Apium graveolens L.

Standardized Common Name: Celery

Family: Apiaceae (Umbelliferae)

Taxonomy: *Apium* includes about two dozen species, mainly South American. *Apium graveolens* is native to Europe and is widely cultivated.

Description: Biennial herb, 30–100 cm high. Leaves basal and cauline, pinnately compound with 5–7 leaflets or 3 in upper part of plant; leaflets 1–5 cm long, petiolulate, deltoid-rhomboid to rhomboid, usually shallowly lobed; bases of largest leaflets broad and deltoid, bases of smaller leaflets cuneate; margins coarsely serrate to crenate. Inflorescences compound umbels, numerous, borne opposite leaves, nearly sessile, with 4–12 unequal rays, without bracts; umbellets to 20–flowered, without bracteoles; flowers small, white. Fruit a schizocarp of 2 mericarps; mericarps 1–2 mm long, ovoid, laterally compressed, constricted at commissure, vallecular vittae 1(–3).

Parts in Commerce: Fruits ("Seed")

Identification: See appendix for explanation of the technical terms pertaining to umbel fruits.

- Schizocarp, often separating into individual mericarps
- Mericarps 1–2 mm long
- Mericarps ovoid to broadly ovoid, about half as broad as long
- Somewhat laterally compressed; breadth and thickness of mericarp nearly equal
- Commissure constricted, so flat commissural face is not widest point of mericarp; weakly pentagonal in cross-section
- Ribs yellowish-brown, valleculae greenish-brown to brown
- Ribs threadlike, narrow, at least as high as broad
- Vittae 1(-3) per vallecula, sometimes visible in dried fruit but not resembling secondary ridges
- Calyx teeth absent
- Odor aromatic, similar to vegetable celery
- Taste aromatic, similar to vegetable celery

Adulterants: Fruits of *A. graveolens* may be confused with those of *Ammi majus* L. (Bishop's Weed) and *Ammi visnaga* (L.) Lam. (Khella), both of which are also of commercial value. These differ from *Apium* in several features:

• 1.5–2(–3) mm long, breadth and thickness usually less than half of length

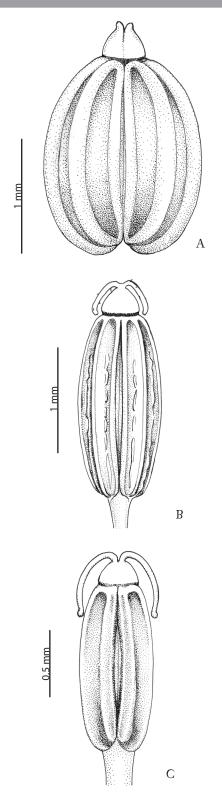


Figure 6: a, fruit of *Apium graveolens*; b, *Ammi majus*; c, *Ammi visnaga*

- Color of valleculae brown or greenish-brown to dark brown in A. majus or nearly black in A. visnaga
- Vittae always 1 per vallecula, often prominent, in A. majus resembling secondary ridges
- Calyx teeth sometimes present but minute, often lost
- Ribs of *A. majus* narrow, with height exceeding breadth; ribs of *A. visnaga* broader and shallower, with a delicate groove or darker line in the center (with a hollow space running longitudinally along rib, not present in *A. majus*)
- Odor aromatic
- Taste hot, acrid or bitter

References:

Arenas Posadas JA, García Martín F. Atlas carpólogico y corológico de la subfamilia *Apioideae* Drude (*Umbelliferae*) en España peninsular y Baleares. *Ruizia*. 1993;12:1–245.

Cappellettii EM. Differential microcharacters of epicarp surfaces of *Ammi visnaga* and *Ammi majus*. *Planta Med*. 1979;37:143–150.

Tutin TG. *Apium*. In: Tutin TG, Heywood VH, Burges NA, et al., eds. *Flora Europaea*. Vol. 2. Cambridge: Cambridge University Press; 1968:351–352.

Tutin TG. *Umbellifers of the British Isles*. London: Botanical Society of the British Isles; 1980. B.S.B.I. Handbook No. 2.

Wichtl M, ed. *Herbal Drugs and Phytopharmaceuticals*, 3rd English ed. Stuttgart: medpharm Scientific Publishers and Boca Raton, FL: CRC Press; 2004:34–37 and 51–53.