

42. DRACAENA Vandelli ex Linnaeus, Syst. Nat., ed. 12, 2: 229, 246. 1767;
Mant. Pl. 1: 9, 63. 1767.

龙血树属 long xue shu shu

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Pleomele Salisbury.

Plants treelike, shrubby, or subshrubby. Stems simple or branched, ± woody. Leaves crowded toward apex of stems or spaced along distal part of stems, sessile or petiolate; petiole to 8 cm, base amplexicaul; leaf blade usually sword-shaped to elliptic-lanceolate, veins truly parallel from base, lateral veins absent. Inflorescence terminal, branched, rarely simple. Flowers bisexual, clustered, sometimes solitary; pedicel articulate. Perianth cylindric, campanulate, or funnellform; tube short; lobes 6, similar. Stamens 6, inserted in tube or throat of perianth; anthers versatile. Ovary 3-loculed; ovules 1 or 2 per locule. Style slender; stigma capitate or 3-lobed. Fruit a berry, globose, 1–3-seeded. Seeds not coated with phytomelanin.

About 50 species: mainly in tropical regions of Africa and Asia; six species in China.

Dracaena, as treated in Dracaenaceae by Bos (in Kubitzki, Fam. Gen. Vasc. Pl. 3: 240. 1998), includes the genus *Sansevieria* Thunberg from Africa to S Asia. If this arrangement is accepted, *Dracaena* probably comprises from 100–150 species. *Dracaena* in Asia has been studied very little for several decades. Consequently there are many taxonomic and nomenclatural problems and large numbers of unidentified specimens in herbaria. The present account attempts to identify some of the problems affecting the Chinese species, which can only be properly understood in the context of an in-depth study on the genus throughout tropical Asia.

- 1a. Plants treelike, 3–15 m tall; leaves crowded toward apex of stems, base completely covering internode; internodes much shorter than wide; flowers in clusters of 2–7, perianth 6–8 mm.
 - 2a. Branches reddish apically; leaves reddish basally; inflorescence rachis densely papillose-pubescent; filaments reddish brown tuberculate distally 1. *D. cochinchinensis*
 - 2b. Branches not reddish apically; leaves not reddish basally; inflorescence rachis glabrous or subglabrous; filaments not tuberculate 2. *D. cambodiana*
- 1b. Plants shrubby or subshrubby, to 5 m tall; leaves spaced along distal part of stems, base usually not completely covering internode; internodes often longer than wide; flowers solitary or in clusters of 2–4, perianth (14–)18–23 mm.
 - 3a. Leaves subsessile or indistinctly petiolate, petiole to 1 cm, leaf blade nearly sword-shaped to linear-ob lanceolate 3. *D. angustifolia*
 - 3b. Leaves distinctly petiolate, petiole 1–8 cm, leaf blade linear-lanceolate to elliptic or broadly oblanceolate.
 - 4a. Leaf blade linear-lanceolate or narrowly elliptic-lanceolate, 10–15 × 2–3 cm; base of petiole neither enlarged nor sheathing internode 4. *D. elliptica*
 - 4b. Leaf blade elliptic-lanceolate, elliptic, or broadly oblanceolate, 20–40 × 6–8 cm; base of petiole enlarged and sheathing internode.
 - 5a. Plants shrubby, to 5 m tall; inflorescence branched, 30–60 cm; pedicels 8–10 mm, articulate at middle 5. *D. hokouensis*
 - 5b. Plants subshrubby, less than 1 m tall; inflorescence simple, ca. 15 cm; pedicels 3–4 mm, articulate above middle 6. *D. terniflora*

1. *Dracaena cochinchinensis* (Loureiro) S. C. Chen in F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 14: 276. 1980.

剑叶龙血树 jian ye long xue shu

Aletris cochinchinensis Loureiro, Fl. Cochinch. 1: 204. 1790; *Dracaena loureiroi* Gagnepain, nom. illeg. (included *A. cochinchinensis*); *Pleomele cochinchinensis* (Loureiro) Merrill.

Plants treelike, 5–15 m tall. Stems branched, sometimes to 1 m thick, reddish apically; internodes much shorter than wide; bark grayish white, becoming grayish brown with age, smooth. Leaves crowded at apex of branches, sessile, sword-shaped, 30–100 × 2–5 cm, leathery, base reddish, completely covering internode. Inflorescence terminal, branched, more than 40 cm; rachis densely papillose-pubescent. Flowers in clusters of 2–5; pedicel 3–6 mm, articulate distally. Perianth milky white, 6–8 mm; tube 1.5–2 mm; lobes 5–6 mm. Filaments flat, 0.5–0.7 mm

wide, reddish brown tuberculate distally. Berry orange, subglobose, 0.8–1.2 cm in diam., 1–3-seeded. Fl. Mar, fr. Jul–Aug.

Limestone slopes; 900–1700 m. SW Guangxi, S Yunnan [Cambodia, Vietnam].

There is a nomenclatural problem with the treelike Chinese plants known under this name. The neotype specimen of *Aletris cochinchinensis* (J. & M. S. Clemens 4048, designated by Bos in Agric. Univ. Wageningen Papers 84: 121. 1984) was said to be at P with duplicates at BM, K, and MO, but, after searching each herbarium, only the sheet at BM could be found. This appears to be a specimen of the shrubby species traditionally known as *Dracaena angustifolia*, which should therefore take the name *D. cochinchinensis*, leaving the treelike Chinese plants possibly without a name unless they are conspecific with *D. cambodiana*, which is very similar morphologically (see below). The specimen does not conflict with Loureiro's protologue. Rejection of the name *A. cochinchinensis* would maintain the traditional and current application of *D. angustifolia*. Alternatively, conservation of *A. cochinchinensis* would maintain the traditional and current application of *D. angustifolia*. Alternatively, conservation of *A. cochinchinensis* would maintain the traditional and current application of *D. angustifolia*.

chinensis with a conserved type could additionally preserve its usage in the sense of the treelike Chinese plants.

The dried resin, called xue jie (血竭) or dragon's blood, is used medicinally. The collection of this resin, together with habitat destruction, has made *Dracaena cochinchinensis* a vulnerable species in China.

2. *Dracaena cambodiana* Pierre ex Gagnepain, Bull. Soc. Bot. France 81: 286. 1934.

柬埔寨龙血树 jian pu zhai long xue shu

Pleomele cambodiana (Pierre ex Gagnepain) Merrill & Chun.

Plants treelike, 3–4(–10) m tall. Stems usually branched, not reddish apically; internodes much shorter than wide; bark grayish brown. Leaves crowded at apex of branches, sessile, sword-shaped, 60–70 × 1.5–3 cm, leathery, base not reddish, completely covering internode. Inflorescence terminal, branched, 30–40 cm; rachis glabrous or subglabrous. Flowers in clusters of 3–7; pedicel 5–7 mm, articulate distally. Perianth greenish white or pale yellow, 6–7 mm; tube 1.2–1.6 mm; lobes 4.5–5 mm. Filaments flat, ca. 0.5 mm wide, not tuberculate. Style slightly shorter than ovary. Berry ca. 1 cm in diam. Fl. Jul.

Forests, dry and sandy soils; near sea level to 300 m. S Hainan [Cambodia, Laos, Thailand, Vietnam].

Dracaena cambodiana is very similar morphologically to the species here named *D. cochinchinensis*, and J. J. Bos (pers. comm.) notes that the two may be conspecific.

The dried resin can be used medicinally as a substitute for that of *Dracaena cochinchinensis*.

3. *Dracaena angustifolia* Roxburgh, Fl. Ind., ed. 1832, 2: 155. 1832.

长花龙血树 chang hua long xue shu

Pleomele angustifolia (Roxburgh) N. E. Brown.

Plants shrubby, rhizomatous, 1–3 m tall. Stems simple or few branched; internodes often longer than wide; bark grayish, smooth. Leaves spaced along distal part of stems, subsessile or indistinctly petiolate; petiole to 1 cm, base not completely covering internode; leaf blade nearly sword-shaped to linear-oblongate, 20–45 × 1.5–5.5 cm. Inflorescence terminal, branched, 30–50 cm; rachis glabrous. Flowers in clusters of 2 or 3; pedicel 7–8 mm, articulate distally or near apex. Perianth greenish white, 1.9–2.3 cm; tube 7–8 mm; lobes 1.1–1.6 cm. Filaments filiform; anthers 2–3 mm. Style 5–8 × as long as ovary. Berry orange, globose, 0.8–1.2 cm in diam., 1- or 2-seeded. Fl. Mar–May, fr. Jun–Aug. $2n = 40$.

Forests, thickets. Hainan, S Taiwan (including Lan Yu), S Yunnan [Bhutan, Cambodia, India (including Andaman Islands), Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand, Vietnam; N Australia].

Dracaena menglaensis G. Z. Ye (in G. Z. Ye et al., Acta Bot. Yunnan. 14: 30. 1992) was described from two collections from the same locality in S Yunnan (Mengla Xian). It is said to differ from *D. angustifolia* in its longer, sword-shaped leaves with bases completely covering internodes, sword-shaped leaves with bases completely covering internodes, perianth lobes tinged reddish purple distally, and 3-ribbed berry with 4 small, apical projections. However, in all other features, it falls within the range of variation of *D. angustifolia*, and is probably

best regarded as a robust plant of that species.

4. *Dracaena elliptica* Thunberg, *Dracaena*, 6. 1808.

细枝龙血树 xi zhi long xue shu

Dracaena atropurpurea Roxburgh var. *gracilis* (Baker) Baker; *D. elliptica* var. *gracilis* Baker; *D. gracilis* (Baker) J. D. Hooker (1892), not Salisbury (1796, nom. illeg., included *D. marginata* Lamarck).

Plants shrubby, 1–5 m tall. Stems branched; internodes longer than wide. Leaves spaced along distal part of branches, distinctly petiolate; petiole ca. 1 cm, base neither enlarged nor covering internode; leaf blade linear-lanceolate or narrowly elliptic-lanceolate, 10–15 × 2–3 cm, midvein distinct. Inflorescence terminal, branched, 7–10 cm; rachis glabrous. Flowers solitary, rarely paired; pedicel ca. 10 mm, articulate above middle. Perianth greenish, sometimes flushed red or purple, 2–2.3 cm.

S Guangxi [Indonesia, Laos, Malaysia, Myanmar, Thailand, Vietnam].

Chinese plants were treated in FRPS as *Dracaena gracilis*, which is an illegitimate name (a later homonym). J. J. Bos (pers. comm.) notes that the type specimen of *D. elliptica* var. *gracilis*, from Penang, Malaysia, differs from typical *D. elliptica* only in having somewhat narrower leaves. He believes that the plant should be treated under *D. elliptica*, but does not support any infraspecific status for it.

5. *Dracaena hokouensis* G. Z. Ye in G. Z. Ye et al., Acta Bot. Yunnan. 14: 29. 1992.

河口龙血树 he kou long xue shu

Plants shrubby, to 5 m tall. Stem simple; internodes often longer than wide. Leaves spaced along distal part of stem, distinctly petiolate; petiole 4–8 cm, base neither enlarged nor covering internode; leaf blade elliptic-lanceolate or broadly oblanceolate, 25–40 × 6–7 cm, midvein distinct. Inflorescence terminal, branched, 30–60 cm; rachis glabrous. Flowers in clusters of 2–4; pedicel 8–10 mm, articulate at middle. Perianth white, 1.8–2 cm; tube ca. 8 mm; lobes 1–1.2 cm. Filaments filiform; anthers ca. 2 mm. Style filiform, much longer than ovary. Berry orange, globose, 1.5–2 cm in diam., 3-furrowed. Fl. Apr–May, fr. Sep–Nov.

Forests, bamboo forests, hillsides along valleys; 100–700 m. S Guangxi, SE Yunnan [Thailand, Vietnam].

Dracaena hokouensis was compared in the protologue with *D. helferiana* Wallich ex Kurz, described from Myanmar, and is also similar to *D. spicata* Roxburgh, described from cultivated plants originating from Chittagong, Bangladesh, except that the latter species has subsessile flowers.

6. *Dracaena terniflora* Roxburgh, Fl. Ind., ed. 1832, 2: 159. 1832.

矮龙血树 ai long xue shu

Plants subshrubby, less than 1 m tall. Stems somewhat sprawling, simple or few branched; internodes often longer than wide. Leaves spaced along distal part of stem, distinctly petiolate; petiole 3–6 cm, distinctly widened at base to form a persistent sheath normally concealing internode; leaf blade elliptic-lanceolate or elliptic, 20–30 × 6–8 cm. Inflorescence terminal,

simple, ca. 15 cm; rachis glabrous. Flowers solitary or in clusters of 2 or 3; pedicel 3–4 mm, articulate above middle. Perianth white, (1.4–)1.8–2.2 cm. Berry globose, 1–1.3 cm in diam., 1–3-seeded. Fr. Aug. $2n = 80$.

Dense forests; 1000–1100 m. SW Yunnan (Jinghong Xian) [Bangladesh, India, Malaysia, Thailand].

There may be a nomenclatural problem with the Chinese plants known under this name. The only locality mentioned in the protologue is Sylhet in Bangladesh. The gathering *Wallich 5147A* (BM, K), labeled *D. terniflora* and from Sylhet, is original material for the name but clearly belongs to the species traditionally known as *D. elliptica*. If one of these specimens were designated as the lectotype of *D. terniflora*, that name would fall into the synonymy of *D. elliptica*, leaving the Chinese plants without a name. However, it is possible that these Chinese plants are less robust individuals of *D. hokouensis*, characterized by smaller stature, simple inflorescence, and shorter pedicels. Further collections are needed to ascertain their true identity.

