

Calendula officinalis L.

Standardized Common Name: Calendula

Other Common Names: Marigold, Pot Marigold

Family: Asteraceae (Compositae)

Taxonomy: *Calendula* includes about a dozen species, mostly Mediterranean or Southwest Asian. *Calendula officinalis* is native to Europe and western Asia, and is widely cultivated.

Description: Annual herb, 40–60 cm high. Leaves alternate, (3–)7–14(–17) cm long, oblanceolate to obovate, thick, pubescent; base spatulate or tapering; apex acute to obtuse; margins entire to serrate. Inflorescence a single terminal head, 4–7 cm across. Involucre 1.5–2 cm across, with 2 rows of bracts (phyllaries); phyllaries 8–15 mm long, to 2 mm wide, lanceolate, curved, acute, tough, pubescent, dark greyish-green with light brown margins. Receptacle flat, bearing 2–3 rows of ray florets and numerous disk florets. Ray florets female, yellow to orange; tube to 2 mm long, pubescent with long hairs; ligule 1.5–2.5(–3.5) cm long, 3–7 mm broad, oblanceolate, 4–5-veined, (1–)3(–4)-dentate with small teeth, glabrous. Disk florets perfect, <5 mm long; corollas orange-yellow to brownish, funnellform; tube sparsely pubescent at base; teeth 5, spreading, pointed; corolla

easily separated from ovary. Achenes without pappus, 1–2 mm thick, tapering or sometimes beaked at base and apex; dorsal surface dark brownish-green, pubescent with 2–3 rows of minute spiny bumps, often with pale lateral wings; ventral surface paler, glabrous.

References:

Meikle RD. *Calendula*. In: Tutin TG, Heywood VH, Burges NA, et al., eds. *Flora Europaea*. Vol. 4. Cambridge: Cambridge University Press; 1976:206–207.

Wichtl M, ed. *Herbal Drugs and Phytopharmaceuticals*, 3rd English ed. Stuttgart: medpharm Scientific Publishers and Boca Raton, FL: CRC Press; 2004:100–103.

World Health Organization. *WHO Monographs on Selected Medicinal Plants*. Vol. 2. Geneva: World Health Organization; 1999–2002:35–44.

Youngken HW. *Text-Book of Pharmacognosy*, 5th ed. Philadelphia, PA: The Blakiston Company; 1943:874–875.

Parts in Commerce: Ligulate florets

Identification: Identification of composites is easier when the entire head is available for examination. The ligulate florets are frequently sold stripped from the heads, so that relatively few characters remain, and fruits should be rare. Features to note in the ray florets include:

- Yellow to orange, glabrous
- Tube <2 mm long, hairy, enclosing style and bifid stigma
- Ligule 1.5–3.5 cm long, 3–7 mm broad
- Ligule apex usually with 3 small pointed teeth
- Main veins 4(–5), central 2 running to notches between teeth; veins faint, lesser veins may be present between main veins
- No pappus present

- Immature achene curved, 1–2 mm thick, often winged
- Dorsal side of achene darker, pubescent, with rows of small spiny bumps; ventral side paler, glabrous and without bumps
- Taste weak, slightly bitter or salty

Some disk florets are expected to be present among harvested ligulate florets; these are small, yellow to orange, reddish-purple or brownish, with a narrowly funnellform tube and 5 lobes. Phyllaries, if present, should be narrowly lanceolate to nearly linear, 8–15 mm long, stiff and pubescent.

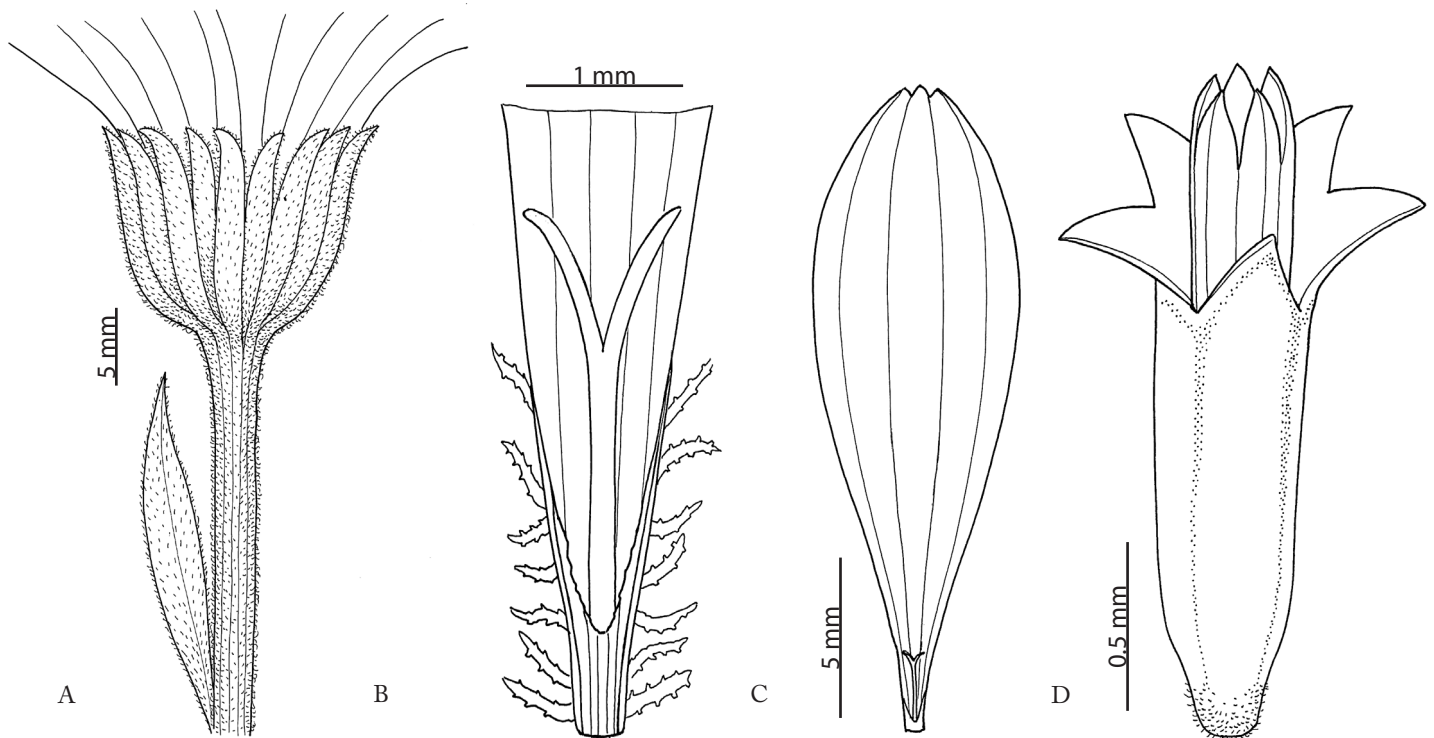


Figure 14: a–d, *Calendula officinalis* involucre, ray floret base, ray floret corolla, and disk floret.