

6. Tribe ACACIEAE

金合欢族 jin he huan zu

Wu Delin (吴德邻 Wu Te-lin); Ivan C. Nielsen

Trees, shrubs, or lianas, armed or unarmed. Stipules spinescent or not. Leaves bipinnate or modified to phyllodes by dilation of petiole and proximal part of rachis; extrafloral nectaries usually present on petiole and rachis or absent; leaflets opposite (in China), sessile or shortly stalked. Inflorescences consisting of pedunculate heads or spikes borne in axillary clusters or aggregated into terminal panicles. Flowers bisexual, or male and bisexual, tetra- or pentamerous, uniform. Sepals connate, valvate. Petals valvate, rarely absent. Stamens numerous, exerted; filaments free or connate at base; anthers glandular or not. Ovary sessile or stipitate; ovules many or 2 rows; style filiform; stigma capitate, small. Legume extremely variable, dehiscent or indehiscent; endocarp not separated from exocarp, not forming envelope around each seed. Seeds usually elliptic to oblong, ± flattened, with a hard black-brown testa with pleurogram, wingless; aril usually absent, but present in some phyllodic species.

One genus recognized here and ca. 1,450 species: distributed in the tropics and subtropics, especially Africa and Australia; 18 species (three endemic, seven introduced) in China.

31. ACACIA Miller, Gard. Dict. Abr., ed. 4, [25]. 1754, nom. cons.

金合欢属 jin he huan shu

Acaciella Britton & Rose; *Racosperma* Martius; *Senegalia* Rafinesque; *Vachellia* Wight & Arnott.

Morphological characters and geographic distribution are the same as those of the tribe.

The genus is treated here sensu lato, including the African, American, Asian, and Australian species.

Acacia senegal (Linnaeus) Willdenow and *A. nilotica* (Linnaeus) Delile were treated in FRPS (39: 28, 30. 1988) but are not treated here because they are only rarely cultivated in China.

1a. Leaves reduced to phyllodes.

2a. Phyllodes 10–20 × 1.5–6 cm; inflorescence a spike 1. *A. auriculiformis*

2b. Phyllodes 6–10 × 0.4–1 cm; inflorescence a head 2. *A. confusa*

1b. Leaves bipinnate.

3a. Flowers in racemes or spikes.

4a. Trees armed; pinnae 10–30 pairs 7. *A. catechu*

4b. Shrubs unarmed; pinnae 5–15 pairs.

5a. Racemes 2–5 cm; midveins of leaflets close to upper margin 8. *A. yunnanensis*

5b. Racemes shorter than 2 cm; midveins of leaflets subcentral 5. *A. glauca*

3b. Flowers in heads, then rearranged in panicles.

6a. Trees or shrubs.

7a. Shrubs armed; stipules spinescent 18. *A. farnesiana*

7b. Shrubs unarmed or rarely with sparse prickles.

8a. Leaflets 4–8 mm.

9a. Leaflets glabrous; heads 6–8 mm in diam. 4. *A. decurrens*

9b. Leaflets sparsely pubescent; heads ca. 10 mm in diam. 13. *A. teniana*

8b. Leaflets 2–4 mm.

10a. Legume 7–12 mm wide, glabrous, glaucous 3. *A. dealbata*

10b. Legume 4–5 mm wide, pubescent 6. *A. mearnsii*

6b. Climbers.

11a. Midvein of leaflets starting centrally or subcentrally.

12a. Base of leaflets truncate, leaflets densely puberulent 9. *A. tonkinensis*

12b. Base of leaflets rounded to cuneate, leaflets abaxially glabrous to faintly adpressed
puberulent 10. *A. caesia*

11b. Midvein starting marginally.

13a. Lateral veins of leaflets abaxially not forming a reticulate pattern.

14a. Petiolar gland in lower half of petiole, usually just above basal pulvinus; leaflets
apically sharply acute, often bent forward 16. *A. pennata*

14b. Petiolar gland at or above middle of petiole; leaflets apically obtuse, straight 17. *A. megaladena*

13b. Lateral veins of leaflets abaxially forming a reticulate pattern.

15a. Midvein parallel to upper margin of leaflets 11. *A. vietnamensis*

15b. Midvein not parallel to upper margin of leaflets.

- 16a. Leaflets membranous, with a wrinkled appearance when dried; legume fleshy, with wrinkled surfaces seeming to break into segments 12. *A. concinna*
 16b. Leaflets papery, without a wrinkled appearance when dried; legume papery, smooth, not seeming to break into segments.
 17a. Branchlets glaucous, puberulent to tomentose when young 14. *A. pruinescens*
 17b. Branchlets brownish, glabrous 15. *A. delavayi*

1. *Acacia auriculiformis* A. Cunningham ex Bentham, London J. Bot. 1: 377. 1842.

大叶相思 da ye xiang si

Racosperma auriculiforme (A. Cunningham ex Bentham) Pedley.

Trees, evergreen, to 20 m tall. Bark gray-white, smooth. Branches pendulous; branchlets angular, glabrous, with conspicuous lenticels. Phyllodes falcate-oblong, 10–20 × 1.5–4(–6) cm, conspicuous main veins 3 or 4, both ends attenuate. Spikes 1 to several, fasciculate, axillary or terminal, 3.5–8 cm. Flowers orange-yellow. Calyx 0.5–1 mm, shallowly dentate. Petals oblong, 1.5–2 mm. Filaments 2.5–4 mm. Ovary densely puberulent. Legume contorted when mature, 5–8 × 0.8–1.2 cm, valves woody. Seeds ca. 12, black, ca. 5 × 3.5 mm. $2n = 26^*$.

Cultivated in Fujian, Guangdong, Guangxi, Zhejiang [native to N Australia and New Guinea].

2. *Acacia confusa* Merrill, Philipp. J. Sci., C, 5: 27. 1910.

台湾相思 tai wan xiang si

Acacia confusa var. *inamurae* Hayata; *Racosperma confusum* (Merrill) Pedley.

Trees, evergreen, 6–15 m tall, glabrous. Branches gray or brown, unarmed; branchlets slender, angular. Phyllodes straight or slightly falcate, linear-lanceolate, 6–10 × 0.5–1.3 cm, leathery, both surfaces glabrous, conspicuous longitudinal veins (3–)5(–8), both ends acuminate, apex slightly obtuse, usually with hooked acumen. Heads solitary or 2- or 3-fasciculate, axillary, globose, ca. 0.7 cm in diam.; peduncles 7–13 mm, slender. Flowers golden yellow, fragrant. Calyx 1–1.3 mm. Petals greenish, 1.5–1.9 mm. Stamens numerous, ca. 3.5 mm. Ovary yellow-brown villous; style ca. 4 mm. Legume black-brown, flat, 4–9(–12) × 0.7–1 cm. Seeds broadly elliptic, 5–6 × 3.5–5 mm. Fl. Mar–Oct, fr. Aug–Dec. $2n = 26^*$.

Widely cultivated in Fujian, Guangdong, Guangxi, Hainan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [native to Philippines].

This tree is grown for its wood and tannins. The seeds are poisonous.

3. *Acacia dealbata* Link, Enum. Hort. Berol. Alt. 2: 445. 1822.

银荆 yin jing

Acacia decurrens Willdenow var. *dealbata* (Link) F. Mueller ex Maiden; *Racosperma dealbatum* (Link) Pedley.

Shrubs or trees, small, ca. 15 m tall, unarmed. Young branchlets slightly angular with ridges gray tomentose, glaucous. Leaves argenteous to greenish or golden when not extended; rachis not angulate; glands at rachis of pinna insertion; pinnae 10–20(–25); leaflets 26–46 pairs, dense, distance be-

tween leaflets not more than width of 1 leaflet, linear, 2.6–3.5 × 0.4–0.5 mm, abaxially or both surfaces gray-white pubescent. Heads 6–7 mm in diam., arranged in axillary racemes or panicles; peduncles ca. 3 mm. Flowers yellowish or orange-yellow. Legume red-brown or black, glaucous, oblong, flat, 3–8 cm × 7–12 mm, glabrous. Seeds elliptic, flat. Fl. Apr, fr. Jul–Aug. $2n = 26$.

Cultivated in Fujian, Guangxi, Guizhou, Sichuan, Taiwan, Yunnan, Zhejiang [native to Australia].

This species is grown for its tannins and as a honey plant.

4. *Acacia decurrens* Willdenow, Sp. Pl. 4: 1072. 1806.

线叶金合欢 xian ye jin he huan

Racosperma decurrens (Willdenow) Pedley.

Trees, unarmed, 7–15 m tall. Branchlets glabrous, conspicuously angulate. Leaf glands on rachis between leaflets; pinnae (3–)7–15 pairs; leaflets widely spaced, 15–45 pairs, linear, 5–10 × 0.3–0.8 mm, main vein close to upper margin. Heads 6–8 mm in diam., arranged in racemes or panicles. Flowers yellow. Calyx shortly ciliate. Petals with conspicuous midvein. Stamens exerted. Legume oblong, flat, 2–10.5 cm × 4–8.5 mm, almost leathery, constricted between seeds. Seeds ovoid. Fl. Jan–Apr, fr. May–Aug. $2n = 26^*$.

Cultivated in Guangdong, Guangxi, Yunnan, Zhejiang [native to Australia].

This plant is grown for its tannins.

5. *Acacia glauca* (Linnaeus) Moench, Methodus, 466. 1794.

灰合欢 hui he huan

Mimosa glauca Linnaeus, Sp. Pl. 1: 520. 1753; *Acacia villosa* (Swartz) Willdenow; *Acaciella villosa* (Swartz) Britton & Rose; *M. villosa* Swartz.

Shrubs, unarmed, 3–8 m tall. Branchlets and petioles pubescent. Stipules deciduous, lanceolate; pinnae 5–8 pairs, 3–6 cm, not glandular; leaflets 10–30 pairs, oblong, 4–8 × 1–3 mm, both surfaces glabrous or abaxially sparsely pubescent, midvein near middle, bilaterally slightly asymmetric, base rounded, margin ciliate, apex obtuse-rounded or very shortly mucronate. Racemes 2–6-fasciculate, axillary, oblong or subglobose, 1–1.5 cm, 20–30-flowered; peduncles 1–1.5 cm. Flowers slightly fragrant; pedicels 1–2 mm. Calyx cup-shaped, ca. 0.5 mm. Corolla 2.5–3 mm, base tubular. Stamens numerous, initially white, turning yellow, 6–7 mm. Legume oblong, compressed, 4.5–6.6 × 1.5–2 cm, membranous, often irregularly constricted, villous. Seeds 3–6. Fl. and fr. Jul–Nov.

Introduced in Fujian, Guangdong [native to the West Indies].

This is a host plant of the lac insect.

6. *Acacia mearnsii* De Wildeman, Pl. Bequaert. 3: 62. 1925.

黑荆 hei jing

Racosperma mearnsii (De Wildeman) Pedley.

Trees, 9–15 m tall. Branchlets angulate, gray-white tomentose. Young leaves golden tomentose, mature leaves gray pubescent; rachis not angulate; pinnae 6–30 pairs, 0.5–5.5 cm, glands at rachis of pinna insertion and elsewhere; leaflets 10–68 pairs, dense, linear, 0.7–6 × 0.4–0.8(–1) mm, margin, abaxial surface, or sometimes both surfaces pubescent. Heads globose, 6–7 mm in diam., arranged in axillary racemes or terminal panicles; peduncles 7–10 mm; rachis yellow, densely tomentose. Flowers yellowish or white. Legume black, oblong, flat, 5–10 cm × 4–5 mm, slightly constricted between seeds, pubescent. Seeds black, shiny, ovoid. Fl. Jun, fr. Aug.

Cultivated in Fujian, Guangdong, Guangxi, Sichuan, Taiwan, Yunnan, Zhejiang [native to Australia].

This species is grown for its tannins and as a honey plant.

7. *Acacia catechu* (Linnaeus f.) Willdenow, Sp. Pl. 4: 1079. 1806.

儿茶 er cha

Mimosa catechu Linnaeus f., Suppl. Pl. 439. 1782; *Acacia catechu* var. *wallichiana* (Candolle) P. C. Huang; *A. wallichiana* Candolle.

Trees, deciduous, small, 6–10 m tall. Bark split into laminar strips. Branchlets pubescent, often with a pair of flat, brown, hooked spines below stipules or without spines. Leaf glands near petiolar base and between several upper leaflets of rachis; rachis villous; pinnae 10–30 pairs; leaflets 20–50 pairs, linear, 2–6 × 1–1.5 mm, ciliate. Spikes 1–4, axillary, 2.5–10 cm. Flowers yellowish or white. Calyx campanulate, 1.2–1.5 cm; teeth deltoid, hairy. Petals lanceolate or oblanceolate, ca. 2.5 cm, sparsely pubescent. Stamens numerous. Ovary ca. 1 mm, glabrous. Legume brown, straight, strap-shaped, 12–15 × 1–1.8 cm, nitid, dehiscent, stalk 3–7 mm, apex rostrate. Seeds 3–10. Fl. Apr–Aug, fr. Sep to following Jan. $2n = 26$.

Native in Yunnan (Lincang, Xishuangbanna); cultivated in Fujian, Guangdong, Guangxi, Hainan, Taiwan, Yunnan, Zhejiang [Bangladesh, Bhutan, India, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand; introduced elsewhere].

This plant is used medicinally.

8. *Acacia yunnanensis* Franchet, Pl. Delavay. 193. 1890.

云南相思树 yun nan xiang si shu

Shrubs, 4–5 m tall, pubescent throughout, generally unarmed; old branches with recurved prickles on internodes. Stipules deciduous, oblong; petiole with raised, elliptic gland; pinnae 5–15 pairs, 2–5 cm; leaflets oblong, 4–10 × 1.8–2 mm, midvein close to upper margin, both surfaces sparsely pubescent, base obtuse-rounded, apex acute. Racemes 2–5 cm, 2- or 3-fasciculate or arranged in panicle. Calyx ca. 2.5 mm. Corolla ca. 5 mm; lobes ca. 2 mm, densely golden tomentose. Filaments ca. 1.1 cm. Ovary pubescent, with ca. 1 mm stipe; style ca. 3 mm. Legume oblong, ca. 15 × 2–3 cm, base attenuate, stalklike,

apex long acuminate, slightly constricted between seeds. Seeds brown, flat. Fl. May.

• Thickets; 1700–2200 m. Sichuan, Yunnan.

9. *Acacia tonkinensis* I. C. Nielsen, Adansonia, n.s., 19: 358. 1980.

滇南金合欢 dian nan jin he huan

Climbers, armed with scattered, recurved prickles on internodes. Branchlets hirsute, with light glands. Stipules caducous, filiform, 4–6 mm; petiole 3.2–5.5 cm, with 2 hollow glands above base and at or above middle, ca. 1.5 mm in diam.; leaflets 17–33 pairs, oblong to subfalcate, 5–9.5 × 2–2.5 mm, adaxial surface and margin strigose, main vein starting centrally at base, running eccentrically toward apex, not parallel to upper margin, lateral veins inconspicuous, base fully truncate, apex asymmetrically rounded-truncate, apiculate, bent forward. Heads with bracts projecting beyond flowers in bud. Calyx lobes adnate at base only, oblong, ca. 2 mm. Corolla ca. 2.5 mm; lobes triangular-ovate, ca. 1 mm. Stamens numerous. Ovary puberulent. Legume red-brown, oblong, flat, 1.3–2.4 × 1.2–1.3 cm, papery, margin slightly sinuate, with glandular hairs, dehiscent. Seeds irregularly ellipsoidal, 8–12 × 5–7 mm.

Thin forests; 400–700 m. S Yunnan [Laos, N Vietnam].

10. *Acacia caesia* (Linnaeus) Willdenow, Sp. Pl. 4: 1090. 1806.

尖叶相思 jian ye xiang si

Mimosa caesia Linnaeus, Sp. Pl. 1: 522. 1753; *Acacia caesia* var. *subnuda* (Craib) I. C. Nielsen; *A. intsia* (Linnaeus) Willdenow var. *caesia* (Linnaeus) Wight & Arnott ex Baker; *A. intsia* var. *oxyphylla* Graham ex Baker; *A. oxyphylla* Graham var. *subnuda* Craib.

Climbers, with recurved prickles on internodes. Branchlets and leaf rachis tomentose or glabrous. Stipules filiform, ca. 3 × 1 mm; petiole with gland 0.3–1 cm above base, in lower half of petiole, and glands on rachis between several upper pinnae; pinnae 6–8(–13) pairs, 3.5–9.5 cm; leaflets 8–19 pairs, oblong, (0.6–)1–1.2 cm × (1.1–)4–5 mm, both surfaces glabrous, main vein starting from center of leaf base, close and parallel to upper margin, apex apiculate. Heads less than 1.2 cm in diam., 1–4 arranged in panicles; peduncles tomentose. Flowers yellow. Calyx 1.5–2 mm; lobes ovate, 0.3–0.5 mm, apex acute. Corolla 2–3 mm; lobes ovate-elliptic, (0.5–)1 mm. Ovary 0.8–1 mm, puberulent to velutinous; stipe ca. 1.5 mm. Legume strap-shaped, 10–15 × 2–3 cm, dehiscent, sutures straight or slightly sinuous, base attenuate, stalklike. Seeds 8–12. Fl. Sep, fr. Nov.

Secondary forests; 200–2500 m. Guangdong, Hainan, Sichuan, Taiwan, Yunnan [Bangladesh, Cambodia, India, Laos, Myanmar, Sri Lanka, Thailand, Vietnam].

11. *Acacia vietnamensis* I. C. Nielsen, Adansonia, n.s., 19: 360. 1980.

越南金合欢 yue nan jin he huan

Shrubs, scandent, armed with scattered, recurved thorns. Young branchlets puberulent, with glandular hairs, glabrescent. Leaf petiole 4–5 cm; glands above base of petiole, elliptic, 0.5–1 mm, raised, flat to slightly concave, rachis glands sessile;

leaflets 25–40 pairs, sessile, oblong, 4–6.5 × 1–1.5 mm, midvein starting eccentrically at base, running parallel to upper margin, lateral veins reticulate, base asymmetrically truncate, apex very asymmetrically acute, bent forward. Calyx campanulate, 1.8–2 mm; teeth triangular, ca. 0.5 mm, glandular puberulent. Corolla ca. 2.5 mm, glandular puberulent; lobes elliptic, ca. 1.1 mm. Stamens numerous. Ovary velutinous. Legume (immature) red-brown, oblong, flat, ca. 11 × 2.8 cm, papery, with light glandular hairs. Seeds unknown. Fl. Mar–Jul, fr. Jun–Dec.

Thickets. Guangxi, Guangdong, Guizhou, Hainan, Hunan, Jiangxi, Zhejiang [Laos, Vietnam].

12. *Acacia concinna* (Willdenow) Candolle, Prodr. 2: 464. 1825.

藤金合欢 teng jin he huan

Mimosa concinna Willdenow, Sp. Pl. 4: 1039. 1806; *Acacia sinuata* (Loureiro) Merrill (1935), not Jacques (1860); *M. sinuata* Loureiro.

Climbers, scandent shrubs, or small trees. Branchlets and leaf rachises gray tomentose; prickles abundant, minute, hooked. Stipules deciduous, ovate-cordate, 3–8 × 1.5–6 mm; leaf 10–20 cm; pinnae 6–18 pairs, 8–12 cm; glands near base of petiole and one between uppermost pinnae; leaflets 15–25 pairs, glaucous abaxially, greenish adaxially, linear-oblong, 8–12 × 2–3 mm, membranous, with a wrinkled appearance when dry, both surfaces hirsute or glabrescent, margin ciliate, midvein near upper margin. Heads globose, 9–12 mm in diam., arranged in a panicle; branches tomentose. Flowers white or yellowish, fragrant. Calyx funnel-shaped, ca. 2 mm. Corolla slightly exerted. Ovary glabrous or sericeous, stipitate. Legume brown, strap-shaped, 8–15 × 2–3 cm, fleshy, with wrinkled surfaces, sutures straight or slightly sinuate, seeming to break into segments. Seeds 6–10. Fl. Apr–Jun, fr. Jul–Dec.

Thin forests, thickets; 200–1100 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Yunnan [tropical Asia].

This plant is important for its tannins and is used medicinally.

Because Merrill did not mention any type specimens of *Acacia sinuata* (Loureiro) Merrill, based on *Mimosa sinuata* Loureiro, the name is regarded by us as dubious (see Nielsen, Adansonia, n.s., 19: 349. 1980).

13. *Acacia teniana* Harms, Repert. Spec. Nov. Regni Veg. 17: 133. 1921.

无刺金合欢 wu ci jin he huan

Trees, small, or shrubs, ca. 3 m tall, armed with recurved prickles at internodes. Bark brown or grayish, often split. Young branchlets pubescent, glabrescent. Leaf gland at middle part of petiole, soon deciduous or without gland; pinnae 7–13 pairs, 7–12 cm or longer, pubescent; leaflets 20–40 pairs, obliquely lanceolate or linear-lanceolate, 4–8 mm, sparsely sericeous when young, margin ciliate, midvein oblique, apex acute or slightly acute. Heads ca. 1 cm in diam., 2–6 in axillary or terminal panicles; peduncles 2–4 cm, villous. Flowers puberulent or subglabrous. Calyx ca. 2 mm. Corolla ca. 3 mm. Filaments ca. 5 mm. Ovary glabrous. Legume oblong, 8–10 × 2.5–3 cm. Fl. May–Jun, fr. Jan of following year.

• Forests; 800–1500 m. Sichuan, Yunnan.

14. *Acacia pruinescens* Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 45: 296, 298. 1877.

粉被金合欢 fen bei jin he huan

Acacia pruinescens var. *luchunensis* C. Chen & H. Sun.

Climbers, woody, or scandent shrubs. Branchlets with recurved spines, glaucous and pubescent when young. Stipules cordate-hastate, pubescent; petiole with oblong gland above base; pinnae 9–11 pairs, 3.3–9 cm; rachis pubescent, with few recurved spines; leaflets numerous, sessile, linear, 7–11(–16) × 1.8–2.5(–4) mm, glabrous or ciliate, midvein close to upper margin, base truncate, apex obtuse. Heads arranged in axillary panicles to 25 cm; peduncles 1.5–2.2 cm. Flowers yellow. Calyx tubular, 2–3 mm, pubescent, apex truncate. Corolla 3–4 mm; tube glabrous; lobes 0.5–1.5 mm, sparsely pubescent or glabrous. Stamens numerous, with deciduous gland at apex. Ovary apically sparsely pubescent. Legume brownish, oblong, flat, 18–20 × 2.9–3.2 cm, both ends acute, sutures thickened, glabrous. Seeds oblong, 7–10 mm. Fl. Apr, fr. Jun–Oct.

Thin forests; 1200–1600 m. Guangxi, Yunnan [Myanmar, Vietnam].

15. *Acacia delavayi* Franchet, Pl. Delavay. 194. 1890.

光叶金合欢 guang ye jin he huan

Climbers. Branchlets brownish, glabrous, angulate, with short straight or slightly recurved prickles. Leaf petiole short, spinose; pinnae 3–5 pairs, 14–20 cm; leaflets dense, linear, 6–7 mm, less than 2 mm wide, glabrous, base obtuse or auriculate, apex obtuse. Heads solitary or paired, axillary, globose, ca. 1 cm in diam.; peduncles 3–4 cm. Calyx ca. 2 mm; lobes ca. 0.4 mm, apex acute. Corolla 3–3.5 mm; lobes ca. 1 mm, glabrous. Stamens ca. 2 × as long as corolla. Ovary ca. 1 mm, velutinous; stipe ca. 1.5 mm. Legume oblong, very flat, 8–10 × 2–3 cm, subleathery, both ends subrounded or obtuse, dehiscent. Seeds 7–9, gray, oblong-rhombic, flat. Fl. Jul, fr. Sep.

• Mountains, secondary forests; 1500–2200 m. Guizhou, Yunnan.

1a. Base of leaflets obtuse 15a. var. *delavayi*

1b. Base of leaflets auriculate 15b. var. *kunmingensis*

15a. *Acacia delavayi* var. *delavayi*

光叶金合欢(原变种) guang ye jin he huan (yuan bian zhong)

Acacia cavaleriei H. Léveillé.

Base of leaflets obtuse.

• Mountains; 1700–2200 m. Yunnan.

15b. *Acacia delavayi* var. *kunmingensis* C. Chen & H. Sun, Acta Bot. Yunnan. 12: 262. 1990.

昆明金合欢 kun ming jin he huan

Base of leaflets auriculate.

• Secondary forests; ca. 1500 m. Guizhou, Yunnan (Kunming).

16. *Acacia pennata* (Linnaeus) Willdenow, Sp. Pl. 4: 1090. 1806.

羽叶金合欢 yu ye jin he huan

Mimosa pennata Linnaeus, Sp. Pl. 1: 522. 1753.

Climbers, with copious, scattered prickles. Branchlets and leaf rachis ferruginous pubescent. Stipules (ovate-)lanceolate, 3–5 × 1–1.5 cm, cuspidate; petiolar glands subpulvinate, narrowly terete or slightly obconic, 0.3–3 mm in diam., below middle of petiole, usually just above basal pulvinus and several between distal pinnae; pinnae 8–22 pairs; leaflets 30–54 pairs, densely crowded, linear, 5–10 × 0.5–1.5 mm, midvein near upper margin, base truncate, margin ciliate, apex sharply acute, asymmetric, bent forward, often nearly hooked, or apex broadly acute, straight. Heads solitary or 2- or 3-fasciculate, globose, ca. 1 cm in diam., arranged in axillary or terminal panicles; peduncles 1–2 cm, yellow pubescent or reddish glandular hairy. Flowers pedicellate or subsessile. Calyx subcampanulate, 1.5–2.5 mm, 5-toothed. Corolla 2–3.2(–4.2) mm. Ovary puberulent, stipitate. Legume strap-shaped, 9–20 × 2–3.5 cm, glabrous or finely puberulent when young, sutures slightly sinuate. Seeds black, 8–12, narrowly elliptic, 6–10 × 4.5–7 mm, flat. Fl. Mar–Oct, fr. Jul–Apr of following year.

Thin forests, thickets. Fujian, Guangdong, Guangxi, ?Guizhou, Hainan, Yunnan, ?Zhejiang [Bhutan, Cambodia, India, Laos, ?Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam].

Acacia pennata var. *pennata* occurs in India, Myanmar, Sri Lanka, and Thailand.

- 1a. Leaflets broadly acute, straight at apex 16a. subsp. *kerrii*
 1b. Leaflets sharply acute, asymmetric at apex, bent forward 16b. subsp. *hainanensis*

16a. *Acacia pennata* subsp. *kerrii* I. C. Nielsen, Adansonia, n.s., 19: 353. 1980.

柯氏羽叶金合欢 ke shi yu ye jin he huan

Glands subpulvinate, elliptic, 1–3 mm in diam. Leaflets broadly acute, straight at apex, main vein not parallel to upper margin. Inflorescences yellow pubescent. Corolla 2.5–3.2 mm.

Thin forests, thickets. Yunnan [Bhutan, Cambodia, India, Laos, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam].

16b. *Acacia pennata* subsp. *hainanensis* (Hayata) I. C. Nielsen, Adansonia, n.s., 19: 352. 1980.

海南羽叶金合欢 hai nan yu ye jin he huan

Acacia hainanensis Hayata, Icon. Pl. Formosan. 3: 86. 1913.

Glands narrowly terete or slightly obconic, 0.3–0.8 mm in diam. Leaflets sharply acute, bent forward. Inflorescences reddish glandular hairy. Flowers subsessile. Corolla 2–2.5 mm.

Thin forests, thickets. Fujian, Guangdong, Guangxi, Hainan, Yunnan [India, Myanmar, Vietnam].

17. *Acacia megaladena* Desvaux, J. Bot. Agric. 3: 69. 1814.

钝叶金合欢 dun ye jin he huan

Climbers, woody. Young branchlets pubescent and glandular hairy, glabrescent when old. Stipules linear to filiform, 2–3 cm; petiole 2.5–6.5 cm; glands at or above middle, elliptic and raised, rarely flat; pinnae 8–20 pairs, rachis 2–12 cm; leaflets 19–81 pairs, oblong, (2–)3.5–7.5 × 0.8–1.5 mm, both surfaces

glabrous, except ciliate along margin, midvein close to upper margin, base truncate, unequal, apex obtuse, straight. Heads globose, arranged in terminal or axillary panicles. Flowers sessile or subsessile. Calyx 1.7–2.9 mm, glabrous, puberulent, or velutinous, 5-toothed. Corolla light yellow, 2–4.2 mm, glabrous or puberulent; lobes oblong or narrowly obovate, 0.8–1.1 mm. Stamens numerous. Ovary sericeous, shortly stipitate. Legume red-brown, oblong, flat, 9.5–17 × 1.3–3.5 cm, papery, glabrous. Seeds brown, ovoid-ellipsoidal to ellipsoidal, flat, 7–9 × 4.5–5.5 mm. Fl. May–Jun, fr. Sep–Oct.

Thin forests, thickets; 800–1600 m. Guangxi, Yunnan [widely distributed in tropical Asia].

- 1a. Calyx glabrous to faintly puberulent; corolla 2–3.4 mm 17a. var. *megaladena*
 1b. Calyx velutinous; corolla ca. 4.2 mm 17b. var. *garrettii*

17a. *Acacia megaladena* var. *megaladena*

钝叶金合欢(原变种) dun ye jin he huan (yuan bian zhong)

Acacia arrophula D. Don ex Wallich; *A. pennata* (Linnaeus) Willdenow var. *arrophula* (D. Don ex Wallich) Baker.

Calyx glabrous to faintly puberulent. Corolla 2–3.4 mm.

Thin forests, thickets; 800–1600 m. Guangxi, Yunnan [widely distributed in tropical Asia].

17b. *Acacia megaladena* var. *garrettii* I. C. Nielsen, Adansonia, n.s., 19: 351. 1980.

盘腺金合欢 pan xian jin he huan

Calyx velutinous. Corolla ca. 4.2 mm.

Thin forests, thickets; ca. 1600 m. Guangxi, Yunnan [Thailand].

18. *Acacia farnesiana* (Linnaeus) Willdenow, Sp. Pl. 4: 1083. 1806.

金合欢 jin he huan

Mimosa farnesiana Linnaeus, Sp. Pl. 1: 521. 1753; *Vachellia farnesiana* (Linnaeus) Wight & Arnott.

Shrubs or small trees, 2–4 m tall. Bark brown, rough. Branches numerous; branchlets zigzag, with small lenticels. Leaves 2–7 cm; stipules spinelike, spines 1–2 cm, shorter on short branchlets; leaf rachis villous, glandular; pinnae 4–8 pairs, axillary, 1.5–3.5 cm in diam.; leaflets 10–20 pairs, linear-oblong, 2–6 × 1–1.5 mm, glabrous. Heads 1–3, axillary, 1–1.5 cm in diam.; peduncles 1–3 cm, hairy; bracts at or near tip of peduncle. Flowers yellow, fragrant. Calyx ca. 1.5 mm, 5-toothed. Corolla ca. 2.5 mm, 5-toothed. Stamens ca. 2 × as long as corolla. Ovary cylindric, puberulent. Legume brown, straight or curved, turgid, subcylindric, 3–7 cm × 8–15 mm, glabrous, scarcely dehiscent, filled with a pith separating seeds from each other. Seeds several, brown, ovoid, ca. 6 mm. Fl. Mar–Jun, fr. Jul–Dec. *2n* = 26, 52.

Cultivated in Fujian, Guangdong, Guangxi, Guizhou, Hainan, Henan, Sichuan, Taiwan, Yunnan, Zhejiang [native to tropical America; cultivated throughout the tropics].

This species is grown as a hedge plant and is used medicinally and for dyes and gums.