

1. MACROSOLEN (Blume) Blume in Roemer & Schultes, Syst. Veg. 7: 1731. Oct-Dec 1830.

鞘花属 qiao hua shu

Loranthus Jacquin sect. *Macrosolen* Blume, Fl. Javæ (Loranth.) 16. 16 Aug 1830.

Shrubs parasitic, base often with epicortical roots, all parts glabrous. Leaves opposite, pinnately veined. Inflorescences axillary, racemes or spikes, rarely umbels; 1 bract and 2 bracteoles subtending each flower; bract small, shorter than the calyx; bracteoles often connate. Flowers bisexual, 6-merous, actinomorphic or sometimes zygomorphic by the presence of a single split. Calyx ovoid to ellipsoid, limb annular or cupular, persistent. Mature flower bud tubular. Corolla sympetalous, tube gradually dilated, usually 6-keeled in middle portion, then constricted abruptly to a neck and expanded to a clavate tip, lobes reflexed. Filaments short; anthers 4-loculed, sometimes multilocellate; pollen grain semilobate in polar view. Ovary at first 3-loculed, then 1-loculed; placentation free, central. Style filiform, base usually articulated. Stigma capitate. Berry ovoid or ellipsoid.

About 40 species: tropical S and SE Asia; five species in China.

- 1a. Leaf blade 3.5–5.5 × 1.3–2 cm, apex rounded 5. *M. tricolor*
- 1b. Leaf blade 4–14 × 1–6 cm, apex acute to acuminate or obtuse.
 - 2a. Pedicel 4–6 mm; racemes (2–)4–8-flowered; peduncle and rachis to 20 mm; berry subglobose 1. *M. cochinchinensis*
 - 2b. Pedicel 1–4 mm; racemes 2–4(–8)-flowered; peduncle and rachis 1–5 mm; berry ellipsoid (berry not known for *M. robinsonii*).
 - 3a. Corolla red with green markings; mature bud 2.5–3.5 cm 4. *M. bibracteolatus*
 - 3b. Corolla orange or yellow; mature bud 1.1–1.5 cm.
 - 4a. Umbels 2- or 3-flowered; petiole 2–4 mm; lateral veins of leaf blade conspicuous adaxially 3. *M. robinsonii*
 - 4b. Racemes 2–4(–8)-flowered; petiole 3–10 mm; lateral veins of leaf blade inconspicuous adaxially 2. *M. geminatus*

1. *Macrosolen cochinchinensis* (Loureiro) Tieghem, Bull. Soc. Bot. France 41: 122. 1894.

鞘花 qiao hua

Loranthus cochinchinensis Loureiro, Fl. Cochinch. 1: 195. 1790; *Elytranthe ampullacea* (Roxburgh) G. Don; *E. ampullacea* var. *tonkinensis* Lecomte; *E. cochinchinensis* (Loureiro) G. Don; *E. cochinchinensis* var. *tonkinensis* (Lecomte) H. L. Li; *E. fordii* (Hance) Merrill; *Loranthus ampullaceus* Roxburgh; *L. fordii* Hance; *Macrosolen fordii* (Hance) Danser.

Shrub 0.5–1.3 m tall. Branches grayish, scattered lenticellate. Petiole 5–10 mm; leaf blade broadly elliptic or ovate to lanceolate, 5–10 × 2.5–6 cm, leathery, lateral veins 4 or 5 pairs, abaxially prominent or obscure on both faces, base cuneate to broadly cuneate, apex acute to acuminate. Inflorescences solitary or 2- or 3-fascicled, axillary, sometimes at older leafless nodes, (2–)4–8-flowered racemes; peduncle 15–20 mm; bracts broadly ovate, 1–2 mm; bracteoles triangular, connate at base, 1–1.5 mm. Pedicel 4–6 mm. Calyx ellipsoid, 2–2.5 mm, limb annular; ca. 0.5 mm. Mature bud 1–1.5 cm. Corolla orange, straight, inflated in middle, 6-angled, lobes lanceolate, ca. 4 mm, reflexed. Filaments ca. 2 mm; anthers ca. 1 mm. Berry orange, subglobose, ca. 7 mm. Fl. Feb–Jun, fr. May–Aug.

Forests, plains, valleys, mountain slopes; ?100–1600 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, S Hunan, Sichuan, Xizang (Mêdog), Yunnan [Bhutan, Cambodia, India, Indonesia, Malaysia, Myanmar, Nepal, New Guinea, Sikkim, Thailand, Vietnam].

The plants have medicinal uses. Recorded hosts include *Castanea mollissima*, *Cinnamomum camphora*, *Cunninghamia lanceolata*, *Ficus lacor*, *Liquidambar formosana*, *Schima superba*, and *Vernicia montana*. The inflorescence, usually with four or more flowers and with pedicels 4–6 mm, immediately distinguishes this very common species from

others recorded from China, even in the absence of corollas.

2. *Macrosolen geminatus* (Merrill) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 344. 1929.

勐腊鞘花 meng la qiao hua

Loranthus geminatus Merrill, Philipp. J. Sci., C, 4: 146. 1909; *Elytranthe suberosa* Lauterbach; *Macrosolen suberosus* (Lauterbach) Danser.

Shrub 0.5–1 m tall. Branches grayish, scattered lenticellate. Petiole 3–10 mm; leaf blade narrowly ovate to lanceolate, (5–)10–11 × (1.5–)4–4.5 cm, leathery, lateral veins 4 or 5 pairs, obscure on both faces, base cuneate, apex acuminate. Inflorescences solitary or 2- or 3-fascicled, axillary on older branches, 2–4(–8)-flowered racemes; peduncle 3–5 mm; bract ovate, ca. 1 mm; bracteoles subovate, connate nearly to apex, ca. 1 mm. Pedicel ca. 1 mm, rarely sessile. Calyx ellipsoid, ca. 3 mm, limb annular, ca. 0.7 mm, margin repand. Mature bud 1.1–1.5 cm. Corolla light orange, tube inflated, 6-angled, lobes lanceolate, ca. 6 mm, reflexed. Filaments ca. 5 mm; anthers 1–1.2 mm. Berry yellow, ellipsoid, ca. 7 × 5.5 mm, verruculose. Fl. Apr–May, fr. May–Jun.

Forests on mountain slopes; 700–800 m. Yunnan (Mengla) [Indonesia, New Guinea, Philippines].

In the Flora area, the plants are parasitic on *Paramichelia bailonii*; outside the Flora area a wider range of hosts is known.

3. *Macrosolen robinsonii* (Gamble) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 345. 1929.

短序鞘花 duan xu qiao hua

Elytranthe robinsonii Gamble, Bull. Misc. Inform. Kew 1913: 45. 1913.

Shrub 0.5–1 m tall. Branches grayish, rather lenticellate. Petiole 2–4 mm; leaf blade elliptic to lanceolate, (4–)7–9 × (1.5–)2–3 cm, leathery, midvein elevated on both sides, lateral veins adaxially conspicuous, base cuneate, apex acuminate or obtuse. Inflorescences usually paired, at node of branchlets or axillary, 2- or 3-flowered umbels; peduncle 1–2.5 mm; bract ovate, ca. 1 mm; bracteoles subovate, almost connate, ca. 1 mm. Pedicel 1–2 mm. Calyx ellipsoid, ca. 2 mm, limb annular, margin repand. Mature bud 1.1–1.5 cm. Corolla orange or yellow, tube inflated, lobes lanceolate, 5–7 mm, reflexed. Filaments ca. 3 mm; anthers 1–1.5 mm. Berry unknown. Fl. Apr–Sep.

Forests, mountain slopes; 1000–1800(–2500) m. SW Yunnan [Malaysia, S Vietnam].

The plants are parasitic on species of *Quercus*.

4. *Macrosolen bibracteolatus* (Hance) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 343. 1929.

双花鞘花 *shuang hua qiao hua*

Loranthus bibracteolatus Hance, J. Bot. 18: 301. 1880; *Elytranthe bibracteolata* (Hance) Lecomte; *E. bibracteolata* var. *acuminatissima* Merrill; *E. bibracteolata* var. *sinensis* Lecomte.

Shrub 0.5–1 m tall. Branches grayish. Petiole 2(–5) mm; leaf blade ovate, ovate-oblong to lanceolate, 8–12 × 2–5 cm, leathery, midvein elevated on both sides, lateral veins usually conspicuous, base cuneate, apex acuminate, rarely subobtuse. Inflorescences solitary or 2–4-fascicled, axillary or in node of branches, 2-flowered umbels; peduncle ca. 4 mm; bract semi-orbicular, ca. 1 mm; bracteoles suborbicular, connate, ca. 1 mm. Pedicel ca. 4 mm. Calyx cylindric, ca. 4 mm, limb cupular, ca. 1.5 mm. Mature bud 3.2–3.5 cm. Corolla red with green band at top of tube, slightly curved, tube inflated, throat 6-angled, lobes lanceolate, ca. 14 mm, greenish, reflexed. Filaments 7–8 mm; anthers ca. 3 mm. Berry red, ellipsoid, ca. 9 × 7 mm, smooth, stylar foot beaklike. Fl. Nov–Dec, fr. Dec–Apr.

Forests, mountain slopes, valleys; 300–1800 m. Guangdong, Guangxi, SE Guizhou, Hainan, Yunnan [Malaysia, Myanmar, N Vietnam].

Recorded hosts include *Antidesma bunius*, *Cinnamomum camphora*, *Schima superba*, and species of *Symplocos*. The overall distribution appears to be disjunct.

5. *Macrosolen tricolor* (Lecomte) Danser, Bull. Jard. Bot. Buitenzorg, sér. 3, 10: 346. 1929.

三色鞘花 *san se qiao hua*

Elytranthe tricolor Lecomte, Notul. Syst. (Paris) 3: 94. 1914.

Shrub ca. 0.5 m tall. Branches grayish, rather lenticellate. Petiole 2–3 mm; leaf blade obovate to narrowly obovate, 3.5–5.5 × 1.3–2 cm, leathery, lateral veins 2 or 3 pairs, base cuneate and slightly decurrent, apex rounded. Inflorescences solitary or paired, axillary, rarely at leafless node, 2-flowered umbels; peduncle ca. 1 mm; bract semi-orbicular, ca. 1 mm; bracteoles semi-orbicular, connate, ca. 1 mm. Pedicel ca. 1 mm. Calyx ellipsoid, 2.5–3 mm, limb annular, ca. 1 mm. Mature bud 2.5–3.5 cm. Corolla red with green band at top of tube, slightly curved, tube inflated, lobes greenish, lanceolate, 6–9 mm, reflexed. Filaments 3–4 mm; anthers 2–3 mm. Berry dark purple, globose, ca. 7 mm, smooth. Fl. and fr. Aug–Mar.

Bushlands; below 100 m. S Guangdong, S Guangxi, Hainan [Laos, Vietnam].

Recorded hosts include *Aporosa chinensis*, *Citrus reticulata*, *Dimocarpus longan*, *Lindera communis*, and *Lumnitzera littorea*. The distinctive shape and size of leaves of *Macrosolen tricolor* immediately distinguish this species from the other members of the genus recorded from China.

