

# *Artemisia absinthium* L.

**Standardized Common Name:** Wormwood

**Other Common Names:** Absinth, Absinthe, Sagewort, Absinthium, Madderwort

**Family:** Asteraceae (Compositae)

**Parts in Commerce:** Whole herb (including stems, leaves and flowers)

## Identification:

- Stems strong but woody only at the base, striated, often somewhat hairy or smooth and reddish, white inside
- Larger leaves petiolate, several cm long, at least bipinnately lobed or divided; ultimate segments 5–20 mm long, 1–6 mm broad, mostly with obtuse apices
- Smallest leaves few-lobed or simple, almost sessile
- Both sides of leaf bearing silky hairs; at least the lower surface densely pubescent
- Heads borne on leafy panicles, numerous, almost globose, greenish-yellow, about 3 mm broad, containing numerous florets
- Involucre hemispherical, 2–3 mm high; outer bracts linear to oblong or oblanceolate, green; inner bracts ovate and obtuse with dry margins; all bracts pubescent
- Receptacle of head bearing long white hairs
- Marginal florets 9–20, lacking anthers; those in the center of the disk numerous, hermaphroditic with well-developed ovaries
- All florets more or less tubular, 1.5–2 mm long, marginal florets irregular, with small teeth or lobes, lobes not hairy; style long-branched, protruding, irregular in some florets
- Florets have no pappus
- Odor aromatic, characteristic
- Taste strongly bitter

***Artemisia vulgaris* L.:** Numerous species of *Artemisia* have been used medicinally. One of the most common of these is *A. vulgaris* (Mugwort), which has been confused with *A. absinthium*. The taxonomy of *A. vulgaris* has been complicated. Almost a dozen North American species have been lumped into *A. vulgaris* in the past, but the species in the strict sense is European and is found in North America only where it has been naturalized, particularly in the East, or cultivated. The leaves and flowering tops or the leaves alone may be used. Its identifying features include the following:

- Stems angled and striated, red to purplish, smooth or slightly hairy
- Leaves pinnately divided into several oblanceolate to obovate segments, these irregularly toothed or lobed in larger leaves; lobes and teeth acute and forward-pointing
- Lower leaves short-petioled, upper leaves sessile; leaf bases somewhat auriculate
- Lower leaf surface densely white-pubescent; margins may be minutely revolute
- Upper leaf surface green and nearly glabrous; may have scattered short, long-armed T-shaped hairs
- Leaf venation netted, not conspicuous
- Uppermost bracts of panicle small and simple
- Heads numerous, short-pedicelled, erect or slightly drooping
- Involucre cup-shaped, 2.5–4 mm high; bracts with broad dry margins and gray pubescence
- Receptacle hairless
- Ray florets 6–9, disk florets 13–20; corollas reddish-brown or yellowish; disk florets with apices of teeth reflexed
- Odor aromatic
- Taste aromatic and somewhat bitter



**Figure 9:** a—b, *Artemisia absinthium* inflorescence and habit.

**Taxonomy:** *Artemisia* includes somewhere from 200 to over 500 species of shrubs and herbs, which are broadly distributed in the Northern Hemisphere, with a major center of diversity in China. There are about 57 species in Europe, several of which have notable medicinal or culinary uses, including *A. absinthium*. Ragweed is also a member of this diverse genus, whose taxonomy is complex; no complete modern treatment exists.

**Description:** Perennial herb, sometimes slightly woody at the base. Stems clustered, 30–100 cm high, branching above, pubescent with grayish hairs or glabrous and often reddish. Leaves alternate, 2–3-pinnately lobed or divided; lower leaves larger, more divided and with longer petioles than upper, to 10–12 cm long and broad; upper leaves sometimes simple and sessile; ultimate leaf lobes oblong or oblanceolate to linear or lanceolate in upper leaves, usually 5–20 mm long, 1–6 mm broad; apices obtuse or acute on upper leaves; both surfaces pubescent, densely so on lower side. Inflorescence a panicle, 15–40 cm long, with straight branches bearing numerous reduced leaves and heads (capitula); heads pedicellate, drooping, ca. 3 mm in diameter. Heads greenish-yellow, rounded; all florets nearly tubular but of two types, ray florets female, disk florets hermaphroditic; involucre hemispherical, 2–3 mm high, of 12–18 bracts (phyllaries); outer phyllaries oblong, the inner ovate, pubescent with scarios margins and obtuse apices; receptacle bearing long white hairs; ray florets 9–20, corolla ca. 1.5 mm long, short-toothed, glabrous; disk florets 30–50, corolla campanulate, 1.5–2 mm long, 5-toothed, glabrous. Fruit an achene, nearly cylindrical, smooth, glabrous, without pappus.

## References:

Bini Maleci L, Bagni Marchi A. *Artemisia vulgaris* L. ed *A. verlotiorum* Lamotte: studio di alcuni caratteri morfo-anatomici distintivi delle due specie. *Webbia*. 1983;37:185–196.

British Herbal Medicine Association. *British Herbal Pharmacopoeia*. BHMA; 1996:138–139 and 189–190.

Fernald ML. *Gray's Manual of Botany*, 8<sup>th</sup> ed. New York: American Book Company; 1950:1519–1524.

Hall HM, Clements FE. *The Phylogenetic Method in Taxonomy: the North American Species of Artemisia, Chrysothamnus, and Atriplex*. Washington, DC: Carnegie Institute of Washington; 1923.

Keck DD. 1946. A revision of the *Artemisia vulgaris* complex in North America. *Proc Calif Acad Scis*. 1946;25:421–468.

Torrell M, Garcia Jacas N, Susanna A, Valles J. Phylogeny in *Artemisia* (*Asteraceae*, *Anthemidae*) inferred from nuclear ribosomal DNA (ITS) sequences. *Taxon*. 1999;48:721–736.

Tutin TG, Persson K, Gutermann W. *Artemisia*. In: Tutin TG, Heywood VH, Burges NA, et al., eds. *Flora Europaea*. Vol. 4. Cambridge: Cambridge University Press; 1976:178–186.

Wichtl M, ed. *Herbal Drugs and Phytopharmaceuticals*, 3<sup>rd</sup> English ed. Stuttgart: medpharm Scientific Publishers and Boca Raton, FL: CRC Press; 2004:60–62.