

5. GYNANDROPSIS Candolle, Prodr. 1: 237. 1824, nom. cons.

羊角菜属 yang jiao cai shu

Pedicellaria Schrank.

Herbs, annual [or rarely short-lived perennials], glabrate or glandular pubescent. Stipules absent. Leaves alternate, spirally arranged, palmately compound; petiole long or short, with pulvinus at basal or distal end; leaflets 3 or 5; petiolule bases connate forming a pulvinar disk; leaflet blades oblanceolate to rhombic, margin serrulate-denticulate. Inflorescences terminal, racemose and sometimes elongated, elongating in fruit; bract present at base of pedicels. Flowers zygomorphic. Sepals 4, equal, each often subtending a basal nectary. Petals 4, equal, distinct. Stamens 6; filaments adnate to basal portion of gynophore receptacle forming androgynophore \pm as long as petals. Gynophore slender, elongating and recurving in fruit, scars from filaments visible for 1/3–1/2 its length; style short, thick; stigma 1, capitate. Fruit an oblong capsule, dehiscent. Seeds 10–40 per capsule, subspherical, not arillate; cleft fused between 2 ends of seed.

Two species: pantropical and warm temperate; one species in China.

The center of diversity is in S Asia. *Gynandropsis* is allied to *Cleome* but is distinguished by the long, conspicuous androgynophore. It has sometimes been included in *Cleome*, but most regional accounts of Capparaceae or Cleomaceae (e.g., Jafri, Fl. Pakistan 34: 17–20. 1973) in the Old World have given it generic status, an approach followed here.

1. *Gynandropsis gynandra* (Linnaeus) Briquet, Annuaire Conserv. Jard. Bot. Genève 17: 382. 1914.

羊角菜 yang jiao cai

Cleome gynandra Linnaeus, Sp. Pl. 1: 671. 1753; *C. heterotricha* Burch; *C. pentaphylla* Linnaeus; *Gynandropsis heterotricha* (Burch) Candolle; *G. pentaphylla* (Linnaeus) Candolle; *G. sinica* Miquel.

Herbs, annual, (0.2–)0.9–1.5 m tall. Stems simple or sparsely branched, glabrate to glandular pubescent. Petiole 3.5–4.5(–8) cm, glandular pubescent; leaflets 3 or 5; leaflet blades oblanceolate to rhombic, 2.5–4.5 \times 1.2–2.5 cm, both surfaces glabrate to glandular pubescent, margin serrulate-denticulate, apex acute. Inflorescences 5–20 cm but 10–40 cm in fruit, 5–12-flowered; bracts 1–2.5 cm, 3-foliolate, petiolate. Pedicel purple, 0.8–1.5 cm, glabrous. Sepals green, lanceolate, 3.5–5 \times 0.8–1.2 mm, persistent, glandular pubescent, base cuneate, margin entire. Petals purple to white, oblong to ovate, 7–14 \times 3–4 mm, clawed. Stamens purple, 0.8–3 cm; filaments adnate to gynophore for 1/3–1/2 their length, diverging at anthesis; anthers green, 1–2 mm. Pistil 6–10 mm; style 1–1.2 mm. Fruit gynophore 1–1.4 cm, scars from filaments visible for 1/3–1/2 its length; capsule 4.5–9.5 cm \times 3–4 mm, glandular pubescent. Seeds 10–20 per capsule, reddish brown to black, subspherical, 1.4–1.6 \times 1–1.2 mm, rugose to tuberculate. Fl. (Apr–)May–Jul(–Oct), fr. Jun–Dec. $2n = 34, 60$.

Roadsides, wastelands, fields, often dry areas; near sea level to 300(–800) m. Anhui, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shandong, Taiwan, Yunnan, Zhejiang [Bhutan, India, Indonesia, Malaysia, Nepal, Sri Lanka, Thailand, Vietnam; tropical Africa; introduced in Central, S North, and South America].

This species is often grown as an ornamental and cultivated as a potherb (see Waithaka & Chweya, *Gynandropsis gynandra*, a tropical leafy vegetable: its cultivation and utilization. F. A. O. Pl. Prod. Protect. Pap. 107. 1991; Chweya & Mnzava, Cat's Whiskers: *Cleome gynandra* L. F. A. O. Pl. Prod. Protect. Pap. 1997). It is also used medicinally. The fresh plant has a peculiar odor that suggests burning *Cannabis*. The C4 photosynthetic pathway is reported from *Gynandropsis gynandra* (see Imbamba & Tieszen, Physiol. Pl. (Copenhagen) 39: 311–316. 1977).

