

1. **SABIA** Colebrooke, Trans. Linn. Soc. London 12: 355. 1819.

清风藤属 qing feng teng shu

Androglossum Champion ex Benthams; *Changiodendron* R. H. Miao.

Woody climbers or scandent shrubs, sometimes suberect, rarely erect, deciduous or evergreen. Branches terete or flexuose, striate, pubescent or glabrous, unarmed (except *S. japonica*); branchlets with bud scales persistent at bases, pubescent or glabrous. Leaves simple, glabrous or slightly pubescent, margins mostly entire or sometimes minutely erose, but never toothed, mostly narrowly cartilaginous and revolute. Flowers bisexual, rarely polygamous, axillary, solitary, or few and arranged in cymes or subumbellate panicles, actinomorphic. Sepals (4 or)5[–7], persistent, imbricate, green, white, yellow, or purple. Petals usually (4 or)5(or 6)[or 7], persistent or not, longer than sepals. Stamens (4 or)5(or 6), all fertile; filaments ± flattened, adherent to bases of petals; anthers introrse or extrorse, upright or inflexed. Carpels 2; styles 2, persistent, connate; ovules 2 per carpel, ± superimposed, half-anatropous. Fruit a schizocarp, with 2 drupelets, usually 1 developed, drupelet laterally compressed; mesocarp white, reddish, or blue, rather thin, fleshy; endocarp crustaceous, with prominent veins forming a reticulate pattern (with faveolate cavities). Seed 1[or 2], subreniform; testa leathery, dotted; embryo with 2 undulate, or strongly folded cotyledons, radicle curved.

About 30 species: S and SE Asia; 17 species (seven endemic) in China.

See Water, A taxonomic revision of the genus *Sabia* (Sabiaceae) (Blumea 26: 1–64. 1980).

Sabia cavaleriei H. Léveillé and *Sabia feddei* H. Léveillé (Repert. Spec. Nov. Regni Veg. 9: 456. 1911) are both synonyms of *Orixa japonica* Thunberg in the Rutaceae (see Fl. China 11).

Sabia edulis H. Léveillé (Fl. Kouy-Tchéou, 379. 1914–1915) is a species of *Iodes* Blume in the Icacinaceae (see Fl. China 11).

Sabia esquirolii H. Léveillé (Repert. Spec. Nov. Regni Veg. 9: 457. 1911) is a synonym of *Gardneria multiflora* Makino in the Loganiaceae (see Fl. China 15: 328. 1996).

Key 1 (based on treatment in FRPS)

- 1a. Disk swollen, thickly set, shortly cylindrical, margin annular or undulate, rarely crenate, never distinctly toothed or lobed.
 - 2a. Flowers solitary, rarely 2-paired, never a 2-flowered cyme 1. *S. campanulata*
 - 2b. Flowers 1–5, arranged in a cyme.
 - 3a. Sepals 0.4–1.2 mm, subequal, suborbicular, ovate, or broadly ovate, veins inconspicuous.
 - 4a. Leaf blade glabrous, to 3.5 cm wide; pedicel 8–15 mm; ovary glabrous 2. *S. schumanniana*
 - 4b. Leaf blade pubescent, to 7 cm wide; pedicel 3–5 mm; ovary pubescent, rarely glabrous 3. *S. yunnanensis*
 - 3b. Sepals 2–3 mm, unequal or equal, obovate or oblong, veins conspicuous.
 - 5a. Sepals slightly unequal, subobovate, largest one distinctly emarginate at apex, others rounded; petals suborbicular or obovate; leaf blade papery; plants of mainland China 4. *S. emarginata*
 - 5b. Sepals equal, oblong, apex rounded; petals oblong or obovate-oblong; leaf blade membranous; plants of Taiwan 5. *S. transarisanensis*
 - 1b. Disk not swollen, thin, shallowly cup-shaped, margin irregularly toothed, lobed, or parted to base, never entire.
 - 6a. Flowers solitary 6. *S. japonica*
 - 6b. Flowers arranged in cymes, or cymes composing a corymb or panicle.
 - 7a. Flowers arranged in cymes composing a corymb or panicle.
 - 8a. Cymes arranged in corymbs; peduncle very short; petals with red spots 13. *S. fasciculata*
 - 8b. Cymes arranged in panicles; peduncle relatively longer; petals without red spots.
 - 9a. Panicle 7–25 cm; schizocarps subreniform or suborbicular, 1–1.7 cm in diam.; leaf blade elliptic or oblong-elliptic.
 - 10a. Panicle 4–6 cm in diam., yellowish pilose; leaf blade abaxially pubescent, lateral veins 3–5 pairs 14. *S. paniculata*
 - 10b. Panicle less than 2 cm in diam., glabrous; leaf blade abaxially glabrous, lateral veins 6 or 7 pairs 15. *S. limoniacea*
 - 9b. Panicle 3–5(–7) cm; schizocarps suborbicular, obovoid, or reniform, 5–7(–10) mm in diam.; leaf blade ovate-lanceolate, narrowly oblong, or oblanceolate to lanceolate.
 - 11a. Panicle 3–5 cm; schizocarps suborbicular, 5–7 mm in diam.; leaf blade ovate-lanceolate or narrowly oblong, 1–3 cm wide 16. *S. parviflora*
 - 11b. Panicle to 7 cm; schizocarps obovoid to oblong-obovoid or pyriform, 7–10 mm in diam.; leaf blade elliptic-oblong to lanceolate, 1.5–8 cm wide 17. *S. lanceolata*
 - 7b. Flowers arranged in cymes.

- 12a. Sepals unequal; disk margin parted to near base, lobes fleshy; leaf blade membranous 7. *S. purpurea*
 12b. Sepals equal; disk margin not parted to near base, lobes not fleshy; leaf blade thinly leathery or papery.
 13a. Young branches, inflorescences, and young petioles gray-yellowish lanuginous or pubescent, leaf blade pubescent or only pubescent on veins abaxially 12. *S. swinhoei*
 13b. Young branches, inflorescences, young petioles, and both surfaces of leaf blade glabrous.
 14a. Leaf blade narrowly oblong-elliptic or oblong.
 15a. Cyme 3-flowered, peduncle 3–4 cm; branchlet striate; leaf blade 6–10 × 2–4 cm 8. *S. nervosa*
 15b. Cyme 5–10-flowered, peduncle 0.5–2 cm; branchlet brown; leaf blade 3.5–7 × 1.5–3 cm 9. *S. coriacea*
 14b. Leaf blade ovate or ovate-lanceolate.
 16a. Leaves evergreen, blade adaxially black when dried, abaxially pale green; cyme umbelliform; endocarp with distinct midrib 10. *S. discolor*
 16b. Leaves deciduous, blade adaxially olivaceous when dried, abaxially light green; cyme not umbelliform; endocarp without midrib 11. *S. dielsii*

Key 2 (alternative key)

- 1a. Leaves deciduous.
 2a. Inflorescence solitary flowers.
 3a. Leaf blade membranous 1. *S. campanulata*
 3b. Leaf blade papery.
 4a. Old branches armed with short spines; flowering Feb–Mar; petals yellowish green; disk margin lobed 6. *S. japonica*
 4b. Old branches not armed; flowering Mar–Apr; petals green to purple or brown; disk margin swollen or undulate 2. *S. schumanniana*
 2b. Inflorescence a panicle or cyme.
 5a. Inflorescence a panicle.
 6a. Leaf blade abaxially glabrous, to 3.5 cm wide; pedicel 8–15 mm; ovary glabrous 2. *S. schumanniana*
 6b. Leaf blade abaxially pubescent, to 7 cm wide; pedicel 3–5 mm; ovary pubescent, rarely glabrous 3. *S. yunnanensis*
 5b. Inflorescence a cyme.
 7a. Leaf blade membranous.
 8a. Petiole 2–4 mm, lateral veins of leaf 3 or 4 pairs; flowering in May; cyme 3–12-flowered; disk margin lobed; Yunnan 7. *S. purpurea*
 8b. Petiole 4–6 mm, lateral veins of leaf 5 or 6 pairs; flowering in Apr; cyme 1- or 2-flowered; disk margin swollen; Taiwan 5. *S. transarisanensis*
 7b. Leaf blade papery.
 9a. Cyme 2–6-flowered; disk not swollen, shallowly cup-shaped 11. *S. dielsii*
 9b. Cyme 3(–30)-flowered; disk swollen, broadly cylindrical.
 10a. Cyme 4–5 cm, 1–20-flowered; sepals triangular-ovate, ca. 0.5 mm, not emarginate; schizocarp obovoid or orbicular 2. *S. schumanniana*
 10b. Cyme 1.5–1.8 cm, 2- or 3-flowered; sepals subobovate to oblong, 1.5–3 mm, largest ones emarginate; schizocarp reniform 4. *S. emarginata*
 1b. Leaves evergreen.
 11a. Leaf blade abaxially pubescent.
 12a. Leaf blade length : width ratio 1–2 : 1.
 13a. Petiole 15–30 mm; leaf blade adaxially glabrous; cymes arranged in a panicle 14. *S. paniculata*
 13b. Petiole 3–5(–10) mm; leaf blade adaxially pubescent; cyme 1–3(–5)-flowered 12. *S. swinhoei*
 12b. Leaf blade length : width ratio more than 2 : 1.
 14a. Flowers arranged in a cyme 2–7-flowered 12. *S. swinhoei*
 14b. Cymes arranged in a corymb or panicle.
 15a. Cymes arranged in a corymb, glabrous to sparsely tomentulose 13. *S. fasciculata*
 15b. Cymes arranged in a panicle.
 16a. Leaf blade 5–9 cm wide, lateral veins 3–5 pairs; panicle 7–25 cm; petals purplish red, ca. 3 mm; schizocarp 10–12 mm in diam. 14. *S. paniculata*
 16b. Leaf blade 1.5–8 cm wide, lateral veins 6–12 pairs; panicle to 7 cm; petals green to white, 3.5–5.5 mm; schizocarp 7–10 mm in diam. 17. *S. lanceolata*
 11b. Leaf blade abaxially glabrous.
 17a. Leaf blade papery.
 18a. Leaf blade ovate, elliptic-ovate, or elliptic, abaxially pale green, adaxially green, apically acute

- or obtuse; cymes umbelliform 10. *S. discolor*
- 18b. Leaf blade ovate-lanceolate, narrowly oblong, or oblanceolate to lanceolate, abaxially grayish green, adaxially dark or olivaceous green, apically acuminate or shortly acuminate; cymes arranged in a panicle.
- 19a. Leaf blade ovate-lanceolate or narrowly oblong, 1–3 cm wide; panicle 3–5 cm; schizocarps suborbicular, 5–7 mm in diam., lateral veins to 8 pairs 16. *S. parviflora*
- 19b. Leaf blade elliptic-oblong to lanceolate, 1.5–8 cm wide; panicle to 7 cm; schizocarps obovoid to oblong-obovoid or pyriform, 7–10 mm in diam., lateral veins to 12 pairs 17. *S. lanceolata*
- 17b. Leaf blade leathery.
- 20a. Branchlets green or striate; cymes 2–5-flowered or cymes arranged in a panicle.
- 21a. Branchlets striate; lateral veins of leaf 3–5 pairs; cymes 3(–5)-flowered 8. *S. nervosa*
- 21b. Branchlets green; lateral veins of leaf 6 or 7 pairs; cymes arranged in a panicle 15. *S. limoniacea*
- 20b. Branchlets black or brown; cymes 5–10-flowered or cymes arranged in a corymb or panicle.
- 22a. Cymes 5–10-flowered 9. *S. coriacea*
- 22b. Cymes arranged in a corymb or panicle.
- 23a. Cymes arranged in a corymb; peduncle 1–2 mm; schizocarp red 13. *S. fasciculata*
- 23b. Cymes arranged in a panicle; peduncle 2–6 mm; schizocarp green to blue or red.
- 24a. Leaf blade ovate-lanceolate or narrowly oblong, 1–3 cm wide; panicle 3–5 cm; schizocarps suborbicular, 5–7 mm in diam., lateral veins to 8 pairs 16. *S. parviflora*
- 24b. Leaf blade elliptic-oblong to lanceolate, 1.5–8 cm wide; panicle to 7 cm; schizocarps obovoid to oblong-obovoid or pyriform, 7–10 mm in diam., lateral veins to 12 pairs 17. *S. lanceolata*

1. *Sabia campanulata* Wallich in Roxburgh, Fl. Ind. 2: 311. 1824.

钟花清风藤 zhong hua qing feng teng

Woody climbers, up to 6 m tall, deciduous. Branchlets light green, with brownish spots, striate, glabrous. Bud scales ovoid or broadly ovoid, apices acute, ciliate. Petiole 4–10 mm, pilose; leaf blade abaxially gray, adaxially dark green, lanceolate or narrowly ovate-lanceolate when young, oblong or oblong-ovate when mature, 3.5–8 × (2–)3–4 cm, membranous, abaxially glabrous or pubescent on veins, adaxially puberulent, subglabrous when old, lateral veins 4 or 5 pairs, anastomosing 4–5 mm from margin, reticulate veins sparse, lateral and reticulate veins inconspicuous adaxially, base cuneate or rounded, apex caudate-acuminate or acuminate. Pedicel 1.5–3 mm to 1.5 cm. Flowers solitary, rarely 2-paired, green, yellowish green, or dark purple, 1–1.5 mm in diam. Sepals 5, suborbicular, ca. 0.5 × 2 mm. Petals 5, broadly ovate or suborbicular, 6–9 × 4–7 mm, enlarged to 12 mm at fruiting, 7-veined, apex rounded. Stamens 5, 4–5 mm; filaments flattened; anthers extrorse. Disk margin lobed. Ovary glabrous. Schizocarp broadly obovoid, ca. 7 × 8 mm; endocarp with midrib, faveolate-concave on side, lateral surface concave, shaggy with unarranged strips. Fl. May, fr. Jul.

Humid valley forests, sparse forests, mountain slopes; 500–2800 m. Anhui, Fujian, S Gansu, N Guangdong, Guizhou, Hubei, Hunan, SC Jiangsu, Jiangxi, S Shaanxi, Sichuan, S Xizang, Yunnan, Zhejiang [Bhutan, N India, Nepal].

- 1a. Petals green or yellowish green, persistent, enlarged to 12 mm at fruiting; disk shorter than broad 1a. subsp. *campanulata*
- 1b. Petals dark purple, deciduous, 5–6 mm; disk higher than broad 1b. subsp. *ritchiae*

1a. *Sabia campanulata* subsp. *campanulata*

钟花清风藤(原亚种) zhong hua qing feng teng (yuan ya

zhong)

Sabia campanulata subsp. *metcalfiana* (L. Chen) Y. F. Wu; *S. metcalfiana* L. Chen.

Pedicel 1.5–3 mm. Petals persistent, green or yellowish green, enlarged to 12 mm at fruiting. Disk shorter than broad.

Sparse forests on mountain slopes; 2200–2800 m. S Xizang, Yunnan [Bhutan, N India, Nepal].

1b. *Sabia campanulata* subsp. *ritchiae* (Rehder & E. H. Wilson) Y. F. Wu, Acta Phytotax. Sin. 20: 426. 1982.

鄂西清风藤 e xi qing feng teng

Sabia ritchiae Rehder & E. H. Wilson in Sargent, Pl. Wilson. 2: 195. 1914; *S. gaultheriifolia* Stapf ex L. Chen; *S. shensiensis* L. Chen.

Pedicel 1–1.5 cm. Petals deciduous, dark purple, 5–6 mm, not enlarged at fruiting. Disk higher than broad, base broadest, margin annular.

• Humid valley forests, mountain slopes; 500–1200 m. Anhui, Fujian, S Gansu, N Guangdong, Guizhou, Hubei, Hunan, SC Jiangsu, Jiangxi, S Shaanxi, Sichuan, Zhejiang.

2. *Sabia schumanniana* Diels, Bot. Jahrb. Syst. 29: 451. 1900.

四川清风藤 si chuan qing feng teng

Woody climbers, 2–3 m, deciduous. Branchlets of current year yellowish green, striate; second-year branches brown, glabrous. Bud scales ovoid, glabrous, ciliate. Petiole 2–10 mm; leaf blade oblong-ovate, 3–13 × 1.5–3.5 cm, papery, both surfaces glabrous, lateral veins 3–5 pairs, ascending, anastomosing near margin, reticulate veins sparse, base rounded or broadly cuneate, apex acute or acuminate. Cyme or panicle 1–3(–20)-flowered, 4–5 cm; peduncle 2–3 cm. Pedicel 8–15 mm. Sepals 5, triangular-ovate, ca. 0.5 mm. Petals 5, light green or greenish purple to brownish chocolate colored, oblong or broadly obo-

vate, 4–5 mm, 7–9-veined. Stamens 5, 3–5 mm; filaments flattened; anthers ovoid, introrse. Disk swollen, cylindrical, margin undulate. Ovary glabrous; style ca. 4 mm. Schizocarp obovoid or suborbicular, ca. 6 × 7 mm, glabrous; endocarp with midrib narrowly winged, with 2 adjacent reticulate lines, both surfaces concave. Fl. Mar–Apr, fr. Jun–Aug.

• Forests, mountain slopes, valleys, streamsides; 600–2600 m. Chongqing, N and W Guizhou, Henan, W Hubei, Shaanxi, E and S Sichuan, C Yunnan.

This species is used medicinally.

- 1a. Sepals, petals, filaments, and disk without red glandular dots; cyme 1–3-flowered; leaf blade abaxially light green 2a. subsp. *schumanniana*
1b. Sepals, petals, filaments, and disk with red glandular dots; panicle to 20-flowered; leaf blade abaxially pale 2b. subsp. *pluriflora*

2a. *Sabia schumanniana* subsp. *schumanniana*

四川清风藤(原亚种) si chuan qing feng teng (yuan ya zhong)

Sabia schumanniana subsp. *longipes* (Rehder & E. H. Wilson) C. Y. Chang; *S. schumanniana* var. *longipes* Rehder & E. H. Wilson.

Leaf blade light green abaxially. Cyme 1–3-flowered. Sepals, petals, filaments, and disk without red glandular dots.

• Broad-leaved forests, mountain slopes, valleys, streamsides; 1100–2600 m. Chongqing, N and W Guizhou, Henan, Shaanxi, S Sichuan.

Water (Blumea 26: 25–27. 1980) treated this taxon as a synonym of *Sabia campanulata*.

2b. *Sabia schumanniana* subsp. *pluriflora* (Rehder & E. H. Wilson) Y. F. Wu, Acta Phytotax. Sin. 20: 427. 1982.

多花清风藤 duo hua qing feng teng

Sabia schumanniana var. *pluriflora* Rehder & E. H. Wilson in Sargent, Pl. Wilson. 2: 197. 1914; *S. bicolor* L. Chen; *S. schumanniana* var. *bicolor* (L. Chen) Y. F. Wu.

Leaf blade abaxially pale, narrowly elliptic or linear-lanceolate, 3–8 × 0.8–1.5(–2) cm. Panicle 6–20-flowered. Sepals, petals, filaments, and center of disk with red glandular dots.

• Forests, mountain slopes, valleys, streamsides; 600–2600 m. W Guizhou, W Hubei, E and S Sichuan, C Yunnan.

Plants with leaf blade gray abaxially, sometimes pubescent, panicles 2-flowered, and veined projection of disks apically with red glandular dots have been sometimes treated as *Sabia schumanniana* var. *bicolor* (L. Chen) Y. F. Wu.

Water (Blumea 26: 25–27. 1980) treated this taxon as a synonym of *Sabia campanulata*.

3. *Sabia yunnanensis* Franchet, Bull. Soc. Bot. France 33: 465. 1886.

云南清风藤 yun nan qing feng teng

Woody climbers, 3–4 m, deciduous. Young branches light green, pubescent or puberulent; old branches brown or black-brown, glabrous, striate. Bud scales ovoid or broadly ovoid, midvein prominent, puberulent when young, ciliate. Petiole 3–10 mm, pubescent; leaf blade ovate-lanceolate, oblong-ovate, or obovate-oblong to obovate-orbicular, 3–7(–14) × 1–3.5(–7) cm, membranous or subpapery, both surfaces pubescent, or only abaxially pubescent on veins, lateral veins 3–6 pairs, slender, ascending, anastomosing, base obtuse-rounded to broadly cuneate, apex acute or acuminate to shortly caudate-acuminate. Panicle 2–4-flowered; peduncle 1.5–3 cm. Pedicel 3–5 mm. Sepals 5, with purple-red spots or not, broadly ovate or suborbicular, 0.8–1.2 mm, glabrous. Petals 5, green, yellowish green, or purplish, with purple-red spots at base or not, broadly ovate or obovate-oblong, 4–6 × 3–4 mm, 7–9-veined, sometimes ciliate. Stamens 5. Disk swollen, prominent veins 3 or 4, with or without prominent brown glandular dots at center. Ovary pubescent or puberulent. Schizocarp subreniform, 6–8 mm wide; endocarp with midrib, and 1 or 2 reticulate lines. Fl. Apr–May, fr. May.

Dense or sparse forests, valleys, streamsides; 1400–3600 m. Anhui, Guizhou, Henan, Hubei, Jiangxi, Sichuan, Xizang, C and NW Yunnan [Bhutan, Nepal].

Water (Blumea 26: 25–27. 1980) treated this species complex, including its infraspecific taxa and synonyms, in the synonymy of *Sabia campanulata*.

- 1a. Leaf blade ovate-lanceolate, oblong-ovate, or obovate-oblong, 3–7 × 1–3.5 cm; petals basally with purple-red spots; center of disk with prominent brown glandular dots 3a. subsp. *yunnanensis*
1b. Leaf blade elliptic-oblong, elliptic-obovate, or obovate-orbicular, 5–14 × 2–7 cm; petals basally without purple-red spots; center of disk without prominent brown glandular dots 3b. subsp. *latifolia*

3a. *Sabia yunnanensis* subsp. *yunnanensis*

云南清风藤(原亚种) yun nan qing feng teng (yuan ya zhong)

Celastrus mairei H. Léveillé; *Sabia angustifolia* L. Chen; *S. callosa* L. Chen; *S. croizatiana* L. Chen; *S. glandulosa* L. Chen; *S. leptandra* J. D. Hooker & Thomson; *S. pallida* Stapf ex L. Chen; *S. pentadenia* L. Chen; *S. puberula* Rehder & E. H. Wilson; *S. puberula* var. *hupehensis* L. Chen; *S. pubescens* L. Chen; *S. rockii* L. Chen; *S. rotundata* Stapf ex L. Chen; *S. yui* L. Chen; *S. yunnanensis* var. *mairei* (H. Léveillé) L. Chen.

Leaf blade ovate-lanceolate, oblong-ovate, or obovate-oblong, 3–7 × 1–3.5 cm. Petals basally with purple-red spots. Disk with prominent brown glandular dots at center.

Sparse forests, valleys, streamsides; 2000–3600 m. Henan, Hubei, Sichuan, Xizang, C and NW Yunnan [Bhutan, Nepal].

3b. *Sabia yunnanensis* subsp. *latifolia* (Rehder & E. H. Wilson) Y. F. Wu, Acta Phytotax. Sin. 20: 428. 1982.

阔叶清风藤 kuo ye qing feng teng

Sabia latifolia Rehder & E. H. Wilson in Sargent, Pl. Wilson. 2: 195. 1914; *S. latifolia* var. *omeiensis* (Stapf ex L. Chen) S. K. Chen; *S. obovatifolia* Y. W. Law & Y. F. Wu; *S. omeiensis* Stapf ex L. Chen.

Leaf blade elliptic-oblong, elliptic-obovate, or obovate-orbicular, 5–14 × 2–7 cm. Petals basally without purple-red spots. Disk without brown glandular dots at center. $2n = 24^*$.

• Dense forests; 1400–2600 m. Anhui, Guizhou, Henan, Jiangxi, Sichuan, Yunnan.

4. *Sabia emarginata* Lecomte, Bull. Soc. Bot. France 54: 673. 1908.

凹萼清风藤 *ao e qing feng teng*

Sabia heterosepala L. Chen.

Woody climbers or suberect shrubs, deciduous. Branchlets yellowish green; branches brown, glabrous, striate. Petiole 0.5–1 cm; leaf blade abaxially pale green, adaxially green, oblong-lanceolate, oblong-elliptic, or ovate, 5–11 × 1.5–4 cm, papery, both surfaces glabrous, lateral veins 4 or 5 pairs, slender, ascending, curved, base cuneate or rounded, apex acuminate or acute. Cymes 2(or 3)-flowered, 1.5–1.8 cm. Sepals 5, slightly unequal, subobovate to oblong, (1–)1.5–3 × 0.5–1.5 mm, largest one distinctly emarginate at apex, others rounded. Petals 5, suborbicular or obovate, (3.5–)5–6 × ca. 3.5 mm. Stamens 5, equal; filaments ca. 2 mm, slender; anthers ca. 0.8 mm, introrse. Disk swollen, higher than broad, base broadest, with 2 or 3 obscure projecting veins, each vein with a tiny gland. Ovary ovoid, glabrous. Schizocarp suborbicular, 7–9 mm in diam., with persistent sepals at base. Fl. Apr, fr. Jun–Jul.

• Forests; 400–1500 m. NE Guangxi, Guizhou, S and W Hubei, W Hunan, C and E Sichuan.

Water (Blumea 26: 25–27. 1980) treated this taxon as a synonym of *Sabia campanulata*.

5. *Sabia transarisanensis* Hayata, Icon. Pl. Formosan. 5: 31. 1915.

阿里山清风藤 *a li shan qing feng teng*

Woody climbers, sometimes trailing, deciduous. Branchlets green, striate. Petiole 4–6 mm, pubescent; leaf blade ovoid-oblong or oblong, 4–6 × 2–3 cm, membranous, both surfaces glabrous, lateral veins 5 or 6 pairs, veins and reticulate veins conspicuous, base cuneate or broadly cuneate, margin entire or inconspicuously erose or denticulate, apex acuminate. Cymes 1- or 2-flowered, 1.5–2 cm. Sepals 5, green, equal, oblong, 2–2.5 × 1–2 mm, apex rounded. Petals 5 or 6, purple, oblong or obovate-oblong, ca. 5 × 2.5 mm. Stamens 5 or 6, slightly shorter than petals; filaments flattened, ca. 2.5 mm; anthers globose, ca. 1 mm. Disk swollen, higher than broad, base broadest. Ovary coniform, glabrous. Schizocarp blue, subreniform or suborbicular, ca. 5 mm in diam., with faveolate cavities. Fl. Apr, fr. Jul–Aug.

• Forest margins, thickets; 1500–3300 m. Taiwan.

This is a rare species.

Water (Blumea 26: 25–27. 1980) treated this taxon as a synonym of *Sabia campanulata*.

6. *Sabia japonica* Maximowicz, Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 6: 202. 1868.

清风藤 *qing feng teng*

Woody climbers, occasionally suberect shrubs, to 3 m tall, deciduous. Young branches green, with dense brownish hairs; old branches purple-brown, glabrous, waxy, armed with short spines 4–6 mm, spines at apices shallowly bifurcate; bud scales glabrous, ciliolate. Petiole 0.5–1 cm; leaf blade abaxially pale green, adaxially dark green, ovate-elliptic, ovate, or broadly ovate, 3.5–9 × 2–5 cm, papery, glabrous or sparsely pubescent on midvein, lateral veins 3–5 pairs, base acute, cuneate, or rounded, apex acute or acuminate. Pedicel 2–4 mm, 2–2.5 cm at fruiting; bracts 4, 2–4 mm. Flowers appearing before leaves, solitary. Sepals 5, suborbicular or broadly ovate, ca. 0.5 mm, ciliolate or not. Petals 5, light yellowish green, obovate or oblong-ovate, 3–4 mm. Stamens 5; anthers narrowly elliptic, extrorse. Disk cup-shaped, shallowly 5-lobed. Ovary ovoid, pubescent or glabrous. Schizocarp green to red, purple, or bluish black, suborbicular or subreniform, ca. 5 mm in diam.; endocarp with prominent midrib, with faveolate cavities. Fl. Feb–Mar, fr. Apr–Jul.

Dense forests, forest margins, mountains, valleys, roadsides; below 800 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Jiangsu, Jiangxi, Zhejiang [Japan].

- 1a. Pedicels shortly pubescent or tomentellous;
ovary pubescent 6a. var. *japonica*
1b. Pedicels and ovary glabrous 6b. var. *sinensis*

6a. *Sabia japonica* var. *japonica*

清风藤(原变种) *qing feng teng* (yuan bian zhong)

Sabia bullockii Hance; *S. japonica* var. *spinosa* Lecomte.

Pedicels shortly pubescent or tomentellous. Ovary pubescent.

Dense forests, forest margins, valleys; below 800 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Jiangsu, Jiangxi, Zhejiang [Japan].

6b. *Sabia japonica* var. *sinensis* L. Chen, Sargentia 3: 36. 1943.

中华清风藤 *zhong hua qing feng teng*

Pedicels and ovary glabrous.

• Mountains, roadsides; ca. 500 m. Fujian, N Guangdong, SW Jiangxi.

7. *Sabia purpurea* J. D. Hooker & Thomson subsp. *dumicola* (W. W. Smith) Water, Blumea 26: 54. 1980.

灌丛清风藤 *guan cong qing feng teng*

Sabia dumicola W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 10: 63. 1917; *S. acuminata* L. Chen; *S. parvifolia* L. Chen.

Woody climbers, 2–6 m, deciduous. Branches green, slen-

der, striate, glabrous; bud scales broadly ovoid, glabrous. Petiole 2–4 mm; leaf blade oblong-ovate or narrowly ovate, 1.5–6 × 1–3 cm, membranous, both surfaces glabrous, lateral veins 3 or 4 pairs, ascending, arched-anastomosing, reticulate veins sparse, base broadly cuneate or rounded, apex acute or acuminate. Cymes 3–12-flowered, 1–3 cm. Flowers appearing at same time as leaves, 3–5 mm in diam. Sepals 5, slightly unequal, ovate or suborbicular, 0.5–1 mm. Petals 5, purple-green, purple, or dark red, with red dots distally, elliptic or ovate, 2–4 × 1.5–2 mm, 5-veined, apex obtuse or rounded. Stamens ca. 1 mm; filaments flattened; anthers introrse or extrorse. Disk cup-shaped, deeply lobed to near base, fleshy. Pistil ca. 1 mm; ovary glabrous. Schizocarp subobovoid, 5–7 mm; endocarp with prominent midrib, with faveolate cavities. Fl. May, fr. Jul–Aug.

- Dense forests, valleys, streamsides; 1700–2700 m. W Yunnan.

Sabia purpurea subsp. *purpurea* is distributed in W Bangladesh, Bhutan, NE India, Myanmar, Nepal, and Thailand.

8. *Sabia nervosa* Chun ex Y. F. Wu, Acta Phytotax. Sin. 17(1): 42. 1979.

长脉清风藤 chang mai qing feng teng

Woody climbers, evergreen. Young branches striate; old branches waxy; bud scales triangular, thick, pilosulose. Petiole 8–10 mm; leaf blade abaxially light green, adaxially dark green and shiny, black when dried, narrowly oblong or narrowly obovate-elliptic, rarely ovate, 6–10 × 2–4 cm, thinly leathery, both surfaces glabrous, lateral veins 3–5 pairs, slender, ascending, anastomosing near margins, reticulate veins sparse, base broadly cuneate or cuneate, apex caudate-acuminate. Cymes usually 3(–5)-flowered; peduncles 3–4 cm. Pedicel 4–8 mm. Sepals 5, triangular-ovate, ca. 1.5 mm, ciliate. Petals 5, light green, ovate, obovate, or oblong-ovate, 5–6 × 3.5–4 mm, 9-veined, apex rounded. Stamens 5, 3–3.5 mm; filaments flattened; anthers introrse. Disk shallowly cup-shaped. Ovary glabrous. Schizocarp blue when mature, obovoid, 6–7 mm; endocarp with midrib, with faveolate cavities. Fl. May, fr. Aug–Sep.

- Dense forests, valleys, hillsides, streamsides; below 900 m. N and W Guangdong, N Guangxi.

9. *Sabia coriacea* Rehder & E. H. Wilson in Sargent, Pl. Wilson. 2: 198. 1914.

革叶清风藤 ge ye qing feng teng

Woody climbers, to 5 m, evergreen. Branchlets dark brown; bud scales broadly triangular-ovoid, apex acute. Petiole 5–15 mm; leaf blade abaxially light green, adaxially dark green and shiny, oblong or elliptic, 3.5–7 × 1.5–3 cm, leathery, lateral veins 4–7 pairs, ascending, anastomosing 5–7 mm from margin, reticulate veins sparse, base broadly cuneate or rounded, apex acute or acuminate. Cymes 5–10-flowered, umbelliform, 1.5–2.5 cm; peduncles 0.5–2 cm. Pedicel 1–5 mm. Sepals 5, broadly ovate, ca. 1 mm. Petals 5, light green with reddish tinge, oblong-ovate or ovate, 3–3.5 × 1.5–2 mm, 5–7-veined, apex acute or narrowly obtuse. Stamens 5, 1.5–2.5 mm; filaments flattened; anthers introrse. Disk cup-shaped. Ovary glabrous. Schizocarp pink to red or reddish purple, suborbicular or obo-

void, ca. 5 mm; endocarp with midrib, with faveolate cavities. Fl. Apr, fr. Sep–Nov.

- Hillside scrub, valleys; below 1000 m. SC Fujian, Guangdong, S Jiangxi.

10. *Sabia discolor* Dunn, J. Linn. Soc., Bot. 38: 358. 1908.

灰背清风藤 hui bei qing feng teng

Woody climbers, to 3.5 m, evergreen. Young branches striate, glabrous; old branches dark brown, waxy; bud scales broadly ovoid. Petiole 7–15 mm; leaf blade abaxially pale green, adaxially green, becoming black when dried, ovate, elliptic-ovate, or elliptic, 4–7 × 2–4 cm, papery, both surfaces glabrous, lateral veins 3–5 pairs, base rounded or broadly cuneate, apex acute or obtuse. Cymes 4- or 5-flowered, umbelliform, 2–3 cm, glabrous; peduncles 1–1.5 cm. Pedicel 4–7 mm. Sepals 5, triangular-ovate, 0.5–1 mm, ciliate. Petals 5, yellow, ovate or elliptic-ovate, 2–4 × 1.5–2 mm, 4–7-veined. Stamens 5, 2–3.5 mm; filaments flattened; anthers extrorse. Disk cup-shaped. Ovary glabrous. Schizocarp red or purplish red, obovoid, orbicular, or subreniform, compressed, 5–6.5 × 5.5–7 mm; endocarp with distinct midrib, keeled, faveolate cavities only at margin. Fl. Mar–Apr, fr. May–Aug.

- Mountain thickets; below 1000 m. Fujian, Guangdong, Guangxi, Guizhou, Jiangxi, Zhejiang.

11. *Sabia dielsii* H. Léveillé, Repert. Spec. Nov. Regni Veg. 9: 456. 1911.

平伐清风藤 ping fa qing feng teng

Sabia brevipetiolata L. Chen; *S. olacifolia* Stapf ex L. Chen; *S. wangii* L. Chen.

Woody climbers, 1–2 m, ?deciduous. Young branches yellowish green or light brown; old branches purple-brown or brown, striate, glabrous; bud scales triangular or triangular-ovoid, thick. Petiole 3–10 mm; leaf blade abaxially light green, adaxially dark green, olivaceous-green when dried, ovate-lanceolate, oblong-ovate, or elliptic-ovate, 6–14 × 2–6 cm, papery, both surfaces glabrous, lateral veins 4–6 pairs, reticulate veins sparse, base rounded or broadly cuneate, apex acuminate or long acuminate. Cymes 2–6-flowered, to 5 cm; peduncles 1.5–3 cm. Pedicel 5–10 mm. Sepals 5, ovate, 0.5–1 mm, ciliate. Petals 5, white, ovate or ovate-elliptic, 2–3 × 1.5–2 mm, inconspicuously 7-veined, apex rounded. Stamens 5, 1.2–2 mm; filaments flattened; anthers upright, elliptic, introrse. Disk cup-shaped. Ovary ovoid, glabrous. Schizocarp green, subreniform, somewhat compressed, 5.5–7 × 6.5–8 mm; endocarp without midrib, with faveolate cavities. Fl. Apr–Jun, fr. Jul–Oct.

- Forest margins, streamsides in thickets, mountain slopes, roadsides in valleys; 800–2000 m. N Guangxi, S Guizhou, C and S Yunnan.

12. *Sabia swinhoei* Hemsley, J. Linn. Soc., Bot. 23: 144. 1886.

尖叶清风藤 jian ye qing feng teng

Embelia bonii Gagnepain; *Sabia dunnii* H. Léveillé; *S. gracilis* Hemsley; *S. longruiensis* X. X. Chen & D. R. Liang; *S. ovalifolia* S. Y. Liu; *S. swinhoei* var. *hainanensis* L. Chen; ?*S. swinhoei* var. *parvifolia* Y. H. Xiang & Q. H. Chen; *S. swinhoei*

var. *subcorymbosa* L. Chen; *S. uropetala* Gagnepain.

Woody climbers, to 8 m, evergreen. Branchlets long and straight pilose; bud scales pubescent, ciliate. Petiole 3–5(–10) mm, pubescent; leaf blade elliptic, ovate-elliptic, ovate, or broadly ovate, 5–12 × 2–5(–5.5) cm, papery or thinly leathery, abaxially shortly pilose or pilose only on midvein, adaxially glabrous but pubescent on midvein when young, lateral veins 4–6 pairs, reticulate veins sparse, base cuneate or rounded, apex acuminate to caudate-acute, or obtuse to subrounded. Cymes (1 or) 2–7-flowered, 1.5–2.5(–22) cm, sparsely pubescent or tomentose; peduncles (0.4–)0.7–1.5 cm. Pedicel 2–4 mm. Sepals 5, with inconspicuous red dots outside, ovate or narrowly triangular, 1–1.5 mm, ciliate. Petals 5, white to light green, yellow, or purple, ovate-lanceolate or lanceolate, (3–)3.5–6 × 1–1.5 mm, 5-veined, apex acuminate. Stamens 5, 1–1.6 mm; filaments slightly to broadly flattened; anthers often inflexed, elliptic, introrse. Disk shallowly cup-shaped. Ovary glabrous, entire (or bifid). Schizocarp green to red or dark blue, suborbicular or obovoid, compressed, 7–9 × 6–8 mm; endocarp with inconspicuous midrib, with faveolate cavities. Fl. (Jan–)Mar–Apr(–Jun), fr. Jul–Sep(–Oct).

Valley forests, thickets on limestone hills; 300–2300 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [N Vietnam].

13. *Sabia fasciculata* Lecomte ex L. Chen, *Sargentia* 3: 42. 1943.

簇花清风藤 cu hua qing feng teng

?*Sabia calcicola* C. Y. Wu ex S. K. Chen.

Woody climbers, to 12 m, evergreen. Young branches brown or black-brown, waxy; branchlets glabrous, sparsely puberulent, or tomentulose; bud scales broadly triangular or broadly ovoid, glabrous, ciliate. Petiole 8–15 mm, glabrous or somewhat puberulent; leaf blade abaxially light green, adaxially dark green, oblong, elliptic, obovate-oblong, or narrowly elliptic, 5–12 × 1.5–4 cm, leathery, lateral veins 5–8 pairs, straight, base cuneate or rounded, apex acute or long acuminate. Cymes 3–6-flowered, arranged in a short, ± corymbose inflorescence 10–20-flowered, glabrous to sparsely tomentulose, glomerulate-clustered at early flowering, to 4 cm when blooming; peduncles very short, 1–2 mm. Pedicel 3–6 mm. Sepals 5, ovate or oblong-ovate, 1–2 mm, glabrous, with red glandular dots, margin white, apex acute or obtuse. Petals 5, light green, with red spots at middle, oblong-ovate or ovate, 4.5–6.5 × 2–2.5 mm, 7-veined. Stamens 5, 3–5 mm; filaments flattened; anthers upright, elliptic or oblong-elliptic, extrorse. Disk cup-shaped, shortly 5-lobed. Ovary glabrous. Schizocarp red, obovoid or broadly obovoid, compressed, 6–7 × 7–8.5 mm; endocarp with conspicuous midrib, narrowly keeled, with faveolate cavities. Fl. Feb–May, fr. May–Oct.

Forests, mountain slopes, valleys, rocks; 600–1900 m. S Fujian, N Guangdong, Guangxi, SE Yunnan [N Myanmar, Vietnam].

14. *Sabia paniculata* Edgeworth ex J. D. Hooker & Thomson, *Fl. Ind.* 1: 211. 1855.

锥序清风藤 zhui xu qing feng teng

Woody climbers, to 4 m, evergreen. Young branches yellowish brown, hispidulous, subglabrous when old. Petiole 1.5–3 cm, pubescent; leaf blade elliptic or oblong-elliptic, 10–20 × 5–9 cm, leathery, abaxially puberulent, adaxially glabrous, lateral veins 3–5 pairs, reticulate veins sparse, adaxially inconspicuous, base cuneate or rounded, apex acute or shortly acuminate. Cymes 3–6-flowered, arranged in a panicle 7–25 cm, 4–6 cm in diam., yellowish long pilose. Sepals 5, with purple-red stripes and spots in middle, ovate, ca. 1 mm, ciliate, densely pubescent outside. Petals 5, purple-red, narrowly oblong, ca. 3 × 0.8 mm, 5-veined. Stamens 5; filaments with purple-red spots, flattened; anthers introrse. Disk shallowly cup-shaped, shortly 5-lobed. Ovary glabrous. Schizocarp suborbicular, 1–1.2 cm in diam.; endocarp with midrib, with faveolate cavities. Fl. Jan–Apr, fr. Mar–Aug.

Forests; below 1000 m. SW Yunnan [Bangladesh, Bhutan, NE and NW India, Myanmar, Nepal, Thailand].

15. *Sabia limoniacea* Wallich ex J. D. Hooker & Thomson, *Fl. Ind.* 1: 210. 1855.

柠檬清风藤 ning meng qing feng teng

Androglossum reticulatum Champion ex Bentham; *Sabia limoniacea* var. *ardisioides* L. Chen.

Woody climbers, to 10 m, evergreen. Young branches green; old branches brown, waxy; bud scales broadly triangular. Petiole 1.5–2.5 cm; leaf blade elliptic, oblong-elliptic, or ovate-elliptic, 7–15 × 4–6 cm, leathery, both surfaces glabrous, lateral veins 6 or 7 pairs, reticulate veins sparse, distinct abaxially, inconspicuous adaxially, base broadly cuneate or rounded, apex shortly acuminate or acute. Cymes 2–4-flowered, sometimes with a leaflike bract at base, arranged in a long, narrowly paniculate inflorescence 7–15 cm, less than 2 cm in diam. Flowers fragrant. Sepals 5, ovate or oblong-ovate, 0.5–1 mm, apex acute or obtuse, glabrous, ciliate. Petals 5, greenish white to light green, yellowish green, or light red, obovate or elliptic-ovate, 1.5–2 mm, 5–7-veined, apex rounded. Stamens 5; filaments flattened; anthers introrse. Disk cup-shaped, shortly 5-lobed. Ovary glabrous. Schizocarp pink to red or bluish black, suborbicular or subreniform, 1–1.7 cm; endocarp with inconspicuous midrib, with faveolate cavities. Fl. Aug–Nov, fr. Jan–May of following year.

Dense forests; 800–1300 m. Fujian, Guangdong, Hainan, Sichuan, SW Yunnan [Bangladesh, N India, Indonesia, Malaysia, Myanmar, Thailand].

16. *Sabia parviflora* Wallich in Roxburgh, *Fl. Ind.* 2: 310. 1824.

小花清风藤 xiao hua qing feng teng

Celastrus discolor H. Léveillé; *C. esquirolii* H. Léveillé; *Changiodendron guangxiense* R. H. Miao; *Sabia harmandiana* Pierre; *S. parviflora* var. *harmandiana* (Pierre) Lecomte; *S. parviflora* var. *nitidissima* H. Léveillé; *S. polyantha* Handel-Mazzetti.

Woody climbers, to 6 m, evergreen. Young branches pubescent, glabrous when old; bud scales ovoid, apex long acute,

ciliate. Petiole 0.5–2 mm, sparsely puberulent or glabrous; leaf blade abaxially grayish green, adaxially dark green or olivaceous-green, sometimes shiny, obovate-lanceolate, narrowly oblong, or oblong-elliptic, 5–12 × 1–3 cm, papery or thinly leathery, both surfaces glabrous, lateral veins 5–8 pairs, anastomos-

ing 3–10 mm from margin, base rounded or broadly cuneate, apex acuminate. Cymes comprising a 10–20(–25)-flowered panicle 3–5 cm, glabrous or sparsely pilose; peduncles 2–6 mm. Pedicel 3–6 mm. Sepals 5, ovate or oblong-ovate, ca. 0.8 mm, apex acute, ciliate. Petals 5, green, yellowish green, or greenish white, oblong or oblong-lanceolate, 2–4 × 0.7–1.3 mm, veins up to 7 and reddish, apex acute or obtuse. Stamens 5, 3–5 mm; filaments broad and flattened, 1–2 × 0.25–0.5 mm; anthers often inflexed, elliptic or ovoid, extrorse. Disk cup-shaped, distinctly 5-lobed. Ovary glabrous; styles narrowly conical. Schizocarp green to red or blue, suborbicular, 5–7 mm in diam.; endocarp with inconspicuous midrib, with obscure faveolate cavities. Fl. Mar–May, fr. Jul–Sep.

Forests, streamsides in forests, thickets on mountain slopes, ravines; 800–2800 m. W Guangxi, W Guizhou, Sichuan, S Yunnan [India, Indonesia, Myanmar, Nepal, Philippines, Thailand, Vietnam].

17. *Sabia lanceolata* Colebrooke, Trans. Linn. Soc. London 12: 355. 1819.

披针清风藤 pi zhen qing feng teng

Sabia kachinica L. Chen.

Woody climbers or suberect shrubs, evergreen. Branchlets glabrous. Petiole to 1.2 cm; leaf blade elliptic-oblong to lanceolate, 5–22 × 1.5–8 cm, papery to leathery, both surfaces glabrous, lateral veins 6–12 pairs, obvious, straight or sometimes curved, base cuneate or cordate, apex acute or acuminate. Cymes 10–30-flowered, solitary, axillary or arranged in axillary panicles 1.5–7 cm, glabrous. Pedicel to 1.3 cm; bracteoles ovate to oblong-ovate, to 1.2 mm, often near calyx, glabrous, ciliolate or not. Sepals 5, broadly ovate to ovate, 0.75–1.25(–2) × 0.7–1(–1.5) mm, glabrous, ciliolate or not, apex acute to obtuse. Petals 5, green to white, oblong-ovate to oblong, 3.5–5.5 × 1.5–2 mm, veins to 6, but often obscured by many “granules” forming dotted lines, apex acute or narrowly obtuse. Stamens 1.5–2.5 mm; filaments flattened, 1.2–2 mm, 0.3–0.5 mm wide; anthers inflexed, globose or ellipsoid, ca. 0.3 mm. Disk crown-shaped; lobes short, but often with distinctly disciform apices. Ovary broadly transversely ellipsoid, 0.6–0.75 × 0.7–1 mm, glabrous. Schizocarp probably blue when fresh, distinctly obovoid to oblong-obovoid or pyriform, somewhat compressed, 1.2–1.5 cm × 7–10 mm, with or without persistent petals and stamens at base, reticulate pattern faint or absent. Fl. Oct, fr. Dec.

Forests, riverbanks; 700–1100 m. Xizang [Bangladesh, Bhutan, India, Myanmar].

