

89. TARENNA Gaertner, *Fruct. Sem. Pl.* 1: 139. 1788.

乌口树属 *wu kou shu shu*

Chen Tao (陈涛); Charlotte M. Taylor

Chomelia Linnaeus (1758), not Jacquin (1760, nom. cons.); *Cupi* Adanson; *Webera* Schreber.

Shrubs or trees, unarmed, often drying blackened. Raphides absent. Leaves opposite, sometimes with domatia; stipules persistent or occasionally tardily deciduous, interpetiolar or united around stem, triangular, often aristate. Inflorescences terminal, sometimes displaced to pseudoaxillary by subsequent growth, cymose to corymbiform, few to many flowered, sessile or pedunculate, bracteate or bracts reduced. Flowers pedicellate or sessile, bisexual, monomorphic, often fragrant. Calyx limb 5-lobed. Corolla white, pale green, or yellow, funnelform or salverform, inside glabrous or pubescent in throat; lobes 5, convolute in bud, usually strongly reflexed at anthesis. Stamens 5, inserted in corolla throat, exerted; filaments short or reduced; anthers dorsifixed. Ovary 2-celled, ovules 1 to numerous in each cell on axile placentas; stigma fusiform or linear, sulcate or striate, shortly 2-lobed at apex, exerted. Fruit baccate, leathery or thinly fleshy, globose to ellipsoid, black or perhaps sometimes white, with calyx limb deciduous; seeds several, medium-sized, plano-convex or concavo-concave, testa membranous, leathery, or crustaceous; endosperm fleshy or corneous; embryo small; cotyledon small, leaflike.

About 370 species: tropical and subtropical Africa, Asia, Madagascar, and Pacific islands; 18 species (12 endemic) in China.

The name *Chomelia* Linnaeus (1758) was applied to these plants for many years; however, the later homonym *Chomelia* Jacquin (1760), which applies to a wholly neotropical genus, is now conserved against the Linnaean name, so the Old World plants formerly known under *Chomelia* are now correctly known under *Tarenna*.

Most of the characters that distinguish species of *Tarenna* are found in the corollas and calyx limb, thus specimens of *Tarenna* are often difficult to identify when they only have fruit from which the calyx limb has fallen. The genus was not well known in China until the work of W. C. Chen (*Acta Phytotax. Sin.* 22: 139–174. 1984). *Tarenna* apparently has secondary pollen presentation. W. C. Chen (in *FRPS* 71(1): 370. 1999) described the stipules as caducous, but the specimens seen all have persistent or tardily deciduous stipules. The key here closely follows that of W. C. Chen in *FRPS* (loc. cit. 1999: 370–372), with its emphasis on pubescence characters and number of ovules per locule, for reference. Chen (loc. cit. 1999: 370–384) considered the form (i.e., raised vs. flat vs. impressed) of the leaf midrib adaxially to be consistent within a species, but specimens studied show variation within species and overlapping among most species.

- 1a. Flowers with pedicels 18–30 mm 14. *T. sinica*
- 1b. Flowers subsessile or with pedicels to 13 mm.
 - 2a. Calyx lobes subulate, 3–5 mm 7. *T. lanceolata*
 - 2b. Calyx lobes triangular to narrowly triangular, 2 mm or shorter.
 - 3a. Ovary with ovules 1 per cell; fruit with seeds 1 or 2 2. *T. attenuata*
 - 3b. Ovary with ovules 2 to many per cell; fruit with seeds 1 to many.
 - 4a. Corolla tube longer than corolla lobes.
 - 5a. Corolla villosulous to pilosulous outside; leaf blade densely villosulous to pilosulous 17. *T. yunnanensis*
 - 5b. Corolla glabrous outside; leaf blade glabrous or sparsely puberulent, strigillose, or hirtellous abaxially.
 - 6a. Calyx lobes triangular-lanceolate, ca. 1.5 mm, strigillose; leaf blade abaxially glabrous or sparsely pilosulous or strigillose 1. *T. acutisepala*
 - 6b. Calyx lobes triangular to broadly triangular, 0.5–1.5 mm, glabrous; leaf blade abaxially glabrous or sparsely puberulent or strigillose.
 - 7a. Leaves with secondary veins 12–14 pairs 5. *T. foonchewii*
 - 7b. Leaves with secondary veins 6–9 pairs.
 - 8a. Ovary with ovules 6–9 per cell; calyx with hypanthium portion sparsely puberulent to hispidulous, lobes 0.8–1.5 mm; leaf blade drying papery or membranous, with secondary veins 6 or 7 pairs 3. *T. austrosinensis*
 - 8b. Ovary with ovules ca. 17 per cell; calyx with hypanthium portion glabrous, lobes 0.5–0.8 mm; leaf blade drying leathery, with secondary veins 7–9 pairs 12. *T. polysperma*
 - 4b. Corolla tube as long as or shorter than corolla lobes.
 - 9a. Leaf blade glabrous on both surfaces.
 - 10a. Branches becoming yellowish white or grayish white with age, sometimes resinous at apex; stipules deciduous usually through fragmentation 4. *T. depauperata*
 - 10b. Branches green to brown or ashy gray, not evidently resinous at apex; stipules persistent or deciduous through fragmentation.
 - 11a. Leaf secondary veins 3–10 pairs; petioles 0.8–2 cm; inflorescences 4–9 × 4–9 cm; leaf blade 4.5–15 × 1.5–6 cm.

- 12a. Corolla tube 2–2.5 mm 2. *T. attenuata*
 12b. Corolla tube 5–7 mm 8. *T. lancilimba*
 11b. Leaf secondary veins 7–13 pairs; petioles 1–3.5 cm; inflorescences 4–15 × 6–20 cm;
 leaf blade 13–25 × 5–12 cm.
 13a. Leaf secondary veins 8–13 pairs; calyx mealy puberulent; inflorescences
 subglabrous or puberulent, ca. 15 × 20 cm; ovary with 4 ovules per cell 9. *T. laticorymbosa*
 13b. Leaf secondary veins 7 or 8 pairs [or 6 in Japan]; calyx glabrous;
 inflorescences glabrous, 4–10 × 6–15 cm; ovary with 2 ovules per cell 18. *T. zeylanica*
 9b. Leaves abaxially strigillose, hirtellous, hispidulous, pilosulous, or villosulous.
 14a. Leaves pubescent adaxially, at least on midrib.
 15a. Corolla glabrous outside; fruit with seeds 1–6 13. *T. pubinervis*
 15b. Corolla strigillose or hirtellous outside; fruit with seeds ca. 30.
 16a. Corolla tube 5–7 mm, lobes 11–12 mm, much longer than tube; leaf
 secondary veins widely spaced, 6–8 pairs 10. *T. laui*
 16b. Corolla tube 3–4 mm, lobes 4–5 mm, slightly longer than or nearly as
 long as tube; leaf secondary veins well spaced to closely set, 5–12 pairs 11. *T. mollissima*
 14b. Leaves glabrous or glabrescent adaxially.
 17a. Corolla tube pubescent outside; leaf blade lanceolate or lanceolate-oblong,
 12–29 × 4.5–10.5 cm, abaxially pubescent along principal veins 16. *T. wangii*
 17b. Corolla tube glabrous outside; leaf blade narrowly elliptic, obovate, lanceolate,
 or oblong-obovate, 6–16 × 1.5–7 cm, abaxially subglabrous to scabrous,
 puberulent, or strigillose on blade and veins.
 18a. Ovary with ovules 5 or 6 per cell; pedicels rather slender, 5–10 mm; fruit
 ellipsoid; leaf blade abaxially sparsely strigillose 6. *T. gracilipes*
 18b. Ovary with ovules 2 per cell; pedicels rather thick, 4–7 mm; fruit subglobose;
 leaf blade scattered subpapillose-pubescent, scabrous, or subglabrous 15. *T. tsangii*

1. *Tarennia acutispala* F. C. How ex W. C. Chen, Acta Phytotax. Sin. 24: 477. 1986.

尖萼乌口树 jian e wu kou shu

Shrubs, 1–2.5 m tall; branches hispidulous or hirtellous becoming glabrescent, gray to reddish brown. Petiole 5–22 mm, hispidulous; leaf blade drying papery or subleathery, elliptic-oblong, lanceolate, oblong-ovate, or subovate, 4–19.5 × 1.5–5.6 cm, adaxially glabrous or sometimes sparsely puberulent along midrib or sparsely strigillose throughout, abaxially strigillose to hirtellous or sometimes glabrous, base cuneate, obtuse, or acute, apex acuminate or acute; secondary veins 5–7 pairs; stipules persistent, shortly united around stem, triangular, narrowly triangular, or lanceolate, 4–7 mm, hispidulous to glabrescent, acute. Inflorescence corymbiform to congested-cymose, 2.5–3 × 3–4 cm, several to many flowered, strigillose, pedunculate; peduncle 0.5–1 cm; bracts lanceolate to triangular, 1.5–2 mm; pedicels 0.5–3 mm. Flowers subsessile to pedicellate. Calyx strigillose; hypanthium portion ellipsoid to ovoid, 1–1.5 mm; limb 1.5–2 mm, deeply lobed; lobes triangular-lanceolate, apex acute. Corolla pale yellow, glabrous outside; tube ca. 10 mm, villosulous inside upper part and throat; lobes narrowly elliptic, ca. 4 mm. Ovules 16–20 per cell. Berries subglobose, 5–7 mm in diam., strigillose or glabrous; seeds 9–31. Fl. Apr–Sep, fr. May–Nov.

• Forests or thickets at streamsides in valleys or on mountain slopes; 500–1600 m. Fujian, Guangdong, Guangxi, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan.

2. *Tarennia attenuata* (J. D. Hooker) Hutchinson in Sargent, Pl. Wilson. 3: 411. 1916.

假桂乌口树 jia gui wu kou shu

Webera attenuata J. D. Hooker, Fl. Brit. India 3: 104. 1880;
Ixora attenuata (J. D. Hooker) Kuntze; *Tarennia sylvestris* Hutchinson.

Shrubs or trees, 1–8 m tall; branches glabrous, flattened, becoming ash gray to brown with age. Petiole 0.5–1.5 cm, glabrous; leaf blade drying papery or thinly leathery, blackish brown, and somewhat shiny adaxially, oblong-lanceolate, oblong-obovate, lanceolate, or obovate, 4.5–15 × 1.5–6 cm, both surfaces glabrous, base cuneate or acute, margins sometimes thinly revolute, apex acuminate or abruptly shortly acuminate; secondary veins 5–10 pairs, sometimes with pilosulous domatia; stipules persistent, shortly united around stem, narrowly triangular, 4–9 mm, glabrous, acuminate to cuspidate. Inflorescences congested-cymose, pyramidal to corymbiform, 2.5–5 × 4–6 cm, many flowered, puberulent to glabrescent, pedunculate; peduncle 0.3–1 cm; bracts narrowly triangular to subulate, 1–5 mm, acute; pedicels 0.5–5 mm. Flowers subsessile to pedicellate in dichotomous cymules. Calyx glabrous; hypanthium portion subglobose to ellipsoid, 1.5–2 mm; limb 1–2 mm, lobed for 1/4–1/2; lobes triangular, acute. Corolla white or pale yellow, outside glabrous; tube 2–2.5 mm, villosulous at throat; lobes narrowly oblong to spatulate, 5–8 mm, acute to obtuse. Ovules 1 per cell. Berries subglobose, 5–7 mm in diam., glabrous; seeds 2. Fl. Apr–Nov, fr. May–Jan.

Forests or thickets at streamsides, on hills or mountains, or in fields; near sea level to 1200 m. Guangdong, Guangxi, Hainan, Yunnan [Cambodia, India, Thailand, Vietnam].

3. *Tarennia austrosinensis* Chun & F. C. How ex W. C. Chen,

Acta Phytotax. Sin. 22: 145. 1984.

华南乌口树 hua nan wu kou shu

Shrubs, ca. 2 m tall; branches terete to flattened, glabrous, becoming pale gray. Petiole 5–15 mm, glabrous; leaf blade drying papery or membranous, blackish brown, elliptic-oblong or oblong-lanceolate, 5–15 × 2–4.5 cm, glabrous on both surfaces or puberulent to strigillose abaxially, base cuneate to acute, apex acuminate; secondary veins 6 or 7 pairs, without domatia; stipules generally deciduous leaving truncate persistent base, ovate to triangular, 3–5 mm, glabrous, acuminate. Inflorescences corymbiform to cymose, ca. 3 cm, few flowered, strigillose; peduncle 4–5 mm; bracts linear to triangular, 1–3 mm, acute; pedicels 3–7 mm. Flowers pedicellate. Calyx with hypanthium portion cupular to ellipsoid, 1–1.5 mm, sparsely puberulent to hispidulous; limb 2–3 mm, glabrous, lobed for ca. 1/2; lobes triangular, apex acute. Corolla pale green, outside glabrous; tube ca. 7 mm, villosulous inside and at throat; lobes ovate, 3–4 mm, apex acute. Ovules 6–9 per cell. Berries globose, 5–6 mm in diam.; seeds 6–14. Fl. Apr–May, fr. Aug–Sep.

• Forests on mountains; 800–1300 m. Guangdong (Xinyi), Guangxi (Jinxu), Hunan (Yizhang).

4. *Tarenna depauperata* Hutchinson in Sargent, Pl. Wilson. 3: 411. 1916.

白皮乌口树 bai pi wu kou shu

Shrubs or small trees, 1–6 m tall; branches glabrous, blackened becoming yellowish white or grayish white with age. Petiole 4–18 mm, glabrous; leaf blade drying papery or leathery, dark brown or sometimes yellowish brown abaxially, and somewhat shiny adaxially, elliptic-obovate, elliptic, or subovate, 4–15 × 2–6.5 cm, both surfaces glabrous, base cuneate or acute, apex shortly acuminate often abruptly acuminate with tip often slightly obtuse; secondary veins 5–11 pairs, without domatia; stipules deciduous usually through fragmentation, shortly united around stem, triangular-ovate, 1.5–3 mm, glabrous, resinous, acute. Inflorescences corymbiform to pyramidal, 2.5–3 × 3–5 cm, few to many flowered, puberulent, hirtellous, or glabrescent, subsessile to pedunculate; peduncle to 1 cm; bracts triangular, 0.3–1.5 mm; pedicels 0–3 mm. Flowers mixed sessile and pedicellate (or perhaps borne on expanded axes) in dichotomous cymules. Calyx glabrous, puberulent, or pilosulous; hypanthium portion cupuliform to ellipsoid, ca. 1 mm; limb ca. 1 mm, lobed for 1/2–3/4; lobes ovate or triangular, ciliolate, acute to rounded. Corolla white, outside glabrous; tube 3–4 mm, villous inside and at throat; lobes narrowly oblong to spatulate, ca. 5 mm, acute to obtuse. Ovules 1–3 per cell. Berries globose, 6–8 mm in diam., shiny, glabrescent; seeds 1 or 2. Fl. Apr–Nov, fr. Apr–Jan.

Forests or thickets at streamsides, on hills, or on mountain slopes; 200–1700 m. Guangdong, Guangxi, Guizhou, Jiangsu, Yunnan [Vietnam].

5. *Tarenna foonchewii* (W. C. Ko) Tao Chen, **comb. nov.**

宽昭龙船花 kuan zhao long chuan hua

Basionym: *Ixora foonchewii* W. C. Ko, Guihaia 19: 102.

1999.

Small trees, to 3 m tall; branches glabrous. Petiole 12–17 mm, glabrous; leaf blade drying papery and olive-brown, elliptic, 15–18 × 5–9 cm, glabrous, base obtuse, apex cuspidate or shortly acuminate; secondary veins 12 or 13 pairs; stipules persistent, broadly triangular, 12–14 mm, glabrous, long acuminate to aristate. Inflorescence cymose, ca. 7 × 5.5 cm, many flowered; peduncle ca. 3 cm, sometimes subtended by or bearing reduced leaves or leaflike bracts; bracts linear, 3–4 mm; pedicels ca. 1 mm. Flowers pedicellate. Calyx glabrous; hypanthium cupuliform, ca. 2 mm; limb deeply lobed; lobes triangular, ca. 1 mm. Corolla outside glabrous; tube ca. 13 mm; lobes narrowly ligulate to narrowly elliptic, ca. 5 × 3 mm, obtuse. Fruit unknown. Fl. Apr.

• Roadsides. Yunnan.

Based on the description of this species as having 5 corolla lobes, fully exerted anthers, and subcapitate stigmas, as well as its general aspect, this species seems better placed in *Tarenna* than *Ixora*. The protologue did not describe the number of ovules per ovary locule, which is not a significant character in *Ixora* and probably thus was not checked.

6. *Tarenna gracilipes* (Hayata) Ohwi, Repert. Spec. Nov. Regni Veg. 36: 57. 1934.

薄叶玉心花 bao ye yu xin hua

Chomelia gracilipes Hayata, Icon. Pl. Formosan. 9: 57. 1920; *C. lancifolia* Hayata; *Tarenna hayataiana* Kanehira; *T. lancifolia* (Hayata) Kanehira & Sasaki.

Shrubs, to 3 m tall; branches slender, strigillose becoming glabrescent and brown with age. Petiole 0.5–1.5 cm, strigillose; leaf blade drying papery, obovate, lanceolate, or narrowly elliptic, 6.5–15 × 2–4.5 cm, glabrous adaxially, sparsely strigillose abaxially at least along veins, base cuneate to acute, apex acute to acuminate; secondary veins 6 or 7 pairs, without domatia; stipules persistent, shortly united around stem, triangular, 1.5–3 mm, strigillose to glabrescent, acute to cuspidate. Inflorescences corymbose, 3–6 × 3–10 cm, trichotomous, strigillose, subsessile to pedunculate; peduncle to 1 cm; bracts narrowly triangular, 0.2–2 mm, acute; pedicels slender, 5–10 mm. Flowers pedicellate. Calyx glabrous to strigillose; hypanthium portion ellipsoid, 1–1.5 mm; limb 1–1.5 mm, lobed for 1/4–1/2; lobes broadly triangular, acute. Corolla white, glabrous outside; tube 4–6 mm, villous at throat; lobes narrowly spatulate-oblong, 9–10 mm, obtuse. Ovules 5 or 6 per cell. Berries ellipsoid, 5–8 mm in diam., glabrous. Fl. May, Jul, fr. Dec.

Forests on mountains; 100–500 m. Taiwan [Japan].

The specimens studied are from the elevations given; W. C. Chen (in FRPS 71(1): 378. 1999) gave the elevational range of this species as up to 2500 m.

7. *Tarenna lanceolata* Chun & F. C. How ex W. C. Chen, Acta Phytotax. Sin. 22: 139. 1984.

广西乌口树 guang xi wu kou shu

Shrubs, 0.5–3 m tall; branches densely strigillose becoming glabrescent, often brownish red. Petiole 0.3–1.8 cm, densely strigillose; leaf blade drying papery, lanceolate to ob-

lanceolate, 5–32.5 × 1–5 cm, adaxially sparsely scabrous or strigillose on lamina and densely strigillose on principal veins, abaxially strigillose to pilosulous with pubescence denser on principal veins, base acute or cuneate, apex long acuminate; secondary veins 7–10 pairs, apparently without domatia; stipules generally persistent becoming brown and hardened, partially fused around stem, lanceolate to triangular or ovate, 3–4 mm, strigillose or glabrescent on margins, acute to cuspidate. Inflorescences corymbiform and often nodding, ca. 2 × 3 cm, several to many flowered, densely strigillose, sessile or pedunculate; peduncle to 5 mm; bracts linear to narrowly lanceolate, 2–10 mm; pedicels 1–3 mm. Flowers pedicellate. Calyx in bud with hypanthium portion ellipsoid to ovoid, 1.5–2 mm, densely pilosulous to puberulent; limb lobed nearly to base, densely strigillose; lobes linear to narrowly lanceolate, 3–5 mm, sometimes unequal on an individual flower. Corolla in bud densely strigillose outside. Berries subglobose, 3–6 mm in diam., puberulent, strigillose, or glabrescent; seeds 8–32. Fl. buds Oct, fr. May–Nov.

• Forests or thickets in valleys; 700–1600 m. Guangxi, Guizhou, Hunan (Dongkou).

W. C. Chen (in FRPS 71(1): 372. 1999) described the stipules as 6–10 mm, but the specimens studied (including several paratypes) all have stipules 3–4 mm.

8. *Tarenna lancilimba* W. C. Chen, Acta Phytotax. Sin. 22: 141. 1984.

披针叶乌口树 pi zhen ye wu kou shu

Tarenna attenuata (Voigt) Hutchinson var. *puberula* Chun & F. C. How ex W. C. Ko, Fl. Hainan. 3: 584. 1974.

Shrubs or trees, 2–10(–15) m tall; branches slightly compressed, glabrous or mealy pubescent, becoming brown with age. Petiole 0.8–2 cm, glabrous; leaf blade drying thinly leathery, dark brown or yellowish abaxially, lanceolate, elliptic, or obovate-oblong, 5–15 × 1.5–5 cm, both surfaces glabrous, base cuneate then shortly decurrent, apex shortly acuminate; secondary veins 3–5 pairs, without domatia; stipules generally persistent, shortly united around stem, triangular, 1.5–3 mm, glabrous, acute to cuspidate. Inflorescence corymbose, trichotomous, 4–9 × 4–9 cm, many flowered, subglabrous or mealy pubescent, subsessile; bracts triangular, 0.5–1.5 mm, ciliate; pedicels 3–6 mm. Flowers pedicellate. Calyx glabrous or puberulent; hypanthium portion cupuliform, 1–1.5 mm; limb 1–1.5 mm, lobed for ca. 1/2; lobes triangular to spatulate, ciliolate. Corolla white, outside glabrous, sparsely to densely villosulous at throat and onto lobes; tube 5–7 mm; lobes ligulate-linear, 5–6 mm, obtuse. Ovules 2 per cell. Berry globose, 5–6 mm in diam., glabrescent; seeds 2–4. Fl. Apr–Jun, fr. Jun–Jan.

Forests or thickets on hills; 100–1000 m. Guangxi (Shangsi), Hainan [Vietnam].

9. *Tarenna laticorymbosa* Chun & F. C. How ex W. C. Chen, Acta Phytotax. Sin. 22: 141. 1984.

宽序乌口树 kuan xu wu kou shu

Shrubs, height not noted; branches glabrous. Petiole 2.5–

3.5 cm, glabrous; leaf blade drying membranous or papery and grayish black, elliptic-oblong or obovate-oblong, 18.5–25 × 6–10 cm, glabrous on both surfaces, base cuneate, apex acuminate or obtuse then mucronate; secondary veins 8–13 pairs; stipules ovate-triangular, glabrous. Inflorescence corymbose with axes spreading, ca. 15 × 20 cm, subglabrous or puberulent; pedicels 3–8 mm. Flowers pedicellate. Calyx mealy puberulent; hypanthium portion obconical; limb denticulate. Corolla glabrous outside, pilosulous in throat and onto bases of lobes; tube ca. 6.5 mm; lobes narrowly linear-oblong, ca. 7 mm, rounded. Ovules 4 per cell. Fruit unknown. Fl. May.

• Yunnan (Hekou).

10. *Tarenna laui* Merrill, Lingnan Sci. J. 14: 59. 1935.

崖州乌口树 ya zhou wu kou shu

Shrubs, 2–3 m tall; branches densely grayish yellow hispidulous or strigillose becoming glabrescent with age. Petiole 6–23 mm, densely strigillose; leaf blade drying papery and dark yellowish brown or blackish brown, oblong-elliptic or oblong-lanceolate, 5–15 × 1.5–6 cm, sparsely hispidulous to strigillose adaxially, sparsely to densely hispidulous or strigillose abaxially, base cuneate or acute, apex acuminate; secondary veins 6–8 pairs; stipules generally persistent, shortly united around stem, broadly triangular, 1.5–3, densely strigillose, acute. Inflorescences cymose to corymbose and somewhat lax, 6–10 cm, densely grayish yellow strigillose, pedunculate; peduncle ca. 1 cm; bracts triangular, 1–3 mm; pedicels 2–13 mm. Flowers pedicellate. Calyx densely strigillose; hypanthium portion cylindrical, ellipsoid, or urceolate, 2–2.5 mm; limb 1–2 mm, lobed for ca. 1/2; lobes ovate-triangular to triangular, apex acute. Corolla white, outside densely strigillose; tube 5–7 mm, villous in throat; lobes narrowly lanceolate to spatulate, 11–12 mm, acute to obtuse. Ovules ca. 15 per cell. Berry subglobose, 5–6 mm in diam., strigillose. Fl. May–Jul, fr. Jul–Feb.

• Forests on mountains; ca. 700 m. Hainan (Sanya).

11. *Tarenna mollissima* (Hooker & Arnott) B. L. Robinson, Proc. Amer. Acad. Arts 45: 405. 1910.

白花灯笼 bai hua ku deng long

Cupia mollissima Hooker & Arnott, Bot. Beechey Voy. 192. 1833; *Mussaenda kuliangensis* F. P. Metcalf; *Stylocoryna mollissima* (Hooker & Arnott) Walpers; *Tarenna incana* Diels.

Shrubs or small trees, 1–6 m tall; branches densely gray or brown pilosulous or tomentulose, becoming glabrescent when old. Petiole 0.4–2.5 cm, densely pilosulous or tomentulose; leaf blade drying papery and blackish brown, lanceolate, oblong-lanceolate, or ovate-elliptic, 4.5–22.5 × 1–10 cm, adaxially moderately to densely hispidulous to pilosulous, abaxially densely pilosulous, tomentulose, or villosulous, base cuneate, acute, or obtuse, apex acuminate or long acuminate; secondary veins 5–12 pairs, apparently without domatia; stipules generally persistent, interpetiolar or shortly united around stem, ovate to triangular, 5–8 mm, densely strigillose to pilosulous, acute to cuspidate. Inflorescences corymbose, 4–8 cm, many flowered, densely pilosulous to tomentulose, sessile and subtended by a

pair of somewhat reduced leaves; bracts linear, 1–3 mm; pedicels 3–6 mm. Flowers pedicellate. Calyx densely tomentulose to pilosulous; hypanthium portion ellipsoid to subglobose, 1.5–2 mm; limb 1–1.8 mm, lobed shallowly to deeply; lobes triangular to spatulate, rounded to acute. Corolla white, outside densely strigillose to hirtellous; tube 3–4 mm, densely villous at throat; lobes narrowly oblong, 4–5 mm, obtuse to rounded. Ovules ca. 15 per cell. Berry subglobose, 5–7 mm in diam., pilosulous, villosulous, or sometimes glabrescent; seeds 7–30. Fl. May–Jul, fr. May–Jan.

Forests or thickets at streamsides, on hills, or on mountains; 200–1100 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Yunnan, Zhejiang [Vietnam].

W. C. Chen (in FRPS 71(1): 377. 1999) described the corollas as ca. 1.2 cm, but this length has not been seen on the numerous specimens studied.

12. *Tarenna polysperma* Chun & F. C. How ex W. C. Chen, Acta Phytotax. Sin. 22: 144. 1984.

多籽乌口树 duo zi wu kou shu

Shrubs or trees, 1.5–14 m tall; branches slightly compressed, glabrous, becoming brown when old. Petiole 5–15 mm, glabrous; leaf blade drying leathery and olive-greenish brown, oblong-lanceolate or elliptic, 5–10.5 × 1.5–3.8 cm, glabrous on both surfaces, base cuneate, apex shortly acuminate or abruptly acute; secondary veins 7–9 pairs, without domatia; stipules deciduous usually through fragmentation often leaving a persistent truncate base, interpetiolar, triangular to narrowly triangular, 3–4 mm, glabrous, acute. Inflorescences corymbose and trichotomous, 3–5 × 4–6 cm, 6–10-flowered, puberulent to glabrescent, subsessile to pedunculate; peduncle to 1 cm; bracts filiform, 1–2 mm, ciliolate; pedicel 3.5–6.5 mm. Flowers pedicellate. Calyx glabrous; hypanthium portion turbinate, ca. 1 mm; limb 1–1.5 mm, lobed for ca. 1/2; lobes broadly triangular. Corolla white, glabrous outside; tube ca. 8 mm, villous at throat; lobes ovate to elliptic, ca. 4.5 mm, obtuse. Ovules ca. 17 per cell. Berry globose, ca. 7 mm in diam., glabrous; seeds 14–27. Fl. Mar–Apr, fr. May–Oct.

• Forests on mountains; 900–1000 m. Guangdong.

The protologue and W. C. Chen in FRPS (71(1): 382. 1999) described the secondary leaf veins as 7–9 pairs, but the paratypes seen all have 5 or 6 pairs, which has complicated herbarium identifications of this species.

13. *Tarenna pubinervis* Hutchinson in Sargent, Pl. Wilson. 3: 411. 1916.

滇南乌口树 dian nan wu kou shu

Shrubs or small trees, 0.5–6 m tall; branches puberulent to pilosulous, becoming gray with age. Petiole 5–25 mm, strigillose to hirtellous; leaf blade drying papery or membranous, blackish brown, oblong-elliptic, oblong-lanceolate, lanceolate, or oblanceolate, 6–22 × 2–7.8 cm, strigillose to hirtellous on both surfaces with pubescence denser on principal veins, base acute to attenuate, apex caudate-acuminate or acuminate; secondary veins 7–10 pairs, apparently without domatia; stipules generally persistent and becoming yellowed and hardened, in-

terpetiolar or shortly united around stem, triangular to ovate, 3–9 mm, pilosulous to strigillose becoming glabrescent, long acuminate to aristate or cuspidate. Inflorescences cymose, ca. 3 × 3.5 cm, few flowered, densely strigillose, subsessile; bracts linear, 1.5–2 mm; pedicels 1–2.5 mm. Flowers pedicellate. Calyx glabrous or sparsely pubescent; hypanthium portion obconic, 1–1.5 mm; limb lobed for ca. 1/2; lobes lanceolate, 1–1.75 mm, ciliate. Corolla pale green, glabrous outside; tube 4–5 mm, villosulous inside; lobes narrowly oblong, 5–6 mm, obtuse. Ovules ca. 3 per cell. Berry subglobose to ellipsoid, 5–10 mm in diam., puberulent to glabrescent; seeds 1–6. Fl. Mar–May, fr. Jun–Jan.

• Forests in valleys; 700–2700 m. Guangxi, Sichuan, Yunnan.

14. *Tarenna sinica* W. C. Chen, Acta Phytotax. Sin. 22: 146. 1984.

长梗乌口树 chang geng wu kou shu

Shrubs, ca. 1.5 m tall; branches hispid. Petiole 0.5–1.5 cm, hispid; leaf blade drying papery and blackish brown, narrowly elliptic or elliptic-lanceolate, 6–12 × 2–4 cm, both surfaces sparsely strigose except densely hispid-hirsute along principal lateral veins, base cuneate, apex acuminate; secondary veins 6–8 pairs; stipules persistent becoming hardened and straw-yellow, subtriangular, ca. 2 mm, hispidulous, acute. Inflorescences corymbiform, ca. 5 cm, few flowered, hispidulous, pedunculate; peduncle 0.5–0.7 cm; bracts lanceolate, ca. 2 mm; pedicels 18–30 mm. Flowers pedicellate. Calyx hispidulous; hypanthium portion ellipsoid, ca. 1.5 mm; limb lobed for ca. 1/2; lobes triangular, ca. 0.7 mm, acute. Corolla white, ca. 12 mm, hispidulous outside; tube densely villosulous inside and at throat; lobes linear-lanceolate, longer than corolla tube. Ovules 1 per cell. Berry unknown. Fl. Jun.

• Forests on mountain slopes. Guangxi (Jingxi).

15. *Tarenna tsangii* Merrill, Lingnan Sci. J. 11: 59. 1932.

海南乌口树 hai nan wu kou shu

Tarenna tsangii f. *elliptica* Chun & F. C. How ex W. C. Ko.

Shrubs or trees, 1–6 m tall; branches flattened, shortly pilosulous, becoming brown or grayish brown with age. Petiole 5–15 mm, pilosulous; leaf blade drying papery and blackish brown, oblong-obovate or lanceolate, 5–26 × 1.5–7 cm, adaxially glabrous, abaxially scabrous and sparsely puberulent to subglabrous with pubescence denser along principal veins, base cuneate, apex acuminate or shortly acuminate; secondary veins 4–7 pairs; stipules triangular, 4–5 mm, acuminate or apiculate. Inflorescence corymbose, 4–7 × ca. 6 cm, many flowered, gray strigillose, pedunculate; pedicels 4–7 mm. Flowers pedicellate. Calyx pilosulous; hypanthium portion cylindrical-urceolate, ca. 1.5 mm; limb ca. 1.5 mm, lobed for up to 1/3. Corolla white, glabrous outside; tube 8–9 mm, pilosulous inside; lobes narrowly oblong, ca. 10 mm. Ovary with 2 ovules per cell. Berry subglobose, 5–7 mm in diam., glabrous; seeds 4. Fl. May–Jul, fr. Jul–Jan.

• Forests on hills; 100–800 m. Guangdong (Maoming), S Guang-

xi, Hainan.

Plants from Hainan (Lingshui) with leaf blade elliptic or ovate-elliptic and 5–8 × 3–6 cm that fruit in Dec were described as *Tarenna tsangii* f. *elliptica*. These features, however, do not clearly distinguish the two groups of plants in Hainan, so this name is here synonymized.

16. *Tarenna wangii* Chun & F. C. How ex W. C. Chen, Acta Phytotax. Sin. 22: 143. 1984.

长叶乌口树 chang ye wu kou shu

Shrubs, 2–5 m tall; branches gray, glabrous. Petiole 1–3 cm, subglabrous or puberulent; leaf blade drying papery or membranous and brownish black, lanceolate or lanceolate-oblong, 12–29 × 4.5–10.5 cm, glabrous on both surfaces or abaxially strigillose along principal veins, base attenuate, apex acuminate or shortly acuminate; secondary veins 9–11 pairs; stipules ovate-triangular, 3–4 mm. Inflorescences corymbose, ca. 5 × 5 cm, strigillose; pedicels 3–4 mm. Flowers pedicellate. Calyx pilosulous; hypanthium portion obconical; limb subtruncate or denticulate. Corolla white, villous inside and onto lobes; tube ca. 5 mm; lobes linear-oblong. Ovules 4 per cell. Berry subglobose, 8–10 mm in diam.; seeds 2 or 3. Fl. Jun, fr. Aug–Nov.

- Forests on hills; 900–1000 m. Yunnan.

17. *Tarenna yunnanensis* F. C. How ex W. C. Chen, Acta Phytotax. Sin. 22: 142. 1984.

云南乌口树 yun nan wu kou shu

Shrubs or trees, to 3 m tall; branches densely yellowish brown villosulous to tomentulose. Petiole 0.5–2.3 cm, densely villosulous to tomentulose; leaf blade drying papery, elliptic, obovate, elliptic-oblong, or oblanceolate-oblong, 11–32 × 3.5–12 cm, adaxially subglabrous or sparsely hispidulous with pubescence denser along principal veins, abaxially densely villosulous to pilosulous, base cuneate, obtuse, or acute, apex abruptly shortly acuminate; secondary veins 8–12 pairs, apparently without domatia; stipules generally persistent, shortly united around stem, broadly triangular, 2.5–4 mm, densely villosulous, acute to cuspidate. Inflorescences cymose to corymbiform, 4–9 × 4–7 cm, many flowered, densely pilosulous, pedunculate; peduncle 1–3.5 cm; bracts linear to narrowly triangular, 1–4 mm; pedicels 2–9 mm. Flowers pedicellate. Calyx densely pilosulous; hypanthium portion cupulate, ca. 1 mm; limb 1–1.5 mm, lobed shallowly or for up to 1/2; lobes triangular. Corolla outside moderately to densely yellowish brown villosulous to pilosulous; tube 5–6.5 mm, sparsely pilosulous at throat; lobes narrowly oblong to spatulate, 4–4.5 mm, obtuse. Ovules 3–5 per cell. Berry subglobose, ca. 5 mm in diam., yellowish brown villous. Fl. Apr–Jun, fr. Jun.

- Forests or thickets in valleys or at streamsides; 100–200 m. Yunnan.

18. *Tarenna zeylanica* Gaertner, Fruct. Sem. Pl. 1: 139. 1788.

锡兰玉心花 xi lan yu xin hua

Chomelia kotoensis Hayata; *Tarenna kotoensis* (Hayata) Masamune.

Shrubs, evergreen, to 2.5 m tall; branches glabrous, compressed to subquadrangular, green sometimes turning brown.

Petiole 1–2.5 cm, glabrous; leaf blade drying papery, oblong-ovate to oblong-obovate, elliptic, or elliptic-oblong, 13–22 × 5–12 cm, glabrous on both surfaces, base cuneate to obtuse, apex shortly cuspidate or acute; secondary veins 7 or 8 pairs, with pilosulous domatia; stipules generally deciduous through fragmentation often leaving persistent base, shortly united around stem, triangular, 3–11 mm, glabrous, acute to acuminate. Inflorescences corymbiform to broadly pyramidal, 4–10 × 6–15 cm, many flowered, glabrous, subsessile to pedunculate; peduncle to 1 cm; bracts linear to narrowly triangular, 1–3 mm, acute; pedicels 3–8 mm. Flowers pedicellate. Calyx glabrous; hypanthium portion ellipsoid to cupular, 1–1.5 mm; limb 1–1.5 mm, lobed for ca. 1/2; lobes triangular. Corolla white, glabrous outside; tube ca. 5 mm, villous in throat; lobes narrowly oblong to spatulate, 7–12 mm, obtuse. Ovules 2 per cell. Berry globose, ca. 10 mm in diam., glabrous; seeds 2–4. Fl. Feb, Apr, fr. Sep, Dec.

Forests; below 100–600 m. Taiwan [Japan, Sri Lanka].

W. C. Chen (in FRPS 71(1): 373. 1999) described the petioles as up to 5 cm, but no petioles at all similar to this have been seen on specimens studied.

Fl. China 19: 339–345. 2011.