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The Aspalathus Caper

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Abstract
Aspalathus, a plant mentioned in Pliny the Elder's "Natural History," Dioscorides' "De Materia Medica," Theophrastus' "Enquiry into Plants," and Ecclesiasticus is most probably caper (Capparis sp.). It has an Akkadian linguistic cognate, supālu. Ethnobotanical, archaeobotanical, and linguistic evidence show that this plant has played a role in the ancient, but ongoing cultural tradition in the Near East.

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The *Aspalathus* Caper

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Aspalathus, *a plant mentioned in Pliny the Elder's* Natural History, *Dioscorides'* De Materia Medica, *Theophrastus'* Enquiry into Plants, *and Ecclesiasticus is most probably caper (*Capparis *sp.). It has an Akkadian linguistic cognate,* supālu. *Ethnobotanical, archaeobotanical, and linguistic evidence show that this plant has played a role in the ancient, but ongoing cultural tradition in the Near East.*

In the same region [Cyprus] grows camel's thorn [aspalathos], *a white thorn of the size of a moderate-sized tree, with the flower of a rose; the root is in request for unguents. People say that any shrub over which a rainbow forms its arch gives out a scent as sweet as that of the aspalathus, but that if this happens in the case of an aspalathus a scent rises that is indescribably sweet. Some call this shrub red scepter* [erysisceptrum] *and others scepter. The test of its genuineness lies in its fiery red colour, firmness to the touch and scent like that of beaver-oil. It is sold for 5 denarii a pound (Pliny,* Nat. Hist. *12.52.10).*

Aspalathus, somme call . . . Erysisceptron [i.e., red scepter]. It is a woody kind of shrub hauing many prickly thornes, growing in Istrus, & Nisyrus, & Syria, & Rhodes, which the oyntment-makers vse for the thickning of their ointments. That is good which is heauie, & after it is barked about, enclining to a red or a purple colour, thick, odoriferous, & bitter in the tast (Dioscorides, De Materia Medica I, *19).*

I gave a sweet smell like cinnamon and aspalathus, and I yielded a pleasant odour like the best myrrh, as galbanum, and onyx, and sweet storax, and as the fume of frankincense in the tabernacle (Ecclesiasticus 24:15).

Now this is a general list of the plants used for perfumes: cassia cinnamon cardamom spikenard nairon *balsam of Mecca* aspalathos *storax iris* narte kostos *all-heal saffron-crocus myrrh* kypeiron *ginger-grass sweet-flag sweet marjoram lotos dill. Of these it is the roots, bark, branches, wood, seeds, gum or flowers which in different cases yield the perfume. Some of them grow in many places, but the most excellent and most fragrant all come from Asia and sunny regions. From Europe itself comes none of them except the iris (Theophrastus,* Enquiry into Plants *9.7.3).*

The plant name *aspalathus* occurs infrequently in ancient texts. It is mentioned once in the Apocrypha of the Bible (Eccles 24:15) (Moldenke and Moldenke 1952) and once in Theophrastus' *Enquiry on Plants*. Both references suggest it to be a sweet-smelling plant. Dioscorides mentions its thorns, and reports its use for thickening ointments. Pliny gives the most complete description by far in his *Natural History.*[1] Given the likelihood that folk nomenclature varies across time and space, we will never be certain that the ancient authors all were referring to the same plant; yet the history of *aspalathus* is an example of an ongoing ethnobotanical tradition that has persisted across the Near East from the beginning of history.

Spininess is an important plant defense against predation by herbivores; so spiny plants abound in the Mediterranean region and southwest Asia, where grazers have influenced the vegetation for millennia. Over the years, scholars have considered a variety of such plants as referents for *aspalathus*. In modern Greek, *aspalathos* is translated as prickly broom, furze, and gorse (Stavrapoulos 1988), which are spiny legumes (*Cytisus* and *Genista*). Rackham

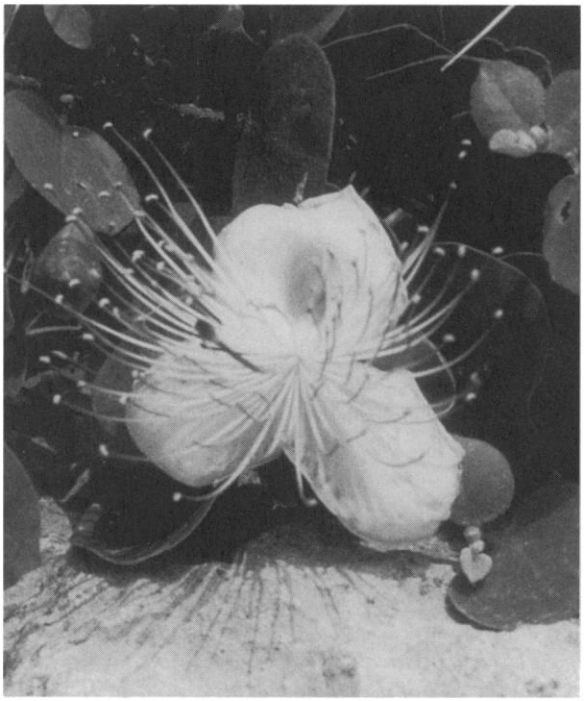

Fig. 1. Camel thorn (*Alhagi pseudalhagi* [Bieb.] Desv.). (Photo by Laura Foos)

Fig. 2. Caper (*Capparis spinosa* L.). (Photo by Jennifer Fry)

translates the word as "camel's thorn" (*Alhagi* sp.), another spiny legume (fig. 1).[2] The *Oxford Latin Dictionary* (1982, s.v. "aspalathus") is circumspect, however, defining *aspalathus* as "a thorny shrub from which a fragrant oil was obtained." I propose here that Pliny's *aspalathus* conforms closely to caper (fig. 2),[3] most probably *Capparis spinosa* L. The designation caper is also consistent with the bits of description provided by the other ancient authors.

ASPALATHUS IN PLINY'S *NATURAL HISTORY*

In this section, the descriptions of caper, camel thorn, and rose are based on identification criteria reported in the *Flora of Iraq* (Townsend and Guest 1966; 1974; 1980) and personal observation. Table 1 summarizes the evidence, which supports the view that *aspalathus* is caper, and is, in any case, unlikely to be camel thorn.

Source: Cyprus

Both caper and camel thorn occur on Cyprus around the eastern Mediterranean, and in west Asia, but caper grows as far west as Portugal.

Thorn: "White"

The phrase "white thorn" (*spina candida*) is ambiguous, for it could refer to the color of the plant, its thorn, or some other trait (cf. the English tree name, "white oak"). Taken literally, the description fits caper, which has two thorn-like, light brown stipules at the base of each leaf. Camel thorn has branches tipped with brownish spines.

Life-form: Moderate-size Tree/Shrub

An English speaker would not call either caper or camel thorn a tree; botanically, both are small shrubs. Note that the Germans and Dutch do not have the same problem, with *Kapernbaum* and *kapperboom*! Caper grows up to 75 cm, with a diameter up to 2 meters of trailing branches; it can have a thick root stock. Camel thorn grows up to a meter.

Flower: "Rose"

This descriptor, too, is ambiguous, as it may refer to smell, form, or color. The flower of the wild rose (*Rosa* sp.) has five distinct petals, is usually pink

TABLE 1.
Correlation between Pliny's Description of *Aspalathus*[a] and Attributes of Caper and Camel Thorn

Identification criteria	*Caper* (Capparis)	*Camel thorn* (Alhagi)
Source	Very good	Good
Thorn	Plausible	Plausible
Life form	Possible	Possible
Flower form	Good	Poor
Use (ethnomedicine, pharmacology)	Good–excellent	Possible
Odor	Excellent	Poor
"Red scepter"	Good	No
Cognate (modern language)	Good	No
Cognate (ancient language)	Good	No
Good alternative ancient name	Yes	No

[a] In *Natural History.*

(though also white or red), exhibits radial symmetry, and can measure up to 6 cm in diameter. It also has numerous yellow stamens. The flower of caper has four creamy-white petals, sometimes tinged with purple. Like the rose, it has radial symmetry. The prominent flower can be up to 10 cm in diameter, though it is more commonly 5–6 cm. Its stamens are numerous, pink to purple, and can be as long as 5 cm. In contrast, camel thorn has a rose to reddish pea-like flower (i.e., bilaterally symmetrical), about 1 cm long. Its stamens are not visible at a glance.

Use: Root Used for Unguent

Despite its spininess, caper is a very useful plant. In Europe and North America, the pickled flower buds are put in salads and other dishes, but its flowers, fruits, and shoots may also be eaten. Of more relevance here, however, are the reported medicinal uses of *Capparis spinosa* L. and related species. In Iraq (Townsend and Guest 1980) and Iran (Caius 1986), for example, a decoction of the root is used to alleviate rheumatism. Many parts of the plant have pharmacologically active compounds which people around the world have recognized (Asolkar, Kakkar, and Chakre 1992); products of the caper plant are used to treat skin problems or are applied to the skin as poultices (Townsend and Guest 1980; Lewis and Elvin-Lewis 1977; Caius 1986; Chopra, Nayar, and Chopra 1956).

The situation is quite different for camel thorn, though it, too, has some medicinal properties (Asolkar, Kakkar, and Chakre 1992); for example, the oil from the leaves is used to treat rheumatism, and the flowers in treatments for piles (Chopra, Nayar, and Chopra 1956). A sugary exudate from the plant is considered one of several referents for ancient "manna" (Townsend and Guest 1974).

Odor: "Indescribably Sweet"

The caper flower does indeed have an "indescribably sweet" odor (personal observation); the odor of camel thorn is not especially noteworthy.

Redness, Red Scepter

Several parts of the caper plant fall within the description "red." The dark pink to purple stamens are one of the most salient features of the caper flower, and the stigma and style form an even longer, prominent, club-like unit (scepter?) that emerges from the center of the flower amid the stamens (Zohary 1966), as can be seen in fig. 2. Upon ripening, the fruit rind peels back revealing a pinkish-red, fleshy fruit. The only obvious "red" part of camel thorn is the flower. Of course, both plants draw blood when approached too quickly, but that doesn't seem to be an issue here.

ARCHAEOBOTANICAL EVIDENCE

The archaeobotanical evidence for caper in western Asia and the eastern Mediterranean is sparse, but intriguing. In terrestrial sites, its charred seeds sporadically occur from early times. Of special interest is a jar of charred flower buds and unripe fruits dating

to the late third millennium B.C. found at Tell es-Sweyhat in northwestern Syria (van Zeist and Bakker-Heeres 1985: 309–10), which demonstrates that caper was an economic plant in antiquity. A few caper seeds have also been found at Ulu Burun off the south coast of Turkey, in a Late Bronze Age sunken ship that would have plied the waters between the Levant, Cyprus, and Turkey. The archaeobotanist considers the few caper seeds to be incidental weeds scattered among a royal cargo of metals, glass, ceramics, and animal and plant products, rather than cargo in its own right (Haldane 1990).

ETYMOLOGICAL RELATIONSHIPS

The main objection to translating *aspalathus* as caper is that both Greek and Latin already have perfectly good words for caper, namely *kapparis* and *capparis*, which are the source of words for caper in many languages, including a number of Indo-European ones (e.g., caper, *caprier*, *Kapernbaum*), Turkish (*kebere*), and Arabic (*kabar*). Furthermore, there is no doubt that the ancient words refer to caper. Dioscorides details the traits of *kapparis* so precisely as to suggest he had seen the plant growing:[4]

> Capparis . . . is a prickly shrub, spred in a round compasse on ye ground, hauing prickles as ye Bush crooked like an hooke, the leaues round like those of the Malicottoon tree, a fruit like as of the Oliue which opening doth first send forth a white flower, which falling off, there is found somme thing of ye fashion of a long suppositorie, which being opened hath little red graines, like those of Pommegranat. It hath rootes, woodie, & great, & many. It doth grow alltogether in rough and barren places, & in Islandes, and in courts belonging to howses. Both stalke & fruit of it are preserued in salt to be eaten (Dioscorides, *De Materia Medica* II, 204).

There are several ways to explain the coexistence of the two names in antiquity. First, different words may refer to parts of the same plant, depending on context (e.g., acorn and oak). Second, neither Pliny's nor Dioscorides' description of *aspalathus* is detailed (see above), and Pliny's only other references to the plant concern how it was used. This strongly suggests that those ancient authors were familiar not with the plant itself, but rather with a processed product of commerce, and that they relied on sailors, merchants, and other travelers for their descriptions. And finally, there could have been two names for caper in the eastern Mediterranean; folk taxonomy provides many examples of genera that have more than one name for the same or different species and varieties (e.g., cedar and juniper in American English).[5] In fact, one might expect a plant to have more than one name where people from different regions and language backgrounds meet.

Aspalathos, the Greek source of *aspalathus*, belongs to a class of nouns consisting particularly of plant names and place names that derive from a pre-Greek language of the Aegean (K. DeVries, personal communication). Because caper is an important medicinal plant, one might expect it to have a name in local Semitic languages of the eastern Mediterranean. Indeed, there is an Arabic word, *šafallah*, which usually refers to the caper fruit, but may also be applied to the plant (Townsend and Guest 1980).[6] That it could be etymologically related to *aspalathus* is clear, with the semantically important phonemes being *s*, *p*, and *l*.

"*S*" in Latin and Greek may appear as "*š*" in languages of the Middle East (consider the word *sesamum/sesamon*, which in Arabic may be *simsim*, but in Chaldaean *šišma* [Townsend and Guest 1980], and in the ancient Semitic language, Akkadian, *šamšamū* [*CAD* 17/1: 301]). As Moscati et al. (1964) have determined, "*f*" in Arabic may occur as "*p*" in Proto-Semitic and the later Semitic languages of the Mediterranean coast, Hebrew and Ugaritic, and Syriac.

An unanswered question remains concerning whether some of the Greek medical and botanical knowledge preserved by medieval Arab scholars originated in an earlier west Asian/Mesopotamian tradition. In ancient times, in both west Asia and Greece, people would have been familiar with the caper plant and would have had a name for it; they also may have had knowledge of its medicinal properties. As Powell (1993: 56) points out, the practice of medicine in ancient Babylonia was "primarily drug-oriented," so one can imagine that the pharmacological properties of caper were known in pre-Arab times.

If the proposed linguistic connection between *aspalathus* and *šafallah* is accepted, it becomes plausible that *aspalathos* was a Semitic loan word into Greek. One might therefore look for cognates in other Semitic languages, both ancient and modern. Several clues may be worth following.

Few plant names in Akkadian are translated with confidence, but fortunately there are determinatives in the written language that at least announce a word

to be a tree or plant name. Indeed, there is a probable Akkadian cognate for *aspalathus*: *supālu*. *Supālu* has several meanings. One designation is for a tree, generally considered to be a juniper (*CAD* 15: 390–91).[7] The *Assyrian Dictionary* also reports that as resin or wood shavings, *supālu* occurs as an aromatic, and there are a number of medical references (primarily to poultices) (*CAD* 15:390–91), which is consistent with the uses of *aspalathus* reported by later Classical authors. Civil (1987) suggests that the word *supālu* also refers to a kind of plant that grows in lower Mesopotamia. With this meaning, *supālu* has an even older Sumerian equivalent, *ú-munzer*, which occurs in an enumeration of plants eaten by sheep. That plant "grows near water sources . . . , is used as a sweetener . . . , and . . . is an excellent fodder for cows" (*CAD* 15: 46),[8] traits that do not preclude an identification of the plant as caper, though they by no means encourage it.

IS *ASPALATHUS* ALWAYS THE SAME PLANT?

Each culture classifies and names plants in its own way, so translations of plant names between taxonomic systems rarely match their real-world referents exactly. Even so, folk genera (e.g., caper, camel thorn, rose) usually "correspond closely in content with [genera] recognized independently by Western botany," and they "exhibit an internal structure in which some members are thought of as prototypical of the taxon while others are seen as less typical of the category" (Berlin 1992: 34).[9] For these reasons, it is surprisingly appropriate for translators to use common English genera rather than impose a spurious botanical precision on an ancient text by assigning a scientific species designation. On the other hand, it would be helpful if translators would indicate the range of scientific taxa, especially genera, they include under a given common English name.

Despite ambiguity inherent in all discussions that rely on the common names of plants, whether ancient or modern, Pliny's description of *aspalathus* conforms reasonably closely to caper. Aside from spininess, the other ancient authors consider *aspalathus* sweet-smelling and an ingredient in ointments. All of these associations are quite compatible with the known properties of caper. Ancient misidentification of the caper plant is unlikely, as it is quite distinctive. In different times and places, *aspalathus* and its linguistic cognates may have been applied to other plants besides caper; yet the knowledge of plants and medicines developed and transmitted by peoples of the ancient world transcended both time and cultural boundaries.

ACKNOWLEDGMENTS

This article was inspired by Stuart Fleming's request for a picture of camel thorn based on Pliny's description. I thank Steve Tinney, Keith DeVries, Linda Bregstein, Miguel Civil, Susan Zeelander, Kathryn Gleason, and Pat McGovern for information and references on the many languages and sources with which I am unfamiliar, and the anonymous reviewers for their skeptical comments; none of these colleagues are responsible for the conclusions here.

NOTES

[1] *Aspalathus* also appears in Pliny's *Natural History* as an ingredient in oil of cyprus (13.2.12); from Spain as an ingredient in ointment (24.68.111); as an ingredient in the "royal" unguent (13.2.18); mixed with wine (13. 19.107); for making oil (15.7.30); and mixed with rose and other items for medicine (21.73.121).

[2] Rackham, however, does not provide a scientific name for "camel's thorn"; as camels eat the leaves of *Capparis*, he might even have meant that plant.

[3] In the interest of readability, I use caper to refer to the scientific genus *Capparis* and camel thorn to *Alhagi*.

[4] A comparison with the texts cited at the beginning of this article shows that Dioscorides' description of *aspalathus* has more in common with Pliny's description than it does with his own description of caper.

[5] This can be a cause of some confusion, as Lebanon cedar (*Cedrus libani* A. Rich) is a different genus from red cedar (*Juniperus virginiana* L.). Ancient Akkadian texts, too, are ambiguous on this point; some scholars consider the *erēnu*-tree to be Lebanon cedar (*C. libani*), but others consider it to be *Juniperus excelsa* Bieb. (Hansman 1974).

[6] Another *Capparis*, *C. cartilaginea* Decne, is called *lasaf* or *lassāf* (Townsend and Guest 1974); it does not seem likely that the "*l*" would be transposed from last to first position, however.

[7] Thompson (1949, cited by Townsend and Guest 1974) suggest *supālu* may mean manna, and therefore be associated with camel thorn. The *CAD* 2: 66 translates *baltu* as a kind of thorn bush, only tentatively identifying it as camel thorn; it is not likely that the root *blt* would

become *spl*, even with metathesis. In Talmudic Hebrew, the word for caper is *tsalaf* (Feinbrun-Dothan 1986: 416).

[8] Civil (personal communication, 17 Nov. 1994) thinks it possible that *supālu* and *aspalathus* are linguistically related.

[9] For example, the "prototypical" species of caper would be *Capparis spinosa* L., though other capers are known from the region.

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ERRATUM

The photographs for figures 1 and 2 on page 56 in the article, "The *Aspalathus* Caper," by Naomi Miller (*BASOR* 297: 55–60), were inadvertently switched in production.

The Editors regret the error.