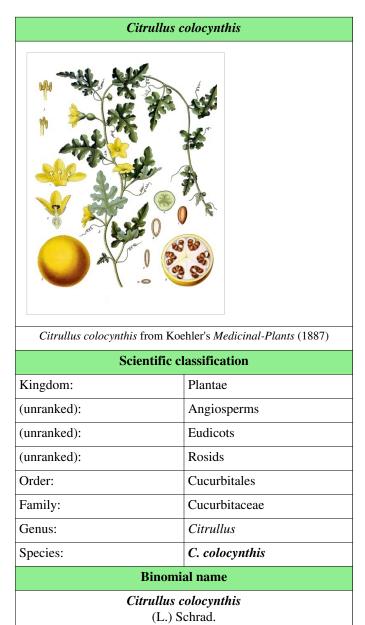
Citrullus colocynthis

Citrullus colocynthis

"Bitter-apple" and spelling variants redirect here. This is also used for the poisonous Soda Apple, a species of nightshade.



Citrullus colocynthis, commonly known as the colocynth, bitter apple, bitter cucumber, egusi, or vine of Sodom (Sanskrit: Gavakshi गवाक्षी, Indarvaruni इंद्रवारूणी), is a viny plant native to the Mediterranean Basin and Asia, especially Turkey (especially in regions such as İzmir), Nubia, and Trieste. It originally bore the scientific name Colocynthis citrullus, but is now classified as Citrullus colocynthis.

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Growth

Its fruit, which is lemon-sized, yellowish, green-mottled, spongy, and extremely bitter, is a powerful hepatic stimulant and hydragogue cathartic. It is used as a strong laxative. In overdoses, the fruit can cause violent, sharp pains in the bowels, with dangerous inflammation. Given that the colocynth grows wild in region of Israel, these symptoms would be consistent with the "wild gourd" mentioned in 2 Kings 4:39-40. It is seldom used alone, but in combination with other cathartics has been a standard remedy. It has been used alone in obstinate edema, amenorrhea, and in cerebral derangements. A normal dose of fluid extracted from the fruit pulp is 2 to 5 minims (120 to 310 μ L), and for the powdered extract, 1 to 2 grains (60 to 130 mg). [2]

Seed constituents

Its seed, which is edible but similarly bitter, nutty-flavored, and rich in fat and protein, is eaten whole or used as an oilseed. The oil content of the seeds is 17-19% (w/w), consisting of 67-73% linoleic acid, 10-16% oleic acid, 5-8% stearic acid, and 9-12% palmitic acid. It is estimated that the oil yield is approximately 400 L/hectare. [3]

Uses

The characteristic small seed of the colocynth have been found in several early archeological sites in northern Africa and the Near East, specifically at Neolithic Armant, Nagada in Egypt; at sites dating from 3800 BC to Roman times in Libya; and the pre-pottery Neolithic levels of the Nahal Hemar Caves in Israel. [4] Zohary and Hopf speculate that "these finds indicate that the wild colocynth was very probably used by humans prior to its domestication." [5]

Desert Bedouins are said to make a type of bread from the ground seeds. There is some confusion between this species and the closely related watermelon, whose seeds may be used in much the same way. In particular the name "egusi" may refer to either or both plants (or more generically to other cucurbits) in their capacity as seed crops, or to a soup made from these seeds and popular in West Africa.

A traditional food plant in Africa, this little-known vegetable has potential to improve nutrition, boost food security, foster rural development and support sustainable landcare. ^[6]

Pre-modern medicinal uses

In pre-modern medicine it was an ingredient in the electuary called *confectio hamech*, or diacatholicon, and most other laxative pills; and in such cases as required purging, it was very successful. It is one of the most violent purgative drugs known; insomuch that it excoriates the passages to such a degree as to sometimes draw blood, and induce a so-called "superpurgation". Sometimes, it was taken boiled in water, or beer, in obstruction of the menses, which was considered successful in strong constitutions. Some women used it in the same manner, in the beginning of pregnancy, to cause an abortion, which often occurred due to the violence of its operation.^[7] Its usage for this purpose is documented in ancient times; for example, the following recipe was found in the Ebers medical papyrus in Egypt, dated to about 1550 BCE:^[8]

To cause a woman to stop [terminate] pregnancy in the first, second or third period [trimester]: unripe fruit of acacia; colocynth; dates; triturate with 6/7th pint of honey. Moisten a pessary of plant fiber [with the mixture] and place in the vagina.

— Ebers papyrus, c. 1550 BCE; translation from *Eve's Herbs*, by John M. Riddle^[8]

The powder of colocynth was sometimes used externally, with aloes, etc., in unguents, plasters, etc., with remarkable success against parasitic worms; and some, for the same purpose, recommended that the pulp be used as an enema. In iliac passion, enemas of colocynth were used effectively where most other pre-modern medicines had failed.^[7]

Troches, or lozenges, made of colocynth were called "troches of alhandal". They were prepared by cutting the colocynth to a small size, and reducing it to a fine powder in a mortar, rubbed with oil of sweet almonds; adding gum

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tragacanth, and mastic afterwards.^[7]

Remedies for counteracting colocynth have included emetics, such as zinc sulfate, and apomorphine, if caught early; later, demulcents and opiates, with stimulants to combat collapse.^[2]

References in religion

In Islam, it is reported from Abu Musa Al Ash'ari that Muhammad said,"The example of a believer who recites the Qur'an and acts on it, like a citron which tastes nice and smells nice. And the example of a believer who does not recite the Qur'an but acts on it, is like a date which tastes good but has no smell. And the example of a hypocrite who recites the Qur'an is like a Raihana (sweet basil) which smells good but tastes bitter And the example of a hypocrite who does not recite the Quran is like a colocynth which tastes bitter and has a bad smell." (Book #61, Hadith #579) [Bukhari] & Sahih Muslim]

References

- [2] Davis & Company Parke. *Manual of therapeutics* (http://books.google.com/books?vid=0v8WXvgMqT9vJWctY-wB& id=VwdlfEwRuTEC). Parke, Davis & Co. 1909. pp. 262-266.
- [3] "Evaluation of Citrullus colocynthis, a desert plant native in Israel, as a potential source of edible oil" (http://dx.doi.org/doi:10.1006/jare. 1998.0454)
- [4] Daniel Zohary and Maria Hopf, Domestication of Plants in the Old World, third edition (Oxford: University Press, 2000), p. 194.
- [5] Zohary and Hopf, ibid.
- [6] National Research Council (2006-10-27). "Egusi" (http://books.nap.edu/openbook.php?record_id=11763&page=155). Lost Crops of Africa: Volume II: Vegetables (http://books.nap.edu/openbook.php?record_id=11763). Lost Crops of Africa. 2. National Academies Press. ISBN 978-0-309-10333-6. . Retrieved 2008-07-17.
- [7] This article incorporates content from the 1728 Cyclopaedia, a publication in the public domain.
- [8] Riddle, John M. Eve's Herbs: A History of Contraception and Abortion in the West. Harvard University Press. 1999. ISBN 0-674-27026-6.

External links

- Information on oilseed uses (http://www.hort.purdue.edu/newcrop/nexus/Citrullus_colocynthis_nex.html)
- "Evaluation of Citrullus colocynthis, a desert plant native in Israel, as a potential source of edible oil" (http://dx.doi.org/doi:10.1006/jare.1998.0454)

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