

23. DIPLOSPORA Candolle, Prodr. 4: 477. 1830.

狗骨柴属 *gou gu chai shu*

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Shrubs or small trees, sometimes polygamo-dioecious, unarmed; branches sometimes superaxillary. Raphides absent. Leaves opposite, sometimes with domatia; stipules persistent or deciduous, shortly united around stem, triangular. Inflorescences axillary or sometimes supra-axillary, cymose to fasciculate or glomerulate, few to many flowered, sessile to pedunculate, bracteate. Flowers subsessile to pedicellate, bisexual and monomorphic or unisexual. Calyx limb truncate to 4(or 5)-lobed or -denticulate. Corolla white, pale green, or pale yellow, salverform, inside pubescent in throat and sometimes on lower part of lobes; lobes 4(or 5), convolute in bud. Stamens 4(or 5), inserted in corolla throat, exerted; filaments short; anthers dorsifixed. Ovary 2-celled, ovules 1–3(–6) in each cell on axile placentas; stigma 2-lobed, shortly exerted. Fruiting pedicels often elongating notably. Fruit yellow, orange, or red, baccate, subglobose or ellipsoidal-globose, fleshy or leathery, with calyx limb usually persistent; seeds several, medium-sized, angled, subglobose, or somewhat flattened, embedded in pulp derived from placenta; hilum linear or comma-shaped; radicle hypogynous.

About 20 species: tropical and subtropical Asia; three species (one endemic) in China.

This genus was reviewed by Robbrecht and Puff (Bot. Jahrb. Syst. 108: 114–119. 1986), then in more detail by Ali and Robbrecht (Blumea 35: 279–305. 1991). The description of the sexuality of the plants and flowers here follows Ali and Robbrecht (loc. cit.) and Puff et al. (Rubiaceae of Thailand, 84. 2005).

- 1a. Leaves drying leathery or thickly papery, glabrous and rather shiny on both surfaces, abaxially with secondary veins plane or thinly prominulous, higher order venation hardly or not visible, without domatia; petioles glabrous 1. *D. dubia*
- 1b. Leaves drying papery or thinly leathery, glabrescent, strigillose, puberulent, tomentulose, or hirtellous abaxially or on both surfaces, abaxially with secondary veins prominent, higher order venation well marked and usually thinly raised, usually with domatia; petioles glabrescent, strigillose, or tomentulose.
 - 2a. Leaves abaxially pubescent along principal veins but glabrescent or very sparsely pubescent on blade; stipules usually deciduous after distalmost 1 or 2 nodes 2. *D. fruticosa*
 - 2b. Leaves densely tomentulose abaxially; stipules usually persistent 3. *D. mollissima*

1. *Diplospora dubia* (Lindley) Masamune, Trans. Nat. Hist. Soc. Formosa 29: 269. 1939.

狗骨柴 *gou gu chai*

Canthium dubium Lindley, Bot. Reg. 12: t. 1026. 1826; *Diplospora buisanensis* Hayata; *D. tanakae* Hayata; *D. viridiflora* Candolle; *Tricalysia dubia* (Lindley) Ohwi; *T. lutea* Handel-Mazzetti; *T. viridiflora* (Candolle) Masamune; *T. viridiflora* var. *buisanensis* (Hayata) Yamamoto; *T. viridiflora* var. *tanakae* (Hayata) Yamamoto.

Shrubs or trees, 1–12 m; branches terete to somewhat flattened, glabrous. Petiole 4–15 mm, glabrous; leaf blade drying leathery or rarely thickly papery, and yellowish green to brown, ovate-oblong, elliptic-oblong, elliptic, or lanceolate, 4–19.5 × 1.5–8 cm, both surfaces glabrous and rather shiny, base acute, cuneate, or obtuse, sometimes slightly oblique, margins often thinly revolute, apex acute to acuminate with tip often ultimately obtuse; secondary veins 5–11 pairs, without domatia; stipules persistent on distalmost 1 or 2(–4) nodes, ovate to triangular, 5–8 mm, glabrous, densely white sericeous inside, acute, keeled in upper part with keel often extending into an arista 1–4 mm. Inflorescences subcapitate to congested-fasciculate, 6–10 mm, puberulent to strigillose, tomentulose, or puberulent, sessile or subsessile; bracts triangular, ca. 1 mm, frequently fused in pairs, acute; pedicels 1–4 mm. Calyx strigillose to glabrescent; ovary portion obconic to obovoid, 0.5–1 mm; limb ca. 1 mm, 4-denticulate, sometimes also irregularly split-

ting. Corolla white or yellow, glabrous outside or sometimes strigose on tube; tube 2–3 mm; lobes elliptic-oblong to narrowly elliptic, 3–4 mm, obtuse. Fruiting pedicels to 8 mm. Berry red, subglobose, 4–9 mm in diam., sparsely strigillose to glabrous; seeds dark red, subovoid, 3–6 × 3–4 mm. Fl. Apr–Aug, fr. May–Feb of following year.

Thickets or forests on hillsides, ravines, fields; near sea level to 1500 m. Anhui, Fujian, Guangdong, Guangxi, Hainan, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [Japan, Vietnam].

This is one of the most commonly collected Rubiaceae species in China.

2. *Diplospora fruticosa* Hemsley, J. Linn. Soc., Bot. 23: 383. 1888.

毛狗骨柴 *mao gou gu chai*

Discospermum fruticosum (Hemsley) Kuntze; *Tricalysia fruticosa* (Hemsley) K. Schumann ex E. Pritzl.

Shrubs or trees, 1–8(–15) m tall; branches compressed to terete, densely puberulent to pilosulous or strigillose sometimes becoming glabrescent. Petiole 3–13 mm, strigillose or pilosulous to glabrescent; leaf blade drying papery or thinly leathery, elliptic-oblong, oblong-lanceolate, obovate, oblanceolate, or narrowly elliptic, 5.5–22 × 2.5–8 cm, adaxially glabrous or along principal veins sometimes strigillose to puberulent, abaxially hirtellous to strigillose at least on principal veins, base acute, cuneate, or rarely rounded, sometimes slightly oblique,

apex acuminate with tip sometimes curved; secondary veins 7–13 pairs, in abaxial axils usually with well-developed pilosulous domatia; stipules usually deciduous after distalmost 1 or 2 nodes, lanceolate to ovate, 4–8 mm, strigillose or puberulent to glabrescent, acute, keeled in upper part or with ridges in form of upside-down Y, keel extended into arista 0.5–2 mm. Inflorescences shortly cymose, 1–1.5 cm, subsessile, densely puberulent to strigillose; bracts ovate to triangular, 0.5–1 mm, mostly united in pairs; pedicels 0.5–3 mm. Calyx strigillose or puberulent to glabrous; ovary portion obconic to ellipsoid, ca. 1 mm; limb 0.5–1 mm, lobed shallowly or for up to 1/2 its length; lobes broadly triangular. Corolla white or seldom yellow, glabrous outside; tube 2–3.5 mm; lobes oblong-elliptic, ca. 3 mm, obtuse to rounded. Fruiting pedicels to 10 mm. Fruit red, subglobose, 5–7 mm in diam., strigillose to glabrescent; seeds ca. 3 mm. Fl. Mar–May, fr. Jun–Feb of following year.

Thickets or forests in ravines; 200–2000 m. Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Xizang, Yunnan [Vietnam].

3. *Diplospora mollissima* Hutchinson in Sargent, Pl. Wilson. 3: 401. 1916.

云南狗骨柴 yun nan gou gu chai

Tricalysia mollissima (Hutchinson) Hu.

Shrubs or trees, 2–8 m tall; branches compressed to terete or angled, densely tomentulose or hirtellous. Petiole 4–10 mm, densely tomentulose to glabrescent; leaf blade drying papery or thinly papery, elliptic-oblong, lanceolate, elliptic, or oblong-lanceolate, 5–24 × 2–7.5 cm, adaxially glabrous except midrib and sometimes principal veins tomentulose, abaxially tomentulose or hirtellous on principal veins and hirtellous to glabrous on lamina, base cuneate, obtuse, or rounded, sometimes slightly oblique, apex acute or acuminate with tip often ultimately obtuse; secondary veins 7–10 pairs, in abaxial axils with pilosulous domatia; stipules persistent on distalmost 1–3 nodes, triangular to ovate, 8–10 mm, densely tomentulose to glabrescent, acute or acuminate, keeled in upper part with keel extending into arista 3–6 mm. Inflorescences congested-cymose to glomerulate, 1–1.5 cm in diam., densely strigillose to tomentulose, subsessile; bracts triangular, 0.5–1 mm, often united in pairs; pedicels 0.1–0.5 mm. Calyx strigillose to tomentulose; ovary portion turbinate to obconic, ca. 0.5 mm; limb 1–1.3 mm, undulate to shallowly lobed; lobes broadly triangular. Corolla white, glabrous outside; tube 2–3 mm; lobes oblong-elliptic, 3–3.5 × 1.5–2 mm, obtuse. Fruiting pedicels to 8 mm. Fruit red, subglobose, 5–7 mm in diam., strigillose to glabrescent; seeds 3–4 mm. Fl. May–Jun, fr. Jun–Dec.

- Forests on mountains or at streamsides; 700–1900 m. Yunnan.

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