

65. DERRIS Loureiro, Fl. Cochinch. 2: 423, 432. 1790, nom. cons.

鱼藤属 *yu teng shu*

Chen Dezhaoh (陈德昭 Chen Te-chao); Les Pedley

Brachypterum (Wight & Arnott) Bentham; *Dalbergia* subg. *Brachypterum* Wight & Arnott.

Lianas, rarely erect shrubs or trees. Stipules small. Leaves imparipinnate; stipels absent; leaflets opposite, margins entire. Inflorescences axillary pseudoracemes, these often combined with terminal or axillary pseudopanicles; rachis nodes with 1 to many flowers, fascicled or on a short spur or branchlet; bracts and bracteoles small, deciduous. Calyx campanulate or cup-shaped, apex subtruncate or with 4 or 5 short and broad teeth. Corolla white, purplish red, or pink, longer than calyx; standard broad, usually glabrous but outside sometimes subglabrous or pubescent, without basal calluses; wings long clawed, often auriculate, adhering to keel; keels incurved, base often auriculate, apex blunt. Stamens monadelphous. Ovary sessile or with a short stipe, with 1–11 ovules; style incurved; stigma capitate. Legume globose, oblong, or ligulate-oblong, indehiscent; adaxial suture or both adaxial and abaxial sutures with a narrow wing. Seeds 1 to several per legume, reniform, compressed.

About 50 species: tropical and subtropical Africa, Asia, Australia, and Pacific islands; 16 species (nine endemic) in China.

- 1a. Legume winged only on adaxial suture.
 - 2a. Leaves more than 13-foliolate.
 - 3a. Leaflet blades 1.5–4 cm; trees 1. *D. robusta*
 - 3b. Leaflet blades 5–7.5 cm, lianas 2. *D. eriocarpa*
 - 2b. Leaves 11-foliolate or less.
 - 4a. Leaves (3 or)5(or 7)-foliolate 5. *D. trifoliata*
 - 4b. Leaves 7–11-foliolate.
 - 5a. Leaflet blades abaxially densely puberulent 3. *D. yunnanensis*
 - 5b. Leaflet blades abaxially glabrous 4. *D. harrowiana*
- 1b. Legume winged on both sutures.
 - 6a. Leaflet blades abaxially pubescent or puberulent.
 - 7a. Branchlets robust, densely rust-colored pubescent; leaves 5–9-foliolate, leaflet blades adaxially shiny; legume with wing of abaxial suture only slightly narrower than wing of adaxial suture 6. *D. ferruginea*
 - 7b. Branchlets slender, glabrescent; leaves 5-foliolate, leaflet blades adaxially not shiny; legume with wing of abaxial suture almost 1/2 width of adaxial suture wing 7. *D. cavaleriei*
 - 6b. Leaflet blades abaxially glabrous.
 - 8a. Flowers in pseudoracemes.
 - 9a. Leaflet blade apices caudate-acuminate; calyx glabrous 8. *D. caudatilimba*
 - 9b. Leaflet blade apices obtusely acuminate to shortly acuminate; calyx puberulent or pilose.
 - 10a. Legume adaxial wing ca. 5 mm wide, abaxial wing 1–2 mm wide 11. *D. tonkinensis*
 - 10b. Legume adaxial wing 3–5 mm wide, abaxial wing 0.5–1 or 2–3 mm wide.
 - 11a. Leaves 5- or 7-foliolate; legume abaxial wing 2–3 mm wide 9. *D. breviramosa*
 - 11b. Leaves 7–13-foliolate; legume abaxial wing 0.5–1 mm wide 10. *D. scabricaulis*
 - 8b. Flowers in pseudopanicles.
 - 12a. Rachis of inflorescences pilose, hispidulous, or pubescent.
 - 13a. Trees or climbing shrubs 11. *D. tonkinensis*
 - 13b. Lianas.
 - 14a. Leaves 5- or 7-foliolate, leaflet blades thickly papery to thinly leathery; legume 4–10 cm, thinly leathery 12. *D. fordii*
 - 14b. Leaves (3 or)5-foliolate, leaflet blades leathery; legume 2–5 cm, leathery 13. *D. alborubra*
 - 12b. Rachis of inflorescences glabrous.
 - 15a. Leaflet blades 5, closely inserted on a very short rachis, forming subpalmate leaves 16. *D. palmifolia*
 - 15b. Leaflet blades 5 or 7, forming distant pinnate leaves.
 - 16a. Leaflet blades obovate-elliptic to obovate; flowers fascicled on branches of inflorescences 14. *D. marginata*
 - 16b. Leaflet blades elliptic; flowers scattered on branches of inflorescences 15. *D. laxiflora*

1. *Derris robusta* (Roxburgh ex Candolle) Bentham, J. Proc. Linn. Soc., Bot. 4(Suppl.): 104. 1860. 1825; *Brachypterum robustum* (Roxburgh ex Candolle) Dalzell & Gibson.

大鱼藤树 *da yu teng shu*

Dalbergia robusta Roxburgh ex Candolle, Prodr. 2: 417.

Trees, 10–15 m tall, deciduous. Branches slightly sparsely pubescent, glabrescent. Leaves 13–21-foliolate; rachis 10–15

cm, including petiole 1.5–4 cm; leaflet blades oblong to obovate, 1.5–4 × 0.9–1.5 cm, membranous, both surfaces puberulent or adaxially glabrous, base obliquely cuneate, apex obtuse and shortly cuspidate. Pseudoracemes axillary, elongated, 5–15 cm; rachis nodes with 2 or 3 fascicled flowers. Pedicel 4–5 mm, slender. Flowers ca. 8 mm. Calyx campanulate, 2–5 mm, outside sericeous; teeth minute, deltoid. Corolla white; petals clawed; standard orbicular-subcordate. Ovary puberulent. Legume linear-oblong, flat, 3.5–5 × 0.9–1 cm, glabrous or puberulent, both ends narrowed; adaxial suture with a 2–3 mm wide wing. Seeds 1–5(–10) per legume. Fl. Feb–Apr, fr. May–Jan. $2n = 22$.

Mountain slopes; 300–1600 m. Yunnan [India, Laos, Myanmar, Thailand, Vietnam].

2. *Derris eriocarpa* F. C. How, Acta Phytotax. Sin. 3: 223. 1954.

毛果鱼藤 mao guo yu teng

Lianas. Young shoots rust-colored puberulent. Leaves 13- or 15-foliolate; rachis 20–30 cm, including petiole 5–6 cm; rachis and petiole canaliculate, sparsely puberulent; leaflet blades oblong to ovate-oblong but apical one obovate-elliptic, 5–7.5 × 2–2.5 cm, stiffly papery, both surfaces appressed scattered yellowish puberulent, base obliquely rounded to obtuse, apex shortly acuminate to slightly obtuse. Pseudoracemes axillary, solitary, longer than leaves; rachis yellowish puberulent; rachis nodes with 3–10 flowers, fascicled or on a 2–4 mm spur. Pedicel filiform, 4–5 mm, appressed yellowish pubescent. Flowers 1–1.2 cm. Calyx cup-shaped, 3–4 mm long and wide, outside densely yellowish pubescent; teeth small, unequal in length. Corolla white flushed with red; standard elliptic-ovate, outside glabrous or sparsely puberulent along veins, base truncate and shallowly cordate, apex slightly emarginate. Stamens unequal in length. Ovary villous. Legume linear-oblong, flat, 6–11 × 1.2–1.6 cm, sparsely villous, base attenuate into a stipe, apex apiculate; adaxial suture with a ca. 2 mm wide wing. Seeds 1–8 per legume. Fl. Jun–Jul, fr. Sep–Jan.

Sparse forests on mountain slopes; 800–1600 m. Guangxi, S Guizhou, S Yunnan [N Thailand].

3. *Derris yunnanensis* Chun & F. C. How, Acta Phytotax. Sin. 2: 69. 1952.

云南鱼藤 yun nan yu teng

Lianas, large. Young shoots, petioles, pedicels, bracteoles, and legumes yellowish puberulent. Branchlets robust. Leaves 9- or 11-foliolate; rachis ca. 25 cm, including petiole 4–4.5 cm; leaflet blades oblong or apical one oblanceolate, 6.5–11 × 2–3.5 cm, subleathery, abaxially densely yellowish puberulent, adaxially glabrous or yellowish puberulent in vein axils, base broadly cuneate, apex obtusely acuminate. Infructescences axillary. Pseudoracemes axillary, 20–30 cm; rachis nodes with 2 or 3 flowers borne singly along a short branchlet; bracts linear. Pedicel ca. 2.5 mm. Flowers 1.4–2 cm. Calyx cup-shaped, 4–6 mm, puberulent; teeth 5, abaxial tooth longer than others, adaxial 2 teeth subconnate. Corolla glaucous whitish, 1–1.4 cm;

petals all long clawed. Ovary sessile, densely pubescent; style long and incurved, glabrous. Legume oblong, flat, 5–15 × 2–2.5 cm, densely yellowish brown shortly villous, base abruptly constricted, apex obtusely acute; adaxial suture with a 1–2 mm wide wing. Seeds 1–4 per legume. Fl. Jul–Aug, fr. Oct.

• Cliff bases in mountains; ca. 2000 m. Guangxi, Guizhou, Yunnan.

4. *Derris harrowiana* (Diels) Z. Wei, Acta Phytotax. Sin. 23: 290. 1985.

大理鱼藤 da li yu teng

Millettia harrowiana Diels, Notes Roy. Bot. Gard. Edinburgh 5: 246. 1912.

Lianas. Branches with tuberculate whitish lenticels. Leaves 7–11-foliolate, juvenile at anthesis; rachis 10–12 cm, including petiole 6–8 cm; leaflet blades oblong-elliptic to sometimes narrowly ovate, 4.5–5.5 × 1.5–2.5 cm, both surfaces glabrous, apex shortly acuminate. Pseudoracemes 12–16 cm including peduncle; rachis nodes with 2 or 3 fascicled flowers. Pedicel 2–3 mm. Flowers ca. 1.2 cm. Calyx campanulate, ca. 5 mm, densely rust-colored sericeous; teeth short. Corolla whitish or rose-red, ca. 7 mm. Stamens 7–8 mm. Ovary sericeous. Legume narrowly oblong, 7–16 × 2–2.3 cm, compressed, glabrous, apex mucronate; adaxial suture with a 2–4 mm wide wing. Seeds 2 or 3 per legume. Fl. Apr–May, fr. Jun–Aug.

• Forests on mountain slopes; 1900–2000 m. Yunnan (Dali).

5. *Derris trifoliata* Loureiro, Fl. Cochinch. 2: 433. 1790.

鱼藤 yu teng

Derris uliginosa (Roxburgh ex Willdenow) Bentham; *Robinia uliginosa* Roxburgh ex Willdenow.

Lianas, glabrous. Leaves (3 or)5(or 7)-foliolate; rachis 7–15 cm, including petiole 5–9 cm; leaflet blades ovate-oblong, 5–10 × 2–4 cm, firmly papery to subleathery, base rounded to slightly cordate, apex obtusely acuminate. Pseudoracemes axillary, 5–10 cm; rachis nodes with 2 or 3(–6) fascicled flowers sometimes borne on a short branchlet. Pedicel 2–4 mm. Flowers ca. 1.2 cm. Calyx campanulate, ca. 2 mm, glabrous or subglabrous; teeth very short, obtuse. Corolla whitish to pink, ca. 1 cm; standard suborbicular. Ovary sparsely pubescent. Legume obliquely ovoid, globose, or oblong, 2.5–4 × 2–3 cm, compressed, glabrous; adaxial suture with a narrow wing. Seeds 1 or 2 per legume. Fl. Apr–Aug, fr. Aug–Dec. $2n = 22$.

Coastal areas along beaches or riverbanks, thickets, forests; below 1000 m. Fujian, Guangdong, Guangxi, Hainan, Taiwan [Cambodia, India, Indonesia, Japan, Malaysia, Papua New Guinea, Sri Lanka, Thailand, Vietnam; E Africa, Australia, Pacific islands].

6. *Derris ferruginea* Bentham in Miquel, Pl. Jungh. 252. 1852.

锈毛鱼藤 xiu mao yu teng

Robinia ferruginea Roxburgh, Fl. Ind., ed. 1832, 3: 329. 1832, not Kunth (1823).

Lianas. Branchlets densely rust-colored pubescent. Leaves 5–9-foliolate; rachis 5.5–9(–15) cm, including petiole 3.5–

5(–10) cm; leaflet blades elliptic to obovate-oblong, 6–13 × 2–5 cm, leathery, abaxially slightly rust-colored puberulent, adaxially glabrous and shiny, base rounded, apex obtusely acuminate. Pseudopanicles axillary, 15–30 cm, densely rust-colored puberulent; rachis nodes with 2 or 3(–8) fascicled flowers often borne on a short branchlet. Pedicel slender, 4–6 mm. Flowers 1–1.4 cm. Calyx ca. 3 mm; teeth minute. Corolla pale red to whitish, 8–10 mm. Ovary pubescent. Legume oblong to ligulate-oblong, 5–8 × ca. 2.5 cm, leathery, flat, densely rust-colored sericeous when young, nearly glabrescent when old; abaxial suture with a 2–4 mm wide wing, adaxial suture with a 3–5 mm wide wing. Seeds 1 or 2 per legume. Fl. Apr–Jul, fr. Sep–Dec.

Sparse forests and thickets, low elevation mountain slopes; 500–1200 m. Guangdong, S Guangxi, SW Guizhou, Hainan, S Yunnan [Bangladesh, India, Laos, Myanmar, Thailand, Vietnam].

7. *Derris cavaleriei* Gagnepain, Notul. Syst. (Paris) 2: 347. 1913.

黔桂鱼藤 qian gui yu teng

Lianas. Branches slender, yellowish pubescent when young, glabrescent, dark brown when dried. Leaves 5-foliolate; rachis 9–12 cm, including petiole 5–7 cm; leaflet blades ovate-oblong, 5–10 × 2–4 cm, leathery, abaxially densely appressed yellowish brown pubescent, adaxially sparsely pubescent or glabrous and not shiny, secondary veins 7–10 on each side of midvein, base rounded to broadly cuneate, apex obtusely acuminate. Pseudopanicles terminal or lateral, 7–10 cm, compact, with few branches; rachis nodes with 2–5 fascicled flowers. Pedicel ca. 6 mm. Flowers ca. 1.3 cm. Calyx campanulate, ca. 3 mm, hispidulous. Corolla whitish, 8–10 mm; standard elliptic. Ovary pubescent. Legume broadly ellipsoid, 6–13 × 3–4.5 cm, compressed, densely rust-colored pubescent, both ends subtruncate; abaxial suture with a 3–6 mm wide wing, adaxial suture with a 0.7–1.3 cm wide wing. Seeds 1 or 2 per legume. Fl. Apr–May, fr. Oct–Dec.

• Thickets or sparse forests on mountain slopes; 300–1300 m. Guangdong, Guangxi, Guizhou, Yunnan.

8. *Derris caudatilimba* F. C. How, Acta Phytotax. Sin. 3: 221. 1954.

尾叶鱼藤 wei ye yu teng

Lianas. Branches glabrous, with pale gray lenticels. Leaves 7- or 9-foliolate; rachis 10–15 cm, including petiole 4–5 cm; leaflet blades oblong, 4–10 × 1.4–2.8 cm, papery, abaxially glabrous, midvein raised on both surfaces, secondary veins 6 or 7 on each side of midvein, base broadly cuneate to slightly obtuse, apex caudate-acuminate. Racemes axillary, narrow and elongated, 10–25 cm; rachis sparsely puberulent, with 2–6 fascicled flowers. Pedicel filiform, 3–5 mm, sparsely puberulent. Flowers 9–10 mm. Calyx campanulate, ca. 3 mm long and wide, glabrous; teeth deltoid. Corolla whitish, 6–7 mm; standard elliptic to orbicular, base subtruncate, apex emarginate. Ovary puberulent. Legume ligulate-oblong, 4–9 × 1.2–1.5 cm, compressed, glabrous; abaxial suture with a 0.8–1.5 mm wide wing, adaxial suture with a 3–4 mm wide wing. Seed 1 per legume. Fl. May–Aug, fr. Nov–Dec.

• Thickets or sparse forests on mountain slopes; 500–1400 m. Guangdong, Yunnan.

9. *Derris breviramosa* F. C. How, Acta Phytotax. Sin. 3: 219. 1954.

短枝鱼藤 duan zhi yu teng

Lianas. Leaves 5- or 7-foliolate; rachis 15–20 cm, including petiole 6–7 cm; leaflet blades obovate-oblong to oblong, 5–10 × 2.5–4.5 cm, subpapery, glabrous, secondary veins 7 or 8 on each side of midvein, slender, and raised on both surfaces, base broadly cuneate to obtuse, apex obtusely acuminate to shortly acuminate. Pseudoracemes axillary, much longer than leaves, without branches or paniculate and with a few branches near base of rachis; rachis nodes with several fascicled flowers on a 4–6 mm branchlet. Pedicel puberulent, 3–6 mm. Flowers 9–10 mm. Calyx campanulate, ca. 3 mm long and wide, puberulent, with numerous minute orange glandular dots. Corolla whitish, 8–9 mm; petals all clawed; standard oblong. Ovary pubescent. Legume oblong, inserted on scarred nodal short branchlets, 5–7.5 × 1.8–2 cm, compressed, finely veined, glabrous, both ends slightly obtuse; abaxial suture with a 2–3 mm wide wing, adaxial suture with a 3.5–5 mm wide wing. Seed 1 per legume. Fl. Jun, fr. Aug.

• Mountain valleys, streamsides. Hainan.

10. *Derris scabricaulis* (Franchet) Gagnepain, Notul. Syst. (Paris) 2: 367. 1913.

粗茎鱼藤 cu jing yu teng

Millettia scabricaulis Franchet, Pl. Delavay. 158. 1889.

Lianas. Branches scabrous, with convex lenticels, brownish pubescent when young. Leaves 7–13-foliolate; rachis 9–14 cm, including petiole 4.5–6 cm; petiolules blackish brown; leaflet blades obovate-oblong to oblong, 5–9 × 1.5–3 cm, papery, glabrous, base obtuse, rounded, or broadly cuneate and rather oblique except for apical one, apex shortly acuminate. Pseudoracemes axillary or terminal, ca. 25 cm or much longer; rachis nodes with 2 or 3 fascicled flowers. Pedicel 2–3 mm, puberulent. Flowers 1–1.2 cm. Calyx campanulate, 2–3 mm, appressed yellowish puberulent; teeth obscure. Corolla reddish, glabrous, ca. 5 × as long as calyx; standard orbicular. Ovary pubescent. Legume oblong, 6–9 × ca. 3 cm, thin, glabrous; abaxial suture with a 0.5–1 mm wide wing, adaxial suture with a 3–5 mm wide wing. Seeds 1 or 2 per legume. Fl. May, fr. Aug–Sep.

• Valleys in mountains, scrub; 1400–2500 m. Xizang, Yunnan.

11. *Derris tonkinensis* Gagnepain, Notul. Syst. (Paris) 2: 349. 1913.

东京鱼藤 dong jing yu teng

Trees or climbing shrubs. Branches brown to red, glabrous. Leaves 5(or 7)-foliolate; rachis 4–8 cm, including petiole 1.5–6 cm; leaflet blades ovate-lanceolate or broadly ovate to ovate-oblong, 3–10 × 1.5–4 cm, firm in texture, glabrous, base rounded but apical one cuneate, apex shortly acuminate to obtuse. Pseudoracemes axillary or terminal, lax or somewhat con-

gested, 7–10 × ca. 5 cm, sometimes paniculate with 1 to many 3–4 cm slender branches, thinly reddish pilose; rachis nodes with 4–6 flowers congested and fascicled or lax and borne on 1.5–2 cm branchlets. Pedicel 6–7 mm, appressed reddish pilose. Flowers 1–1.2 cm. Calyx cup-shaped, 2.5–3 mm, appressed reddish pilose; teeth obscure. Corolla whitish to pink; petals all clawed; standard elliptic, 10–12 × ca. 6 mm, reflexed, base abruptly attenuate. Ovary slightly pilose. Legume ellipsoid, 8–11 × ca. 2.5 cm, flat, glabrous, finely veined, both ends obtusely attenuate; abaxial suture with a 1–2 mm wide wing, adaxial suture with a ca. 5 mm wide wing. Seed 1(or 2) per legume. Fl. Mar–Jun, fr. May–Nov.

Scrub or sparse forests on mountain slopes. Guangdong, Guangxi, Guizhou [Vietnam].

- 1a. Leaves 5-foliolate; leaflet blades ovate-lanceolate, 3–6 cm; inflorescences with 1–3 or more branches; flowers lax on 1.5–2 cm branchlets 11a. var. *tonkinensis*
1b. Leaves 5(or 7)-foliolate; leaflet blades broadly ovate to ovate-oblong, 5–10 cm; inflorescences with many branches; flowers congested and fascicled 11b. var. *compacta*

11a. *Derris tonkinensis* var. *tonkinensis*

东京鱼藤(原变种) *dong jing yu teng* (yuan bian zhong)

Leaves 5-foliolate; leaflet blades ovate-lanceolate, 3–6 cm. Inflorescences with 1–3 branches. Flowers lax on 1.5–2 cm branchlets. Corolla whitish to pink. Fl. Mar–Jun, fr. May–Oct.

Guangxi, Guizhou [Vietnam].

11b. *Derris tonkinensis* var. *compacta* Gagnepain in Lecomte, Fl. Indo-Chine 2: 458. 1916.

大叶东京鱼藤 *da ye dong jing yu teng*

Leaves 5(or 7)-foliolate; leaflet blades broadly ovate to ovate-oblong, 5–10 cm. Inflorescences with many branches. Flowers congested and fascicled. Corolla pink. Fl. Apr–May, fr. Oct–Nov.

• Guangdong, Guangxi.

12. *Derris fordii* Oliver, Hooker's Icon. Pl. 18: t. 1771. 1888.

中南鱼藤 *zhong nan yu teng*

Lianas. Leaves 5- or 7-foliolate; rachis 15–28 cm, including petiole 3–8 cm; leaflet blades ovate-elliptic, ovate-oblong, or elliptic, 3–13 × 1.5–6 cm, thickly papery to thinly leathery, both surfaces glabrous, reticulate veins slightly prominent or obscure, base rounded, apex acuminate to slightly obtuse. Inflorescences and pedicels sparsely yellowish brown hispidulous or densely brownish pubescent. Pseudopanicles axillary, slightly shorter than leaves; rachis nodes with several fascicled flowers on short branchlets. Pedicel 3–5 mm. Flowers 1.2–1.3 cm. Calyx campanulate, 2–3 mm, sparsely pubescent; teeth orbicular to deltoid, short. Corolla whitish, ca. 1 cm; standard obovate-elliptic, claw short. Ovary sessile, whitish villous. Legume oblong to ligulate-oblong, 4–10 × 1.5–2.3 cm, compressed, swollen or not when mature, thinly leathery, glabrous;

abaxial suture wing up to 1.5 mm wide, adaxial suture with a 2–3 mm wide wing. Seeds 1–4 per legume. Fl. Mar–May, fr. Jun–Nov.

• Mountain valleys, scrub, sparse to dense forests, mountain slopes, near trails; 500–1600 m. Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Yunnan, Zhejiang.

- 1a. Leaflet blades 4–13 × 2–6 cm, reticulate veinlets slightly prominent; inflorescences and pedicels sparsely yellowish brown hispidulous; legume slightly thick, swollen when mature, abaxial suture with a less than 1 mm wide obscure wing .. 12a. var. *fordii*
1b. Leaflet blades 3–8 × 1.5–3 cm, reticulate veinlets obscure; inflorescences and pedicels densely brownish pubescent; legume thin, not swollen when mature, abaxial suture with a 1–1.5 mm wide distinct wing 12b. var. *lucida*

12a. *Derris fordii* var. *fordii*

中南鱼藤(原变种) *zhong nan yu teng* (yuan bian zhong)

Derris rubromaculata Chun & F. C. How.

Leaflet blades 4–13 × 2–6 cm, reticulate veinlets slightly prominent. Inflorescences and pedicels sparsely yellowish brown hispidulous. Legume slightly thick, swollen when mature, abaxial suture with a less than 1 mm wide obscure wing. Fl. Apr–May, fr. Oct–Nov.

• Mountain valleys, scrub, sparse forests, mountain slopes, near trails. Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hunan, Jiangxi, Yunnan, Zhejiang.

12b. *Derris fordii* var. *lucida* F. C. How, Acta Phytotax. Sin. 3: 218. 1954.

亮叶中南鱼藤 *liang ye zhong nan yu teng*

Leaflet blades 3–8 × 1.5–3 cm, adaxially shiny, reticulate veinlets obscure. Inflorescences and pedicels densely brownish pubescent. Legume thin, not swollen when mature, abaxial suture with a 1–1.5 mm wide distinct wing. Fl. Mar–Apr, fr. Jun–Aug.

• Dense or sparse forests on rocky mountain slopes. Guangdong, Guangxi, Guizhou, Yunnan.

13. *Derris alborubra* Hemsley, Bot. Mag. 131: t. 8008. 1905.

白花鱼藤 *bai hua yu teng*

Lianas, 6–7 m, evergreen. Leaves (3 or) 5-foliolate; rachis 5–14 cm, including petiole 2.5–3.5 cm; leaflet blades elliptic, oblong, or obovate-oblong, 5–8(–15) × 2–5(–7) cm, leathery, glabrous, base broadly cuneate to rounded, apex obtuse and slightly emarginate. Inflorescence rachis and pedicels thinly puberulent; pseudopanicles terminal or axillary, 15–30 cm, narrow; rachis nodes with up to 15 flowers on short filiform branchlets. Pedicel ca. 1 cm. Flowers 1–1.2 cm. Calyx red, obliquely campanulate, ca. 4.5 mm, appressed pubescent but glabrescent. Corolla whitish, 1–1.2 cm; standard suborbicular, puberulent, apex emarginate. Ovary sessile, yellowish pubes-

cent. Legume obliquely ovoid to obliquely oblong, 2–5 × 2.2–2.5 cm, compressed, glabrous; abaxial suture with a ca. 1 mm wide wing, adaxial suture with a 3–4 mm wide wing. Seeds 1 or 2 per legume. Fl. Apr–Jun, fr. Jul–Oct.

Sparse forests or thickets on mountain slopes. Guangdong, Guangxi, Hainan [Cambodia, Laos, Vietnam].

Derris alborubra is represented in China by the typical variety. Another variety, *Derris alborubra* var. *honheoensis* P. K. Lóc, is endemic to Vietnam.

14. *Derris marginata* (Roxburgh) Benth in Miquel, Pl. Jungh. 252. 1852.

边荚鱼藤 bian jia yu teng

Dalbergia marginata Roxburgh, Fl. Ind., ed. 1832, 3: 230. 1832.

Lianas, glabrous except for pilose calyces and ovaries. Leaves 5- or 7-foliolate; rachis 13–25 cm, including petiole (3.5–)5–10 cm; leaflet blades obovate-elliptic to obovate, 5–15 × 2.5–6 cm, subleathery, secondary veins 6–8(–10) on each side of midvein and slightly prominent, base rounded, apex shortly and obtusely acuminate. Pseudopanicles axillary, 6–20 cm, with few branches, glabrous; rachis nodes with 1–3 fascicled flowers. Pedicel 5–12 mm. Flowers 1–1.2 cm. Calyx shallowly cup-shaped, 2–3 mm. Corolla whitish to pale red, 8–10(–12) cm, glabrous; standard broadly ovate. Ovary sessile, glabrescent. Legume ligulate-oblong, 7–10(–15) × 2–4 cm, thin, glabrous, reticulate veined; abaxial suture with a 2–3 mm wide wing,

adaxial suture with a 6–8 mm wide wing. Seeds 1(or 2) per legume. Fl. Apr–May, fr. Nov–Jan.

Open or dense forests, mountain slopes; 400–600 m. Guangdong, Guangxi, Guizhou, Yunnan [Bangladesh, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

The place of publication of the basionym is often given incorrectly. Roxburgh used the epithet “marginata” in Flora Indica for distinct species in two genera. Both were treated by Benth as species of *Derris*. In making the transfer of *Dalbergia marginata*, Benth cited the wrong page number. See R. Geesink (Leiden Bot. Ser. 8: 110. 1984) for discussion.

15. *Derris laxiflora* Benth, J. Proc. Linn. Soc., Bot. 4(Suppl.): 105. 1860.

疏花鱼藤 shu hua yu teng

Lianas, glabrous except for pilose calyces. Leaves 5- or 7-foliolate; rachis 6–9(–12) cm, including petiole 3–6 cm; leaflet blades elliptic, 5–8 × 2.5–4 cm, subleathery, base broadly cuneate, apex obtuse. Pseudopanicles terminal, 15–30 cm, laxly flowered, basal branch elongated but others short; rachis nodes with 2 or 3 fascicled flowers. Pedicel 6–8 mm. Flowers ca. 1.2 cm. Calyx broadly campanulate, ca. 2 mm. Corolla whitish, 7–9 mm; petals all clawed; standard suborbicular, base broadly cuneate. Ovary glabrous. Legume ellipsoid, 5–8 × 1.5–2.5 cm, flattened, glabrous; abaxial suture with a distinct but narrow wing, adaxial suture with a ca. 3 mm wide wing. Seeds 1–3 per legume. Fl. Apr–Jun, fr. Jul–Oct.

• Semi-open areas, thicket margins; below 1000 m. Taiwan.

16. *Derris palmifolia* Chun & F. C. How, Acta Phytotax. Sin. 2: 68. 1952.

掌叶鱼藤 zhang ye yu teng

Lianas, glabrous except for pubescent young branchlets and flower buds. Leaves subpalmately pinnate, 5–7 cm, with 5 closely inserted leaflets on an abbreviated rachis; leaflet blades ovate-elliptic to oblong, basal pair each 2–3.5 × 1.3–1.5 cm, remaining pairs each 4–5 × ca. 1.5 cm but sometimes apical one larger, secondary veins 6–9 on each side of midvein and very slender, base cuneate to slightly subrounded, apex shortly acuminate. Flowers unknown. Infructescences axillary, 2–3 × as long as leaves, broadly paniculate, with few elongated spreading branches. Legume oblong-ligulate, 4–7 × 1.3–1.7 cm, reticulate veined when dry, base rounded to truncate, apex obliquely pointed; abaxial suture with a less than 1 mm wide wing, adaxial suture with a ca. 2 mm wide wing. Seed 1(or 2) per legume. Fr. Sep.

• Mountain valleys; ca. 1700 m. Yunnan.

