



## Traditional and modern herbalism in the Netherlands

Research Report presented as a short paper at the ethnobotany  
conference in Antigua, Guatemala, 14-18 sept. 2001.

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Beek, IEZ, 2001.

ISBN 90-76073-08-2

Price €20,-

Publisher: Institute for Ethnobotany and Zoopharmacognosy (IEZ), 2001

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**IEZ**



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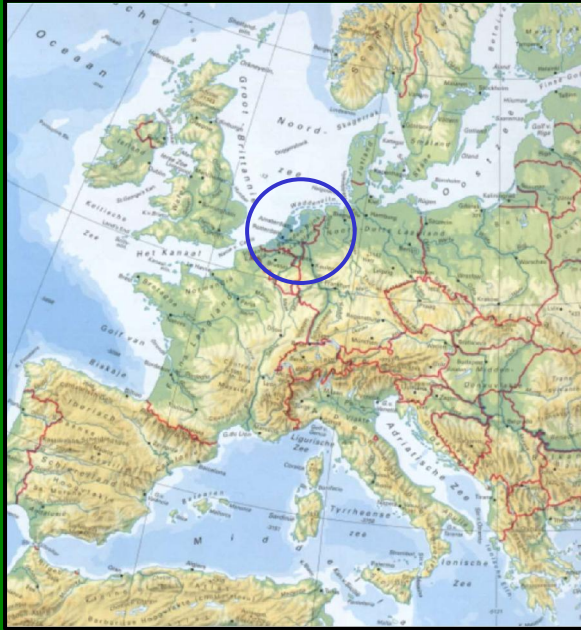


Fig. 1 The Netherlands in Europe



Fig. 2 Original Dutch vegetation

## ***Introduction***

In this short communication it is my intention to inform you about diverse aspects of herbalism in the Netherlands. Both folk and professional applications; as well as historical and current situations will receive attention, of course all in a nutshell.

### ***The Netherlands: position, soil and climate***

The Netherlands is the name of a small country in Europe, consisting mainly of the fertile delta's of three rivers (fig.1). Nearly half of the country is situated below sea level. The Dutch landscape is shaped by wind and water; there are no rocks or mountains, only a few sand hills which were created by the glaciers of the Salicien era (200.000 years ago). We have mainly young sedimental soils in the lower parts and podzol sand soils particularly in the east and south.

The climate is strongly influenced by the sea. There are moderate yearly temperature fluctuations (January 2°C, July 17°C) and rain all year round (50-80 mm each month). The original vegetation consists of the temperate deciduous forest, partly kept open by big grazers (fig.2). Of this original landscape, nearly nothing is left. Nowadays we see intensive agriculture and a very dense population (465 persons/km<sup>2</sup>).<sup>1</sup> This is the highest population density in the Western world (nearly double of UK; 17 times of USA). The majority of this population is concentrated in the west part of the country (Holland), the part near the sea.

## *Archeology*

Assumably the use of herbs and trees in cases of wounds and ailments was, as has been observed in several other cultures, partly based on the observation of animals. This is mentioned by several classic European authors (such as Plinius and Aristoteles) and cited and confirmed by medieval authors such as Brunfels. The study of this kind of phenomena has long been neglected but it has recently gained new interest and a new name: Zoofarmacognosy<sup>2</sup>. Our institute sampled observed several examples (fig. 3) in a Dutch and French zoo<sup>3</sup>. Here the animal keepers have planted many medicinal herbs in the outdoor enclosure and it is believed that the monkeys make specific use of it. Statistical evidence for this is difficult to generate, but anecdotal reports keep coming in. For example, it was reported to us that wild deer in spring eat the bark of *Rhamnus frangula* and wild

swine ingest the bark of willow (*Salix* spp.) trees, both having a strong pharmaceutical activity. Of course, we received many cases of dogs and cats eating grass to provoke vomiting and also of specific grazing of horses on *Urtica* or *Cnicus*, that could possibly be related to their condition. The badger, a carnivorous indigenous animal in Holland, has a few favorite plants amongst others *Allium ursinum*.

We know very little of the (Teutonic and Celtic) herbal practice of the pre-Roman inhabitants although special relations to certain trees have been documented<sup>4</sup>. Several trees in our country, for example *Sambucus nigra*, *Corylus avellana* and *Fagus sylvatica* were considered sacred. Some folk uses still exist, such as the use of the oak (*Quercus robur*) against fevers: pieces of cloth of the sick person are attached to it (fig. 4).



**Fig. 3 Zoopharmacognosy research by IEZ students**



**Fig. 4 Fever tree (Oak), Overasselt**



Fig. 5 R. Dodoens and his Herbal

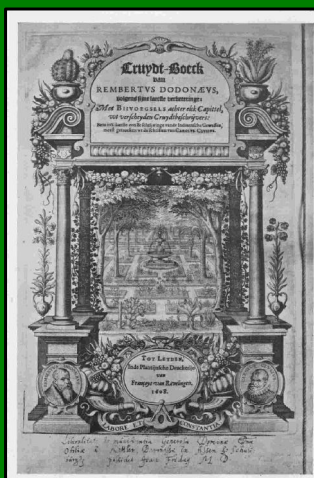
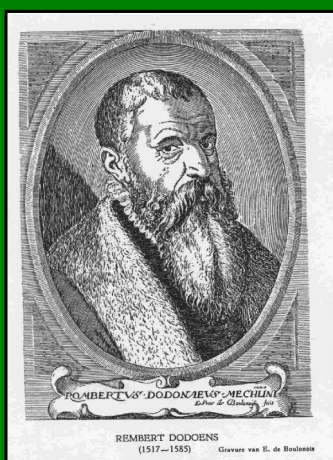
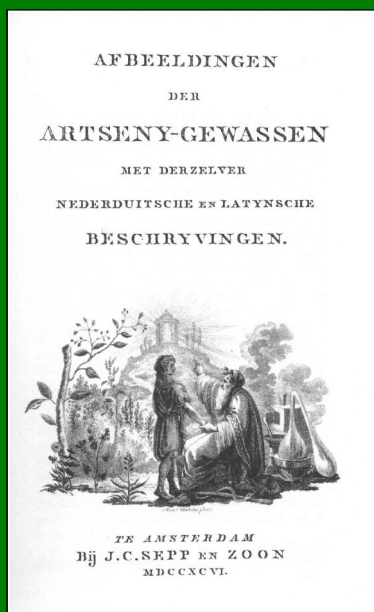


Fig. 6 Partly translated herbal 1796



## ***Roman era, Middle Ages and afterwards***

Romans introduced several Mediterranean medicinal plants (especially of the Lamiaceae and Apiaceae family) into our regions. The enactment (Capitulare de Villis) of Charlemagne (742-814 AD) ordered specific plants and trees to be grown on every of his many estates and in the gardens of convents. Partly due to this act several of these plants appear nowadays in the Dutch flora as well as in traditional Dutch herbalism.

As in most European countries<sup>5</sup> during the Middle Ages, the Greek/Arab approach of medicine was still dominant and the Catholic inquisition destroyed the remains of paganism, including what was left of the original herbal traditions. The establishing of trade colonies overseas brought many exotic herbs in the Netherlands. Amongst medical professionals these quickly gained popularity over the indigenous Dutch medicinal plants. The latter were considered to be the poor mans medicine, of less quality. This attitude was criticized by amongst others Theophrastus von Hohenheim (Paracelsus) whose scholar Van Hellemont was a Dutch physician<sup>6</sup>.

The first herbal in the Dutch language was (1554) the “Cruydeboek” (herbarium) of Rembert Dodoens (1517- 1586) (fig. 5). Dodoens was a Flemish Physician and also

professor in Leiden University. He chose to call himself Dodoneus. Contributions to this herbal were also made by Dutch botanists such as Clusius and Lobelius. The work added new plants and experiences to the work of Dioscorides, which after 1500 years was still the most important in those days. It contained 1060 plant descriptions (of which 109 were original) and 715 figures (200 again original, 515 were used from the German herbal of Fuchs)<sup>7</sup>. The book has played an important role in the past and present. So many copies were printed (last edition was the 6<sup>th</sup> in 1644) that they are still easily obtainable in the antique market and some herbal healers today still use the original antique book as a work of reference.

Another (fig. 6) herbal that was called “Beschrijvingen der Artseny Gewassen” (descriptions of medicinal plants) appeared in 6 volumes from 1795 onwards. It was translated from the German and partly in Latin, but its several Dutch authors added their comments in Dutch. Recently vol. 1 and 2 were reprinted.

In the south of the Netherlands was a monk (Aloysius) that worked as an herbal healer. His teacher had been the German pastor Kneipp. He wrote the Herbal “de troost der zieken” (comfort for the diseased)<sup>8</sup> that was printed in 1901.

## ***Dutch medicinal plants : trees and shrubs***

In the Dutch landscape the genus *Salix* (willow) (fig.7) is very important, 12 species and 5 bastards are considered native. The wood was used for furniture, fences, wooden shoes etc. and of course, the bark (origin of the famous drug saly-cin) was an important fever- and pain remedy. *Populus nigra* and *P. tremula* are very prominent in the flat and empty Dutch landscape (fig. 8) and appear in paintings and poems. The leaf buds have the same properties as the willow bark. Unfortunately the medicinal use of both trees today is nearly absent. Other important trees are *Tilia cordata* and *T. platyphyllos*. *Tilia* was very often in the center of the village where magistrates met (fig.9). We have *Acer*, *Alnus*, *Betula* and *Crataegus* species, the latter two have important medicinal value. *Betula alba* is used as a folk remedy against baldness and as a diuretic in rheumatic diseases.



Fig. 7 *Salix alba*

*Crataegus* species were used by Dodoneus as astringent and stone-dissolving remedies, but nowadays they are well researched as remedies in mild cases of angina pectoris. Quantitative important species are *Fagus sylvatica*, *Ulmus* sps and *Fraxinus excelsior*. The use of *Rhamnus frangula* as a laxative for the poor, being unable to afford the more expensive exotics such as *Cassia* and *Aloe*, has been only documented since the Middle Ages, but is likely much older. *Sambucus nigra* was in the past a much honored tree, its multiple uses were medicinal, antidiabetic and as a food plant. Indigenous are also the wild fruit trees *Malus*, *Pyrus* and *Prunus* sp. The Pinaceae *Juniperus* fruit is since long known to be used both medicinally and as a food flavoring agent in both the famous sauerkraut and the “jenever” (Hollands, or gin).



Fig. 8 Populus ssp



Fig. 9 Tilia tree in town square

## ***Dutch Medicinal plants: herbs and small shrubs***

The most intensively used medicinal plants are the herbs to be found on the border between forests and open spaces (meadowland), just as it was recently described for tropical plants<sup>9</sup>, and also along river banks. An example of the first is placed on the cover page.

A summary of 15 Dutch popular herbals that appeared in the 20<sup>th</sup> century was made<sup>10</sup>.

The most important plant species, mentioned by nearly all authors, are:

*Hypericum perforatum*

*Matricaria recutita*(*chamomilla*)

*Thymus vulgaris* (*T sp.*)

*Urtica dioica* (*U. urens*)

*Valeriana officinalis*.

Next in line are (mentioned in 13 books)

*Achillea millefolium*

*Alchemilla vulgaris*

*Allium cepa*

*Calendula officinalis*

*Capsella bursa pastoris*

*Melissa officinalis*

*Mentha piperita*

*Sambucus nigra*.

Next are *Agropyron (Triticum) repens*, *Angelica archangelica (sp)*, *Arnica montana*, *Crataegus oxyacantha (sp)*, *Foeniculum vulgare (sp)*, *Plantago lanceolata (sp)*, *Potentilla anserina*, *Potentilla erecta*, *Quercus robur*, *Salix alba*, *Salvia officinalis*, *Symphytum officinale* (in 12 books);

*Allium sativum*, *Betula sp*, *Erythrea centaurium*, *Fragaria vesca (sp)*, *Juniperus communis*, *Lamium album (sp)*, *Lavendula off.*, *Rubus fructuosus (R. idaeus)*, *Ruta graveolens*, *Taraxacum off.*, *Tilia sp.*, *Tussilago farfara*, *Veronica off.*(in 11 books);

*Aesculus hippocastanum*, *Chelidonium majus*, *Cichorium intybus*, *Cochlearia off.*, *Euphrasia off.*, *Filipendula ulmaria*, *Rhamnus frangula*, *Geum urbanum*, *Glechoma hederacea*, *Juglans regia*, *Linum usitatissimum*, *Petroselinum sativum*, *Pimpinella anisum*, *Polygonum sp.*, *Sanicula europeae*, *Solidago virga-aurea*, *Viscum album* (in 10 out of 15 books).

Looking at the list of these 58 most popular plants we see that it is composed of many indigenous and 12 aromatic Mediterranean herbs, the latter often being members of the Lamiaceae, Asteraceae or Apiaceae family and since they are in the Netherlands for 2000 years they have entered the Dutch Flora. And there are the indigenous trees (*Betula*, *Crataegus*, *Juniperus*, *Rhamnus*, *Sambucus*, *Salix*, *Quercus*) and some that were also imported by the Romans (*Aesculus*, *Juglans*).

The following overview was inspired by dr Moermans paper presented on the ethnobotany seminar 1999<sup>11</sup>. Popular medicinal plants were on a family level compared with all plants mentioned in the Dutch flora<sup>12</sup>.

Some important herb family's are shown in table 1. This table is the result of the summary of 15 Dutch popular books on traditional herbalism in the 20<sup>th</sup> century<sup>13</sup>.

Table 1. Summary of 15 popular Dutch 20<sup>th</sup> century herbals:  
2195 plant descriptions. 624 different plant species (82% indigenous), 397 genus, 90 indigenous plant families. Sorted by plant family.

Medicinal plants (58) found in 10 or more out of 15 popular books				total medicinal species/family in all 15 books (624 species)		
NL fam	Family	nr species	%	nr species	%	
Cypergras	CYPERACEAE	0	0	0	0	
Grassen	POACEAE	1	2	5	1	
Orchideeen	ORCHIDACEAE	0	0	1	0	
Lelie	LILIACEAE (+ALL)	2	3	17	3	
Composieten	ASTERACEAE	9	16	58	9	
Kruisbloem	BRASSICACEAE	2	3	25	4	
Schermbloem	APIACEAE	5	9	29	5	
Anjer	CARYOPHYLLACEAE	0	0	6	1	
Vlinderbloem	FABACEAE	0	0	27	4	
Rozen	ROSACEAE	8	14	38	6	
Lipbloemen	LAMIACEAE	9	16	54	9	
Helmkruid	SCROPHULARIACEAE	2	3	16	3	
Ranonkel	RANUNCULACEAE	0	0	19	3	
Ruwbladigen	BORAGINACEAE	1	2	13	2	
Duizendknoop	POLYGONACEAE	0	0	23	4	
Ganzevoet	CHENOPODIACEAE	0	0	10	2	
Gymnospermen	GYMNOSPERM GENUS	1	2	9	1	
Overige	OTHERS	*	18	31	274	44
totaal			58	100	624	100

\*

OTHERS :

Ericaceae	11	
Papaveraceae	10	
Salicaceae	1	10
Solanaceae	17	
Pterid.&lower	14	
ab.17 exotic families	29	
69 ind families	17	173

In table 2 a summary of the Dutch flora is compared to the results in table 1.

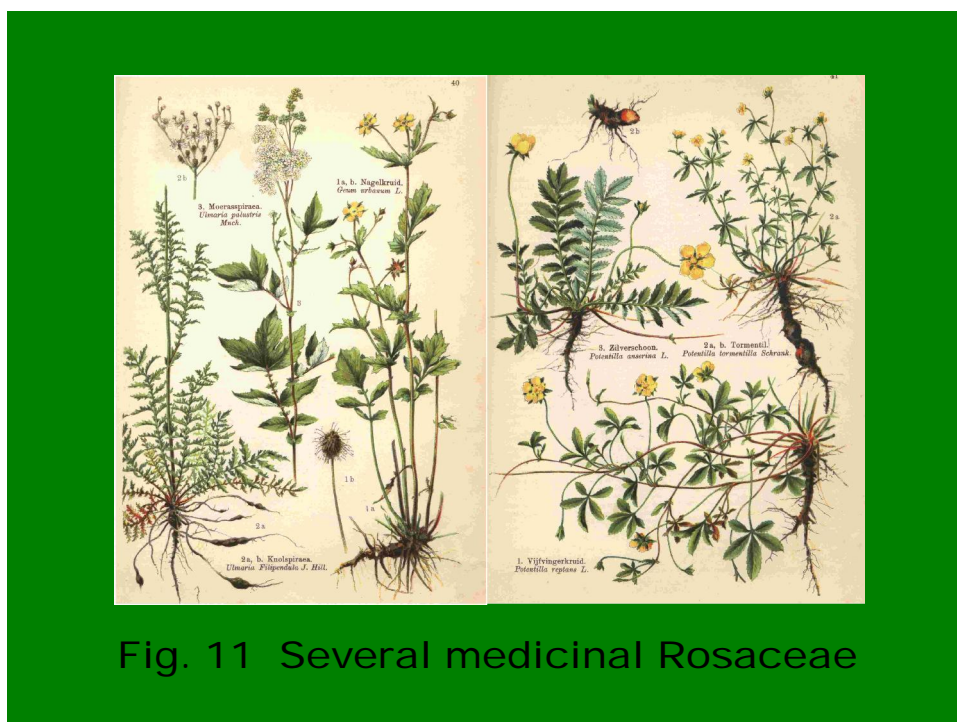
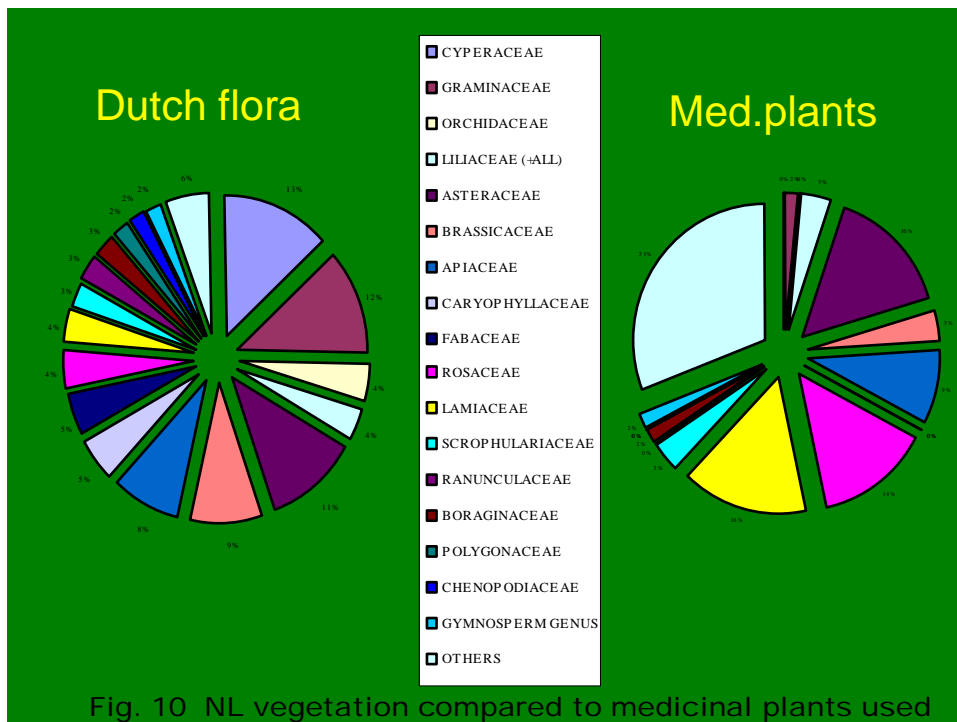
Table 2. Summary of the Dutch flora. 553 genus, 132 families (114 Angiospermae families).

Plant families in NL FLORA		Results from table 1 (%) % medic use of 58 pl of all			
Angiospermae	Families	Genus	%		
Name NL					
Cypergras	CYPERACEAE	70	13	0	0
Grassen	POACEAE	62	12	2	1
Orchideeen	ORCHIDACEAE	22	4	0	0
Lelie	LILIACEAE (+ Allium)	19	4	3	3
Composieten	ASTERACEAE	58	11	16	9
Kruisbloem	BRASSICACEAE	45	9	3	4
Schermbloem	APIACEAE	44	8	9	5
Anjer	CARYOPHYLLACEAE	26	5	0	1
Vlinderbloem	FABACEAE	24	5	0	4
Rozen	ROSACEAE	23	4	14	6
Lipbloemen	LAMIACEAE	21	4	16	9
Helmkruid	SCROPHULARIACEAE	16	3	3	3
Ranonkel	RANUNCULACEAE	15	3	0	3
Ruwbladigen	BORAGINACEAE	13	3	2	2
Duizendknoop	POLYGONACEAE	12	2	0	4
Ganzevoet	CHENOPODIACEAE	10	2	0	2
	GYMNOSPERM				
Gymnospermen	GENUS	10	2	2	1
Overige	OTHERS (ang)	29	6	31	44
totaal		519	100	100	100

When I compare the diversity of the flora with the diversity in the popular medicinal plants this leads to the picture as shown in fig.10.

So I can confirm that the monocotyledonae are underrepresented; apart from the Alliums. Many other families are underrepresented. Strongly overrepresented are Lamiaceae and Rosaceae. Some important medicinal Rosacea are shown in fig.11, most people will know the important Mediterranean Lamiaceae such as Sage, Rosemary and Thyme. The importance of Ranunculaceae and Solanaceae is not very great as most of these plants are poisonous and when mentioned in the Dutch herbals it is mainly because of their homeopathic use. As mr Moerman stated that in Northern countries Asteraceae, Lamiaceae and Apiacea are often medicinal plants, the Rosaceae family appears to be hosting some “typically Dutch” medicinal plants.





## *Position of herbalism in the Netherlands in the 20th century*

The Dutch folk herbal tradition is poorly researched and the prescription of herbs by medical doctors is very rare.

Uittien, a biology teacher, brought a lot of material together before he was executed in a German concentration camp during the war in 1944<sup>14</sup>.

A dissertation of van Andel (1874-1941)<sup>15</sup> in 1909 and a study of Bakker (1863-1933) in 1928<sup>16</sup> were followed by an interesting study by Paul van Dijk<sup>17</sup>, undertaken without support from the government or scientific community, published in 1981. All three last mentioned authors are family physicians and male, and worked alone. The essential absence of interest in the traditional herbalism of our country by the Dutch government and scientific community is possibly due to the fact that Holland was in the center of the rationalist

and experimentalist scientific trends that began with Descartes. Another issue is that homeopathy (Hahnemann, around 1800) and anthroposophy (Steiner, around 1920) assimilated much of the herbal tradition and these movements had better public relations than traditional herbalism. The success of the chemical isolation of active compounds of plants and later the possibility to synthesize chemical drugs made plants, both indigenous and exotic, disappear from the pharmacists shelves. Nevertheless, many Dutch people maintained interest in herbs. Over the years there have been many (mainly popular) books sold on the subject. These books were often written by female authors with little or no scientific education (fig. 12), and yet they sold millions of copies<sup>18</sup>.



Fig. 12 Mrs K. Rotstein and Mrs M. Uyldert, writers of many Dutch folk herbals

## *Legislation and education*

Natural healers (including herbalists) worked illegally from 1865 until 1993 when a law (BIG) was established to formalize the tolerance that had existed for some years. Atypically, Dutch healing tradition incorporated a paranormal aspect, such as the so-called magnetism that was later strongly theoretically influenced by Mesmer (18th century physician of Vienna). Especially in dogmatic Protestant parts of the country it was considered better to consult these healers (who were said to have “God-given gifts” to take away pain) and their healing was derived from the approval of God (in contrary to modern doctors, that were thought to play for Gods themselves). Quite often, the gift of healing passed from father to son. The growing or gathering in the wild of herbs was done by the healer himself. Because in Holland fresh herbs are only available in spring and summer, some processing took place. Out of these home-industries grew several still existing phytopharmaceutical companies with names like Bonusan, Lumen natura, Zonnatura (sun/nature) and Cruydhof (a medieval name for herb garden). The founders are the authors of some of the books summarized previously.

Often criminalized and put to trial by the Dutch Quack-watch Association, the Dutch

healers organized themselves in 1948 in the NWP (Working group of Naturopathic Practitioners). They made rules for their members (i.e. patients had to be seen by a regular family physician before they were treated) and started educational courses to facilitate communication with other health care practitioners. At this moment, there are four private academies for natural healers. Herbalism is taught in combination with dietary knowledge, massage, etc. Recently, new education is available in Ayurvedic and Traditional Chinese herbalism<sup>19</sup>. In addition, Winti-healers practice herbalism (a traditional healing system from Surinam, a former Dutch colony). Non-involvement of the government (no funding, no regulations, no official exam, etc.) and of the scientific community (apart from our small institute IEZ) remains a problem<sup>20</sup>. The latter is changing for the better. The NVF (Netherlands Association for Phytotherapy, see appendix) is gaining more influence and gives scientifically sound training for healers, pharmacists and physicians. Also recently, the first European chair in Ethnobotany has been installed in Leiden University (professor Slikkerveer). We are developing a cooperative program of ethnobotanical/ethnoveterinary research in Holland.

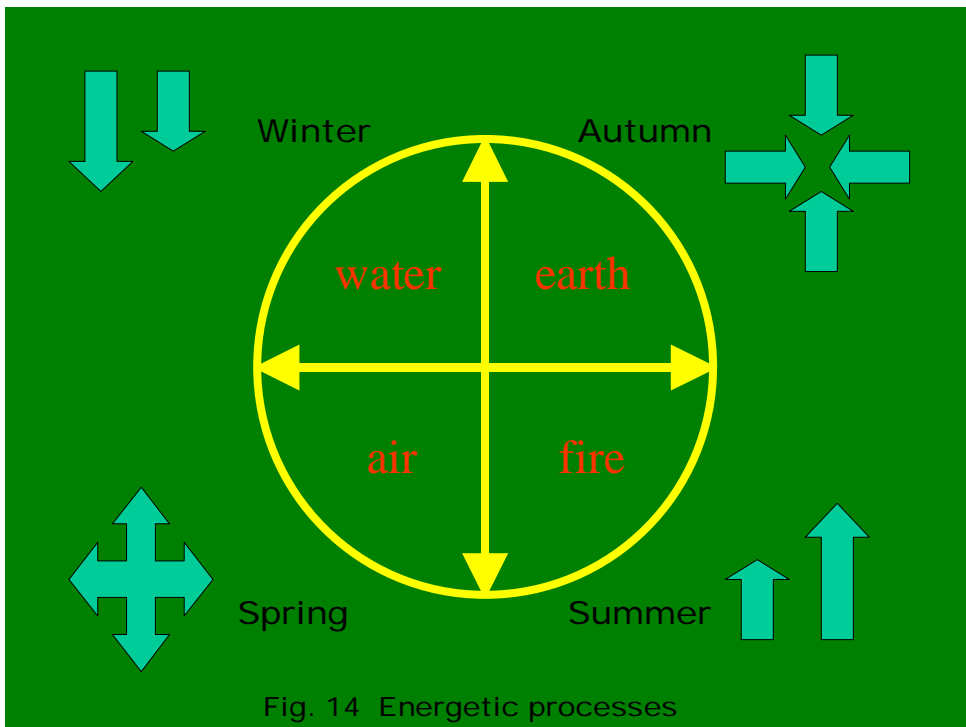
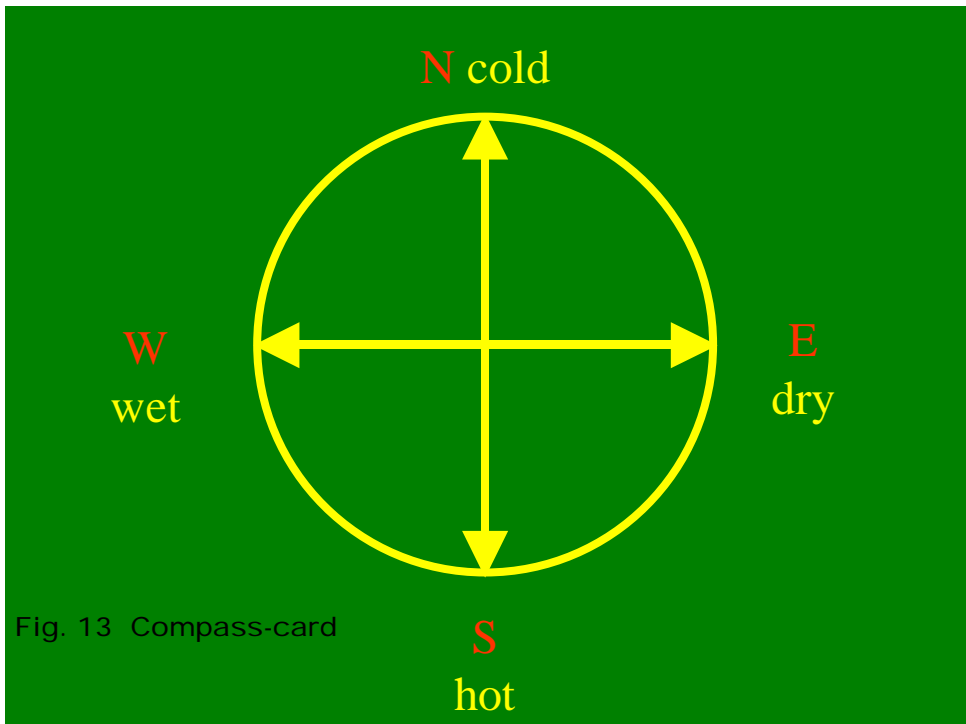
## ***Background philosophy***

The background philosophy of Dutch traditional herbalism stems from the Hippocratic tradition. For example in the books of Dodoens, herbs are classified as being warm or cold and, secondarily as being dry or wet. The Galenic interpretation of this classical philosophical approach gave rise to severe dogmatism, excessive bloodletting and many other problems as mentioned for example by Barbara Griggs.

The philosophy behind the doctrine of humors is very interesting. It is based on the observation (fig. 13) that in Europe wind from the North is cold, from the South is warm, from the West is wet, and from the East is dry. The combination of two of these qualities results in a process, for example cold and dry result in a centripetal directed development, as for example what we observe in autumn, when all life force of a plant concentrates in the root or in the seed (fig.14). This process was given the name earth; and its counterpart, the expanding process was given the name air. The slowing down, falling process was called water and the ascending, the rising/activating process was called fire. The periodical changes of seasons make the wheel go round, when autumn has passed we go into a cold/wet winter; then comes spring, with its expanding processes. This yearly rhythm has its parallel in a day; or in a person's life. If you look at reality this way, it is very much like a fractal: the same patterns appear on a small scale in one day; on a larger scale in a year; on a still larger scale in one's life. The plants follow these

rhythms also, but as in humans, they have their own accents. Some provoke or give mild stimulation to specific processes. In the case of a centripetal process this could for example be the plants that work as astringents. People that have this process in abundance (for example: small and dry stools; or: feeling very melancholic, naturally exaggerated in the autumns and evenings) are always warned not to take too much of these plants; it will worsen their condition.

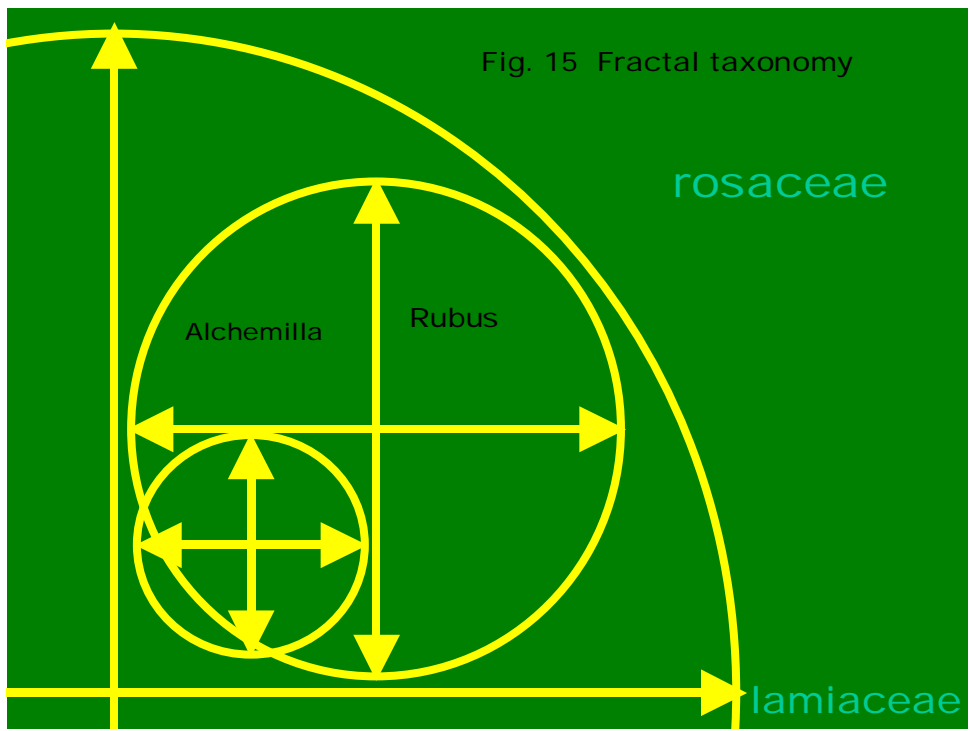
Hippocrates gave names to the conditions that result from excesses of these four processes (excesses that can be caused externally, e.g. by the winds, or internally e.g. by eating in an unbalanced manner). The knowledge of these kinds of unbalances and of the way they could be influenced by herbs was probably older. Its essentially a very ecological approach to enlighten the health situation and the manners to improve health. Consistent with this approach is the popular folk belief that plants grow where they are needed. This may seem ridiculous, but observe the following example: in the Netherlands farmers have a lot of live stock; the Dutch soil, already rich from sediments, is receiving a lot of extra dung from the cattle. The abundance of Nitrogen causes the flourishing of plants like *Arctium*, *Urtica*, *Taraxacum*. These plants are old remedies against ailments caused by eating too much meat (i.e. gout). So perhaps the abundance of these plants can be interpreted as a self regulative act of the ecosystem.



Also the classification of herbs in the humores concept is like a fractal. In the context of this small paper I will only give a short example. If we say Rosacea-members have astringent properties, in general we are right, all of them contain quite a bit of tannins. So we could place them in the right upper part (centripetal energy), to distinguish them from e.g. Apiaceae-plants, that in general are not astringent but predominantly warm, or from Lamiaceae-plants with both qualities (fig. 15). Looking at a specific plant within the Rosaceae family we could again say that a certain plant genus (e.g. Agrimonia)

is warm/wet when compared to e.g. Rubus species. But when we look within the Rubus genus we again find different accents. We could mention accents on a species level, but then again it depends on when and where the herb was picked. And so on (fig. 15).

Many indications and, importantly, many contra-indications in the old herbals (e.g. a choleric person, who has the hot/dry processes in abundance, should not take garlic that has the same quality<sup>21</sup>) cannot be valued without trying to understand this background philosophy, which is still inspiring to contemporary herbalists.



## ***Conclusion***

### **Dutch herbal tradition**

- In the past, Dutch herbal tradition included a great deal (the percentage is not yet exactly quantified) of their indigenous species; given the description of over 1000 plants by Dodoens (compared to a national flora of about 500 genus at the moment).
- In the Netherlands, but maybe also elsewhere, almost all plants have some medicinal value. But the most typical medicinal plants for folk use are the ones not belonging to the less toxic edible plants (most of these are Monocotyledonae) or the rather dangerous poisonous plants (the latter group being used in both homeopathic and allopathic medicine, in it many members of Ranunculaceae and Solanaceae families). I found most of the medicinal plants to be of an evolutionarily young (Angiospermae) and Dicotyledonae

nature. We saw a strong presence of the Rosaceae, apart from the “usual” (partly Mediterranean imported) aromatics from Asteraceae, Apiaceae en Lamiaceae.

- The use of local plant medicines in the Netherlands at the moment has diminished due to the rejection of scientists and the rising popularity of exotics amongst pharmacists and physicians.

### **Recommendation**

- I recommend that old herbals should be studied seriously, not only to promote scientific evaluation of the plants mentioned regarding the diseases mentioned, but also to attain a better understanding of contra-indications for plants that are being used on a large scale as food supplements. Moreover, they can provide interesting philosophical views on ecological aspects of health care.

## ***Acknowledgements***

Many thanks to W. Smits, G. Oskamp, M. Uyldert and J. Mink for their kind cooperation as well to M. Albers for assisting in data sampling, H. Albers for graphical and media work and M. Rasing for translation. Also I would like to thank J. and M. Slikkerveer and J. van Meer for their encouraging advice.

This work has been done as a project of the IEZ and was not externally funded.

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- <sup>18</sup> For example: Mrs MellieUyldert (1908-) wrote about 20 books, the most popular being: Lexicon der Geneeskruiden, Amsterdam, and De Taal der Kruiden, Amsterdam 1948, 1969, Naarden 1980 and Mrs Klazien Rotstein-van den Brink (from Zalk) (1911-1997) wrote in her last decade several books about old folk medicine that were for months the best sold books in the Netherlands, for example Allerhande dingen over de natuur. Kampen 1990.
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