

51. VANILLA Plumier ex P. Miller, Gard. Dict. Abr., ed. 4. 1754.

香荚兰属 *xiang jia lan shu*

Chen Xinqi (陈心启 Chen Sing-chi); Phillip J. Cribb

Vines, climbing, herbaceous, to several meters long. Stem with an aerial root and a leaf at each node. Leaves large, fleshy, shortly petiolate [sometimes reduced to scales outside Flora area]. Racemes axillary, several to many flowered. Flowers resupinate, often large, often with an abscission layer between ovary and perianth. Sepals and petals similar, free, spreading. Lip often joined to sides of column with its basal margin, sometimes almost to top of column and \pm trumpet-shaped, free part often dilated, spurless, sometimes 3-lobed, disk often with hairy appendages adaxially. Column long, slender, slightly curved near top; anther inserted pointing downward; pollinia 2 or 4, granular-farinaceous or loosely granular, without caudicle or viscidium; rostellum often broad, below anther. Fruit cylindrical, fleshy, often indehiscent. Seeds with stout testa, often black, wingless.

About 70 species: throughout the tropics; four species (two endemic) in China; one additional species (endemic) is incompletely known.

- 1a. Inflorescence very short, usually 2-flowered 2. *V. somae*
- 1b. Inflorescence 3–20 cm, many flowered.
 - 2a. Sepals and petals 14–20 \times 4–6 mm, white tinged with greenish 4. *V. annamica*
 - 2b. Sepals and petals 38–48 \times 10–28 mm, yellowish green, sometimes with purple-red lip.
 - 3a. Sepals and petals 10–13 mm wide; lip not purple-red 1. *V. siamensis*
 - 3b. Sepals and petals 16–28 mm wide; lip purple-red 3. *V. shenzhenica*

1. *Vanilla siamensis* Rolfe ex Downie, Bull. Misc. Inform. Kew 1925: 410. 1925.

大香荚兰 *da xiang jia lan*

Stem to several meters long, with long internodes, with a root and a leaf at each node. Leaves loosely arranged, fleshy; blade elliptic, 14–25 \times 6–8(–13) cm, glabrous, base slightly contracted, apex acuminate; petiole robust, 1.5–2.5 cm, broad. Raceme axillary, 7–14 cm, many flowered; floral bracts broadly ovate, 7–8 mm, fleshy; pedicel and ovary ca. 2 cm. Flowers opening ephemerally; sepals and petals yellowish green. Sepals oblong or narrowly ovate, 3.8–4.5 \times ca. 1.2 cm, apex rounded and slightly involute. Petals obovate-oblong, ca. 4 \times 1–1.3 cm, thinly textured; lip rhombic-obovate, ca. 4 cm, basal half adnate to both sides of column, \pm trumpet-shaped, indistinctly 3-lobed; lateral lobes embracing column; mid-lobe undulate at margin, with fimbriate papillae near apex; disk with a cup-shaped, shortly hairy appendage centrally. Column 2–2.6 cm, villous on central surface. Fl. Aug. $2n = 32$.

Forests; 800–1200 m. S Yunnan [Thailand].

2. *Vanilla somae* Hayata, Icon. Pl. Formosan. 6: 88. 1916 [“*somai*”].

台湾香荚兰 *tai wan xiang jia lan*

Vanilla griffithii H. G. Reichenbach var. *formosana* Ito; *V. griffithii* var. *ronoensis* (Hayata) S. S. Ying; *V. ronoensis* Hayata.

Stem climbing, to 3 m, with internodes 7–10 cm. Leaves alternate; blade narrowly ovate or elliptic-lanceolate, 10–20 \times 4–8 cm, thickly fleshy, slightly reticulate veined, base obtuse and with a very short petiole, apex acuminate. Inflorescence axillary, very short, usually 2-flowered; floral bracts subtriangular, 1–1.5 cm; pedicel and ovary 4–5 cm. Flowers 5–6 cm in diam., whitish or tinged with greenish; lip adaxially red-striped, abaxially tinged with pink. Sepals similar, spreading, elliptic-oblancheolate or oblancheolate, 3.5–4 \times 0.8–1 cm, apex recurved.

Petals similar to sepals; lip 3.5–4 cm, basally connate for ca. 3/5 length to both sides of column forming a trumpet-shaped tube, margin undulate, apex dilated and slightly 3-lobed; lateral lobes rather large, incurved; mid-lobe subtriangular or orbicular, adaxially with 2 or 3 rows of papillae near apex; disk with a white brushlike appendage centrally. Column 2.5–3 cm, apex with 2 small wings; anther ca. 3 mm, fleshy. Fruit subcylindric, 7–10 cm, with 3 inconspicuous longitudinal ridges. Fl. and fr. Apr–Aug. $2n = 32^*$.

• Forests; below 1200 m. Taiwan.

3. *Vanilla shenzhenica* Z. J. Liu & S. C. Chen, Acta Phytotax. Sin. 45: 301. 2007.

深圳香荚兰 *shen zhen xiang jia lan*

Stem scandent, 1–1.5 cm, with internodes 5–10 cm. Leaf blade elliptic, 10–20 \times 5.5–9.5 cm, base shortly petiolate. Inflorescence 3–5 cm, usually 4-flowered; floral bracts oblong, 1.8–2.1 cm, leathery. Flowers not fully opening, yellowish green, with purple-red lip and white appendage. Sepals and petals oblong-lanceolate to elliptic, 4.4–4.8 \times 1.6–2.8 cm; lip broadly obovate when spreading, 4.4–4.6 cm, basally connate for ca. 3/4 length to both sides of column forming a trumpet-shaped tube, apical margin undulate, adaxially tufted with a

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retorse white fimbriate appendage composed of many thin pieces, with 3–5 rows of small horn-shaped appendages above middle, and with 2 lamellae extending from base up to fimbriate appendage. Column 3.8–4.2 cm. Fl. Feb–Mar.

- Forests or cliffs along valleys; below 300 m. S Guangdong.

One of us (Cribb) suggests that *Vanilla shenzhenica* needs to be further compared with *V. somae*, which is very close morphologically.

4. *Vanilla annamica* Gagnepain, Bull. Mus. Natl. Hist. Nat., sér. 2, 3: 686. 1931.

南方香荚兰 nan fang xiang jia lan

Stem climbing, 6–20 m, ca. 1 cm in diam., swollen noded, with internodes 6–10 cm. Leaf blade elliptic, 18–23 × 5–10 cm; petiole 1–1.5 cm, base amplexicaul. Inflorescence 10–20 cm;

floral bracts broadly elliptic or elliptic, concave, 7–12 mm, thickened, obtuse at apex. Flowers white, tinged with greenish. Sepals and petals lanceolate, 14–20 × 4–6 mm; lip 2–2.5 × ca. 1.5 cm, basally connate for ca. 3/4 length to both sides of column forming a tube, apex inconspicuously 3-lobed; lateral lobes broad, margins incised; mid-lobe with dense, fimbriate hairs near apex; disk with scaly appendages. Column ca. 2 cm. Fl. Apr–May.

Cliffs, forests; 1200–1300 m. Fujian, SW Guizhou, Hong Kong, SE Yunnan [Thailand, Vietnam].

Of the Chinese specimens referred to this species, only the one from Hong Kong has flowered, confirming its identity. The other specimens are sterile but are very similar in habit to *Vanilla annamica*.

Incompletely known species

Vanilla taiwaniana S. S. Ying, Quart. J. Chin. Forest. 20: 55. 1987.

宝岛香荚兰 bao dao xiang jia lan

Stem scandent, elongate, with long internodes, with a leaf at each node. Leaves alternate; blade narrowly ovate-elliptic or elliptic-lanceolate, 10–15 × 5–7 cm, apex acute or acuminate; petiole 1–1.5 cm, ± amplexicaul. Inflorescence terminal, racemose, 15–30 cm, many flowered; floral bracts reddish or brownish, ovate, 5–6 mm; pedicel and ovary 1–1.8 cm, glabrous. Flowers reddish or brownish, glabrous. Sepals oblanceo-

late, 25–30 × 6–8 mm, base contracted, apex obtuse. Petals linear, 25–28 × 3–4 mm, apex obtuse; lip narrowly elliptic or elliptic, adaxially villous at center, 3-lobed, margin indistinctly serrate; disk with 2 thickened ridges. Column 2–2.5 cm. Fl. unknown.

- Thickets; 800–1600 m. C Taiwan.

No specimen of this species has been seen. According to the original description and the color photograph provided by the author (Coloured Ill. Indig. Orchids Taiwan 2: photo: 109. 1990), this taxon seems to be a member of *Galeola* rather than *Vanilla*.

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