

20. ENDIANDRA R. Brown, Prodr. 402. 1810.

土楠属 tu nan shu

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Brassiiodendron C. K. Allen; *Dictyodaphne* Blume.

Trees. Buds small, scaly. Leaves alternate, pinninerved, veins and veinlets always foveolate. Panicle axillary, inserted on base of branchlet, pedunculate, many flowered or almost reduced to a cyme. Flowers bisexual, minute. Perianth tube very short to nearly absent or campanulate; perianth lobes 6, subequal or outer 3 somewhat larger. Fertile stamens 3, of 3rd whorl, anthers slightly thickened, stalkless, 2-celled on middle part or below apex, cells extrorse; stamens of 1st and 2nd whorls absent or 6 undeveloped and reduced to glands, sometimes glands united into a fleshy ring. Staminodes of innermost whorl, absent or rarely 3. Ovary sessile; style short; stigma small. Fruit oblong, cylindrical, or ovoid; fruit stalk not or nearly not dilated; perianth wholly deciduous, or slightly discoid, or nearly persistent and not deformed.

About 30 species: India through SE Asia to Australia and Pacific islands; three species (two endemic) in China.

- 1a. Fruit ovoid, small, ca. 2 × 1 cm; leaf blade thickly leathery, elliptic or obovate; panicle pubescent 1. *E. coriacea*
- 1b. Fruit narrowly ellipsoid or cylindrical, ca. 3.8 × 1.4 cm or more; leaf blade papery or leathery, oblong or oblong-elliptic; panicle gradually glabrate.
 - 2a. Leaf blade generally small, largest one up to 15 × 5 cm, papery, midrib and lateral veins slightly elevated abaxially; petiole 1–1.5 cm; rachis of infructescence ca. 2 mm in diam.; fruit stalk slightly dilated at top; fruit narrowly ellipsoid, small, up to 3.8 × 1.4 cm, purple-brown when mature 2. *E. hainanensis*
 - 2b. Leaf blade generally larger, ca. 13–25 × (4–)5–7.5 cm, leathery, midrib and lateral veins conspicuously elevated abaxially; petiole robust, up to 2 cm; rachis of infructescence robust, up to 2.5 mm in diam.; fruit stalk up to 5 mm in diam. on top; fruit cylindrical, larger and longer, up to 8 × 2.3 cm, black-brown when mature 3. *E. dolichocarpa*

1. *Endiandra coriacea* Merrill, Publ. Bur. Sci. Gov. Lab. 35: 14. 1905.

革叶土楠 ge ye tu nan

Medium-sized trees, up to 25 m tall, to 40 cm d.b.h., with buttressed trunk. Bark gray, smooth or peeling off in lamellae. Branchlets yellow-brown, terete, puberulent, warty, inconspicuously striate. Buds ovoid, densely sericeous initially but later glabrate. Leaves alternate; petiole 1–1.2 cm, puberulent initially but soon glabrate; leaf blade red-brown when dry, elliptic or obovate, 9–12 × 4.5–6 cm, thickly leathery, glabrous on both surfaces, lateral veins 5 or 6 pairs, lateral veins, veins, and veinlets conspicuous and foveolate on both surfaces, base cuneate, apex acute or shortly caudate. Panicle axillary or terminal, up to 8 cm, few flowered, puberulent. Pedicels slender, ca. 5 mm. Flowers white, small. Perianth tube campanulate; perianth lobes unequal, outer ones large, broadly ovate, ca. 4 × 3 mm, pilose near base inside, inner ones smaller, ovate, ca. 4 × 2.5 mm, densely villous inside. Fertile stamens 3, narrowly triangular, ca. 2 mm, eglandular, densely puberulent; anthers thick, stalkless, 2-celled; cells extrorse. Ovary ovoid, ca. 2 mm in diam., stalkless, glabrous. Fruit ovoid, ca. 2 × 1 cm, smooth, glabrous, base subrounded, apex acute. Fl. Jun, fr. Aug.

Dense forests. S Taiwan (Lan Yu) [Philippines].

2. *Endiandra hainanensis* Merrill & F. P. Metcalf ex C. K. Allen, J. Arnold Arbor. 23: 461. 1942.

土楠 tu nan

Trees, up to 8 m tall. Bark gray. Branchlets brown, terete but ± angled and striate, glabrous but pubescent when young, warty. Leaves alternate; petiole 1–1.5 cm, concave-convex,

glabrous; leaf blade greenish and opaque abaxially, green and shiny adaxially, lanceolate to oblong-elliptic, 9–15 × 3–6 cm, papery, glabrous and densely finely glandular-spotted on both surfaces, midrib elevated on both surfaces but rather conspicuous abaxially, lateral veins 6–8 pairs, slightly elevated abaxially,

conspicuous adaxially, veins and veinlets reticulate, conspicuous and foveolate on both surfaces, base cuneate, always asymmetric on sides, apex acuminate with obtuse acumen or obtuse with acute acumen. Panicle axillary, 2–6 cm, few flowered, glabrate; peduncle up to 1 cm, slender, sparsely puberulent initially but soon glabrate. Pedicels slender, 3–10 mm, thickened after anthesis. Flowers yellowish, scented, ca. 3.5 mm, glabrous. Perianth lobes ovate, fleshy. Fertile stamens 3, triangular, ca. 2 mm, tightly adnate and nearly connate. Ovary ovoid, ca. 1 mm; style short; stigma capitate. Fruit narrowly ellipsoid when dry, up to 3.8×1.4 cm, purple-brown when mature, glabrous, obtuse at both ends; fruit stalk gray or black-red, ca. 5×2 mm, glabrous. Fl. Jun, fr. Sep.

• Mixed forests in valleys, thickets on open land; ca. 400 m. Hainan.

3. *Endiandra dolichocarpa* S. K. Lee & Y. T. Wei, *Acta Phytotax. Sin.* 17(2): 74. 1979.

长果土楠 chang guo tu nan

Trees. Bark gray. Branchlets brown, terete but \pm angled and striate, glabrous, warty; young branchlets glabrous or subglabrous. Leaves alternate; petiole robust, up to 2 cm, concave-convex, glabrous; leaf blade greenish and opaque abaxially, green and shiny adaxially, oblong, $13\text{--}25 \times (4\text{--})5\text{--}7.5$ cm, leathery, glabrous and densely finely glandular-spotted on both surfaces, midrib elevated on both surfaces, especially abaxially, lateral veins 6–8 pairs, elevated abaxially, conspicuous adaxially, veins and veinlets reticulate and foveolate, base cuneate or broadly cuneate, rarely subrounded, always asymmetric on sides, apex abruptly shortly acuminate, acumen obtuse. Flowers unknown. Fruit cylindrical when dry, up to 8×2.3 cm, black-brown when mature, glabrous, obtuse on both ends; rachis of infructescence robust, up to 2.5 mm in diam.; fruit stalk glabrous, up to 5 mm in diam. at apex. Fr. Aug–Sep.

• Forests; ca. 500 m. W Guangxi (Tianyang), SE Yunnan (Jinping).

