

## 1. CLEOME Linnaeus, Sp. Pl. 2: 671. 1753.

白花菜属 bai hua cai shu

Herbs, annual, sparsely branched, glandular pubescent or glabrous, lacking spines. Stipules absent or scalelike and caducous. Leaves alternate, spirally arranged, pinnately compound; petiole long or short, with a pulvinus at basal or distal end; leaflets [1 or]3–7[–11]; petiolule bases connate, forming a pulvinar disk; leaflet blades lanceolate to oblanceolate, margin entire or serrulate. Inflorescences terminal or axillary from apical leaves, racemose, sometimes flat-topped or elongated, elongating in fruit; bract present [or absent] at base of pedicels. Flowers slightly zygomorphic. Sepals 4, equal, connate for ca. 1/2 their length, each often subtending a basal nectary. Petals 4, distinct, equal. Stamens [4–]6, distinct; filaments inserted on a discoid or conical receptacle (androgynophore). Gynophore slender, elongating and recurving in fruit or sometimes obsolete; carpel 1; style 0.2–0.8 mm, thick; stigma 1, capitate. Fruit an oblong capsule, dehiscent. Seeds 10–40 per capsule, reniform, arillate or not; cleft fused between 2 ends of seed.

About 20 species: Old World warm-temperate and tropical areas; one species (introduced) in China.

The center of diversity of *Cleome* is SW Asia with only one true *Cleome* naturalized in China. Other native and non-native species formerly included in *Cleome* are placed in *Arivela*, *Cleoserrata*, *Gynandropsis*, and *Tarenaya* following Iltis and Cochrane (Novon 17: 447–451. 2007).

### 1. *Cleome rutidosperma* Candolle, Prodr. 1: 241. 1824.

皱子白花菜 zhou zi bai hua cai

*Cleome ciliata* Schumacher & Thonning.

Herbs, annual or rarely perennial, 30–100 cm tall. Stems branched, often with decumbent branches, glabrous or glabrescent to slightly scabrous but sometimes glandular pubescent. Stipules ca. 0.5 mm, scalelike or absent. Petiole 0.5–3.5 cm, proximally winged; leaflets 3; leaflet blades oblanceolate to rhomboid-elliptic, 1–3.5 × 0.5–1.7 cm, abaxially with curved trichomes on veins especially when young, adaxially glabrous, margins entire or serrulate-ciliate, apex acute, obtuse, or sometimes acuminate. Inflorescences terminal and axillary, 2–4 cm but 8–15 cm in fruit, 3–6-flowered; bracts leaflike, 3-foliate, 1–3.5 cm. Pedicel 1.1–2.1 cm but 1.8–3 cm in fruit. Sepals yellow,

narrowly lanceolate, 2.5–4 × 0.2–0.3 mm, ± persistent, glabrous, margin ciliate. Petals white or speckled with purple, oblong to narrowly ovate, 7–10 × 1.5–2.3 mm; central 2 petals outside with a yellow transverse band. Filaments yellow, 5–7 mm; anthers purplish brown, 1–2 mm. Pistil 2–3 mm, glabrous; style 0.5–1.4 mm. Fruit with a 4–12 mm gynophore; capsule 40–70 × 3–4 mm, striate. Seeds 4–25 per capsule, reddish brown to black with white funicular aril, 1–1.5 mm, slender, striately verrucose. Fl. and fr. Jun–Sep.  $2n = 20, 30$ .

Between paddy fields, streamsides, wetlands; near sea level to 200 m. Introduced and naturalized in Anhui, Guangdong, Guangxi, Hainan (Qiongshan), Taiwan, and W Yunnan (Luxi) [native to tropical Africa; naturalized in tropical America, Asia, and Australia].

This species is an invasive weed throughout most lowland wet tropical areas of Asia and Australia.

CLEOMACEAE