

Chapter Four

PLANTS OF POTENTIAL MEDICINAL VALUE

In the last two chapters, we discussed the pharmacopoeial plants and those commonly sold in the market and used in the folk medicine. However, there is a third group of plants which are of potential value as medicinal plants. Some of these plants are used in areas where they grow, but are not of widespread use in other localities. Others have been investigated from the pharmacognostical, phytochemical and/or pharmacological point of view. The results are not enough to evaluate the plant as a pharmacopoeial item. The list of these plants could be very long. Nevertheless, we shall give some of the important wild plants of this group with short notes on each. The available ethnopharmacological information about these plants seem to be insufficient. Those given here are compiled from the available literature (cf. Al-Rawi and Chakravarty 19 and Boulos 1983 and others). There is a great need for field surveys among the natives to report correctly about these plants and their indigenous uses. Also, it is necessary to compile the available information and prepare an annotated bibliography to help the researchers in the different fields related to the medicinal plants. The traditional knowledge about the use of these plants should be recorded. There is fear from the loss of the biodiversity; the medicinal plants represent an important component of it, and consequently the loss of the traditional knowledge of the healers. Conservation, either *ex situ* or *in situ*, is indispensable. It is to be noted that the present treatise aims at gathering information and data about the wild medicinal plants of Egypt. We can not pretend that it covers all the various aspects of the subject. However, it is a trial towards recording some of the available data and information to represent a bases for future studies. In the coming pages, we shall

give a short list of some plants, which would have considerable value as medicinal plants.

Acacia raddiana Savi *Talh, Seyal* ??????s

A tall spiny desert tree, with round irregular crown and reddish bark. The flowers are arranged in heads. The legume is flattened and spirally twisted. The fruit and the young branches are good fodder for the camels, sheep and goats. Gum from the tree is dispensed in water and used to treat ocular affections, jaundice, and pulmonary diseases. Dried powdered bark disinfectant, and it is used for healing wounds. Seeds, entire or powdered, are taken as antidiarrhoeic.

Achillea santolina L.

Aromatic hairy perennial which grows in the barley fields in the Mediterranean coastal zone and the Isthmic desert. The plant flowers in spring. It is used locally to reduce the pain of toothache by rubbing the young flowering branches against the teeth or by chewing them. The plant is becoming rare these days due to the impact of human activities on its habitat.

Ajuga iva (L.) Schreb.

Small woolly, aromatic perennial herb which grows in rocky habitats in the western Mediterranean region. The cold infusion of this herb is considered antihelminthic. It is said that the hot infusion is useful in the case of diabetes. The plant is endangered.

Alhagi graecorum Boiss. *Alhag- Aqoul* ? ??? ???

Perennial, leguminous spiny undershrub. It is common in all the phytogeographical regions of the country. It grows in waste places, saline habitats. The plant is a favourable food for camels, sometimes called *shouk el-gamal*; Camel thorn. The Latin name is given after the Arabic name *Aqoul*. The plant is used as a laxative as well as in diseases of the urinary tracts.

Asphodelus fistulosus L.

A small annual herb with a rosette of semi-terete leaves. Flowers in a lax panicle. Seeds are black. It grows in all the phytogeographical regions of Egypt. The seeds are diuretic. They are eaten with yoghurt.

Bacopa monnieri (L.) Pennell.

Creeping glabrous perennial herb, growing in mats. Leaves opposite, entire, rounded at tip. It grows in wet places in the Nile region, Oases. It is a rare plant and subject to threats due to drying the wet habitats supporting the plant. It is used as a tonic, and in epilepsy, hysteria, insanity

***Blephasris ciliaris* (L.) B.L.Brutt** *Shouk ed-dhab* ? p ????

Thistle-like spiny perennial herb. Leaves and bracts rigid of silvery appearance, 4-rowed, patent, recurved, spiny-tipped and prickly-toothed. Flowers blue in a dense bracteate spike. The plant grows rarely in Sinai, Gebel Elba and the Red Sea region. The charcoal from roots ground into a powder as ³*kohl* (eye powder) for feeble sight, probably against cataract.

***Capsella bursa-pastoris* (L.) Medic.** *Kees el Raʿe* ?????B ?

Annual winter weed growing in cultivated land in the Delta. It is a small herb. The flowers are used to control haemorrhage, while the herb is used as an astringent, diuretic and antiscorbutic.

***Centaurea alexandrina* Del.**

Biennial herb with large heads. Involucral-scales are purple, often spreadingly recurved. Flowers dirty yellow with purple-brown anthers, pappus absent. It is common in the Mediterranean region, usually growing along roads and in waste places. The extracts from the flowering branches are antibacterial and antidiabetic.

***Centaurea calcitrapa* L.**

Tall richly branched biennial weed. Heads are small with conspicuous, yellow involucral-spines. Flowers white or crimson, pappus absent. The plant grows along roads and canal banks, specially in the Nile region. It grows also in the Mediterranean region and the Oases. The plant is bitter. Perhaps it has the Arabic name *morreir*, (bitter) from its taste. The herb is bitter-astringent, appetizer, vulnerary, antiophthalmic, antifebrile, stomachic, for intermittent fever, eye diseases. Leaves are used for cephalalgia. Flowering summits febrifuge. Root and fruit are diuretic. Seeds vulnerary, febrifuge, for renal stones and pains.

***Chenopodium ambrooides* L.** *Netanah* ???

A yellow-green annual herb with rich inflorescence. It is characterised by its foetid odour. It is a common weed along canals in the Nile, Mediterranean regions and the Oases. Infusion of leaves digestive, carminative, stimulant, stomachic,

antiasthmatic. Leaves and young shoots and fruiting summits stomachic, diuretic, anthelmintic, antispasmodic, vermifuge and emmenagogue.

***Chrozophora tinctoria* (L.) A.Juss.**

An annual herb covered with stellate indumentum. Leaves thick woolly, ovate-lanceolate. It grows in field margins and waste places, mainly in the Nile region. The plant is cathartic and emetic

***Cotoneaster orbicularis* Schlecht.**

An unarmed shrub. Leaves small, entire, woolly beneath. The fruit is a very small ovoid red pome. The plant is endangered. It is very rare in Sinai mountains. The infusion in water is used in typhoid, and antispasmodic.

***Cotula cinerea* Del.**

A small grey-woolly erect or ascending annual herb with yellow discoid heads of hemispherical shape. Leaves more or less fine-dissected with flat entire lobes. It is common in sandy habitats in the desert, Mediterranean region, Red Sea region and Sinai. Infusion of flower heads is aromatic and very agreeable. It is stomachic and used to flavour tea replacing peppermint, useful for broncho-pulmonary conditions, against scorpion bites, rheumatism, vomiting, nausea and stomach pains.

***Cuscuta planifera* Ten. *Kashout -Hamoul* ???S ????**

Annual twining stem parasite, richly branched, yellowish or crimson. It grows on a wide variety of hosts. It is widespread in all the phytogeographical regions of the country. Some species of the Genus *Cuscuta* are known as *kashout* in Arabic, which can be derived from the Greek name *Cuscuta*. The cold infusion is usually used as an intestinal disinfectant. The stems are used for obesity. The infusion of seeds is used in catarrh.

***Cynomorium coccineum* Tarthouth ???s**

Perennial leafless fleshy parasite, devoid of chlorophyll. It is a parasite on halophytes growing in saline habitats in the Mediterranean region. The plant is usually grilled by the Bedouin, who think the plant has aphrodisiac properties. Dried plants are powdered and mixed with butter and used against biliary obstruction. The powder is added to meat dishes as a condiment.

***Echium italicum* L.**

A tall biennial plant. Flowers small, flesh-coloured, in a richly branched, yellow-hairy inflorescence. Lower leaves broadly lanceolate, large, upper ones narrower. The plant is very rare and confined to the western Mediterranean coastal zone. The herb is a popular remedy for snake bite. It is interesting to mention that the herb is eaten by donkeys.

***Eminium spiculatum* (Blume) Kuntze Louf ???**

Stout cormous perennial herb with pedately dissected leaves, appearing together with the flowers. Spathe is very large, up to 15 cm long, with an open, inside purple-mottled tube, ending in an inside blackish-purple warty limb. The plant is fairly common in the Mediterranean coastal region. However, it is subjected to threats due to changes in its habitat. It is considered by the Bedouins a dangerous poisonous plant. The juice is hypotensive, the alcoholic extract is hypertensive, while the aqueous extract is devoid of toxicity. Purified alcoholic extract of corms contains glycosides.

***Ephedra alata* Decne & *Ephedra aphylla* Forssk. Alanda ????**

Highly ramified perennial with scaly leaves. Fruits and young shoots are used in local medicine as an astringent. It is used also in the treatment of asthma, and as a cardiac stimulant. Relatives of this species (*E. sinica*) contain ephedrine.

***Eryngium creticum* Lam. & *E. campestre* L.**

Thistle-like spiny perennial plant, with thin divergicate, often blue branches. Basal leaves thin, with flat petioles, soon wilting. The plant is rare in the western Mediterranean region. The leaves and roots are used against anaemia, dropsy, colic and prolonged perturbation period.

***Euphorbia helioscopia* L.**

Annual herb branching from near the base. Leaves alternate, spatulate, serrulate. Umbel rays 4-5, 2-4 cm long, once -twice divided. Seeds 1.5-2 mm, regularly alveolate. It is common in the Nile and the Mediterranean regions. It grows as a weed. The root is used as anthelmintic, purgative, toxic, vesicatory. The seeds are used in cholera. The latex is highly irritating to mucous membrane and toxic to mammals and fish. Leaves are used as vermifuge, and in fever.

***Gnaphalium luteo-album* L..**

Annual woolly plant with simple entire, sessile leaves and small clustered heads. The stem is leafless upwards. Heads corymbose. It is very common as a weed especially along canals, ditches, on muddy soil. It occurs in the Nile and Mediterranean regions. The leaves are astringent and vulnerary. The plant is used as a counter irritant for gout.

***Hyoscyamus albus* L. Sakaran** ?????

Richly branched stout villous-viscid perennial plant. Most of the leaves rounded-cordate, deeply incised-toothed. It is rare in the western Mediterranean region and in the north Arabian desert. The leaves are used as anodyne, narcotic, sedative in nervous affections. It is often used as a substitute of *H. muticus*.

***Hypericum triquetrifolium* Turra**

Perennial herb with stiff patent decussate branches, and hence the plant has a more or less pyramidal aspect. Flowers 1-5 together in the summit of leafy branches and appear in summer. The plant is very rare in the eastern Mediterranean region. There is another endemic species of this genus, *H. sinaicum* Hochst. The latter species is 10-30 cm high, altogether slightly pubescent. Flowers few in a terminal corymbose panicle. It is very rare in the mountains of Sinai. The plant is toxic to livestock.

***Jussiaea repens* L.**

Creeping or floating glabrous aquatic perennial plant. It roots at nodes. When floating, the plant produces clusters of white to pink fusiform roots of very peculiar aspect. Leaves petioled, lanceolate to oblong-ovate. It is rare in the Nile region and grows in and along channels. The herb is used as a plaster or poultice for ulcers and in skin complaints.

***Haplophyllum tuberculatum* (Forssk.) A. Juss.** G??? ??? G??

Perennial, densely glandular-tuberced, 30-50 cm high herb of unpleasant smell. Leaves much variable in shape, from narrowly linear to short, obovate. Flowers yellow and variable in size. The plant is recorded in almost all the phytogeographical regions of Egypt. It grows in fine sandy soils. The plant is collected and sold in the shops in the west Mediterranean coastal region under the name 'shajarah'. In north Sinai, it is known as *dharret rieh*, or *um-jeneinah*. The

Arabic saying in El Arish area “Um Jeneinah, riehetha Helwa Wa Sheina” denotes that the odour of this plant is both sweet and bad. When the fresh plant is smelled slightly it has a sweet odour, but when squeezed and smelled it has a bad odour. Flowering and fruiting branches febrifuge, local antipoison, for vomiting, nausea, constipation, malaria, difficult childbirth, anemia, rheumatism, gastric pains, intestinal worms, eye and ear troubles, aphrodisiac; decoction for rheumatic pains.

***Herniaria hirsuta* L.**

Annual with slender root. Branched from the base in one plane with branches almost at right angle to the main stem. Leaves alternate, acute, hairy on both surfaces. A variety (var. *cinerea* Herm.) occurs also. The plant is common mainly in the Mediterranean coastal region. The decoction of the herb is used in sour throat, as diuretic, powerful narcotic and stomach irritant. The toxic principle can be coumarin.

***Jatropha glauca* Vahl**

Erect low undershrub, about 30 cm high, Leaves palmate-lobed, long petioled, blue-green, at base with lacinate hair-like gland-tipped stipules. Female flowers larger than the male. Capsule light yellow, 1 cm long. The plant is very rare and occurs only in Gebel Elba. It is a potential medicinal plant.

***Lactuca serriola* L. Khass ez-zeit ?????B ?**

Annual or biennial herb, with broad, pinnatifid leaves, which are spiny beneath on the midrib. Inflorescence richly branched, spreading. Flowers lemon-yellow, outside dirty red. The plant is a common weed, especially in the Nile region. The herb is used as a diuretic, antispasmodic, sedative and emollient.

***Hyphaene thebaica* (L.) Mart. Doom ??O**

Dioecious palm. Trunk up to 20 m high, repeatedly bi-forked. Leaves fan-shaped. The plant grows in the oases, in southern Egypt and the Red Sea region. The fruits are edible. Molasses are prepared from the pulpy part. Also, a delicious soft drink is prepared from this pulp. The different parts of the plant have different uses.

***Melilotus indica* (L.) All. Handaqouq ?????S**

Annual weeds with small yellow flowers and globose legumes. The plant is a common weed in almost all the phytogeographical regions of the country. Infusion

of flowering branches is emollient and antispasmodic. Seeds for diseases of genital organs of both sexes.

***Mentha longifolia* L. Habaq El Maya ????? S**

A perennial herb, with linear-lanceolate, almost entire leaves. Flowers minute in a very narrow acuminate spike. It is very rare and occurs only in the mountains of Sinai in moist habitats. Infusion of the herb is carminative, antiseptic, and stimulant. The plant is endangered.

***Mentha pulegium* L. Folaiyah ???**

A perennial herb with small, short-petioled, ovate oblong leaves. Flowers in dense globose whorls. It is a rare species growing in moist habitats in the Nile Delta and the Oases. The plant is endangered. Infusion of the leaves is antispasmodic, antiseptic, cholagogue, and bechic.

***Nitraria retusa* (Forssk.) Ascher. Gharqad ???**

Thorny shrub with small fleshy leaves. The plant grows in saline habitats forming huge phytogenic mounds. The fruits are edible. It is said that they are useful in the treatment of urinary tracts.

***Paronychia argentea* Lam. & *P. arabica* (L.) DC. Besat El Ard ? ???A?**

Small prostrate annual or perennial plant with entirely silvery-scarious bracts and stipules. It is rare in the Mediterranean region, Isthmic desert and Gebel Elba.. Infusion of the above-ground parts is diuretic, febrifuge, appetizer, mild aphrodisiac. It may be used for urinary stones. The plant has been reported to be sold by the herbalists in Amman, Jordan. A similar species is *P. arabica* (L.) DC., which is considered as an aphrodisiac and a stimulant

***Pulicaria undulata* (L.) Kostel Shai El Gabal ????? ?**

A much-branched, woolly procumbent perennial herb. Ray flowers long and yellow. The plant has an aromatic scent. It is added to the tea to give it a good refreshing flavour. It is carminative and stimulant. It is called in Arabic 'shai gabali' means the tea of the mountain.

***Retama raetam* (Forssk.) Webb & Berthel Ratam ???**

A leafless desert shrub with long virgate whip-like branches. Flowers white. Fruit one seeded, seeds brown to black. The plant is common in the deserts of the

country as well as Sinai and the Mediterranean coastal zone. The plant is used for making eye wash for eye troubles. Root are used against diarrhoea. Branches are used as febrifuge, for treatment of wounds; powdered branches mixed with honey are emetic, given as a purgative and vermifuge, abortive in large doses.

Rhus tripartita (Ucria)Grande *Leqq* ??

Shrub, up to 2 m high, branches short and spiny, reddish brown, glossy. Leaves 3-foliolate, with dentate margins. The plant grows on the rocks in the coastal zone, north Arabian desert, Gebel Elba, Sinai and the Red Sea region. The plant is rare and endangered. The fruit is edible. The infusion of the fruits and the leaves is recommended for gastric and intestinal ailments.

***Senecio vulgaris* L.** *Eshbet Salima* ????? ??? ?

Annual herbs with corymbose, yellow flower heads. Leaves deeply cleft with narrow lobes. Heads small, cylindrical, ray florets absent. The plant is a weed in the Nile region and the western Mediterranean zone. It has been noted by the senior author that the weed was common in the sixties in Giza Governorate. After the establishment of the High Dam, one can note a retreat of the plant to the south. In the eighties, the plant can be collected in Beni Suef to the south. It seems that there is a relation between the occurrence of this species and some minerals in the Nile water deposited in the Valley and the Delta before the construction of the High Dam. The lack of these minerals or elements would cause the disappearance of this species. Flowering branches emenagogue, vaso-constrictor, vermifuge, emollient, hemostatic, mild laxative, and resolvent.

***Sonchus oleraceus* L.** *Goqleid* ? ?p ??

Annual herb growing as a weed in the cultivated land. It has a wide ecological amplitude. The plant has been recorded in almost all the phytgeographical regions of the country. The brownish gum left after the evaporation of the juice of this plant is said to be a powerful hydragogue and cathartic. It has also been used as a so-called cure for the opium habit. Recently, the plant has been found to contain an alkaloid.

Vaccaria pyramidata Medicus *Sabounya* ???????

Annual glabrous herb with dichotomously branched stem. Leaves lanceolate, with sessile cordate base. Flowers long peduncled, rose-coloured. The plant is a common weed in the Nile, Mediterranean regions, Sinai, the Oases and the Isthmic desert. Root vulnerary for abscesses, furuncles, ulcers, scabies, mastitis, lymphangitis, emmenagogue and galactagogue, contraindicated in pregnancy. Decoction of root used to take care of wounds, sores, scabies and different dermal infections, taking into consideration its toxicity. Leaves and roots contain saponins which provoke, in strong diseases, a general paralysis of muscles.

***Verbascum sinuatum* L.** *Muslih Al Anzar* ?????? ?

Woolly biennial plants with flowers umbelled in clusters. The plant is rare in the Nile region, eastern Mediterranean region, Oases and Sinai. The plant is endangered. The roots and leaves are used for the treatment of eye diseases. They have the reputation of ameliorating the sight. They are used for inflammation and as an antipoison. The dried powdered plant is used for all eye diseases.

***Withania somnifera* (L.) Dun.** *Somm El Ferakh* ? ??????

Shrub with broad entire, asymmetric leaves The fruit is bright red berry, enclosed by the inflated calyx found in clusters on the stem. The plants grows in different phytogeographical regions in Egypt. It grows mainly along the cultivated fields, especially in the Delta and Nile Valley. It is narcotic, and anti-epileptic. The seeds and fruits are diuretic. The leaves are used for tumors and tuberculated glands. The tuber is used in inflammatory conditions, psoriasis, bronchitis, ulcers, scabies.

***Xanthium brasilicum* Vellozo** *Shubbeit* ????

An annual herb with simple or few- branched stem. Leaves are broadly ovate to cordate, irregularly incised-crenate. Fruit hairy, with thick stout terminal peaks. It is a common summer weed in cultivated land. The fruits are cooling and are used in the treatment of smallpox. The root is bitter, tonic, and believed to be useful in cancer and strumous diseases. The involucre is used in hemicrania. The plant has diaphoretic and sedative properties.