

14. ALYXIA Banks ex R. Brown, Prodr. 469. 1810, nom. cons.

链珠藤属 *lian zhu teng shu*

Plants woody lianas or erect to trailing shrubs, with latex. Leaves in whorls of 3 or 4, rarely opposite. Cymes terminal and/or axillary, sometimes in clusters or short thyrses. Flowers small, 5-merous. Calyx deeply divided, without basal glands. Corolla white or rarely yellow, salverform, tube cylindrical, widened at stamens insertion, lobes overlapping to left; corona scales absent. Stamens included, inserted at or above middle of corolla tube; filaments very short; anthers free from pistil head; disc absent. Ovaries 2, distinct; ovules biseriate, 4–6 in each ovary. Style filiform; pistil head capitate, apex shortly 2-cleft. Fruit usually paired, moniliform, transversely constricted into 1–5 drupelike articles, or not jointed. Seeds ovate or oblong; endosperm horny, ruminant; cotyledons leaflike, erect or curved.

About 70 species: tropical Asia, Australia, Pacific Islands; 12 species in China.

- 1a. Leaves densely pubescent abaxially; cymes spicate 3. *A. villilimba*
- 1b. Leaves glabrous abaxially; cymes fascicled.
 - 2a. Inflorescences 2–10.5 cm.
 - 3a. Corolla pubescent 1. *A. menglungensis*
 - 3b. Corolla glabrous.
 - 4a. Inflorescences 8–10.5 cm 2. *A. siamensis*
 - 4b. Inflorescences 3–5 cm 4. *A. reinwardtii*
 - 2b. Inflorescences 0.5–2 cm.
 - 5a. Leaf apex rounded, obtuse, or rarely retuse.
 - 6a. Leaves usually in whorls of 4; leaf blade 5.5–10 × 2.5–3.5 cm; petiole 10–15 mm; corolla tube 7–10 mm 5. *A. insularis*
 - 6b. Leaves opposite or in whorls of 3; leaf blade 1.5–3.5 × 0.8–2 cm; petiole ca. 2 mm; corolla tube 2–3 mm 6. *A. sinensis*
 - 5b. Leaf apex caudate, acuminate, or acute.
 - 7a. Leaf apex caudate or acuminate, acumen ca. 1.5 cm 7. *A. fascicularis*
 - 7b. Leaf apex acute or short acuminate.
 - 8a. Leaf blade with marginal veins 8. *A. marginata*
 - 8b. Leaf blade without marginal veins.
 - 9a. Ovary glabrous; articles of fruit ca. 6 × 4 mm 9. *A. taiwanensis*
 - 9b. Ovary hairy; articles of fruit 7–22 × 5–10 mm.
 - 10a. Articles of fruit ca. 7 mm; corolla yellow 11. *A. schlechteri*
 - 10b. Articles of fruit 10–22 mm; corolla greenish white or greenish yellow.
 - 11a. Sepals acuminate, 1.5–3 mm; corolla greenish white, tube ca. 3 mm; articles of fruit 10–13 × 8–10 10. *A. levinei*
 - 11b. Sepals obtuse or acute, 1.7–8 mm; corolla greenish yellow, tube 3–15 mm; articles of fruit 10–22 × 5–8 mm 12. *A. odorata*

1. *Alyxia menglungensis* Tsiang & P. T. Li, Acta Phyto-tax. Sin. 11: 364. 1973.

勐龙链珠藤 *meng long lian zhu teng*

Lianas woody, to 4 m. Branchlets gray-green. Leaves opposite or in whorls of 3; petiole ca. 1 cm; leaf blade elliptic to narrowly so, 9–12 × 3–4.2 cm, papery, abaxially glabrous; lateral veins numerous, inconspicuous abaxially. Cymes terminal or axillary, solitary or umbellate in groups of 3 or 4, 2–6.7 cm, pubescent; peduncle 1–4 cm. Sepals ovate, ca. 2 mm, obtuse, densely pubescent. Corolla white, pubescent on both surfaces, tube ca. 6 mm; lobes ovate, ca. 2 mm. Stamens inserted at corolla throat. Ovary glabrous. Style filiform. Fl. Sep.

• Dense montane forests; 2000 m. S Yunnan.

2. *Alyxia siamensis* Craib, Bull. Misc. Inform. Kew 1911: 412. 1911.

长序链珠藤 *chang xu lian zhu teng*

Alyxia balansae Pitard; *A. yunkuniana* Tsiang.

Lianas stout, woody, to 8 m. Bark dull gray, glabrous, warty. Leaves opposite or in whorls of 3 or 4; petiole 1–1.5 cm; leaf blade elliptic to narrowly so, 7–19 × 3–4.4 cm, abaxially glabrous, base cuneate, margin revolute, apex short acuminate; lateral veins numerous, subparallel, slender, elevated on abaxial surface, obscure adaxially. Cymes fascicled, terminal or axillary, thyrsoid, 8–10.5 cm, puberulent. Sepals ovate, ca. 1 mm, acute or short acuminate, puberulent outside. Corolla yellow, glabrous, tube ca. 2 mm; lobes obliquely ovate, ca. 1 mm. Stamens inserted above middle of corolla tube. Ovary pubescent. Style filiform, ca. 1.5 mm; pistil head subcapitate. Fruit moniliform, paired or solitary, ellipsoid or ovoid-oblong, 3–4.5 × 1.2–1.5 cm. Fl. May-Jul.

Humid forests, valleys, brushwoods; 250–1000 m. Guang-dong, Guangxi, Yunnan [Thailand, Vietnam].

3. *Alyxia villilimba* C. Y. Wu ex Tsiang & P. T. Li, Acta Phytotax. Sin. 11: 366. 1973.

毛叶链珠藤 mao ye lian zhu teng

Alyxia villilimba var. *macrophylla* P. T. Li.

Shrubs to 3 m tall, densely pubescent. Leaves usually in whorls of 3; petiole 1–2 cm; leaf blade elliptic or narrowly so, 7–20 × 1.5–4.5 cm, papery, glabrous adaxially, pubescent abaxially; lateral veins 30–40 pairs, subparallel. Cymes spikelike, axillary; peduncle 2–4 cm; bracts and bracteoles ovate. Sepals narrowly elliptic, acuminate, pubescent. Corolla white, ca. 1.5 mm. Stamens inserted at middle of corolla tube. Ovary glabrous. Fruit moniliform, articles ellipsoid, ca. 2.5 × 1 cm.

• Limestone in humid forests; 500–1000 m. W Guangxi, SE Yunnan.

4. *Alyxia reinwardtii* Blume, Catalogus 43. 1823.

长花链珠藤 chang hua lian zhu teng

Alyxia flavescens Pierre; *A. forbesii* King & Gamble; *A. lucida* Wallich var. *meiantha* Stapf; *A. reinwardtii* var. *meiantha* (Stapf) Markgraf.

Lianas woody, to 3 m, glabrous except for inflorescences. Juvenile branchlets triangular, later terete. Leaves opposite or in whorls of 3 or 4; petiole to 5 mm; leaf blade narrowly elliptic or oblong, 8–11 × 1.5–2.5 cm, subleathery to leathery, abaxially glabrous, apex narrowly long acuminate, lateral veins obscure abaxially. Cymes fascicled, axillary, pubescent, 3–5 cm; peduncle 1–1.3 cm; bracteoles very narrowly ovate. Sepals ovate or narrowly so, ca. 2 × 1 mm, obtuse or acute, pubescent to subglabrous. Corolla yellowish white, glabrous, tube ca. 8.5 mm; lobes ovate, ca. 4 mm. Ovary villous. Fruit oblong-ellipsoid, ca. 1.5 cm × 5 mm. Fl. May–Oct, fr. Aug–Dec.

Forests, brushwoods; 800–1700 m. S Yunnan [Indonesia, Malaysia, Philippines, Thailand, Vietnam].

5. *Alyxia insularis* Kanehira & Sasaki, Trans. Nat. Hist. Soc. Taiwan 24: 402. 1934.

兰屿链珠藤 lan yu lian zhu teng

Shrubs to 3 m tall, trailing, glabrous. Branchlets 4-angled. Leaves usually in whorls of 4; petiole 1–1.5 cm; leaf blade ovate or narrowly so, 5.5–10 × 2.5–3.5 cm, thick leathery, abaxially glabrous, apex obtuse or rounded; midvein elevated abaxially, lateral veins inconspicuous. Cymes fascicled, axillary; peduncle short. Sepals ovate to triangular, 3–4 mm, apex obtuse. Corolla tube 7–10 mm, densely pubescent inside at middle; lobes ovate, ca. 5 mm. Stamens inserted above middle of corolla tube. Ovary pubescent. Fruit ellipsoid, 1–2 × 0.6–1.5 cm. Seeds 1 or 2. Fl. May.

• Brushwoods. Taiwan (Lanyu and Luta).

6. *Alyxia sinensis* Champion ex Bentham, Hooker's J. Bot. Kew Gard. Misc. 4: 334. 1852.

链珠藤 lian zhu teng

Lianas woody, to 3 m, glabrous except for inflorescences. Leaves opposite or in whorls of 3; petiole ca. 2 mm; leaf blade orbicular, elliptic, ovate, or obovate, 1.5–3.5 × 0.8–2 cm, leathery, abaxially glabrous, margin revolute, apex rounded or retuse; lateral veins inconspicuous. Cymes fascicled, axillary or subterminal, less than 2 cm. Flowers densely crowded, 5–6 cm. Sepals ovate, ca. 1.5 mm, obtuse, pubescent. Corolla reddish to white, constricted at apex, tube 2–3 mm; lobes ovate, ca. 1.5 mm. Ovary villous. Fruit moniliform, stipitate, with 2 or 3 ellipsoid articles ca. 10 × 5 mm. Fl. Jul. $2n = 36^*$.

• Brushwoods, forest margins; 200–500 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Taiwan, Zhejiang.

The roots are used for the treatment of injury, toothache, and rheumatoid arthritis.

7. *Alyxia fascicularis* Bentham in Bentham & J. D. Hooker, Gen. Pl. 2: 698. 1876.

尾尖链珠藤 wei jian lian zhu teng

Lianas woody, to 2 m. Bark pale, warty; branchlets gray, glabrous. Leaves opposite or in whorls of 3; petiole 3–5 mm; leaf blade oblong-elliptic, oblong, or oblanceolate, 6–10 × 1.7–3 cm, glabrous, base broadly cuneate, apex caudate-acuminate, acumen ca. 1.5 cm; veins numerous, parallel, slender, raised. Cymes fascicled, short pedunculate, densely flowered, glabrous or puberulent. Sepals ovate. Corolla tube ca. 3 mm; lobes small, rounded. Fruit moniliform, stipitate, with 2–4 cylindrical-ellipsoid articles ca. 2 × 1 cm. Fl. Sep–Nov.

Mixed forests; 1800 m. SE Xizang (Motuo) [India (Khasia Mountain), Thailand].

8. *Alyxia marginata* Pitard in Lecomte & Humbert, Fl. Indo-Chine 3: 1123. 1933.

陷边链珠藤 xian bian lian zhu teng

Alyxia funingensis Tsiang & P. T. Li.

Lianas woody, to 3 m, glabrous except for inflorescences. Branchlets dark gray, warty. Leaves opposite or in whorls of 3; petiole 3–10 mm; leaf blade elliptic, narrowly elliptic, or obovate, 7–17 × 1.4–5 cm, papery, abaxially glabrous; lateral veins numerous, inconspicuous abaxially, marginal veins present. Cymes axillary, 1–2 cm, puberulent. Sepals ovate, 3–3.5 mm, acute, pubescent outside. Corolla white or creamy white, tube 5–10 mm, densely pubescent inside, lobes ovate, ca. 3 mm. Ovary puberulent. Fruit moniliform, articles subglobose, 1–1.6 × 0.8–1.1 cm. Fl. Sep–Nov, fr. Oct–Dec.

Dense forests, brushwood, forest borders; 200–1800 m. SW Guangxi, Yunnan [Cambodia, Laos, Vietnam].

9. *Alyxia taiwanensis* Lu & Yang, Bot. Bull. Acad. Sin. 19: 195. 1978.

台湾链珠藤 tai wan lian zhu teng

Shrubs scandent. Branches pubescent. Leaves opposite or in whorls of 3 or 4; petiole 1–2.5 mm; leaf blade narrowly elliptic, 2–2.5 × 1–1.5 cm, leathery, abaxially glabrous, base acute, apex acuminate; lateral veins inconspicuous. Cymes fascicled, terminal, less than 2 cm. Sepals ovate to triangular, 2–3 mm, pubescent. Corolla tube 4–5 mm, pubescent; lobes obliquely ovate, ca. 2 mm. Stamens inserted above middle of corolla tube. Ovary glabrous. Fruit with 1–4 articles; drupes ovoid, ca. 6 × 4 mm. Seeds ovoid, hairy.

- Edges of open forests; 1200–1300 m. Taiwan (Taichung).

10. *Alyxia levinei* Merrill, Philipp. J. Sci. 15: 254. 1920.

筋藤 jin teng

Alyxia acutifolia Tsiang; *A. kweichowensis* Tsiang & P. T. Li.

Shrubs scandent, to 3 m. Branches and branchlets slender, somewhat angled or striate, later terete. Leaves opposite or in whorls of 3; petiole 4–7 mm; leaf blade elliptic, narrowly elliptic, or oblong, 3.5–8 × 1.2–3 cm, papery to somewhat leathery, abaxially glabrous, apex acuminate or acute; lateral veins obsolete. Cymes fascicled, axillary, solitary to trichasial; peduncle 0.5–2 cm, puberulent; bracteoles 2 or more, elliptic-ovate. Sepals 1.5–3 mm, villous, ciliate, apex acuminate. Corolla greenish white; tube ca. 3 mm, glabrous; lobes broadly elliptic, ca. 1.5 mm. Ovary villous. Fruits with 1–3, drupelike, ellipsoid or globose articles 1–1.3 cm × 0.8–1 cm. Fl. Mar–Aug, fr. Sep–Dec.

- Montane sparse woods, brushwoods; 300–500 m. Guangdong, Guangxi, Guizhou.

All parts of the plant are used to cure infantile malnutrition due to intestinal parasites, rheumatism, and furunculosis.

11. *Alyxia schlechteri* H. Léveillé, Repert. Spec. Nov. Regni Veg. 9: 453. 1911.

狭叶链珠藤 xia ye lian zhu teng

Alyxia schlechteri var. *salicifolia* P. T. Li.

Lianas woody, to 3 m. Branches gray, with many lenticels; branchlets puberulent, later glabrous. Leaves opposite or in whorls of 3 or 4, usually crowded on upper branchlets; petiole 2–4 mm, glabrous or pubescent; leaf blade narrowly to very narrowly elliptic, 2–12 × 0.5–1.5 cm, leathery, usually glabrous, base broadly cuneate, margin recurved, apex acuminate or acute; lateral veins inconspicuous abaxially. Cymes fascicled, axillary, 0.5–1 cm. Sepals narrowly elliptic, ca. 2.5 mm, keeled, minutely puberulent, apex long acute. Corolla yellow. Fruit with 2 or 3 ellipsoid articles ca. 7 × 5 mm.

Sparse woods, brushwoods; 500–1500 m. Guangxi, Guizhou, Yunnan [Thailand].

12. *Alyxia odorata* Wallich ex G. Don, Gen. Hist. 4: 97. 1837.

海南链珠藤 hai nan lian zhu teng

Alyxia euonymifolia Tsiang; *A. hainanensis* Merrill

& Chun; *A. jasminea* Tsiang & P. T. Li; *A. leitungensis* Tsiang; *A. nitens* Kerr; *A. vulgaris* Tsiang.

Lianas woody, to 4 m. Branches slightly angled when young, later terete, puberulent or glabrous. Leaves opposite or in whorls of 3; petiole 3–10 mm; leaf blade elliptic, oblong, narrowly elliptic, or obovate, 2–12 × 1–4.5 cm, papery, glabrous, apex acute or short acuminate; lateral veins numerous, usually inconspicuous. Cymes fascicled, terminal and axillary, 1–2 cm, pubescent. Pedicel and calyx pubescent. Sepals ovate to narrowly elliptic, 1.7–8 mm, obtuse or acute, long pubescent, ciliate. Corolla yellowish green, glabrous or sometimes puberulent inside, tube 3–15 mm; lobes ovate, 1.5–4 mm. Stamens inserted at or above middle of corolla tube. Ovary pubescent. Fruit with 1–3 ellipsoid-globose articles 1–2.2 cm × 5–8 mm. Fl. Mar–Oct, fr. Jun–Dec.

Sparse woods, brushwoods; 200–2000 m. Guangdong, Guangxi, Guizhou, Hainan, Sichuan, Yunnan [Myanmar, Thailand].

