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Notes on Medicinal and Other Uses of Plants in Egypt[1]

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The Bedouins of the deserts, the dwellers of the oases, and the Fellahin along the Nile are most knowledgeable on the subjects of native remedies and other uses of plants. They talk as freely about methods of relieving a stomach ache as about warding off the "evil eye."

During the past three years I have traveled over most of Egypt collecting animals and plants. In my travels I hired Bedouin guides and contacted villagers, farmers, herders and camel drivers. From these people and from personal observations I obtained the original notes in this paper.

Tregenza's (14, 15) books contain considerable botanical lore from the Red Sea Hills, which I have included herein. The papers of Drar (5) and Boulos (3) should be consulted for further information on the plants of the Gebel Elba and Nubian regions, respectively.

I am indebted to Mr. Ibrahim Helmy Mohamed, Technician, United States Naval Medical Research Unit No. 3, Cairo, for recording and translating conversations. Dr. M. Kassas, Professor of Botany, University of Khartoum, encouraged my interest in the subject matter, criticized the manuscript, and contributed to the text. Dr. Vivi Täckholm, Professor of Systematic Botany, Cairo University, identified the plant specimens and edited the following list. Duplicate collections are in the herbaria of Cairo University and the Field Museum of Natural History, Chicago, Illinois.

The species are listed by families according to the arrangement of Täckholm et al. (13). Vernacular names are partly from their list.

COMPOSITAE

Pulicaria undulata (L.) Kostel: *Shaay gebeli* or wild tea. The dried elaves make a pleasant tea to which I was introduced by an Abadi[3] Bedouin in the Eastern Desert. Too strong a brew, however, is comparable to warm turpentine. Cairo residents have told me that this plant is sometimes sold in the Cairo drug and spice market.

Artemisia judaica L.: *Sheeh* or wormwood (Fig. 1). This, and probably a similar species, *A. herba-alba* Asso, are harvested by the Bedouins and sold in the Cairo market. Tea made from the dried leaves, an Abadi told me, is drunk to relieve gastro-intestinal cramps. *Sheeh* leaves are placed beside the nostrils when one has a cold, to relieve congestion, according to this Bedouin of the Eastern Desert. He said also that the incense from the leaves is believed to be a strong deterrent to the "evil eye." Each night for seven nights after a child is born, the leaves are burned and the baby is made to inhale the incense so that it will remain in good health.

Farmers in the Nile Valley fumigate their poultry with the smoke of burning *sheeh* (Kassas, personal communication). They also hang pieces of *sheeh* in their homes and pigeon houses to keep snakes away, I was told by a Fellah from a village near Cairo.

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[3] The Ababde are a Bedouin tribe in the Eastern Desert; singular, Abadi.

Incidentally, I once collected a viper under a *sheeh* bush.

Kassim (8) wrote that in the area of Sidi Barrani on the coastal desert, *sheeh* is "believed to prevent skin diseases if camels eat it." He said that "a considerable trade is done in *sheeh*, which is generally used in Egypt as a specific against tapeworms."

Launaea capitata (Spreng.) Dandy [= *L. glomerata* (Cass.) Hook. f.]: *El huwwaia*. The leaves of this dandelion-like plant are the salad of the desert. I have eaten them and observed that they are relished by the Bedouins and eaten by their livestock.

CUCURBITACEAE

Colocynthis vulgaris Schrad. [= *Citrullus colocynthis* (L.) Schrad.]: *Handal* or ground gourd (Fig. 2). I learned from several sources that for rheumatism the Bedouins tie a slice of fresh, green gourd onto the heel before retiring. The people of Bahariya Oasis recommend a slice of boiled gourd. In either case a bitter taste in the mouth the following morning is supposed to indicate a cure.

The gourds are eaten by domestic animals when green, according to an Abadi Bedouin of the Eastern Desert. Mason (11) learned, during his travels in the Libyan Desert that they were eaten (when green) by gazelles, Barbary sheep and donkeys, probably, he postulated, for the water they contained. He tasted a juicy piece of green gourd and had diarrhea for three days. Fortunately, my experimental tasting produced nothing more than a bitter tongue.

I have observed that desert rodents thrive on the dry seeds and pulp. Tregenza's (14) guides told him that gazelles broke the dry gourds with their horns to get at the seeds. These people claimed that they themselves ate the seeds for food. A man from Kharga, my guide to Gebel Oweinat, said that the Tibbu people who came there harvested the seeds of *handal* for food. The seeds were eaten after prolonged soaking in water. Watt and Breyer-Brandwijk (16) mentioned that the seeds were edible after being boiled or roasted. *Abra*, the staple dish of the Tibbu people, according to Hassanein Bey (6), is made from *handal*. The seeds are boiled thoroughly to get rid of the bitterness and then crushed with dates or locusts in a wooden mortar. Hassanein Bey recorded a conversation with a Bedouin who had once survived for twelve days on *handal* seeds which, the man said, had upset his digestion. The cathartic effect of the untreated seeds is known to all Bedouins. Drar (5) stated that they were poisonous.

In Bahariya Oasis I learned that a purgative for intestinal parasites is milk that has stood overnight in a hollowed, dry ground gourd. Natives of Aswan told me that since the time of the Pharaohs dried gourds with a small opening in them have been placed among clothes to keep away insects. Another use of the *handal* which Tregenza (14) mentioned is for tinder. His guides pulverized charred gourds by beating them in a wetted cloth. Dried bits of the impregnated cloth were used for producing fire with flint and steel.

A tar which is extracted from the *handal* seeds is used for treating mange of camels (5) and also for completing the tanning of skins to be used for water containers (Kassas, personal communication). I have often seen piles of charred seeds and the remnants of the gourds in wadis of the Eastern Desert. Nearby there is usually a small oven made of stones and clay where the tar was extracted. A more refined method of extraction was explained to me by an Abadi. Dry seeds are packed into a clay pot with a long neck of the type used for drinking water. The mouth is plugged with a wad of palm fiber and the pot is then inverted over a small bowl and supported by sticks or stones. A fire is built around the upturned base of the pot. The application of intense heat causes the tar to exude from the seeds.

We of the western world refer to something as being "bitter as gall," whereas the Arabs use the phrase, "bitter as handal."

PLANTAGINACEAE

Plantago ciliata Desf.: *Foula khety*. The dried flowers of this plant are used for curdling milk in making cheese. I was told by an Abadi in the Red Sea Hills.

SOLANACEAE

Hyoscyamus muticus L.: *Sakaraan*. The name of this plant is a derivation of the word *sakran* meaning "to be drunk." Smok-

Fig. 3.—*Solenostemma argel*. Herbarium specimen.

ing the dried leaves is supposed to produce a narcosis. Kassas heard from some Bedouins that thieves may come to a tent on the pretense of visiting and offer their host tobacco mixed with *sakaraan*. When the host has fallen asleep, the thieves take what they wish and leave.

Tregenza (14) mentioned that the Bedouins made tea from the dried leaves and also smoked them. Boulos (3) recorded that smoking of *sakaraan* was effective against asthma. See also Hill (7).

LABIATAE

Teucrium pilosum (Deene.) Asch. & Schweinf.: *Ga'da* or *ja'adeh*. Tregenza (14) wrote that this plant is used in the same way as *Colocynthis vulgaris* for making tinder. When he developed a cold, his guide made him inhale the vapor from an infusion of pieces of *ga'da* and leaves of the caper, *Capparis spinosa*; and afterwards, bathe himself with the tea. He admitted that he felt better after this treatment.

ASCLEPIADACEAE

Solenostemma argel (Del.) Hayne: *Harga!* (Fig. 3). I was told by an Abadi that the tea made from the dried leaves was used by his people of the Eastern Desert as a remedy for gastro-intestinal cramps. Drar (5) stated that the leaves possessed purgative properties and were formerly used for adulterating commercial senna.

Calotropis procera (Ait.) Ait. f.: *Oshaar*. Natives of the upper Nile Valley maintain that when a person has a tooth in need of removal, a drop of the latex of this tree is placed on the tooth. Next morning, aches, pains, and the tooth, they say, will have disappeared. A man from Kharga Oasis verbally confirmed this belief.

Be that as it may, Boulos (3) wrote that the Nubians use the latex to loosen teeth which are difficult to pull and for loosening thorns and spines from under the skin. Necklaces made from sections of young shoots of *oshaar*, he wrote, are supposed to cure a throat disease of children.

My Kharga guide said that if any of the sap contacted the eyes it would cause blindness. I was told, on good authority, that during World War II some Egyptian men damaged their eyes with the sap in order to avoid conscription. King (9) mentioned this use of the sap also and that a violent inflammation was set up "for a few days resulting in more or less total loss of sight." Watt and Breyer-Brandwijk (16) said that the sap was extremely toxic and used in Africa for poisoning arrows.

Another use of *oshaar* which King (9) thought peculiar to Kharga and Dakhla was the placing of branches of *oshaar* along with barley and onions over doorways "in order to keep off scorpions, reptiles and venomous insects and to prevent the family from being lazy."

I was told that natives of Kharga and Dakhla Oases smoke the dried leaves of *oshaar* for relief from asthma.

Pergularia tomentosa L. (=*Daemia cordata* R. Br. ex Schult.): *Ghalqa* (Fig. 4). The root of this shrub was recommended by one Bedouin from the Eastern Desert for the treatment of piles. A fresh piece, he told me, should be inserted into the anus and twisted until painful bleeding occurred.

GENTIANACEAE

Centaurium pulchellum (Sw.) Druce [=*Erythraea ramosissima* (Vill.) Pers.] and *C. spicatum* (L.) Fritsch. [=*E. spicata* (L.) Pers.]: *Kourteba, aqiliya, qotayba, kantarion* (Fig. 5). Two or three cups of tea per day from the dried foliage was recommended by people in Bahariya Oasis as a control for what appears to be sugar diabetes. A medical doctor is supposed to have been cured of that disease with this treatment while he was living in the Oasis. At present, the Faculty of Pharmacy, University of Alexandria, is investigating the drug properties of these plants (personal communication).

I learned from a Bedouin living in Cairo that his people have great faith in this tea for relieving gastro-intestinal pain, for stopping the shivering that accompanies malarial fever, and as a diuretic. He said it was given to pregnant women to stop fever before parturition, and mixed with a laxative it is administeerd after a woman has given birth.

UMBELLIFERAE

Pimpinella schweinfurthii Asch.: *Yansoon*. My Kharga guide told me that the people of the Oasis use the seeds of *yansoon*, which smell like anise, to make a tea for gastro-intestinal cramps.

MALVACEAE

Malva parviflora L.: *Khobbaaza* or *khobbayza*. According to King (9), in Dakhla Oasis the leaves of this annual are sometimes pounded and made into a poultice for treating scorpion stings.

Fig. 6.—*Salvadora persica*. Wadi Gemal, Eastern Desert.

SALVADORACEAE

Salvadora persica L.: *Araak* (Fig. 6). In Egypt, this shrub is known from a few wadis in the Gebel Elba area, the Red Sea Mountains and in sand dunes near Dazhla Oasis. Small twigs become frayed when broken and are used as tooth brushes, *meswak* (13, 14). I have seen *meswak* which were purchased in the Cairo market. The Bedouin members of my field crew collected bundles of young *araak* branches whenever the opportunity arose (Fig. 6) from which they made scores of *meswak* to be taken home to families and friends.

ANACARDIACEAE

Rhus oxycantha Schousb. ex Cav. (=R. *oxycanthoides* Dum.-Cours.): *Ereen*. The wood of this shrub when beaten into a pulp and soaked in hot water is used by the Bedouins of the Eastern Desert to cure skins to be used for carrying water (15). Tregenza's guides told him that *ereen* was better for curing skins than were the extracts from acacia or the *botm* (*Pistacia khinjuk* Stocks).

ZYGOPHYLLACEAE

Balanites aegyptiaca (L.) Del.: *Higʻecg. shaashoat* (Fig. 7). I have eaten the date-sized fruits of this tree, which are mostly seed, and they have a horehound-like flavor. I was told by an Abadi that they are eaten by Bedouin children, donkeys, and camels.

Nitraria retusa (Forsk.) Asch. (=*N. tridentata* Desf.): *Ghardaq*. In the Faiyum area of the Western Desert, tea made from the dried leaves of this shrub is considered to be effective in controlling sugar diabetes. I was told this by a camel man who once guided me into Wadi Muwellih where, he said, his people went to collect the leaves and fruits in May. A sweet concentrate made from the red drupes produces a pleasant drink when diluted with cool water. I was served this by the monks who live in Wadi Muwellih. People whom I questioned in the Eastern Desert did not know of these products, even at Ghardaqa (Hurghada) which was named after this plant.

LEGUMINOSAE

Cassia italica (Mill.) Lam. ex Steud.

(=*C. obovata* Collad.): *Sanna (mekki), samaleika* or senna (Fig. 8). Dried senna leaves are used by the Bedouins to make a purgative tea, according to one man from the Eastern Desert.

Acacia nilotica (L.) Willd. ex Del.: *Sant* and *sont*. In Kharga and Dakhla Oases I was told that tea made from the dried flowers is used for gall bladder trouble and that the powdered fruits are placed on embers to produce an incense which relieves nasal congestion.

Boulos (3) and Drar (5) have discussed the uses of various acacias particularly for tanning.

MORINGACEAE

Moringa peregrina (Forsk.) Fiori [=*M. aptera* Gaertn., *M. arabica* (Lam.) Pers.]: *Yasaar, mai, hab el-yasaar* (seed), *habb el-baan* (seed), behen-nut (seed) (Fig. 9). Although this tree has dozens of uses (10, 16) few are known to the Bedouins of the Eastern Desert. I was told that every August the Bedouins move into the rugged, rocky valleys and canyons where the *yasaar* thrives and harvest the seeds. A portion of the crop is sold to local buyers and eventually reaches the Cairo market. The light, non-drying oil of ben which is extracted from the seeds commercially is used for lubricating watches, and as a base for cosmetics and perfume. Oil which is extracted by the Bedouins is used for cooking and, because it does not become rancid, is a valuable commodity in the meagre life of the desert people.

One of our guides, an Abadi, described their method of extracting the oil. The seeds are boiled in water and the oil is skimmed from the surface. The fire for this process must be made from *yasaar* wood only. The person doing the extracting must be alone and is not to be seen by another person; otherwise very little or no oil will be obtained. This man said that two or three *yasaar* seeds were eaten when a cathartic was needed. Perhaps the Bedouins' digestive systems are more sensitive to the "Behen-nuts" than those of the Egyptian women of Cairo who eat them to become fat (10). I have eaten *yasaar* seeds and found the flavor to be very pungent and like sweetened bitter almond.

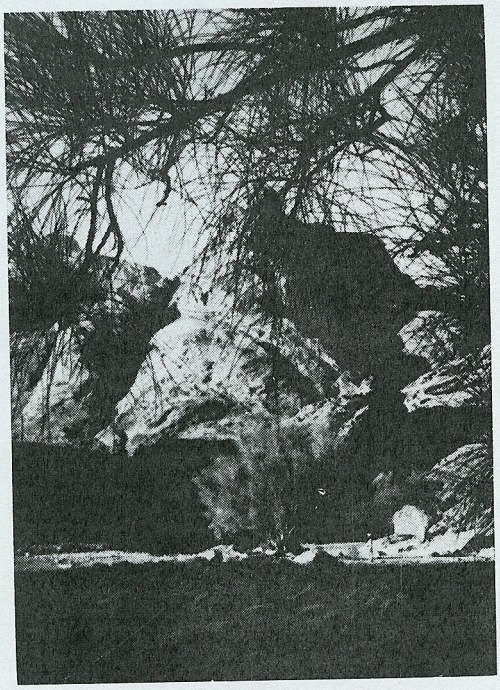

Fig. 9.—*Moringa peregrina*. Wadi Qattar, Eastern Desert. Note man in photo.

My Abadi friend told me that the angular, three-sided seeds are sometimes strung for prayer beads. He also said that a string of one hundred *yasaar* seeds placed around the neck of a woman in labor is believed to lessen the difficulties of childbirth.

CAPPARIDACEAE

Capparis cartilaginea Decne. (=*C. galeata* Fres.): *Lassaf, kabar* etc. (Fig. 10). "The contents of the fruit which is usually eaten by the Bedouins is supposed to be a good remedy against fever." (5).

C. spinosa L.: *Kabar, abaar, lassaf* or *caper*. Tregenza (14) mentions using *kabar* as an inhalant, in combination with *Teucrium pilosum*, for the treatment of a cold. I have eaten the flower buds of this plant and they have a delicious, spicy flavor. I observed that plants which were accessible to ibex (*Capra ibex*) were often stripped of buds and young leaves. This species is the source of commercial capers (7).

Cleome droserifolia (Forsk.) Del.: *Mashta, mishtar* (Fig. 11). The uses of this plant were told me by an Abadi who said the

Fig. 12.—*Aizoon canariense*. Wadi Aqwamtra, Gebel Elba (Sudan Gov. Admin. area).

Bedouins use the dried leaves for scorpion stings and snake bites. For scorpion sting the dried leaves are bound onto the wound until sweating occurs. If sweating does not occur, the treatment is repeated. For viper bite the dried leaves are boiled and made into a poultice. A "decoction of this plant is said to be used by the Bedouins as a remedy for skin eruptions" (5).

AIZOACEAE

Aizoon canariense L.: *Hadaq, hudak, samh* (Fig. 12). The seeds of this woody annual are ground and cooked into gruel by the Bedouins of the Eastern Desert, I was told by a man who saw me collecting a specimen.

PALMAE

Phoenix dactylifera L.: *Nakhl* or date palm. The uses of the palm are many and widely known (12). The natives of the oases in the Western Desert cut out the terminal bud of male palms, make a cup-like depression there and remove the sap as it collects. The fermented palm juice called *lubki,* or *laghbi* I consider to be a delicious and refreshing drink. Browne (4), in his remarks on the Siwans said, "They drink in great quantities the liquor extracted from the date tree, which they term *date-tree-water*, though it have often, in the state they drink it, the power of inebriating." Further details can be found in Belgrave's (2) book on Siwa. According to Hill (7) palm wine was known to Herodotus in 420 B. C.

Palm spines are used by Bedouins in the Western and Eastern Deserts for making part of a gazelle trap. This is a wheel-like affair about eight or ten inches in diameter with the bases of the spines bound with leather or fiber around the circumference and the tips almost touching at the hub-less center. These are placed over holes dug in trails or at feeding stations. Nooses are placed over these devices. When the foot of the unfortunate animal passes through the noose and the spiny ring, the latter prevents the noose from slipping off. A wooden drag tied to the noose restricts the animal's movements (9).

Fig. 13.—*Hyphaene thebaica*. Bir el Shab, Western Desert.

Hyphaene thebaica (L.) Mart. (*Cucifera thebaica* Del.): *Doam;* or *dom*-palm, ginger bread tree (Fig. 13). In the streets of Kharga in early May, I saw people gnawing on the glossy brown, globular fruits of this palm. Although the fruits are fibrous and tough to chew, the flavor is pleasant, similar, I thought, to that of carob pods. Beadnell (1) compared the flavor to ginger bread, hence the common name in English.

I was told that a drink made from the pulverized fruits is used in Kharga for gastro-intestinal disturbances and for strengthening the heart. Beadnell wrote: "In some parts of the Sahara the spongy internal portions of the nut forms an important article of food, and when mixed with an infusion of dates constitutes a cooling drink much valued for uses in cases of febrile disturbances."

The drug properties of *dom* are being investigated by the Faculty of Pharmacy, University of Alexandria (personal communication). Various drug and practical uses of *dom* were listed by Täckholm and Drar (12).

GRAMINEAE

Cymbopogon proximus (Hochst.) Stapf. [=*Andropogon proximus* Hochst. ex A. Rich.]: *Half barr* (Fig. 14). The basal tufts of this grass are pleasantly aromatic and make, in my estimation, a delicious tea. The tea is used by Bedouin and townspeople to relieve gastro-intestinal disturbances and many Egyptians are familiar with it. Drar (5) mentioned its being "recommended as a good remedy for cold."

Parts of the camel road from Gebel Elba and northern Sudan to Aswan and Darawi, which I have frequented, were littered with bits of this herb that had fallen from camel packs.

Panicum turgidum Forsk.: *Thommaam, shoosh* (Fig. 15). In the Gebel Elba area, where there are no palms, I observed that the Bisharin people use this coarse grass for making gazelle and ibex traps. The basal internodes are split into several pieces which are pointed on one end and then bound in

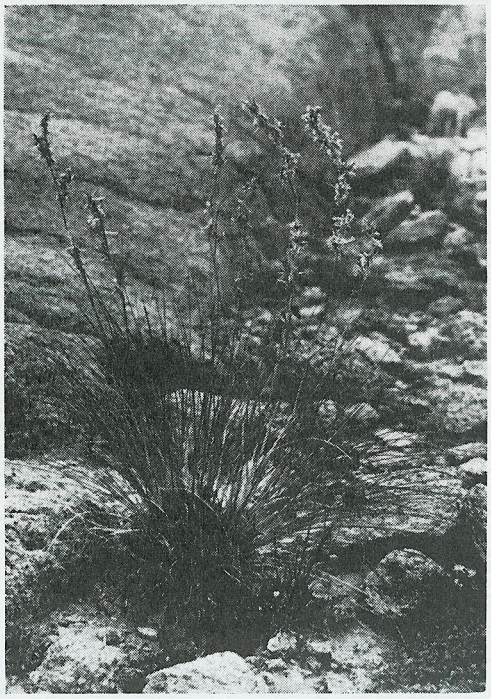

Fig. 14.—*Cymbopogon proximus*. Gebel Nasl, Wadi Yoider, Gebel Elba (Sudan Gov. Admin. area).

Fig. 15.—*Panicum turgidum*, Western Desert.

the same way as palm spines mentioned above.

Literature Cited

1. Beadnell, H. H. Llewellyn. 1909. An Egyptian oasis. John Murray, London. pp. xiv, 248.
2. Belgrave, C. Dalrymple. 1923. Siwa, the oasis of Jupiter Ammon. John Lane the Bodly Head Ltd., London. pp. xxiv, 275.
3. Boulos, L. 1966. Flora of the Nile region in Egyptian Nubia. Feddes Repertorium **73**: 184-215.
4. Browne, W. G. 1799. Travels in Africa, Egypt, and Syria. T. Cadell Jr., and W. Davies, Strand; and T. N. Longman and O. Rees. London. pp. xxxviii, 139.
5. Drar, M. 1936. Enumeration of the plants collected at Gebel Elba during two expeditions. Tech. and Scientific Service, Fouad I Agric. Mus., Ministry of Agric., Egypt. Bull. No. 149. pp. vii, 123.
6. Hassanien Bey, A. M. 1925. The lost oases. Century Co., N. Y., London. pp. xxiii, 363.
7. Hill, Albert F. 1952. Economic botany. McGraw-Hill, Inc., N. Y. 2nd ed. pp. xii, 560.
8. Kassim, M. 1912. A meteorological expedition to Siwa. Cairo Scient. Jour. **6**: 76-84.
9. King, W. J. Harding. 1925. Mysteries of the Libyan Desert. Seeley, Service and Co., Ltd., London. 348 pp.
10. Lucas, A. 1962. Ancient Egyptian materials and industries. Edw. Arnold Ltd., London. 4th ed. 524 pp.
11. Mason M. 1936. The paradise of fools. Hodder and Stoughton, London. 282 pp.
12. Täckholm, V., and M. Drar. 1950. Flora of Egypt. Vol. II. Bull. Fac. Sci. No. 28. Fouad I Univ., Cairo. pp. xii, 547.
13. ———, ———, A. A. A. Fadeel. 1956. Students' flora of Egypt. Anglo-Egyptian Bookshop, Cairo. 649 pp.
14. Tregenza, L. A. 1955. The Red Sea Mountains of Egypt. Oxford Univ. Press, London. pp. viii, 247.
15. ———. 1958. Egyptian years. Oxford Univ. Press, London. pp. xx, 198.
16. Watt, J. M., and M. G. Breyer-Brandwijk. 1962. Medicinal and poisonous plants of East Africa. E. and S. Livingstone Ltd., Edinburgh and London. pp. vii, 1457.