

37. ARCHIDENDRON F. Mueller, Fragm. 5: 59. 1865.

猴耳环属 hou er huan shu

Cylindrokelupha Kostermans; *Paralbizzia* Kostermans.

Trees or shrubs, unarmed. Leaves bipinnate; stipules present or not; petiole, rachis, and pinnae with glands; pinnae in few pairs; leaflets few to several pairs, rarely in 1 pair. Inflorescence a globose head or arranged in panicle, terminal or axillary, or cauliflorous. Flowers white, small, bisexual or polygamous, uniform. Calyx campanulate or tubular, 5-toothed. Petals connate below middle; lobes 5. Stamens numerous; filaments exerted, united into a tube; anthers small, apex eglandular. Carpels 1 to several, free, sessile or stipitate, many ovuled; style filiform; stigma terminal, capitellate. Legume much curved or spirally twisted, or straight, cylindrical, flat or swollen. Seeds ovoid or orbicular, without pleurogram.

About 100 species: tropical Asia; 16 species (three endemic) in China.

Key based on fruiting specimens

- 1a. Legume contorted.
 - 2a. Pinnae 1 or 2 pairs; leaflets alternate or opposite.
 - 3a. Leaflets alternate except for terminal pair, obliquely ovate or oblong, 5–9 × 2–4.5 cm 1. *A. lucidum*
 - 3b. Leaflets opposite, elliptic or ovate-elliptic, 7–18 × 3–9 cm 2. *A. ellipticum*
 - 2b. Pinnae 2–8 pairs; leaflets opposite.
 - 4a. Branchlets angulate 3. *A. clypearia*
 - 4b. Branchlets terete.
 - 5a. Pinnae 2 or 3 pairs; leaflets 4–7 pairs, larger, 2–9 × 1.5–4 cm 4. *A. utile*
 - 5b. Pinnae 5 or 6 pairs; leaflets 7–14 pairs, smaller, 0.5–2 × 0.4–0.9 cm 5. *A. multifoliolatum*
- 1b. Legume straight or slightly curved.
 - 6a. Inflorescence cauliflorous; legume valves slightly contorted after dehiscence, conspicuously netted 6. *A. cordifolium*
 - 6b. Inflorescence on leafy branches, terminal or axillary; legume valves not as above.
 - 7a. Pinnae (1 or) 2 pairs, if 1 pair then leaflets alternate.
 - 8a. Young branchlets and leaf rachis conspicuously angulate; leaflets 8–30 × 5–12 cm 7. *A. eberhardtii*
 - 8b. Young branchlets and leaf rachis not angulate; leaflets smaller than above.
 - 9a. Leaflets opposite, abaxially sparsely ferruginous pubescent, lateral veins 5–7 pairs 8. *A. balansae*
 - 9b. Leaflets alternate, except terminal one, both surfaces glabrous, lateral veins 3–5 pairs 9. *A. alternifoliolatum*
 - 7b. Pinnae 1 pair; leaflets opposite or subopposite.
 - 10a. Glands at petiole flat or concave.
 - 11a. Leaflets 1–3 pairs, lateral veins 4–6 pairs 14. *A. kerrii*
 - 11b. Leaflets 2 or 3 pairs, lateral veins 3, 4, or 6–11 pairs.
 - 12a. Lateral veins 3 or 4 pairs 15. *A. robinsonii*
 - 12b. Lateral veins 6–11 pairs 16. *A. turgidum*
 - 10b. Glands at petiole and leaf rachis raised, more than 1 mm high, hollow.
 - 13a. Leaflets 2 pairs.
 - 14a. Petiolar gland 3–7 mm in diam.; leaflets to 25 cm 10. *A. xichouense*
 - 14b. Petiolar gland 0.5–3 mm in diam.; leaflets to 14 cm 11. *A. chevalieri*
 - 13b. Leaflets 2 or 3 pairs.
 - 15a. Petiolar gland (1.5–)2(–3) mm in diam.; leaflets 3 pairs 12. *A. laoticum*
 - 15b. Petiolar gland 0.5–1.5 mm in diam.; leaflets 2 or 3 pairs 13. *A. tonkinense*

Key based on flowering specimens

- 1a. Branchlets angular or winged.
 - 2a. Flowers pedicellate 3. *A. clypearia*
 - 2b. Flowers sessile 7. *A. eberhardtii*
- 1b. Branchlets terete.
 - 3a. Ovary sessile 16. *A. turgidum*
 - 3b. Ovary stipitate.
 - 4a. Inflorescence cauliflorous; legume valves conspicuously netted 6. *A. cordifolium*
 - 4b. Inflorescence on leafy branches, terminal or axillary; legume valves not netted.
 - 5a. Leaflets alternate except for distal pair.
 - 6a. Glands on leaf rachis depressed; calyx 1.5–2 mm; legume twisted into a circle 1. *A. lucidum*

- 6b. Glands on leaf rachis globose; calyx ca. 4 mm; legume cylindrical 9. *A. alternifoliolatum*
- 5b. Leaflets all opposite or subopposite.
- 7a. Tertiary veins of leaflets forming ladderlike connections between secondary ones 11. *A. chevalieri*
- 7b. Tertiary veins of leaflets not forming ladderlike connections.
- 8a. Petiolar gland raised, hollow.
- 9a. Calyx glabrous 12. *A. laoticum*
- 9b. Calyx faintly to densely puberulent.
- 10a. Calyx subtubular, ca. 2 mm; corolla ca. 5.5 mm, sericeous 13. *A. tonkinense*
- 10b. Calyx campanulate, ca. 3 mm; corolla ca. 8 mm, puberulent 10. *A. xichouense*
- 8b. Petiolar gland circular, elliptic, or oblong.
- 11a. Calyx tube puberulent to tomentose.
- 12a. Pinnae 1 or 2 pairs 1. *A. lucidum*
- 12b. Pinnae 2–6 pairs.
- 13a. Pinnae 2 or 3 pairs; leaflets 4–7 pairs, larger, 2–9 × 1.5–4 cm 4. *A. utile*
- 13b. Pinnae 5 or 6 pairs; leaflets 7–14 pairs, smaller, 0.5–2 × 0.4–0.9 cm ... 5. *A. multifoliolatum*
- 11b. Calyx tube glabrous.
- 14a. Distal leaves with only 1 pair of leaflets per pinna 14. *A. kerrii*
- 14b. Distal leaves with more than 1 pair of leaflets per pinna.
- 15a. Corolla (9–)12.5–15 mm 15. *A. robinsonii*
- 15b. Corolla to 8 mm.
- 16a. Corolla tube glabrous 14. *A. kerrii*
- 16b. Corolla tube puberulent to woolly.
- 17a. Heads 2–6-flowered 2. *A. ellipticum*
- 17b. Heads 10- or more flowered 8. *A. balansae*

1. Archidendron lucidum (Benth) I. C. Nielsen, Adansonia, n.s., 19: 19. 1979.

亮叶猴耳环 liang ye hou er huan

Pithecellobium lucidum Benth, London J. Bot. 3: 207. 1844; *Abarema lucida* (Benth) Kostermans.

Trees, 2–10 m tall, unarmed. Branchlets terete. Branchlet, petiole, and inflorescence shortly brown tomentose. Pinnae 1 or 2 pairs; leaf rachis and base of petiole with round, sunken glands; leaflets 2 or 3 pairs in lower pinnae, 4 or 5 pairs in upper pinnae, adaxially shiny and deep green, obliquely ovate or oblong, 5–9(–11) × 2–4.5 cm, apical ones larger, opposite, proximal ones alternate and smaller, both surfaces glabrous or puberulent on veins, base oblique, apex acuminate, mucronate. Heads globose, 10–20-flowered, arranged in panicles; peduncles to 1.5 cm. Flowers sessile. Calyx less than 2 mm, calyx and corolla shortly brown tomentose. Corolla white, 4–5 mm; lobes connate at middle. Staminal tube slightly shorter than corolla tube. Ovary shortly stipitate, glabrous. Legume twisted into a circle, 2–3 cm wide, margin between seeds constricted. Seeds black, ca. 1.5 × 1 cm. Fl. Apr–Jun, fr. Jul–Dec.

Thin forests; 100–1400 m. Fujian, Guangdong, Guangxi, Hainan, Sichuan, Taiwan, Yunnan, Zhejiang [Cambodia, Laos, Thailand, Vietnam].

2. Archidendron ellipticum (Blume) I. C. Nielsen, Adansonia, n.s., 19: 21. 1979.

椭圆叶猴耳环 tuo yuan ye hou er huan

Inga elliptica Blume, Cat. Gew. Buitenz. 88. 1823.

Trees, small, to 20 m tall. Branchlets terete, with white lenticels; young branchlets brown pubescent. Pinnae 1 or 2 pairs; glands at upper part of petiole and rachis; petiolules 3–4

mm; leaflets 2 or 3 pairs, opposite or subopposite, elliptic or ovate-elliptic, 7–18 × 3–9 cm, both surfaces glabrous, base cuneate to broadly cuneate, apex acuminate to long acuminate. Heads 2–6-flowered, arranged in terminal and axillary panicles. Calyx 4.5–5 mm; teeth 0.5–1 mm. Corolla 4.5–5 mm; lobes 2–2.5 mm. Staminal tube equaling corolla tube. Ovary puberulent. Legume curved into a circle, 4.5–8 mm in diam.; valves 2–3.5 cm wide. Seeds 1.7–2.1 × 1–1.1 cm. Fl. and fr. year-round.

Evergreen broad-leaved forests; ca. 1500 m. Yunnan [Indonesia, Malaysia, Philippines, Thailand].

The record of this species for China is possibly based on a misidentification.

3. Archidendron clypearia (Jack) I. C. Nielsen, Adansonia, n.s., 19: 15. 1979.

猴耳环 hou er huan

Inga clypearia Jack, Malay. Misc. 2(7): 78. 1822; *Abarema angulata* (Benth) Kostermans; *A. clypearia* (Jack) Kostermans; *Pithecellobium angulatum* Benth; *P. clypearia* (Jack) Benth; *P. clypearia* var. *acuminatum* Gagnepain.

Trees, to 10 m tall. Branchlets angulate, densely yellow tomentose. Leaf petiole 4-angulate; leaf rachis and base of petiole with glands; glands flat or hollow; pinnae (3 or)4 or 5(–8) pairs, densely yellow tomentose, lowermost pinna with 3–6 pairs of leaflets, uppermost one with 10–12 pairs of leaflets; leaflets sessile, adaxially shiny, oblique, rhombic-trapezoid, 1–7 × 0.7–3 cm, upper one largest, downward smaller, leathery, both surfaces slightly brown pubescent, base very unequally sided. Corymbs several flowered, arranged in terminal or axillary panicles. Flowers pedicellate. Calyx campanulate, 1–3 mm, 5-toothed, calyx and corolla densely brown villous. Corolla white or yellowish, 4–5 mm; lobes lanceolate. Sta-

mens ca. 2 × as long as corolla, staminal tube equaling corolla tube. Ovary stipitate, hairy. Legume twisted, 1–1.5 cm wide, margin constricted between seeds. Seeds 4–10, black, ellipsoidal or broadly ellipsoidal, ca. 1 cm; testa wrinkled when dry. Fl. Feb–Jun, fr. Apr–Aug.

Forests; 500–1800 m. Fujian, Guangdong, Guangxi, Hainan, Taiwan, Yunnan, Zhejiang [tropical Asia].

This plant is important for the tannins contained in its bark.

4. Archidendron utile (Chun & F. C. How) I. C. Nielsen, *Adansonia*, n.s., 19: 20. 1979.

薄叶猴耳环 bao ye hou er huan

Pithecellobium utile Chun & F. C. How, *Acta Phytotax. Sin.* 7: 17. 1958; *Abarema utilis* (Chun & F. C. How) Kostermans.

Shrubs, 1–2 m tall, rarely small trees. Branchlets terete, brown pubescent. Pinnae 2 or 3 pairs, 10–18 cm; glands on petiole and rachis of apical 1 or 2 leaflets at places of insertion, glands circular, sessile; leaflets 4–7 pairs, opposite, oblong-rhombic, 2–9 × 1.5–4 cm, apical ones larger, downward smaller, membranous, abaxially pubescent, adaxially glabrous, base obtuse or acute, apex obtuse, mucronate. Heads ca. 15-flowered, ca. 1 cm in diam. (not including filaments), arranged in terminal panicles ca. 30 cm. Flowers sessile, white, fragrant. Calyx campanulate, 1.5–3 mm, teeth and corolla pubescent. Corolla 6–8 mm; lobes ovate-oblong, ca. 1.5 mm. Staminal tube shorter than corolla tube. Ovary stipitate, glabrous. Legume red-brown, falcate, 6–10 × 1–1.3 cm. Seeds black, shiny, suborbicular, ca. 1 cm. Fl. Mar–Aug, fr. Apr–Dec.

Forests; 100–700 m. Fujian, Guangdong, Guangxi, Hainan, Zhejiang [Vietnam].

5. Archidendron multifoliolatum (H. Q. Wen) T. L. Wu, **comb. nov.**

多叶猴耳环 duo ye hou er huan

Basionym: *Pithecellobium multifoliolatum* H. Q. Wen, *Guihaia* 15: 212. 1995; *Abarema multifoliolata* (H. Q. Wen) X. Y. Zhu.

Shrubs, ca. 1 m tall. Branchlets terete, brown puberulent. Pinnae 5 or 6 pairs, 4–11 cm; rachis ca. 12 cm; glands oblong or concave at petiolar base and rachis apex, on apical 1 or 2 leaflets at places of insertion; leaflets 7–14 pairs, subsessile, papery, oblong-rhombic, 0.5–2 × 0.4–0.9 cm, apical ones larger, proximal ones smaller, both surfaces puberulent, base unequally sided, margin entire, apex mucronate. Flowers not seen. Legume red, twisted, 7–13 × ca. 1.3 cm, pubescent. Seeds 4–9.

• Forests; ca. 700 m. Guangxi.

6. Archidendron cordifolium (T. L. Wu) I. C. Nielsen, *Acta Phytotax. Sin.* 21: 167. 1983.

心叶猴耳环 xin ye hou er huan

Zygia cordifolia T. L. Wu, *Acta Phytotax. Sin.* 19: 220. 1981; *Abarema cordifolia* (T. L. Wu) C. Chen & H. Sun; *Albizia cordifolia* (T. L. Wu) Y. H. Huang.

Trees. Branchlets brown, terete, glabrous, lenticellate. Pinnae 1 pair; petiole 16–25 cm; petiolar gland orbicular, flat or concave; leaf rachis 20–22 cm; petiolules 5–7 mm; leaflets 3 or 4 pairs, obovate-oblong, 8–30 × 5–18 cm, both surfaces glandular hairy, more densely so abaxially, lateral veins 10–21 pairs, base slightly cordate, apex rounded or acute. Heads 20–50-flowered, arranged in panicles on old branches or stems. Calyx ca. 1.2 mm. Corolla ca. 2.2 mm. Filaments ca. 2 mm. Ovary ca. 1 mm. Legume brownish outside, orange-red inside, strap-shaped, 23–46 × 3.5–4 cm, dehiscent along both sutures; valves slightly contorted, leathery, conspicuously net-veined. Seeds 6–10, ovoid, compressed, ca. 2.5 × 1.7 × 0.7 cm; testa black. Fl. May, fr. Nov.

Valleys; 200–300 m. Yunnan [Vietnam].

7. Archidendron eberhardtii I. C. Nielsen, *Adansonia*, n.s., 19: 30. 1979.

大棋子豆 da qi zi dou

Albizia eberhardtii (I. C. Nielsen) Y. H. Huang; *Cylindrokelupha eberhardtii* (I. C. Nielsen) T. L. Wu; *C. macrophylla* T. L. Wu.

Trees, to 10 m tall. Branchlets strong, 1–1.5 cm in diam., obviously angulate. Leaves large; leaf rachis to 34 cm, obviously angulate; glands urceolate, raised; pinnae 2 pairs; rachis ca. 35 cm; petiolules ca. 6 mm; leaflets 3 pairs, opposite, oblong, 8–30 × 5–12 cm, both surfaces glabrous, midvein central, lateral veins 6–11 pairs, base attenuate, apex acuminate. Heads 4- or 5-flowered, arranged in panicles ca. 20 cm, fasciculate on old branches. Flowers sessile. Calyx cup-shaped, ca. 3 mm; lobes deltoid. Corolla funnel-shaped, 1.1–1.2 cm, sericeous; lobes narrowly ovate, 3–3.5 mm, apex acute. Staminal tube ca. as long as corolla tube. Ovary glabrous, ca. 2.5 mm; stipe ca. 4 mm. Legume cylindric, ca. 20 × 5 cm, dehiscent along both sutures; valves brown, ca. 5 mm thick, subwoody, squarrosescaley. Seeds large, bullet-form on both ends, ca. 6 cm high, ca. 4 cm in diam., middle ones shortly cylindric, ca. 4 cm high. Fr. Jan.

Valleys, along streams in forests; ca. 1000 m. Guangxi [N Vietnam].

The seeds are rich in starch.

8. Archidendron balansae (Oliver) I. C. Nielsen, *Adansonia*, n.s., 19: 23. 1979.

锈毛棋子豆 xiu mao qi zi dou

Pithecellobium balansae Oliver, *Hooker's Icon. Pl.* 20: t. 1976. 1891; *Albizia balansae* (Oliver) Y. H. Huang; *Cylindrokelupha balansae* (Oliver) Kostermans.

Trees, 8–25 m tall. Branchlets red-brown, obviously lenticellate. Leaf petiole 6–8 cm; glands elliptic, flat; pinnae 2 pairs; leaf rachis 16–24 cm; petiolules 5–8 mm; leaflets 4 pairs, opposite, with 1 gland per leaflet pair, oblong or oblanceolate, (5–)10–18 × 3–6.5 cm, abaxially ferruginous pubescent, more densely so on veins, adaxially glabrous or very sparsely ferruginous pubescent, lateral veins 5–7 pairs, conspicuous on both surfaces, base attenuate or obtuse, apex shortly acuminate.

Flowers sessile, ca. 20 in globose head, heads arranged in panicle ca. 20 cm, ferruginous tomentose, branches sparse. Calyx cup-shaped, ca. 1.5 mm. Corolla tube ca. 2.5 mm; lobes 5, ca. 2 mm. Staminal tube equaling corolla tube; filaments 8–10 mm. Ovary stipitate, glabrous. Legume cylindric, 7–15 × ca. 6 cm. Seeds 2–6, bullet-form at both ends, middle ones shortly cylindric, ca. 4.5 cm high and in diam. Fl. Apr–May, fr. Jul.

Thin forests; 600–1300 m. S Yunnan [Vietnam].

9. Archidendron alternifoliolatum (T. L. Wu) I. C. Nielsen, Acta Phytotax. Sin. 21: 164. 1983.

长叶棋子豆 chang ye qi zi dou

Cylindrokelupha alternifoliolata T. L. Wu, Acta Phytotax. Sin. 19: 219. 1981; *Albizia alternifoliolata* (T. L. Wu) Y. H. Huang; *Archidendron glabrifolium* (T. L. Wu) I. C. Nielsen; *C. glabrifolia* T. L. Wu.

Trees, to 6 m tall. Branchlets brown, yellow pubescent. Leaf petiole 2.5–6 cm, with globose gland above middle; pinnae 1 pair; pinna rachis 10–13 cm, sparsely pubescent; petiolules 5–7 mm; leaflets 3 pairs, alternate except terminal opposite pair, oblong, 7–15 × 4–8 cm, lateral veins 3–5 pairs, base acute, apex acuminate. Heads more than 20-flowered, arranged in panicles. Calyx tubular, ca. 4 mm, 5-toothed, sparsely pubescent. Corolla tube ca. 5 mm; lobes lanceolate, ca. 4 mm, yellow pubescent. Filaments ca. 1.5 cm. Ovary glabrous. Legume cylindric, 18–21 × 4–5 cm, dehiscent along both sutures. Seeds broadly cylindric, ca. 2.8 cm high, ca. 3.5 cm in diam. Fl. Mar, fr. Nov.

• Forests; 1400–2000 m. Guangxi, Yunnan.

10. Archidendron xichouense (C. Chen & H. Sun) X. Y. Zhu in X. Y. Zhu et al., Legumes China, 78. 2007 [“*xichouensis*”].

巨腺棋子豆 ju xian qi zi dou

Cylindrokelupha xichouensis C. Chen & H. Sun, Acta Bot. Yunnan. 12: 120. 1990.

Trees, ca. 15 m tall. Branchlets terete. Leaf petiole 4–6 cm; petiolar gland above middle, raised and concave, 1.5–3 mm high, 3–7 mm in diam.; pinnae 1 pair, 6–10 cm; petiolules 5–7 mm; leaflets 2 pairs, opposite, elliptic, 9–25 × 4–10 cm, terminal one larger, base cuneate, apex acuminate. Heads 10–15-flowered, arranged in panicles 10–20 cm. Calyx campanulate, ca. 3 mm; teeth ca. 0.5 mm. Corolla tubular, ca. 8 mm, puberulent; lobes ovate, ca. 2 mm. Staminal tube ca. as long as corolla tube. Ovary ca. 3 mm, glabrous. Legume slightly curved, cylindric, ca. 4.5 cm in diam. Seeds cylindric, 2–3 cm high, ca. 3 cm in diam., both ends truncate; testa hardened.

• Dense forests; 1000–1400 m. Guangxi, Yunnan.

11. Archidendron chevalieri (Kostermans) I. C. Nielsen, Adansonia, n.s., 19: 28. 1979.

坛腺棋子豆 tan xian qi zi dou

Cylindrokelupha chevalieri Kostermans, Reinwardtia 5: 248. 1960; *Albizia chevalieri* (Kostermans) Y. H. Huang (1983), not Harms (1907).

Trees, small, to 10 m tall. Branchlets gray, terete, glabrous. Leaf petiole 1–4 cm; petiolar gland raised, pot-form, ca. 2 mm high, 0.5–3 mm in diam.; pinnae 1 or 2 pairs, with similar gland at apex; petiolules 3–7 mm; leaflets 2 pairs, opposite, elliptic, 8–14 × 4–8 cm, upper one larger, both surfaces glabrous, mid-vein central, lateral veins 3 or 4 pairs, connected by parallel veins, base attenuate, apex shortly acuminate. Heads 10–20-flowered, arranged in narrow panicles to 15 cm. Flowers white, fragrant, sessile. Calyx 2.5–3 mm, glabrous; teeth inconspicuous. Corolla campanulate, 7–8 mm; lobes linear-oblong, only margin pubescent. Staminal tube ca. as long as corolla tube; anthers minute. Ovary glabrous; stipe ca. 2.5 mm. Legume slightly curved or straight, cylindric, 4–10 × 2.5–3 cm, dehiscent along both sutures; valves brown, leathery, netted. Seeds 1–4, ca. 3 cm high, ca. 2.5 cm in diam., middle one shortly cylindric, ca. 2 cm high, both ends turbinate. Fl. May, fr. Jul.

Dense wet forests; below 1700 m. Guangxi [N Vietnam].

12. Archidendron laoticum (Gagnepain) I. C. Nielsen, Adansonia, n.s., 19: 27. 1979.

老挝棋子豆 lao wo qi zi dou

Pithecellobium laoticum Gagnepain, Bull. Soc. Bot. France 99: 48. 1952; *Cylindrokelupha laotica* (Gagnepain) C. Chen & H. Sun.

Trees, ca. 10 m tall. Branchlets brownish, terete, glabrous. Leaf petiole 3–4.5 cm; petiolar glands at apex and insertion of first leaf pair, more than 1 mm high, 1.5–3 mm in diam., hollow inside; pinnae 1 pair; pinna rachis 5–12 cm; petiolules ca. 3 mm; leaflets 3 pairs, opposite, sublanceolate or oblanceolate, 6–10 × 2–3 cm, terminal one largest, firmly papery, lateral veins 5–9 pairs, glabrous on both surfaces, base attenuate, apex mucronate, slightly unequally sided. Heads ca. 20-flowered, ca. 2 cm in diam. (including filaments), 1 or 2 axillary or arranged in panicles; peduncles 1.5–2 cm. Calyx campanulate, 2–3 mm; teeth deltoid. Corolla 4.5–5.5 mm; lobes lanceolate, ca. 3 mm, margin and apex golden pubescent. Stamens ca. 1 cm, staminal tube equaling corolla tube. Ovary stipitate, glabrous. Legume and seeds unknown. Fl. Mar.

Margins of dense forests; 500–700 m. Yunnan [Laos, Vietnam].

The Chinese record of *Archidendron dalatense* (Kostermans) I. C. Nielsen (FRPS 39: 48. 1988, as *Cylindrokelupha dalatensis* (Kostermans) T. L. Wu) is based on a misidentification of *A. laoticum*. See S. Hang and J. Chen (Acta Bot. Yunnan. 12: 121–122. 1990, as *C. laotica*).

13. Archidendron tonkinense I. C. Nielsen, Adansonia, n.s., 19: 24. 1979.

绢毛棋子豆 juan mao qi zi dou

Albizia tonkinensis (I. C. Nielsen) Y. H. Huang; *Cylindrokelupha tonkinensis* (I. C. Nielsen) T. L. Wu.

Trees, small, 5–7 m tall. Branchlets brown, terete, glabrous, with small lenticels. Leaf petiole ca. 2.5 cm; petiolar gland raised, subglobose, hollow, 0.5–1 mm high, 0.5–1.5 mm in diam.; pinnae 1 pair; petiolules 2–3 mm; leaflets 2 or 3 pairs, opposite or subopposite, oblong or elliptic, (2.5–)5.5–10 × (1–)2–3.5 cm, both surfaces glabrous, lateral veins 4 pairs, raised abaxially, inconspicuous adaxially, base narrowly cune-

ate, apex obtuse-acuminate. Heads 12–15-flowered, ca. 1.2 cm in diam. (including filaments), arranged in panicles to 10 cm. Calyx ca. 2 mm; teeth deltoid, ca. 0.5 mm, densely ferruginous pubescent. Corolla campanulate or funnel-shaped, ca. 5.5 mm, sericeous; lobes narrowly oblong, ca. 2 mm. Staminal tube shorter than corolla tube, ca. 3 mm. Ovary ca. 1.5 mm, glabrous; stipe ca. 1.5 mm. Legume ovoid, 7–8 × ca. 5 cm, glabrous, dehiscent along both sutures; valves brown. Seeds 2, brown, turbinate, 3–4 cm high, ca. 3.5 cm in diam.

Thin evergreen forests of valleys; ca. 300 m. Guangxi [N Vietnam].

14. *Archidendron kerrii* (Gagnepain) I. C. Nielsen, Adansonia, n.s., 19: 29. 1979.

碟腺棋子豆 die xian qi zi dou

Pithecellobium kerrii Gagnepain, Bull. Soc. Bot. France 99: 49. 1952; *Abarema kerrii* (Gagnepain) Kostermans; *A. yunnanensis* Kostermans; *Albizia yunnanensis* (Kostermans) Y. H. Huang (1983), not T. L. Wu (1981); *Archidendron yunnanense* (Kostermans) I. C. Nielsen; *Cylindrokelupha kerrii* (Gagnepain) T. L. Wu; *C. yunnanensis* (Kostermans) T. L. Wu.

Trees, small, 3–8 m tall. Branchlets brown, terete, glabrous. Leaf petiole 2–5 cm; petiolar gland plate-form, at insertion of pinna and first leaflet pair; pinnae 1 pair; leaflets 1–3 pairs, opposite or subopposite, ovate, elliptic, or lanceolate, 6–14 × 3–6 cm, papery, both surfaces glabrous, lateral veins 4–6 pairs, abaxially conspicuous, base cuneate or acute, apex acuminate or acute. Heads 10–15-flowered, 8–10 mm in diam., arranged in axillary or terminal loose panicles. Calyx urceolate or cup-shaped, 2.3–3 mm; teeth irregular. Corolla tubular or narrowly funnel-shaped, 6–8 mm, glabrous; lobes narrowly deltoid or oblong, 2–3 mm, apex puberulent. Staminal tube ca. as long as corolla tube or shorter. Ovary glabrous; stipe ca. 1.5 mm. Legume cylindric, ca. 10 × 2–2.5 cm, straight; valves brown. Seeds 6 or 7, shortly cylindric at middle, 5–7 mm high, 1.3–2 cm in diam., both ends turbinate; testa black, crustaceous. Fl. May, fr. Aug.

Dense forests; 200–1800 m. Guangxi, Yunnan [Laos, Vietnam].

15. *Archidendron robinsonii* (Gagnepain) I. C. Nielsen, Adansonia, n.s., 19: 26. 1979.

棋子豆 qi zi dou

Pithecellobium robinsonii Gagnepain, Notul. Syst. (Paris) 2: 281. 1912; *Abarema robinsonii* (Gagnepain) Kostermans; *Albizia robinsonii* (Gagnepain) Y. H. Huang; *Cylindrokelupha robinsonii* (Gagnepain) Kostermans; *Paralbizzia robinsonii* (Gagnepain) Kostermans.

Trees, 8–9 m tall. Branchlets brown or reddish, cylindric, glabrous, with curved leaf scars. Leaf petiole 2–6 cm; petiolar gland circular, less than 0.5 mm high, 0.5–0.7 mm in diam., at upper portion of petiole and insertion of leaflets; rachis of pinnae 6–11 cm; pinnae 1 pair; petiolules ca. 4 mm; leaflets 3 pairs, opposite or subopposite, elliptic or lanceolate, 5–14(–20) × 3–5(–10) cm, both surfaces glabrous, lateral veins 3 or 4 pairs, conspicuous, base cuneate or acute, symmetric or not, apex acuminate. Heads 6–8-flowered, arranged in axillary pani-

cles to 20 cm; peduncles 1–1.5 cm. Calyx urceolate or cup-shaped, 4.5–7 mm, glabrous; teeth inconspicuous. Corolla funnel-shaped or campanulate, (0.9–)1.2–1.5 cm; lobes narrowly ovate or elliptic, 4–5 mm, abaxially and apically sericeous. Staminal tube equaling corolla tube. Ovary glabrous; stipe 6–8 mm. Legume straight, cylindric, 10–20 × 3–3.5 cm; valves brown, leathery. Seeds to 7, ca. 2.5 × 2.5 cm, both ends turbinate; testa brown, crustaceous.

Dense forests of valleys; 300–700 m. Guangxi, Yunnan [Vietnam].

16. *Archidendron turgidum* (Merrill) I. C. Nielsen, Adansonia, n.s., 19: 32. 1979.

大叶合欢 da ye he huan

Pithecellobium turgidum Merrill, Philipp. J. Sci. 15: 239.

1919; *Albizia croizatiana* F. P. Metcalf; *A. turgida* (Merrill) Merrill; *Cylindrokelupha turgida* (Merrill) T. L. Wu; *Paralbizia turgida* (Merrill) Kostermans.

Trees, small, 4–9 m tall. Branches terete. Young branchlets and leaf rachis ferruginous tomentose. Leaf glands near tip of petiole and on rachis at places of leaflet insertion; pinnae 1 pair; petiolules 2–6 mm; leaflets opposite, 2 or 3 pairs, oblong, elliptic, obliquely lanceolate, or obliquely elliptic, 7–20 × 3.5–7 cm, papery, abaxially very sparsely appressed pubescent, more densely so on veins, adaxially glabrous, midvein central, lateral veins 6–11 pairs, base acute or rounded, apex long or shortly acuminate. Heads ca. 1.5 cm in diam., ca. 20-flowered, arranged in axillary or terminal panicles. Flowers white. Calyx cup-shaped, ca. 2 mm, 5-toothed. Corolla ca. 6 mm; lobes oblong, corolla and calyx white tomentose. Staminal tube much shorter than corolla tube. Ovary glabrous, sessile or nearly so. Legume swollen, oblong to strap-shaped, 7–20 × 2.5–3.5 cm. Seeds brown, ellipsoidal, 1.8–2.5 × ca. 2 cm, glabrous. Fl. Mar–May, fr. Jul–Dec.

Forests; 1000–1500 m. Guangdong, Guangxi [N Vietnam].

