

6. GREWIA Linnaeus, Sp. Pl. 2: 964. 1753.

扁担杆属 *bian dan gan shu*

Trees or shrubs. Branchlets usually stellate. Leaves alternate; stipule minute, caducous; petiole short; leaf blade basal veins 3–5, margin serrate or rarely lobed. Flowers bisexual, polygamous, or unisexual (plants monoecious), usually arranged in 3- to many-flowered cymes, solitary or fascicled, axillary or opposite leaves, rarely terminal. Peduncle and pedicel usually hairy. Bracts caducous. Sepals 5, yellow, white, or lilac, rarely brown, free, valvate, abaxially hairy, adaxially usually glabrous, rarely hairy. Petals 5, mostly yellow or white in Flora area, shorter than sepals; glands usually scalelike, borne on base of petals, margin usually villous. Androgynophore short, usually glabrous. Stamens many, free, irregular in length; anthers globose, dorsifixed, dehiscence longitudinal. Ovary 2–4-loculed; ovules 2–8 per locule; style simple; stigma swollen, peltate, entire or 2–4-lobed. Drupe usually with 2 or 4 drupelets. Endosperm copious; cotyledons flat.

About 90 species: tropical regions of Old World; 27 species (13 endemic) in China.

Grewia nitida Jussieu (Ann. Mus. Natl. Hist. Nat. 4: 90. 1804) could not be treated here because no material was seen by the authors.

Grewia salvifolia Linnaeus f. is the basionym of *Alangium salvifolium* (Linnaeus f.) Wangerin in the Alangiaceae (see Fl. China 13: 307. 2007).

- 1a. Ovary and drupe globose, not lobed; drupelets 1 or 2 per fruit.
 - 2a. Climbing lianas; leaf blade oblong or lanceolate, base cordate, abaxially subglabrous 5. *G. kwangtungensis*
 - 2b. Erect shrubs or trees; leaf blade broadly ovate-orbicular to ovate-oblong, base oblique or symmetrically rounded, abaxially tomentose, rarely glabrous.
 - 3a. Leaf blade base oblique.
 - 4a. Leaf blade abaxially densely softly stellate tomentose; cymes in clusters of 1–3 1. *G. eriocarpa*
 - 4b. Leaf blade abaxially sparsely pilose or subglabrous; cymes in clusters of 2–6 4. *G. tiliifolia*
 - 3b. Leaf blade base symmetrical, rounded.
 - 5a. Petiole 5–10 mm, leaf blade broadly ovate, 4.5–6 cm wide; drupe 6–8 mm in diam. 2. *G. celtidifolia*
 - 5b. Petiole 3–4 mm, leaf blade nearly orbicular, 7.5–10 cm wide; drupe 4–5 mm in diam. 3. *G. yinkiangensis*
- 1b. Ovary and drupe obviously 2–4-lobed, lobes ± globose, each with 1 drupelet.
 - 6a. Leaf blade ovate, rhomboid, suborbicular, or obovate-elliptic, base oblique or symmetrical, lateral basal veins ascending beyond middle of blade.
 - 7a. Leaf blade abaxially glabrescent or sparsely pilose, never tomentose.
 - 8a. Leaf blade margin serrulate, leaf blade elliptic to obovate-elliptic or suborbicular 7. *G. biloba*
 - 8b. Leaf blade margin serrate or irregularly serrate, leaf blade rhomboid, ovate, or elliptic.
 - 9a. Leaf blade 2–4.5 cm wide, rhomboid or ovate; branchlets rust-brown stellate tomentose 6. *G. rhombifolia*
 - 9b. Leaf blade 1–2 cm wide, ovate or elliptic; branchlets sparsely stellate hairy 8. *G. piscatorum*
 - 7b. Leaf blade abaxially tomentose, coarsely hairy or pilose.
 - 10a. Leaf blade adaxially glabrous or softly hairy.
 - 11a. Leaf blade elliptic or ovate-elliptic, margin crenate, branchlets softly yellow tomentose 9. *G. angustisepala*
 - 11b. Leaf blade oblong-lanceolate, margin denticulate; branchlets glabrescent 27. *G. multiflora*
 - 10b. Leaf blade adaxially coarsely hairy.
 - 12a. Leaf blade longer than 10 cm, base regular.
 - 13a. Erect shrubs or small trees; leaf blade 21–28 cm 10. *G. permagna*
 - 13b. Climbing shrubs; leaf blade 8–13 cm 11. *G. acuminata*
 - 12b. Leaf blade shorter than 10 cm, base regular or oblique.
 - 14a. Leaf blade ovate-orbicular or elliptic, 2–3 cm wide 7. *G. biloba*
 - 14b. Leaf orbicular or broadly ovate-orbicular, 4–9 cm wide.
 - 15a. Cymes many per axil; peduncle 3–6 mm; stigma 2-lobed 12. *G. abutilifolia*
 - 15b. Cymes 1 or 2 per axil; peduncle ca. 10 mm; stigma 5-lobed 13. *G. urenifolia*
 - 6b. Leaf blade lanceolate or oblong, base always symmetrical, lateral basal veins reaching mid leaf only.
 - 16a. Old leaves abaxially subglabrous or sparsely hairy on veins, adaxially hairy only in vein axils at most.
 - 17a. Leaf blade leathery; peduncle robust, with long hairs; petals 2.5–3 mm 14. *G. concolor*
 - 17b. Leaf blade thinly leathery; peduncle slender, with short hairs; petals 4–5 mm 15. *G. macropetala*
 - 16b. Old leaves abaxially tomentose or rough-hairy, adaxially hairy.
 - 18a. Leaf blade broadly oblong, base broadly cuneate or obtuse on one side; petiole 7–9 mm 25. *G. henryi*
 - 18b. Leaf blade lanceolate, oblong-lanceolate, triangular-lanceolate, or band-shaped, base rounded or slightly cordate, rarely obtuse; petiole 1–8 mm.
 - 19a. Leaf blade triangular-lanceolate, base wide 16. *G. sessiliflora*

- 19b. Leaf blade lanceolate, oblong-lanceolate, or band-shaped, base rounded and narrow.
- 20a. Teeth on leaf blade margin irregular in size, leaf blade leathery, densely tomentose 24. *G. cuspidatoserrata*
- 20b. Teeth on leaf blade margin regular and similar in size, leaf blade papery or leathery, glabrous or sparsely to densely hairy.
- 21a. Leaf blade band-shaped, 13–20 × 1–3 cm.
- 22a. Cymes 1–3 per axil; stamens 20–30; leaf veinlets adaxially obscure 23. *G. falcata*
- 22b. Cymes 2 to several per axil; stamens 10–20; leaf veinlets adaxially prominent 26. *G. lacei*
- 21b. Leaf blade lanceolate or oblong-lanceolate, 4–14 × 2–4 cm.
- 23a. Leaf blade abaxially gray-white appressed stellate pilose 22. *G. retusifolia*
- 23b. Leaf blade abaxially yellow-brown or gray-brown tomentose or coarsely hairy.
- 24a. Leaf blade abaxially stellate pilose.
- 25a. Leaf blade abaxially sparsely yellow stellate pilose 21. *G. brachypoda*
- 25b. Leaf blade abaxially densely white stellate pilose 20. *G. latiglandulosa*
- 24b. Leaf blade abaxially thickly and softly or coarsely tomentose.
- 26a. Leaf blade coarsely yellow-brown tomentose; petiole 2–3 mm .. 19. *G. hirsuta*
- 26b. Leaf blade softly gray-brown tomentose; petiole 3–8 mm.
- 27a. Leaf blade leathery; petiole 3–5 mm 17. *G. chuniana*
- 27b. Leaf blade papery; petiole 5–8 mm 18. *G. oligandra*

1. *Grewia eriocarpa* Jussieu, Ann. Mus. Natl. Hist. Nat. 4: 93. 1804.

毛果扁担杆 mao guo bian dan gan

Grewia boehmeriifolia Kanehira & Sasaki; *G. lantsangensis* Hu.

Shrubs or small trees to 8 m tall. Branchlets softly gray stellate tomentose. Stipule filiform, lanceolate, 5–10 mm; petiole 5–10 mm; leaf blade ovate or ovate-oblong, 6–13 × 3–6 cm, papery, black-brown when dry, softly gray stellate tomentose abaxially, sparsely stellate adaxially, lateral basal veins to 3/4 as long as leaf blade, lateral veins 3–4 pairs, base obliquely rounded or truncate, margin serrulate, apex acuminate or acute. Cymes 1–3, axillary, 1.5–3 cm; peduncle 3–8 mm. Pedicel 3–5 mm. Bracts lanceolate. Flowers bisexual. Sepals narrowly oblong, 6–8 mm, hairy on both surfaces. Petals ca. 3 mm, eglandular. Androgynophore absent. Stamens irregular in length, shorter than sepals. Ovary hairy; style puberulent. Drupe subglobose, furrowed, 6–8 mm in diam., stellate hairy; drupelets 1 or 2.

Guangdong, Guangxi, Guizhou, Taiwan, Yunnan [Bhutan, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Vietnam].

2. *Grewia celtidifolia* Jussieu, Ann. Mus. Natl. Hist. Nat. 4: 93. 1804.

朴叶扁担杆 pu ye bian dan gan

Grewia asiatica Linnaeus var. *celtidifolia* (Jussieu) L. F. Gagnepain; *G. simaensis* Y. Y. Qian; *G. yunnanensis* Hung T. Chang.

Shrubs. Branchlets softly gray-brown tomentose. Petiole 5–6 mm, softly tomentose; leaf blade broadly ovate, 8–10 × 4.5–6 cm, shortly yellow-brown stellate tomentose abaxially, glabrescent adaxially, lateral basal veins 3/4 as long as leaf blade, ca. 1 cm from margin, each with secondary veins 5–6,

lateral veins 2–3 pairs distally, base rounded, margin serrate, apex shortly acute. Cymes 1–1.5 cm, yellow-brown stellate tomentose; peduncle to 1 cm. Pedicel 2–3 mm. Sepals lanceolate, 6–7 mm, tomentose abaxially, pubescent adaxially. Petals 3–4 mm, glandular at base. Stamens 3–4 mm. Androgynophore hairy. Ovary 2-loculed, tomentose; style ca. 2 mm. Drupe subglobose, shallowly furrowed, 6–8 mm in diam., stellate hairy; exocarp not separating from endocarp; drupelets 1 or 2. Fl. Apr–Jun, fr. Jul–Aug.

Open forests, shrublands; 100–1800 m. Guangdong, Guangxi, Guizhou, Taiwan, Yunnan [Cambodia, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

3. *Grewia yinkiangensis* Y. C. Hsu & R. Zhuge, Fl. Yunnan. 6: 412. 1995.

盈江扁担杆 ying jiang bian dan gan

Shrubs. Branchlets striate, gray-yellow stellate pilose. Petiole very short, 3–4 mm, gray-yellow pilose; leaf blade nearly orbicular, 8–12 × 7.5–10 cm, papery, densely stellate tomentose abaxially, sparsely minutely hairy adaxially, basal veins 5, lateral veins 2–3 pairs, ascending, base rounded, margin entire basally, glandular dentate distally, apex obtuse or acute. Cymes 2–4 per leaf axil, slender, 3-flowered. Inflorescence stipe 1.8–2.5 cm; stipe 8–12 mm, densely pilose. Drupe subglobose, 4–5 mm in diam., sparsely stellate pilose; drupelets 1 or 2. Fl. Apr–May, fr. Jun–Jul.

• Open woodlands, scrub; ca. 1000 m. SW Yunnan.

4. *Grewia tiliifolia* Vahl, Symb. Bot. 1: 35. 1790 [*“tiliae-folia”*].

椴叶扁担杆 duan ye bian dan gan

Grewia rotunda C. Y. Wu ex Hung T. Chang.

Trees 5–8 m tall. Branchlets gray stellate tomentose. Petiole ca. 1 cm, softly tomentose; leaf blade nearly orbicular or broadly ovate-orbicular, (1.7–)8–13(–36) × (1–)6.5–9.5(–24)

cm, papery, black-brown when dry, with sparse solitary hairs or glabrescent and hairy only on veins adaxially, lateral basal veins 2/3 as long as leaf blade, 1.5–2.7 cm from margin, each with 5 or 6 secondary veins, dark brown, abaxially sparsely hairy or glabrous, base obliquely cordate, margin serrulate, apex shortly acute. Cymes 2–6 per leaf axil, 3-flowered; peduncle 1–1.5 cm. Pedicel 6–7 mm, gray-brown tomentose. Sepals oblong lanceolate, 7–8 mm, softly gray-yellow tomentose on both surfaces. Petals yellow, shorter and narrower than sepals. Stamens many, in 5 fascicles, slightly connate at base, slightly shorter than sepals. Ovary 2-loculed, hairy; style slightly longer than stamens. Drupe subglobose, not divided; exocarp not separating from endocarp; drupelets 1 or 2. Fl. Apr–Jun, fr. Jul–Aug.

Open woodlands, shrublands, grasslands; 800–1600 m. Guangxi, SW Yunnan [Cambodia, India, Laos, Malaysia, Myanmar, Thailand, Vietnam; E Africa].

5. *Grewia kwangtungensis* Hung T. Chang, Acta Phytotax. Sin. 20: 175. 1982.

广东扁担杆 *guang dong bian dan gan*

Shrubs, climbing. Branchlets brown, shortly tomentose. Petiole 5–6 mm; leaf blade oblong or lanceolate, 6–10 × 2–3 cm, membranous, abaxially puberulent only on veins, adaxially hairy, glabrescent, lateral basal veins 1/3 as long as leaf blade, 2–3 mm from margin, lateral veins 3–5 pairs, minor veins prominently raised abaxially, base cordate or slightly cordate, margin serrulate, apex acuminate or caudate-acuminate. Flowers unknown. Inflorescence in subterminal axils; peduncle 3–6 mm, shortly brown tomentose; fruiting pedicel 7–9 mm, shortly brown tomentose. Androgynophore short, glabrous, with hairs on apex. Drupe red, globose, 6–7 mm in diam., hairy, becoming glabrescent, glossy; drupelets 1 or 2.

• Evergreen forest; 800–900 m. Guangdong.

6. *Grewia rhombifolia* Kanehira & Sasaki, Trans. Nat. Hist. Soc. Taiwan 18: 335. 1928.

菱叶扁担杆 *ling ye bian dan gan*

Shrubs. Branchlets rust-brown stellate tomentose. Stipule subulate, 5–7 mm; petiole 5–7 mm; leaf blade rhomboid or ovate, rarely ovate-orbicular, 2.5–5.5 × 2–4.5 cm, sparsely stellate, abaxially hairy only on veins, adaxially glabrescent, lateral basal veins to 1/2 as long as leaf blade, lateral veins 4–5 pairs, base broadly cuneate to nearly rounded, margin irregularly serrate, apex slightly acute or obtuse. Cymes axillary; peduncle 5–8 mm. Pedicel 5–7 mm. Bracts subulate, ca. 4 mm. Sepals ca. 6 × 1.5–2 mm, glabrous abaxially, adaxially stellate tomentose. Petals oblong, ca. 1.5 mm; glands nearly round, hairy. Stamens many, with long silk hairs. Ovary hairy; style glabrous. Drupe 2–4-lobed; drupelets 1 per lobe. Fl. Jun.

• Taiwan.

7. *Grewia biloba* G. Don, Gen. Hist. 1: 549. 1831.

扁担杆 *bian dan gan*

Shrubs or small trees 0.5–1(–4) m tall, many branched. Branchlets pubescent or nearly glabrous. Stipule subulate, 3–4

mm; petiole 4–8 mm, densely puberulent; leaf blade ovate-orbicular or obovate-elliptic, sometimes shallowly 3-lobed, 4–9 × 2.5–4 cm, thinly leathery, abaxially sparsely stellate hairy to stellate tomentose, adaxially more sparsely stellate hairy, lateral basal veins more than 1/2 as long as leaf blade, lateral veins 3–5 pairs, base cuneate or obtuse, margin serrulate, apex acute. Cymes axillary, many flowered; peduncle less than 1 cm. Pedicel 3–6 mm. Bracts subulate, 3–5 mm. Sepals narrowly oblong, 4–7 mm, abaxially hairy, adaxially white and glabrous. Petals 1–1.5 mm. Androgynophore ca. 0.5 mm, hairy. Stamens ca. 2 mm. Ovary hairy; style as long as sepals. Drupe red, 2–4-lobed; drupelets 1 per lobe. Fl. May–Jul.

Anhui, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Korea].

- 1a. Leaf blade suborbicular, 1–1.5 × ca. 1 cm 7c. var. *microphylla*
- 1b. Leaf blade elliptic or obovate-elliptic, 4–9 × 2.5–4 cm.
 - 2a. Leaf blade sparsely stellate hairy abaxially 7a. var. *biloba*
 - 2b. Leaf blade densely softly stellate tomentose abaxially 7b. var. *parviflora*

7a. *Grewia biloba* var. *biloba*

扁担杆(原变种) *bian dan gan* (*yuan bian zhong*)

Grewia biloba var. *glabrescens* (Benth) Rehder; *G. glabrescens* Benth; *G. parviflora* Bunge var. *glabrescens* (Benth) Rehder & E. H. Wilson; *G. tenuifolia* Kanehira & Sasaki.

Leaf blade elliptic or obovate-elliptic, 4–9 × 2.5–4 cm, abaxially sparsely stellate hairy.

Anhui, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [Korea].

7b. *Grewia biloba* var. *parviflora* (Bunge) Handel-Mazzetti, Symb. Sin. 7: 612. 1933.

小花扁担杆 *xiao hua bian dan gan*

Grewia parviflora Bunge, Enum. Pl. China Bor. 9. 1833; *G. chanetii* H. Léveillé; *G. parviflora* var. *velutina* Pampanini.

Leaf blade elliptic or obovate-elliptic, 4–9 × 2.5–4 cm, abaxially densely softly stellate tomentose. Flowers smaller.

• Anhui, Guangdong, Guangxi, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Shandong, Shanxi, Sichuan, Yunnan, Zhejiang.

7c. *Grewia biloba* var. *microphylla* (Maximowicz) Handel-Mazzetti, Symb. Sin. 7: 612. 1933.

小叶扁担杆 *xiao ye bian dan gan*

Grewia parviflora var. *microphylla* Maximowicz, Trudy Imp. S.-Peterburgsk. Bot. Sada 11: 81. 1890.

Leaf blade suborbicular, 1–1.5 cm, sparsely pilose abaxially. Flowers larger.

• Sichuan, Yunnan.

8. *Grewia piscatorum* Hance, Ann. Sci. Nat., Bot., sér. 5, 5: 208. 1866.

海岸扁担杆 hai an bian dan gan

Shrubs small, many branched, extending, slender. Branchlets sparsely stellate. Stipule filiform, ca. 2 mm; petiole 2–3 mm; leaf blade ovate or elliptic, 1–2.3 × 1–2 cm, nearly membranous, glabrous adaxially, greenish when dry, luminous, glabrous or sparsely pilose abaxially, lateral basal veins ca. 1/2 as long as leaf blade, lateral veins 2–3 pairs, base rounded or slightly cordate, margin serrate, apex obtuse or shortly acute. Cymes 1 or 2 in subterminal axils, usually 3-flowered; peduncle ca. 5 mm. Pedicel as long as peduncle or slightly shorter. Bracts subulate, 2–4 mm. Sepals narrowly oblong, 5–7 mm, abaxially hairy, adaxially glabrous. Petals 1.5–2 mm. Androgynophore very short. Stamens many, 4–5 mm. Ovary hairy; style glabrous. Drupe 2- or 4-lobed, furrowed; drupelets 1 per lobe.

• Coastal areas. Fujian, Hainan, Taiwan.

This species is very similar to *Grewia biloba* var. *microphylla*. It differs in having leaves that are nearly membranous, not thinly leathery, and abaxially nearly glabrous, not stellate hairy.

9. *Grewia angustisepala* Hung T. Chang, Acta Phytotax. Sin. 20: 175. 1982.

狭萼扁担杆 xia e bian dan gan

Shrubs 1–2.5 m tall. Branchlets softly yellow-brown tomentose. Petiole 3–5 mm, softly yellow-brown tomentose; leaf blade ovate-elliptic, thinly leathery, 13–16 × 6–9 cm, densely softly yellow-brown tomentose abaxially, stellate but glabrescent and hairy only on veins adaxially, lateral basal veins to 2/3 as long as blade, 8–15 mm from margin, each with secondary veins 6–8, lateral veins 4–5 pairs in distal 1/2, base rounded or slightly cordate, slightly oblique, margin dentate (teeth alternately small and large, triangular, 1–2.5 mm), apex acuminate. Cymes 1 or 2 in axils of leaves, 2–3 cm; peduncle 1–1.7 cm. Pedicel 6–8 mm. Bracts lanceolate, 6–8 mm, hairy. Sepals narrowly lanceolate, 7–8 × 1–1.5 mm, abaxially tomentose, adaxially white and glabrous. Petals 3–4 mm. Stamens 5–6 mm. Ovary tomentose; style glabrous. Drupe 2-lobed, lobes globose.

• Open forests; 800–1200 m. Yunnan.

10. *Grewia permagna* C. Y. Wu ex Hung T. Chang, Acta Phytotax. Sin. 20: 176. 1982.

大叶扁担杆 da ye bian dan gan

Grewia rugulosa C. Y. Wu ex Hung T. Chang.

Shrubs or small trees. Bark gray-brown; branchlets coarsely yellow-brown tomentose. Petiole 1.7–2.5 cm, coarsely stellate; leaf blade nearly orbicular, 21–28 × 8–23 cm, leathery, softly yellow-brown tomentose abaxially, coarsely hairy adaxially, lateral basal veins ascending to near apex of leaf blade, 3.5–5 cm from margin, each with secondary veins 8–11, lateral veins 5–6 pairs, base rounded or slightly obliquely cordate, margin dentate, apex acute. Flowers not seen. Cymes axillary, ca. 1.5 cm; peduncle 7–11 mm, coarsely hairy. Drupe globose,

7–8 mm in diam., slightly hairy. Fr. winter.

• Scrub; ca. 1200 m. Yunnan.

11. *Grewia acuminata* Jussieu, Ann. Mus. Natl. Hist. Nat. 4: 91. 1804.

密齿扁担杆 mi chi bian dan gan

Grewia densiserrulata Hung T. Chang.

Shrubs climbing. Branchlets densely brown stellate, shortly coarsely hairy. Petiole 3–4 mm, densely yellow stellate; leaf blade ovate to ovate-oblong, 8–13 × 4–6 cm, leathery, stellate, shortly coarsely hairy adaxially, densely brown stellate abaxially, lateral basal veins to 1/2 as long as leaf blade, 6–8 mm from margin, each with 10 secondary veins, lateral veins 5–6 pairs distally, base rounded, margin densely serrulate, teeth less than 0.4 mm, ca. 1 mm apart, apex acute. Cymes solitary in leaf axils, 2- or 3-flowered; peduncle 1–1.5 cm. Pedicel 12–18 mm. Sepals to 2 cm. Petals ca. 7 mm. Androgynophore 4–8 mm. Stamens many; filaments 8–12 mm. Ovary 2-loculed; style ca. 1 cm. Fruiting peduncle 1–2 cm, pedicels 1.5–2 cm, both coarsely stellate hairy. Drupe 4-lobed, ca. 2 cm in diam.; drupelets coarsely hairy; androgynophore 5–6 mm, stellate tomentose.

Scrub; 800–900 m. S Yunnan [Cambodia, India, Indonesia (Java), Laos, Malaysia, Myanmar, Thailand, Vietnam].

12. *Grewia abutilifolia* W. Vent ex Jussieu, Ann. Mus. Natl. Hist. Nat. 4: 92. 1804.

苘麻叶扁担杆 qing ma ye bian dan gan

Grewia hirsutovelutina Burret; *G. kainantensis* Masamune; *Sterculia tiliacea* H. Léveillé.

Shrubs or small trees 1–5 m tall; branchlets yellow-brown stellate, coarsely hairy. Petiole 1–2 cm, coarsely stellate tomentose; leaf blade broadly ovate to nearly orbicular, usually lobed distally, 7–11 × 5–9 cm, papery, densely yellow and brown, coarsely stellate tomentose abaxially, adaxially sparsely coarsely stellate hairy, lateral basal veins more than 1/2 as long as leaf blade, each with 7–9 secondary veins, lateral veins distal, 3–4 pairs, base rounded or slightly cordate, margin serrulate, apex acute. Cymes 3–7 per leaf axil; peduncle 3–6 mm. Pedicel 4–8 mm. Bracts filiform, caducous. Sepals white, narrowly oblong, 6–8 × ca. 2 mm, abaxially hairy, adaxially glabrous. Petals 2–3 mm. Androgynophore glabrous. Stamens 4–5 mm. Ovary villous; style as long as sepals; stigma 2-lobed. Drupe obscurely 2- or 4-lobed, tomentose; drupelets 1 per lobe.

Scrub, slopes on grasslands. Guangdong, Guangxi, Guizhou, Hainan, Taiwan, Yunnan [Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

13. *Grewia urenifolia* (Pierre) Gagnepain, Notul. Syst. (Paris) 1: 126. 1909 [*“urenaefolia”*].

稔叶扁担杆 ren ye bian dan gan

Grewia abutilifolia W. Vent ex Jussieu var. *urenifolia* Pierre, Fl. Forest. Cochinch. t. 164. 1888 [*“urenaefolia”*].

Shrubs 1–2 m tall. Branchlets coarsely stellate. Petiole 1–

1.5 cm, coarsely hairy; leaf blade broadly ovate, 6–8 × 4–6.5 cm, coarsely stellate adaxially, densely coarsely stellate abaxially, base cordate. Cymes 1–2 in axils of leaves; peduncle ca. 1 cm. Pedicel 4–6 mm. Flower buds 6–7 mm. Sepals ca. 6 mm, hairy abaxially, adaxially glabrous. Petals minute, gland base hairy. Ovary hairy; stigma 5-lobed. Drupe 2–4-lobed; drupelets 1 per lobe.

Secondary scrub. Guangxi, Hainan, Yunnan [Cambodia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

This species is similar to *Grewia abutilifolia* but differs in having only 1 or 2 cymes per leaf axil, longer peduncles and pedicels, and a 5-lobed stigma.

14. *Grewia concolor* Merrill, Lingnan Sci. J. 14: 35. 1935.

同色扁担杆 tong se bian dan gan

Shrubs climbing. Branchlets rust-brown stellate tomentose. Stipules lanceolate, ca. 5 × 2 mm; petiole 5–7 mm, hairy; leaf blade oblong, 7–12 × 2.5–4 cm, leathery, sparsely stellate and villous with long solitary hairs at first on both surfaces, glabrescent or with sparsely solitary hairs only on veins on both surfaces, lateral basal veins less than 1/2 as long as leaf blade, lateral veins 5–6 pairs, base slightly oblique, nearly rounded to shallowly cordate, margin serrulate, apex shortly acute or obtuse. Cymes 1 or 2 per leaf axil, 2- or 3-flowered; peduncle ca. 1 cm, brown hairy. Flowers unisexual. Pedicel 5–9 mm, brown hairy. Bracts subulate, ca. 5 mm, hairy abaxially. Sepals narrowly lanceolate, 7–8 mm, adaxially hairy. Petals 2.5–3 mm; glands obovoid, hairy. Stamens many. Ovary villous; style glabrous; stigma 5-lobed. Drupe 2–4-lobed, lobes globose; drupelets 1 per lobe. Fl. Jul–Aug.

- Forests, open scrub. Fujian, Hainan.

15. *Grewia macropetala* Burret, Repert. Spec. Nov. Regni Veg. 33: 74. 1933.

长瓣扁担杆 chang ban bian dan gan

Shrubs 1–3 m tall. Branchlets coarsely brown stellate. Petiole 4–5 mm, stellate pubescent; leaf blade oblong-lanceolate, 4–7 × 1.5–2 cm, thinly leathery, sparsely coarsely stellate pubescent, glabrescent, lateral basal veins to 1/2 as long as leaf blade, lateral veins 3–4 pairs, veinlets prominent on both surfaces, base narrowly rounded, margin irregularly serrulate, apex acuminate. Cymes 1 or 2 per leaf axil, 3-flowered; peduncle slender, 4–14 mm. Pedicel 4–12 mm, stellate pubescent. Bracts filiform, 3–4 mm. Sepals ca. 6 mm, abaxially hairy, adaxially glabrous. Petals 4–5 mm. Androgynophore short, glabrous. Stamens 16–18, as long as or slightly longer than petals. Ovary hairy; style as long as stamens; stigma 2–4-lobed. Drupe 2–4-lobed, hairy, glabrescent; drupelets 1 per lobe. Fl. May–Jun.

- Secondary forests. Guangdong, Guangxi, Yunnan.

16. *Grewia sessiliflora* Gagnepain, Notul. Syst. (Paris) 1: 167. 1910.

无柄扁担杆 wu bing bian dan gan

Shrubs. Branches and branchlets softly yellow-brown tomentose. Petiole 1–3 mm; leaf blade triangular-lanceolate, 6–10

× 3–5 cm, abaxially densely softly yellow-brown tomentose, adaxially softly stellate tomentose, lateral basal veins to 1/2 as long as leaf blade, 7–13 mm from margin, lateral veins 3–4 pairs, base oblique, rounded or shallowly cordate, margin serrate, apex narrowly acuminate. Cymes 1 or 2 per leaf axil, 4–5 cm; peduncle 3–4 cm, tomentose. Bracts filiform, 7–8 mm, tomentose. Sepals lanceolate, 8–9 × ca. 1.5 mm, abaxially tomentose, adaxially glabrous. Petals 4–5 mm. Stamens slightly longer than petals. Ovary tomentose; style longer than stamens. Drupe 2-lobed, lobes globose, glossy, sparsely stellate hairy. Fl. Jun–Jul.

Secondary forests at low elevations. S Guangdong, Guangxi [Laos, N Thailand, N Vietnam].

The diagnostic features of this species include the triangular-lanceolate leaves covered with yellow-brown soft indumentum and the long cymes; at 4–5 cm, these are the longest cymes in the genus in China.

17. *Grewia chuniana* Burret, Notizbl. Bot. Gart. Berlin-Dahlem 13: 488. 1936.

崖县扁担杆 ya xian bian dan gan

Shrubs. Old branches dark brown, glabrous; branchlets densely rust-brown tomentose. Stipules subulate, 5–6 mm; petiole 3–5 mm, densely tomentose; leaf blade oblong-lanceolate, 7–11 × 3–4 cm, leathery, abaxially densely gray-brown stellate tomentose, adaxially sparsely hairy, base rounded or obliquely shallowly cordate, margin serrulate, apex acuminate. Cymes 3-flowered; peduncle 1–1.2 cm, tomentose. Pedicel 5–7 mm, tomentose. Bracts subulate, ca. 5 mm. Sepals 5–6 mm, abaxially densely tomentose, adaxially glabrous. Petals ca. 2.5 mm; glands scalelike, enclosed by ring of long hairs. Stamens many, shorter than sepals, slightly longer than petals. Ovary hairy; style as long as sepals; stigma many-lobed. Drupe 2–4-lobed; drupelets 1 per lobe. Fl. Aug–Sep.

- Coastal scrub. Hainan.

This species is similar to *Grewia hirsuta* but differs in having leaf blades that are gray-brown, not yellowish brown, stellate tomentose, and not blackened when dried, and longer cymes: peduncle 10–12 mm, not 3–7 mm.

18. *Grewia oligandra* Pierre, Fl. Forest. Cochinch. t. 163. 1888.

寡蕊扁担杆 gua rui bian dan gan

Shrubs. Old branches dark brown; branchlets stellate tomentose. Stipules subulate, ca. 4 mm, caducous; petiole 5–8 mm; leaf blade lanceolate or oblong-lanceolate, 9–10.5 × 2–3.5 cm, papery, dark brown when dried, abaxially densely softly gray-brown tomentose, adaxially sparsely coarsely shortly stellate hairy, base rounded, margin serrulate, teeth alternately large and small. Cymes 3–5-flowered; peduncle 4–7 mm, tomentose. Pedicel 3–4 mm, tomentose. Bracts 3–4 mm. Sepals 5–6 mm, abaxially tomentose, adaxially glabrous. Petals oblong, 2–3 mm; glands scalelike, enclosed by ring of hairs. Stamens shorter than sepals. Ovary hairy; stigma many-lobed. Drupe 2–4-lobed, lobes globose, ca. 1 cm in diam., glossy. Fl. Aug.

Guangdong, Guangxi, Hainan [Cambodia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

This species is similar to *Grewia cuspidatoserrata* but differs by its soft gray-brown, not rust-brown, indumentum on the abaxial leaf blade surface and longer cymes: peduncle 4–7 mm, not less than 3 mm.

19. *Grewia hirsuta* Vahl, *Symb. Bot.* 1: 34. 1790.

粗毛扁担杆 cu mao bian dan gan

Shrubs or small trees. Branchlets coarsely gray-brown stellate hairy. Petiole 2–3 mm, tomentose; leaf blade lanceolate, 6–14 × 2–3.5 cm, leathery, black-brown when dried, abaxially yellow-brown stellate tomentose, adaxially sparsely coarsely stellate, lateral basal veins to 1/2 as long as leaf blade, lateral veins 4–5 pairs, base narrow, shallowly cordate, margin serrulate, apex acuminate or rarely obtuse. Cymes 1–5 per leaf axil, 3- or 4-flowered; peduncle 3–7 mm, tomentose. Pedicel 3–5 mm, tomentose. Bracts lanceolate, 3–4 mm. Sepals narrowly lanceolate, 6–7 × ca. 1.5 mm, abaxially tomentose, adaxially glabrous. Petals narrowly ovate, ca. 3 × 1.5 mm. Stamens 4–5 mm. Ovary villous; style longer than stamens, glabrous; stigma 4-lobed. Drupe globose or 2-lobed, sparsely coarsely hairy; drupelets 2 per lobe. Fl. Jun–Jul.

Guangdong, S Guangxi [Bangladesh, Cambodia, India, Laos, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam].

20. *Grewia latiglandulosa* Z. Y. Huang & S. Y. Liu, *J. Trop. Subtrop. Bot.* 13: 367. 2005.

阔腺扁担杆 kuo xian bian dan gan

Shrubs 1–1.8 m tall. Stem and branches grayish brown; branchlets pale brown, densely white stellate pilose. Stipules linear-lanceolate, 3–5 mm; petiole 2–3 mm, stellate pilose; leaf blade elliptic or oblong, 2.2–10 × 1.2–3.4 cm, papery, abaxially densely stellate pilose, adaxially drying green, minutely stellate pilose, lateral basal veins to 1/2 as long as leaf blade, lateral veins 3–6 pairs, base rounded or nearly rounded, slightly oblique, margin serrulate, apex acuminate or long acuminate. Cymes 1 or 2 per leaf axil, 1–3-flowered; peduncle 8–15 mm, densely white stellate pilose. Pedicel 5–10 mm. Sepals 10–12 × 2–3 mm, abaxially densely stellate pilose, adaxially white, glabrous, apex obtuse. Petals yellow, ovate-rotund, 2.5–3 × 1.5–2 mm; gland scalelike, ca. 2/3 as large as petal, margin pilose. Androgynophore ca. 1 mm, pilose. Stamens many; filaments white, unequal; anthers yellow. Ovary depressed-globose, densely white stellate pilose; style ca. 7 mm, stellate pilose below middle; stigma 4- or 5-lobed. Drupe yellow-green drying blackish, 2–4-lobed, sparsely white stellate pilose, glossy; drupelets ca. 5 × 5–6 mm.

• Guangxi (Tianyang).

21. *Grewia brachypoda* C. Y. Wu, *J. W. China Border Res. Soc.* 16: 162. 1946.

短柄扁担杆 duan bing bian dan gan

Shrubs 0.5–1.5 m tall. Branchlets densely yellow-brown tomentose, two-year-old branches slightly coarsely tomentose. Petiole 1–4 mm, densely tomentose; leaf blade oblong-lanceolate or oblong, 3–9 × 2–3.5 cm, leathery, abaxially densely yellow-brown to gray-brown stellate tomentose, adaxially coarsely stellate hairy, fallen hairs leaving verrucose prominence, lateral

basal veins 1/2 as long as blade or longer, lateral veins 3–4 pairs, base rounded, margin serrate, apex acute. Cymes solitary in axils, 3-flowered; peduncle 0.7–1 cm, tomentose. Pedicel 4–6 mm, tomentose. Bracts subulate, hairy, caducous. Sepals 5–7 × 2–2.5 mm, abaxially stellate hairy, adaxially glabrous. Petals 2–3 mm. Stamens 3–5 mm. Ovary villous; style 3–4 mm, glabrous; stigma swollen. Drupe 2-lobed, 1–1.2 cm, glossy, glabrous.

• Scrub, dry grassy slopes. SW Sichuan, N and SW Yunnan.

22. *Grewia retusifolia* Pierre, *Fl. Forest. Cochinch.* t. 168. 1888.

钝叶扁担杆 dun ye bian dan gan

Shrubs or small trees. Branchlets slender, appressed yellow stellate tomentose. Petiole 3–5 mm; leaf blade oblong-lanceolate, 6–8.5 × 2.2–3.4 cm, abaxially gray-white adnate stellate puberulent, adaxially coarsely shortly stellate hairy, glabrescent, lateral basal veins to 1/2 as long as leaf blade, 4–7 mm from margin, lateral veins 3–4 pairs, base rounded, margin irregularly denticulate, apex obtuse or slightly acute. Cymes 1 or 2 per leaf axil, 3–5-flowered; peduncle ca. 1 cm, slender, hairy. Pedicel ca. 3 mm. Bracts filiform, lanceolate, 3–5 mm. Sepals narrowly lanceolate, 5–6 mm, abaxially stellate tomentose, adaxially glabrous. Petals ca. 2.5 mm. Androgynophore slightly longer than petals. Ovary hairy; style longer than stamens; stigma 4-lobed. Drupe 4-lobed, lobes globose, glossy dark reddish brown.

Secondary forests. S Guangxi (Nanning) [Indonesia, Vietnam; N Australia].

23. *Grewia falcata* C. Y. Wu, *J. W. China Border Res. Soc.* 16: 161. 1946.

镰叶扁担杆 lian ye bian dan gan

Shrubs or small trees. Branchlets softly yellow-brown tomentose. Petiole 3–5 mm, tomentose; leaf blade band-shaped, slightly curved or straight, or falcate, 6–18 × 1–3 cm, leathery or papery, abaxially softly yellow-brown or rust-brown tomentose, adaxially sparsely stellate pilose and more densely on veins, lateral basal veins obscure, 1/4–1/3 as long as leaf blade, 1–3 mm from margin, lateral veins 4–8 pairs, veinlets prominent, base obtuse, margin serrulate, apex acuminate. Cymes 1–3 per leaf axil; peduncle 3–5 mm, yellow-brown tomentose. Pedicel 3–4 mm, yellow-brown tomentose. Sepals lanceolate, 8–9 × 2–2.5 mm, abaxially tomentose, adaxially glabrous. Petals oblong, 3–4 mm, glands on basal 1/2. Stamens 20–30, 5–6 mm. Ovary densely yellow-brown villous; style longer than stamens; stigma 4-lobed. Drupe 4-lobed, lobes globose, hairy, glossy.

Open forests; 800–1700 m. SW Guangxi, Yunnan [Cambodia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

This species is similar to *Grewia cuspidatoserrata* but differs in having the leaf margin with uniform teeth, not alternately small and large, the indumentum yellow-brown, not gray-brown, and the leaf blade narrowly band-shaped, not oblong-lanceolate or lanceolate.

24. *Grewia cuspidatoserrata* Burret, *Notizbl. Bot. Gart. Berlin-Dahlem* 9: 718. 1926 [“*cuspidato-serrata*”].

尖齿扁担杆 jian chi bian dan gan

Shrubs. Old branches brown; branchlets rust-brown tomentose. Stipules lanceolate, ca. 7 mm, caducous; petiole 4–6 mm, tomentose; leaf blade oblong-lanceolate or lanceolate, 7–16 × 2.5–4.5 cm, papery or leathery, abaxially densely softly rust-brown tomentose, adaxially coarsely stellate, lateral basal veins 1/3 to more than 1/2 as long as leaf blade, lateral veins distal, 4–5 pairs, base nearly rounded, slightly oblique, margin double-serrate, teeth 1–2.5 mm, alternately small and large, narrow and acute, apex shortly acute or slightly obtuse. Cymes 1 to several per leaf axil; peduncle less than 3 mm. Pedicel 5–8 mm. Bracts lanceolate, ca. 3 mm. Sepals oblong, 6–7 × ca. 2 mm, abaxially hairy, adaxially glabrous. Petals ca. 3 mm, abaxially hairy at base; glands obovoid, enclosed by ring of hairs. Stamens many, with long hairs in between. Ovary hairy. Fruit 2–4-lobed. Seeds 1 or 2 per drupelet. Fl. Apr–May.

- Open forests; 1200–1500 m. S Yunnan.

25. *Grewia henryi* Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9: 674. 1926.

黄麻叶扁担杆 huang ma ye bian dan gan

Shrubs or small trees 1–6 m tall. Branchlets yellow-brown coarsely stellate. Petiole 7–9 mm, coarsely stellate; leaf blade broadly oblong, 11–19 × 3–4.5 cm, thinly leathery, abaxially greenish or coarsely yellow-green stellate, glabrescent, adaxially yellow-green when dry, sparsely shortly stellate hairy, lateral basal veins 1/3–1/2 as long as blade, 3–8 mm from margin, lateral veins 4–6 pairs, base broadly cuneate, rarely unequally obtuse, margin serrulate, apex acuminate. Cymes 1 or 2 per leaf axil, 3–4-flowered; peduncle 1–2.5 cm. Pedicel 5–11 mm. Sepals lanceolate, 1–1.3 cm, abaxially tomentose, adaxially glabrous. Petals long ovate, 4–5 mm. Stamens 5–7 mm. Ovary 4-loculed, hairy; style 6–7 mm; stigma 4-lobed. Drupe 4-lobed.

- Fujian, Guangdong, Guangxi, Guizhou, Jiangxi, Yunnan.

26. *Grewia lacei* Drummond & Craib, Bull. Misc. Inform. Kew 1911: 21. 1911.

细齿扁担杆 xi chi bian dan gan

Trees to 5 m tall. Branchlets densely tomentose. Petiole ca. 5 mm, hairy; leaf blade narrowly lanceolate, 15–20 × 2–2.5 cm, papery, densely rust-brown tomentose abaxially, glabrous or sparsely hairy adaxially, lateral basal veins 1/4–1/3 as long as leaf blade, lateral veins 7–8 pairs, base slightly oblique, cuneate, margin obscurely serrulate, apex obtuse or acute. Cymes 2 to several per leaf axil, 1–3-flowered; peduncle ca. 2 mm. Flowers polygamo-monoecious. Pedicel 3–5 mm. Sepals linear, ca. 6 mm, margin involute, apex obtuse, densely coarsely yel-

low-brown hairy. Petals ca. 1.5 × 1 mm, abaxially minutely hairy, apex erose. Stamens 10–20; filaments ca. 2 mm. Ovary densely yellow-brown tomentose; style ca. 2 mm; stigma swollen, lobed. Drupe nearly square, 4-lobed, yellow villous. Fl. Aug–Sep, fr. Oct–Nov.

Open lowland forests; 500–700 m. S Yunnan [Laos, Myanmar, Thailand].

27. *Grewia multiflora* Jussieu, Ann. Mus. Natl. Hist. Nat. 4: 89. 1804.

光叶扁担杆 guang ye bian dan gan

Grewia didyma Roxburgh ex G. Don; *G. disperma* Rottler ex Sprengel; *G. glabra* Blume; *G. jinghongensis* Y. Y. Qian; *G. serrulata* Candolle.

Shrubs and small trees. Branchlets sparsely stellate, glabrescent. Stipule filiform, 1–1.5 × ca. 0.1 cm, caducous; petiole 6–8 mm, tomentose; leaf blade oblong-lanceolate, 7–17 × 2.5–4.5 cm, papery, glabrous or very sparsely hairy adaxially, hairs simple and stellate, in vein axils, lateral basal veins to 1/2 as long as leaf blade, lateral veins 5–6 pairs, base cuneate or broadly cuneate, margin serrulate, apex long acuminate. Cymes 2–3 in axils, 3-flowered; peduncle slender, 1.2–2.5 cm. Pedicel 1–1.2 cm, sparsely stellate. Bracts subulate, ca. 4 mm. Sepals ca. 1.3 × 0.3–0.5 cm, densely yellow-brown pubescent abaxially. Petals ca. 3 mm. Androgynophore 2–4 mm. Drupe 4-lobed, glabrous; exocarp not separating. Fl. Jul–Sep, fr. Oct.

S Yunnan [India, Indonesia, Malaysia, Myanmar, Nepal, Pakistan; Australia].

This species has been confused with *Grewia laevigata* Vahl (see Chung, Edinburgh J. Bot. 62: 1–27. 2005).

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