

81. OREOLOMA Botschantzev, Bot. Zhurn. (Moscow & Leningrad) 65: 425. 1980.

爪花芥属 zhao hua jie shu

Herbs perennial, with a distinct caudex. Trichomes dendritic, mixed with stalked glandular ones. Stems erect, simple or branched basally and/or apically. Basal leaves petiolate, rosulate, simple, pinnatifid, pinnatisect, sinuate-dentate, repand, or entire. Cauline leaves few to many. Racemes ebracteate, elongated in fruit. Fruiting pedicels thickened, nearly as wide as fruit, divaricate. Sepals oblong-linear, erect, unequal, base of lateral pair saccate, margin membranous. Petals purple, pink, yellow, or rarely white; blade broadly obovate or spatulate, apex rounded; claw well differentiated from blade, longer than sepals. Stamens 6, strongly tetradynamous; median filaments connate into 2 pair, dilated at base; anthers narrowly oblong, obtuse at apex. Nectar glands 2, lateral, annular or semiannular; median glands absent. Ovules 8–50 per ovary. Fruit tardily dehiscent siliques opening basipetally, not breaking transversely into segments, linear or oblong, terete, sessile; valves corky, not veined, with glandular and/or dendritic trichomes, not torulose or moniliform; replum flattened; septum complete, thickened; style prominent, short, or obsolete; stigma capitate or linear, obscurely to strongly 2-lobed, lobes spreading, free, not decurrent. Seeds uniseriate, wingless, oblong, slightly flattened; seed coat not mucilaginous when wetted; cotyledons incumbent.

Three species: China, Mongolia; three species (two endemic) in China.

Oreoloma, which is almost exclusively Chinese, is most closely related to *Sterigmostemum*, a genus distributed primarily in SW Asia. It consists of perennials with erect, unequal, basally saccate sepals, large petals, (1–)1.3–2.2 cm, strongly differentiated into a blade and claw, and fruit not breaking transversely into segments. *Sterigmostemum* comprises mostly annuals with ascending, equal, nonsaccate sepals, smaller petals, 0.5–1(–1.2) cm, undifferentiated into a blade and claw, and fruit generally breaking transversely into segments.

- 1a. Stigma capitate, subtire or obscurely with lobes as long as wide; cauline leaves more than 10; median filaments 5–6(–7) mm; ovules 8–14 per ovary 1. *O. matthiolooides*
- 1b. Stigma linear, with 2 prominent lobes much longer than wide; cauline leaves absent or 1–3(–6); median filaments (8–)9–15 mm; ovules 20–50 per ovary.
 - 2a. Leaves pinnatisect, pinnatifid, or rarely sinuate-dentate; plants densely glandular throughout; fruiting pedicels 2–4(–6) mm; ovules 20–30 per ovary 2. *O. violaceum*
 - 2b. Leaves entire or repand; plants sparsely glandular on sepals subapically and pedicels, very rarely throughout; fruiting pedicels (4–)6–12(–15) mm; ovules 40–50 per ovary 3. *O. eglandulosum*

1. *Oreoloma matthiolooides* (Franchet) Botschantzev, Bot. Zhurn. (Moscow & Leningrad) 65: 426. 1980.

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Dontostemon matthiolooides Franchet, Pl. David. 1: 35. 1883; *Sterigmostemum matthiolooides* (Franchet) Botschantzev.

Herbs 15–45 cm tall, densely tomentose and glandular throughout; caudex slender, often branched. Stems simple from caudex, often branched above. Basal leaves with petioles (0.5–) 1–3 cm; leaf blade lanceolate in outline, 2–7 × 0.8–3 cm, margin pinnatifid or pinnatisect, rarely sinuate-dentate, apex subacute; lateral lobes to 5 on each side of midvein, oblong or ovate, (1–)2–10(–20) cm × (0.5–)1–4(–6) mm. Cauline leaves many, shortly petiolate, pinnatifid or sinuate-dentate. Fruiting pedicels stout, slightly narrower than fruit base, 2–3(–5) mm, divaricate. Sepals narrowly oblong, (6–)7–8 × 1.2–1.7 mm. Petals pink, creamy white, or yellowish, spatulate, 1.4–1.8 cm × 3–4(–5) mm; claw 7–10 mm. Median filaments 5–6(–7) mm, connate along 0.5–0.8 of their length; lateral filaments 3–4(–5) mm; anthers narrowly oblong, 2–2.5 mm. Ovules 8–14 per ovary. Fruit cylindrical or oblong, (1–)1.5–3(–4) cm × 2–4 mm, straight, widest at base, narrower at apex; style obsolete or to 1.5 mm; stigma capitate, subtire or with obscure lobes as long as wide.

Seeds oblong, brown, 2–2.7 × 1–1.3 mm. Fl. and fr. Jun–Aug.

• Valleys, rocky places, sandy and gravelly slopes; 1400–2000 m. Nei Mongol, Ningxia, Qinghai.

The record of *Oreoloma matthiolooides* in FRPS (as *Sterigmostemum matthiolooides*) from Xinjiang is based on misidentified plants of *O. violaceum*.

2. *Oreoloma violaceum* Botschantzev, Bot. Zhurn. (Moscow & Leningrad) 65: 426. 1980.

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Oreoloma sulfureum Botschantzev; *Sterigmostemum fuhaiense* H. L. Yang; *S. violaceum* (Botschantzev) H. L. Yang.

Herbs 6–22 cm tall, densely tomentose and glandular throughout; caudex woody, branched, covered with petiolar remains of previous years, 2–10 mm in diam. Stems simple from caudex, simple or branched above. Basal leaves with petioles 1–3 cm; leaf blade linear-lanceolate to lanceolate in outline, 2–7.5 × 0.5–2 cm, margin pinnatifid or pinnatisect, rarely sinuate-dentate, apex subacute; lateral lobes to 7 on each side of midvein, oblong or ovate, 3–10 × 1–4 mm. Cauline leaves few, subsessile, pinnatifid or dentate. Fruiting pedicels stout, slightly narrower than fruit base, 2–4(–6) mm, divaricate. Sepals narrowly oblong, (6–)8–10 ×

1.5–2 mm. Petals pink, creamy white, or yellowish, (1–)1.3–1.8 cm × (3–)4–6(–7) mm; claw (7–)9–11 mm. Median filaments (8–)9–11 mm, connate along 0.6–0.8 of their length; lateral filaments 6–7.5(–9) mm; anthers narrowly oblong, 2.5–3.5 mm. Ovules 20–30 per ovary. Fruit cylindrical, (1.5–)2.5–3.5 cm × 2–3 mm, straight or curved, widest at base, attenuate to apex; style 3–5 mm; stigma lobes linear, 1–3 mm. Seeds oblong, brown, 2–2.5 × 1–1.3 mm. Fl. Apr–Jun, fr. Jun–Jul.

Mountain slopes; 1000–2200 m. Xinjiang [Mongolia].

A highly variable species in leaf margin, flower color and size, and degree of connation of median filaments. An examination of the type collections of the three “species” united here reveals that the alleged differences in the length of united portions of median filaments, which were used by Botschantzev (loc. cit.) and Yang (Fl. Desert. Reipubl. Popularis Sin. 2: 64. 1987) to separate species, are totally un-reliable, as is the shape of nectar glands. Yang (loc. cit.) reduced *Oreoloma sulfureum* to the synonymy of *Sterigmostemum sulphureum* (Banks & Solander) Bormüller, but the latter is an entirely different species restricted to SW Asia.

3. *Oreoloma eglandulosum* Botschantzev, Bot. Zhurn. (Moscow & Leningrad) 65: 427. 1980.

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Sterigmostemum eglandulosum (Botschantzev) H. L.

Yang; *S. grandiflorum* K. C. Kuan.

Herbs (6–)10–22(–30) cm tall, densely tomentose, sparsely glandular on sepals and sometimes on pedicels and leaf blades, eglandular elsewhere, rarely densely glandular throughout; caudex woody, branched, covered with petiolar remains of previous years. Stems simple from caudex, simple or branched above. Basal leaves with petioles (1–)2–5(–7) cm; leaf blade broadly oblong or broadly oblanceolate, (1–)2–8(–10) × (0.5–)1.5–3(–4) cm, margin entire or repand, apex rounded or obtuse. Cauline leaves absent or few, shortly petiolate, entire. Fruiting pedicels stout, slightly narrower than fruit base, (4–)6–12(–15) mm, divaricate. Sepals narrowly oblong, (0.8–)1–1.5 cm × 2–3 mm. Petals pink, creamy white, or yellowish, (1.5–)1.7–2.2 cm × 4–6 mm; claw 1–1.5 cm. Median filaments 1.1–1.5 cm, connate along 0.5–0.9 of their length; lateral filaments 0.8–1.2 cm; anthers narrowly oblong, 3–4 mm. Ovules 40–50 per ovary. Fruit cylindrical, (3–)4–7(–8) cm × 2–3 mm, straight or curved, attenuate to apex; style 2.5–6(–8) mm; stigma lobes linear, 2.5–4.5 mm. Seeds oblong, brown, 2–3 × 1–1.3 mm. Fl. Jun–Aug, fr. Jul–Aug.

• Slopes, dry gravelly valleys, sandy roadsides; 3000–4300 m. Gansu, Qinghai, Xinjiang.

Both *Oreoloma eglandulosum* and *Sterigmostemum grandiflorum* were published in 1980, the former in March (thus taking priority) and the latter in August. In his protologue of *O. eglandulosum*, Botschantzev indicated that the plants are eglandular. However, the holotype and other collections annotated by him all have the sepals subapically sparsely glandular. The holotype of *S. grandiflorum* has sparsely glandular leaves, pedicels, and sepals. Evidently the density of glands is not a reliable character for the separation of species.

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