

Chamaemelum nobile (L.) All.

Standardized Common Name: Roman Chamomile

Other Common Names: Common Chamomile, English Chamomile, Garden Chamomile

Family: Asteraceae (Compositae)

Taxonomy: *Chamaemelum* includes six mostly Mediterranean species that are closely related to *Anthemis*, a much larger genus with a broader range. The basionym of *C. nobile* is *Anthemis nobilis* L., and several wild species commonly known as chamomiles are still placed within the genus *Anthemis*.

Description: Perennial herb. Stems numerous, prostrate or ascending, branching, (5–)10–30 cm high. Leaves alternate, sessile, 2–5 cm long, oblong, deeply 2–3-pinnatisect; lobes numerous, crowded, linear, mucronulate, pubescent. Heads few, terminal, with long pubescent peduncles, 1.2–3 cm in diameter; in wild material, ray florets 12–20 or rarely absent, disk florets numerous; in cultivated material, most or all florets ligulate. Involucre hemispherical, 4–9 mm in diameter; involucre bracts (phyllaries) 4–6 mm long, in 2–3 rows, oblong to obovate, blunt, with scarios transparent borders and green midrib, slightly hairy. Receptacle conical, solid, with receptacular bracts (paleae) subtending flowers; paleae slightly shorter than disk florets (to ca. 3 mm), sometimes curving around florets, with blunt apex, scarios, bearing minute hairs. Ray florets female; corollas white, contracted into a tube at the base; ligules strap-shaped to ovate-oblong, 7–10 mm long with 3 inconspicuous apical teeth, usually 4-veined (rarely 3–6-veined). Disk florets bisexual, small; corolla yellow, tubular below, somewhat dilated at base, upper part campanulate and five-lobed. Achenes without pappus, ca. 1 mm long, smooth, pale greenish brown, with persistent corolla base at apex; with 3 faint ribs, 1 adaxial and 2 lateral.

Parts in Commerce: Heads

Identification: Commercially cultivated *C. nobile* is always more or less doubled (with some disk florets converted to ray florets); “single chamomile” usually refers not to the wild type but to those plants which still have a significant number of ray florets, as opposed to “double chamomile” in which nearly all florets are ligulate. Aromatic compounds are said to be more concentrated in the disk florets, so the preference for doubled flowers must be aesthetically rather than pharmacologically motivated. Since similar-looking wild contaminants will generally have only one whorl of ray florets, cultivated *C. nobile* is easily identified. In addition to the unusual appearance of the heads, whereby most or all florets are ligulate and white or yellowish-white, its features include:

- 1.2–3 cm in diameter
- Receptacle conical in longitudinal section (not flat

or hemispherical), solid, with 2–3 rows of involucre bracts (phyllaries)

- Receptacular bracts (paleae) chaffy, densely covering receptacle
- Odor characteristic, aromatic
- Taste aromatic, bitter

If material of wild *C. nobile* is to be identified, many more species are similar enough to represent possible contaminants; smaller features should then be observed, such as the following:

- Corolla tube of ray florets distended at base, narrowly tubular below, bell-shaped at the top

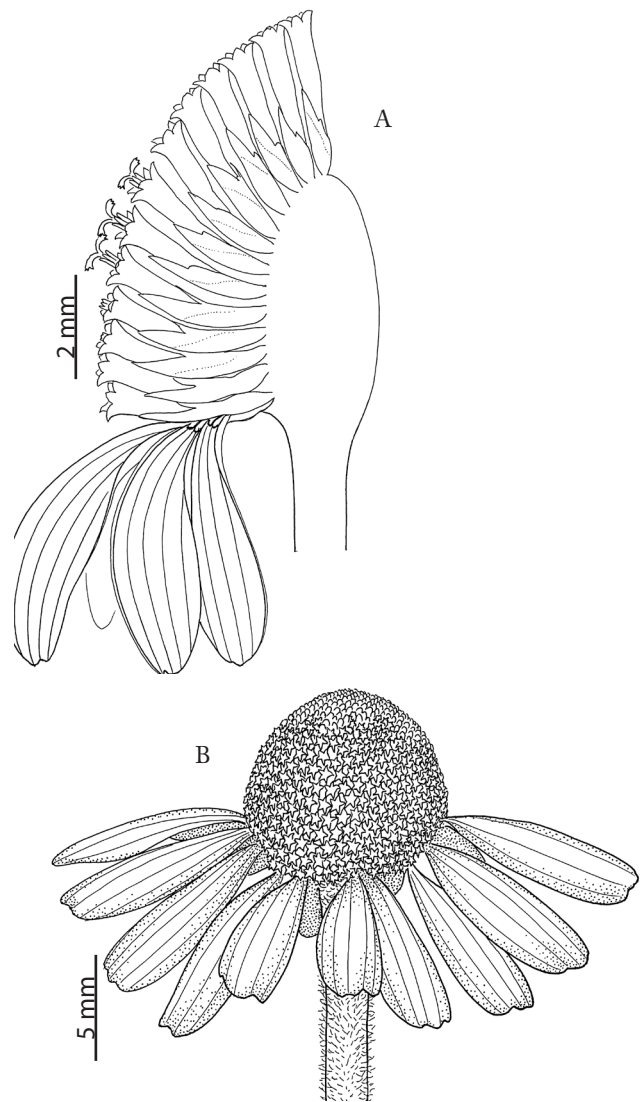


Figure 18: a–b, wild *Chamaemelum nobile* head.

- Achenes <1 mm long, with three faint, widely spaced ribs (not with 4+ ribs or with heavy ribs), crowned with persistent corolla base
- Pappus absent
- Receptacular bracts green to transparent, not with dark brown edges and apices, nor densely woolly.

Adulterants: Cultivated *C. nobile* is easily distinguished from most potential adulterants. Doubled heads of *Tanacetum parthenium* (L.) Sch. Bip. (Feverfew) are a reported adulterant; these flowers can be distinguished by their flattened receptacle. Doubled heads of feverfew sometimes have bracts on the receptacles, but they are comparatively few in number, more acute, and less membranous than those of *C. nobile*. The achenes of the ray florets also have a pappus in the form of a small corona. Flowers of *Achillea ptarmica* are also reported as potential adulterants; these likewise lack a conical receptacle, and are less than 12 mm in diameter.

Wild *C. nobile* could be confused with several plants, including species of *Matricaria* and *Anthemis* (c.f. ***Matricaria chamomilla* L.**) whose common names include “chamomile,” emphasizing their close resemblance. *Matricaria*

is distinguished by its hollow receptacle. *Anthemis*, while very similar to *Chamaemelum*, lacks the swollen, persistent corolla base; in several common species, the achenes are >1 mm long with more than 3 ribs, and may have a small corona. Species of *Tripleurospermum*, closely related to *Matricaria*, may be distinguished by the presence of orange resin sacs on the lobes of the disk corollas. Other species of *Chamaemelum* have similar capitula, but have not been found as contaminants in commerce; these differ mainly in the above-mentioned features of the receptacular bracts.

References:

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