Hyoscyamus muticus L., Mant., 45 (1767).

Names
Arabic: Sakaraan, Sekran سم النار
Semm el-far سم الفراش
Shagaretas-sakraan
English: Egyptian Henbane
French: Jusquiame d’Egypt

Morphological Description
Herbaceous plant, 30-60 cm high, perennial, stout, green and fleshy, stem thick, richly branched from the neck, leaves succulent, alternate, long petioled below, sessile above with an acute apex and angled or toothed-lobed margin. The leaf blade is broad, the floral leaf arising on the peduncle oblong-elliptical-shaped. Inflorescence in one-sided spike or raceme-like with dense flowers. Flowers are bisexual, homogeneous and slightly zygomorphic, calyx is tubular, corolla funnell-shaped, white or green or purple. Fruits are relatively small, brownish, unarmed capsules with a longitudinal opening and containing numerous seeds. It is included in the persistent calyx.

Geographical Distribution
Local: Almost all the phytogeographical regions of the country. It occurs in the desert, Mediterranean Sea, Sinai, Red Sea, Oases, and in certain parts of the Gebel Elba region.
Regional: In the deserts of the Middle East.
Global: In the deserts of the Middle East, Africa, Europe, Asia and South America.

Ecology
The soil texture supporting *Hyoscyamus muticus* ranges between gravelly sand, sandy limestone and loam and to sandy clay. Thus, *Hyoscyamus muticus* has a wide range of amplitude in the desert, the most suitable habitat being sandy soil (considerable fine sand fruction) with a low medium carbonate content. The soil reaction must be weakly alkaline (PH 7.4-8.0) or alkaline (PH 8.0-9.0) and low salinity of the magnitude of 0.28%. *Hyoscyamus muticus* belongs to the xerophytic plant community, which is characterized by a limited water supply.

Status
The economic importance of *H. muticus* is widely increasing since the plant has been spotlighted and an increasing interest is directed towards its cultivation as a source for alkaloid production in pharmaceutical industrialization. Trials to cultivate *H. muticus* in two different locations have been carried out to determine the total alkaloidal contents in addition to other plant growth criteria. The first location was the experimental farm of the Faculty of Pharmacy which represented a clay-loamy soil, and the second one was the 6th October farm in Noubaria (Egypt) which represented sandy soil lands, the latter giving better results.

Part(s) Used
Total herb, leaves and flowering tops.

Collection
The flowering tops are collected at the mid flowering stage.

Preparations
Infusion, decoction and powder.

Use
Oral, external and ointment.
Constituents
Total tropane alkaloids ranging from 1.38-1.58% during flowering stage. Hyoscyamine represents 90% of the total alkaloids in addition to small amounts of hyoscine. *H. muticus* is 25 times richer in alkaloid than *H. niger*.

Pharmacological Action and Toxicity
Antispasmodic, anodyne, sedative, mydriatic. Principally employed in irritable conditions and nervous affections. It has also been recorded to be used in asthma, whooping cough, as a sedative and as a substitute for opium, where this is inadmissible, such as for children’s complaints. The alkaloid hyoscine is used very widely, as a pre-operative medication, to prevent travel sickness. *Hyoscyamus* is used mainly for its antispasmodic effect on the digestive and urinary tracts, and to counteract griping due to purgatives. The plant is toxic due to its high content of tropane alkaloids.

Pharmacopoeia

Phytopharmaceutical Products
*Hyoscyamus muticus* fluid extracts.
*Herba Hyoscyamus muticus*.
Standardized powder of *Hyoscyamus muticus*.
Tincture of Egyptian *Hyoscyamus*.
Avicenne powder; Kahira, 20g *Hyoscyamus* leaves, 75g.
Buchu and *Hyoscyamus* mixture.
Buscopan; Buscopan Compositum; Buscopan plus (CID), (Boehringer Ingelheim)

Traditional Medicine and Indigenous Knowledge
History: “*Hyoscyamus*” originated from Greek literature, “Hoys” meaning a Hog and “Kyamos” meaning a bean. It was Dioscorides who, long before the Christian era, gave the plant its name of *Hyoscyamus*, because although poisonous to man and many animals, pigs could apparently eat it without any harm. He used henbane to produce sleep and allay pain. In the 10th century, it is recorded under the name of *Jusquiasmus*. It fell into disuse until it was again adopted in medicine in 1809 after the recommendation of Baron Storch, who gave it in the extract form in cases of epilepsy and other nervous convulsive diseases. Greeks and Romans knew it as a painkiller; Babylonians and Egyptians were acquainted with both its good and bad qualities. Brewers in earlier times made use of henbane in beer, probably in order to make it more intoxicating.

The plant is said to relieve painful spasmodic conditions, of the digestive and urinary tracts, and lead colic. It has been used for toothache and whooping cough. The boiled herb has been used as a pain killer during labour. Sakaraan cigarettes have been used to treat asthma.

Traditional Medicinal Uses
- Acute mania and delirium, in the treatment of withdrawal symptoms in morphine dependence
- Chronic dementia
- Convulsions
- Epileptic mania
- Functional palpitations
- Gastro-intestinal tract and the gastric or duodenal ulcer
- Mental and maniacal excitement
- Neurolgia
- Paraylsis agitans
- Spasmodic cough and asthma

Other uses of the plant: In some parts of the world, it is used as a poison.
References


General References


Dan Kenner, Yves Requena (2001) "Botanical Medicine, A European Professional Perspective", Paradigm Publications 44, Linden Street, Brookline, Massachusetts 02445 USA.

