

17. **SONERILA** Roxburgh, Fl. Ind. 1: 180. 1820, nom. cons.

蜂斗草属 feng dou cao shu

Herbs, shrublets, or shrubs, branched. Stems usually 4-sided, winged or not, usually pubescent with simple or glandular trichomes. Petiole winged or not, usually pubescent; leaf blade thin, secondary veins 2–4(or 5) on each side of midvein, base usually cordate and often oblique, margin serrulate with each tooth having a terminal seta, apex acute or acuminate. Inflorescences terminal or sometimes axillary, scorpioid cymes or subumbellate, pedunculate; bracts small, caducous. Flowers small, 3[or 6]-merous. Hypanthium tubular-campanulate, 3-sided, 6-ribbed, pubescent. Calyx lobes broadly triangular, small, very short. Petals pink, red, or purplish red, oblong-elliptic. Stamens 3[or 6], equal or unequal; filaments filiform; anthers subulate to broadly ovate, dehiscence poricidal; connective not inflated. Ovary inferior, urceolate, apex with a membranous 3-lobed crown. Style filiform; stigma apiculate. Capsule campanulate to tubular-campanulate, crown woody and exerted from calyx; hypanthium 3[or 6]-sided, 6-ribbed, usually with sparse glandular trichomes. Seeds numerous, cuneate, small, glabrous or small tuberculate.

About 150 species: tropical Asia; six species (three endemic) in China.

Some 240 names have been published in this genus, and there may be as many as 150 species.

*Sonerila khasiana* C. B. Clarke (in J. D. Hooker, Fl. Brit. India 2: 539. 1879) probably occurs in SE Xizang (Mêdog), although it is not treated here.

- 1a. Flower hypanthium and capsule tubular, hypanthium 4–5 × to 1.7 mm and capsule 4–7 × ca. 2 mm ..... 4. *S. erecta*
- 1b. Flower hypanthium and capsule ± campanulate, broader in diam. than above relative to length.
  - 2a. Herbs to 7 cm tall, with a basal leaf rosette; leaf blade cordate, as long as wide ..... 5. *S. primuloides*
  - 2b. Herbs 10–50 cm tall, with leaves distributed along stems; leaf blades elliptic, ovate, or lanceolate, distinctly longer than wide (except sometimes in *S. hainanensis*).
    - 3a. Leaf blade 1.5–3 × 1–2.3 cm ..... 6. *S. hainanensis*
    - 3b. Leaf blade usually much longer and wider than above.
      - 4a. Leaf blade base oblique or symmetrically deeply cordate, secondary veins usually (2–)4(or 5) on each side of midvein ..... 1. *S. plagiocardia*
      - 4b. Leaf blade base cuneate to obtuse, sometimes slightly oblique, but never deeply cordate, secondary veins 1 or 2(or 3) on each side of midvein.
        - 5a. Leaf blade abaxially scattered setose on veins, adaxially remotely setose between veins and sometimes with white, orbicular patches ..... 2. *S. maculata*
        - 5b. Leaf blade abaxially hispid on veins, adaxially sparsely appressed setose or strigose ..... 3. *S. cantonensis*

1. ***Sonerila plagiocardia*** Diels, Bot. Jahrb. Syst. 65: 117. 1932.

海棠叶蜂斗草 hai tang ye feng dou cao

*Fordiophyton begoniifolium* H. L. Li; *Sonerila alata* Chun & F. C. How ex C. Chen; *S. alata* var. *triangula* C. Chen.

Herbs, erect or sometimes creeping, 30–40 cm tall, base woody. Stems 4-sided, succulent, winged, with sparse glandular trichomes, glabrescent. Petiole 2–10 cm, winged, puberulous and sparsely setose; leaf blade ovate, (2.5–)5–18 × 3.5–5.5(–10) cm, papery to membranous, adaxially puberulous and sometimes purple on veins, secondary veins (2–)4(or 5) on each side of midvein, base oblique or symmetrically deeply cordate, margin serrulate, abaxially puberulous and sparsely setose on veins, apex acuminate. Inflorescences terminal and axillary, scorpioid cymes, 3–6 cm, to 8-flowered, inconspicuously winged, sometimes branched, with sparse glandular trichomes; peduncle 2–4 cm. Pedicel 2–5 mm but to 1.8 cm in fruit, with sparse glandular trichomes or puberulous. Hypanthium tubular-campanulate, middle slightly contracted, 6–8 mm, 3-sided, 6-ribbed, puberulous and with sparse glandular trichomes. Calyx lobes 3, broadly triangular, 1–3 mm, slightly with glandular trichomes. Petals pink to red, oblong-obovate, 1–1.1 cm, middle vein with a few glandular trichomes, apex shortly acuminate. Stamens 3, usually 2 shorter and 1 longer, rarely equal. Longer stamens with filament ca. 8 mm; anthers oblong, 5–7 mm on longer sta-

men, ca. 9 mm on shorter stamens, base forked, apex rounded and shortly beaked. Ovary flask-shaped, apex truncate and with a membranous 3-lobed crown. Capsule campanulate, 7–8 × ca. 5 mm, 3-sided, 3-lobed; hypanthium 6-ribbed, slightly with glandular trichomes or glandular. Fl. Aug–Sep, fr. Oct–Nov.

Dense forests, hillsides, valleys, shaded damp places, stony soil rich in humus; 600–2500 m. Guangdong, Guangxi, Jiangxi, SE Yunnan [Cambodia, Laos, Malaysia, Thailand, Vietnam].

2. ***Sonerila maculata*** Roxburgh, Fl. Ind. 1: 180. 1820.

溪边桑勒草 xi bian sang le cao

*Sonerila laeta* Stapf; *S. rivularis* Cogniaux.

Herbs or shrublets, 20–30 cm tall, sometimes stoloniferous. Stems obtusely 4-sided, glandular puberulous or glabrescent. Petiole (0.5–)1.2(–3) cm, puberulous; leaf blade obovate to elliptic, (2.5–)6(–14) × 2.5–4.5 cm, papery to submembranous, abaxially scattered setose on veins, adaxially remotely setose between veins and sometimes with white, orbicular patches (maculae), secondary veins 1 or 2 on each side of midvein, base cuneate to obtuse and sometimes slightly oblique, margin serrulate with each tooth having a terminal seta, apex acuminate to acute. Inflorescences terminal, scorpioid cymes, 1.5–3.5 cm, furfuraceous, glabrescent; peduncle 0.7–2 cm, 4-angled. Pedicel 1–3 mm, sparsely furfuraceous and with glandular trichomes. Hypanthium funnel-shaped, 5–6 mm, 3-sided,

6-ribbed. Calyx lobes broadly triangular, less than 1 mm, apex acute. Petals purple, oblong, 5.5–10 × 2.5–6 mm, apex acute with 1 glandular trichome at tip. Stamens 3, equal, 5.5–12 mm; anthers 3–7 mm. Ovary flask-shaped to cup-shaped, apex with a membranous 3-lobed crown. Capsule campanulate, 3-sided; hypanthium 6–8 × 4–6 mm, furfuraceous or glabrescent. Fl. Jun–Sep, fr. Aug–Dec.

Thickets, hillsides, valleys, trailsides, streamsides, shaded damp places; 100–1300 m. Fujian, Guangdong, Guangxi, Xizang (Cona), Yunnan [Bhutan, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

**3. *Sonerila cantonensis*** Stapf, Ann. Bot. (Oxford) 6: 302. 1892.

蜂斗草 feng dou cao

*Sonerila cantonensis* var. *strigosa* C. Chen; *S. yunnanensis* Jeffrey.

Herbs or shrublets, (15–)20–50 cm tall, sometimes stoloniferous. Stems obtusely 4-sided, spreading-hirsute and puberulous, glabrescent, usually lenticellate. Petiole 0.5–3(–6) cm, densely hirsute or villous; leaf blade ovate, elliptic-ovate, narrowly lanceolate-oblong, or subelliptic, 3–5.5(–13) × 1.8–6 cm, papery to submembranous, abaxially hispid on veins and sometimes trichomes brownish purplish, adaxially sparsely appressed setose or strigose, secondary veins 1 or 2(or 3) on each side of midvein, base cuneate to obtuse and sometimes slightly oblique, margin serrulate with each tooth having a terminal seta, apex shortly acuminate to acute. Inflorescences terminal, scorpioid cymes or dichasial cymes, 3–7-flowered, densely puberulous and with sparse glandular trichomes or densely villous; peduncle 1.5–3 cm, puberulous and with sparse trichomes; bracts caducous. Pedicel 1–3 mm, slightly 3-sided. Hypanthium tubular-campanulate, 5–7 mm, 3-sided, 6-ribbed, puberulous or with sparse glandular trichomes. Calyx lobes broadly triangular, ca. 1 mm, pilose, apex acute. Petals pink to pale rose-colored, oblong, 5–10 mm, with sparse glandular trichomes or pilose on ridge, apex acute. Stamens 3, equal; filament ca. 7 mm; anthers ca. 8 mm, base slightly forked. Ovary flask-shaped, apex with a membranous crown. Capsule campanulate, 5–7 × 4–5 mm, 3-sided; hypanthium 6-ribbed, glabrous. Fl. Jun–Oct, fr. Dec–Feb.

• Dense forests, hillsides, valleys, shaded damp places, dry or damp places, grassy areas; 500–1500 m. Guangdong, Yunnan [?Vietnam].

This species has also been treated as a synonym of *Sonerila maculata* (Renner et al., Fl. Thailand 7(3): 488. 2001), but study of Chinese material shows that it is probably a distinct species.

**4. *Sonerila erecta*** Jack, Malayan Misc. 1(5): 7. 1820.

直立蜂斗草 zhi li feng dou cao

*Sonerila cheliensis* H. L. Li; *S. epilobioides* Stapf & King; *S. shanlinensis* C. Chen; *S. tenera* Royle.

Herbs 5–18 cm tall. Stems slender, almost 4-sided, alate, with sparse spreading glandular trichomes. Petiole 4–15 mm, glandular pilose, faintly narrowly alate; leaf blade narrowly

elliptic to ovate, (0.5–)1–2.5(–3) × (0.3–)0.4–1.6(–2) cm, membranous, abaxially scattered hirsute, glabrous, or furfuraceous, adaxially sparsely hirsute, secondary veins 2–3 on each side of midvein, base cuneate, margin serrulate with each tooth having a terminal seta, apex shortly acuminate. Inflorescences terminal, scorpioid cymes, 1–5(–11)-flowered, 1–4.5 cm, with spreading glandular trichomes; peduncle 0.8–2 cm. Pedicel 2–7 mm, sub 3 sided, with scattered glandular trichomes. Hypanthium tubular, 4–5 mm, to 1.7 mm in diam., almost 3-sided, 6-ribbed, usually with sparse glandular trichomes on ribs. Calyx lobes broadly ovate-triangular, ca. 0.5 mm, apex apiculate. Petals pink to purple, oblong-elliptic, 3–3.5 mm, oblique, with sparse glandular trichomes on ridge, apex acute. Stamens 3, subequal; filaments as long as anthers; anthers broadly ovate, 1.8–2 mm, base forked. Ovary flask-shaped, membranous crown 3-lobed. Capsule tubular, 4–7 × ca. 2 mm, 3-sided; hypanthium sparsely glandular pilose, 6-ribbed. Fl. Jul–Oct, fr. Oct–Dec.

*Pinus* woodlands, forest margins, limestone hillsides, bamboo thickets, grassy areas, grasslands, trailsides; 500–1800 m. Guangdong, Guangxi, Hunan, Jiangxi, Yunnan [N India, Malaysia, Myanmar, Philippines, Thailand, Vietnam].

In Chinese herbaria the name *Sonerila epilobioides* has often been misapplied to specimens of *S. maculata*.

**5. *Sonerila primuloides*** C. Y. Wu, Fl. Yunnan. 2: 126. 1979.

报春蜂斗草 bao chun feng dou cao

Herbs, ca. 7 cm. Stems ca. 1 cm, densely villous. Leaves in a basal rosette; petiole 1–3 cm, winged, sparsely villous; leaf blade cordate, 1.5–3 × 1.5–3 cm, membranous, abaxially furfuraceous and sparsely puberulous along veins, adaxially sparsely villous and furfuraceous, secondary veins 3 on each side of midvein, base cordate, margin serrate with each tooth having a terminal seta, apex acute. Inflorescences terminal, scorpioid cymes or subumbellate; peduncle (2–)5.5 cm, winged, glabrous. Pedicel 1.1–1.6 cm in fruit, winged, glabrous. Capsule tubular-campanulate; hypanthium tubular-campanulate, ca. 5 × 2 mm, 3-sided, 6-ribbed, glabrous; calyx lobes triangular, sparsely puberulous. Fr. Oct.

• River banks, rock crevices; 1400–1500 m. Yunnan (Jingdong).

**6. *Sonerila hainanensis*** Merrill, Philipp. J. Sci. 23: 256. 1923.

海南桑叶草 hai nan sang ye cao

Herbs or shrublets, 10–20 cm tall, stoloniferous, many-branched, base woody. Stems with sparse glandular trichomes, glabrescent. Petiole 5–10 mm, both sides with sparse glandular trichomes; leaf blade ovate-elliptic to elliptic, 1.5–3 × 1–2.3 cm, membranous, abaxially scattered furfuraceous, adaxially sparsely strigose, secondary veins 1 or 2 on each side of midvein, base rounded, margin scattered serrate with each tooth tipped by 1 glandular trichome, apex acute to obtuse. Inflorescence terminal, compact scorpioid cymes or subumbellate, 2–5-flowered; peduncle 5–8 mm, with a few glandular trichomes; bracts subulate, ca. 1.5 mm. Pedicel 2–4.5 mm. Hypanthium tubular-funnelform, ca. 5 mm, 3-sided, ± furfuraceous. Calyx lobes shortly triangular-semiorbicular, ca. 1 mm, adaxially glandular furfuraceous, apex apiculate. Petals pink, oblong to

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oblong-elliptic, with 1 or 2 glandular trichomes at base of ridge, apex acute. Stamens 3, ca. 8.5 mm; anthers ca. 3.5 mm. Ovary flask-shaped, apex with a membranous crown, crown margin abruptly denticulate. Capsule campanulate, 3-sided, apex truncate; hypanthium ca.  $6 \times 4$  mm, glabrous. Fl. Apr, fr. May.

- Forests, mountain slopes, soil among stones. Hainan.

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