

### 175. PAPILIONANTHE Schlechter, Orchis 9: 78. 1915.

凤蝶兰属 feng die lan shu

Chen Xinqi (陈心启 Chen Sing-chi); Jeffrey J. Wood

Herbs, epiphytic, scrambling, monopodial. Stems erect to pendulous, climbing or pendulous, elongate, terete, branching or unbranched, many noded, laxly many leaved. Leaves terete, fleshy, channeled adaxially, jointed and sheathing at base; sheaths thickly leathery, tightly enclosing stem, persistent. Inflorescence axillary, 1- to several flowered. Flowers flat, large. Sepals and petals subsimilar, free, spreading. Petals usually larger; lip continuous with column foot, immovable, spurred, 3-lobed; lateral lobes ± erect, either parallel to or embracing column; mid-lobe often dilated and 2- or 3-lobed at apex; spur funnel-shaped or conic to long horn-shaped. Column subterete, short, fleshy, foot short; rostellum elongate, slender; pollinia waxy, 2, shortly cleft, attached by a broadly triangular or subquadrate stipe to a large viscidium.

About 12 species: China, India, SE Asia and the Malay Archipelago; four species (one endemic) in China.

- 1a. Lip saccate or shortly spurred at base; spur or sac 2–2.5 mm; petals 7–10 mm wide ..... 3. *P. taiwaniana*
- 1b. Lip spurred at base; spur 20–25 mm; petals 15–17 mm wide.
  - 2a. Lateral lobes of lip entire, embracing column, lip deep purplish red; dorsal sepal ca. 2 cm wide ..... 1. *P. teres*
  - 2b. Lateral lobes of lip bilobulate, lip color not as above; dorsal sepal 0.8–1.5 cm wide.
    - 3a. Lobules of lateral lobes not serrate-denticulate; lip creamy white, sometimes tinged with pale pink ..... 2. *P. biswasiana*
    - 3b. Lobules of lateral lobes serrate-denticulate; lip with a purple-flushed base and spur ..... 4. *P. vandarum*

**1. *Papilionanthe teres*** (Roxburgh) Schlechter, Orchis 9: 78. 1915.

凤蝶兰 feng die lan

*Dendrobium teres* Roxburgh, Fl. Ind., ed. 1832, 3: 485. 1832; *Vanda teres* (Roxburgh) Lindley.

Stems scrambling, terete, usually to 1 m, stout, branching. Leaves well spaced, terete, 8–18 cm × 4–5 mm, fleshy, obtuse. Inflorescence slightly longer than leaf, laxly 2–5-flowered; peduncle stout, with 3 or 4 membranous sheaths; floral bracts broadly ovate, 4–6 mm, slightly fleshy, obtuse. Flowers opening widely, 4–10 cm in diam., thinly textured, sepals and petals white, tinged with pink or purplish, lip deep purple-red, spur yellowish brown; pedicel and ovary white, 2–3 cm. Dorsal sepal broadly elliptic, ca. 2.5 × 2 cm, obtuse-rounded; lateral sepals obliquely ovate-oblong, ca. 3 × 2 cm, base adnate to column foot, apex obtuse. Petals suborbicular, large, ca. 3 × 2.7 cm, obtuse; lip spurred, 3-lobed; lateral lobes embracing column, subobovate, ca. 1.5 cm wide, rounded; mid-lobe spreading, obovate-triangular, ca. 2 cm, adaxially shortly hairy, deeply bilobed; spur conic, ca. 2 cm. Column ca. 5 mm, foot ca. 5 mm. Fl. May–Jun. 2n = 38, 40.

Epiphytic on tree trunks in open forests or at forest margins; 500–900 m. S Yunnan [Bangladesh, Bhutan, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

**2. *Papilionanthe biswasiana*** (Ghose & Mukerjee) Garay, Bot. Mus. Leaflet 23: 371. 1974.

白花凤蝶兰 bai hua feng die lan

*Aerides biswasiana* Ghose & Mukerjee, Orchid Rev. 53: 124. 1945.

Stems erect or pendulous, terete, to 50 cm or longer, stout, 5–7 mm in diam., often unbranched, internodes 3–4 cm. Leaves well spaced, terete, 13–16 cm × 3–4 mm, fleshy, abruptly con-

tracted at apex and aristate. Inflorescence often slightly shorter than leaves, 1–3-flowered; peduncle with 2 or 3 short sheaths; floral bracts broadly ovate-triangular, 3–4 mm, slightly fleshy. Flowers opening widely, creamy white, sometimes tinged pale pink, large, thinly textured; pedicel and ovary ca. 3 cm. Sepals similar, obovate, ca. 2 × 1 cm, obtuse-rounded, lateral sepals adnate to column foot. Petals oblanceolate, ca. 1.8 × 1.5 cm, base contracted, margin ± erose, apex rounded; lip spurred, 3-lobed; lateral lobes erect, parallel to column, bilobed; proximal lobule linear, ca. 1.7 cm, attenuate toward apex; distal lobule ca. 2 mm, apex emarginate; mid-lobe spreading, subflabellate, ca. 1.4 cm, deeply bilobed, base with a claw ca. 5 mm, with 3 fleshy keels adaxially; spur cylindrical, ca. 2.5 cm × 3 mm, narrowed toward tip, slightly hooked. Column ca. 1 × 0.7 cm. Fl. Apr.

Epiphytic on tree trunks in forests; 1700–1900 m. S Yunnan [Myanmar, Thailand].

*Papilionanthe uniflora* (Lindley) Garay was reported to be found in SE Xizang (K. Y. Lang & Z. H. Tsi in C. Y. Wu, Fl. Xizang. 5: 778–780, fig. 421. 1987, as *Aerides uniflora* (Lindley) Summerhayes). The identification was based on a fruiting specimen that is very similar in habit to *P. biswasiana* rather than *P. uniflora*.

**3. *Papilionanthe taiwaniana*** (S. S. Ying) Ormerod, Taiwaniana 47: 242. 2002.

台湾凤蝶兰 tai wan feng die lan

*Vanda taiwaniana* S. S. Ying, Mem. Coll. Agric. Natl. Taiwan Univ. 29(2): 65. 1989; *Papilisia taiwaniana* (S. S. Ying) J. M. H. Shaw.

Stems pendulous, terete, 30–60 cm, 4–4.5 mm in diam., branched, enclosed in sheaths. Leaves laxly alternate, terete, 14–21 cm × 2–3.5 mm, base amplexicaul-sheathing, apex obtuse and apiculate; sheaths 3–3.5 cm, glabrous. Inflorescence 2–3 cm, usually 2-flowered; peduncle base with a terete bract 2–3 mm; floral bracts ovate-triangular, 1.5–2.5 mm. Flowers 4–5

cm in diam., dorsal sepal whitish, tinged yellowish, lateral se-

pals yellowish, petals white, lip yellowish, with many dark brown or brown-red longitudinal stripes, apex white, column white or yellowish; pedicel and ovary 2–3 cm. Dorsal sepal narrowly elliptic, 15–20 × 7–10 mm, obtuse; lateral sepals triangular-ovate, 14–20 × 10–12 mm. Petals obovate, 20–25 × 7–8 mm, base contracted; lip ovate-oblong in outline, 15–18 × 14–16 mm, 3-lobed; lateral lobes nearly erect, suborbicular to semiorbicular, 8–10 × 7–9 mm; mid-lobe subquadrate, 6–7 × 10–12 mm, apex emarginate. Column 5–6 mm. Fl. unknown.

• Epiphytic on trees in forests; 200–600 m. S Taiwan.

**4. *Papilionanthe vandarum*** (H. G. Reichenbach) Garay, Bot. Mus. Leaflet 23: 372. 1974.

万代凤蝶兰 *wan dai feng die lan*

*Aerides vandarum* H. G. Reichenbach, Gard. Chron. 1867: 997. 1867.

Stems pendulous, branched, terete, flexuous, covered by leaf sheaths, to 60 cm; sheaths ridged, overlapping, tubular, 1.5–2.3 cm. Leaves suberect, terete, grooved, acuminate, jointed, 9–25 × ca. 0.3 cm. Inflorescence leaf-opposed, 1–4-flowered; peduncle ca. 2.2 cm, sheathed; floral bracts triangular, 2–4 × 1.4–1.6 mm. Flowers 3.8–5 cm in diam., white with a purple-flushed base to lip and spur, pedicel pink; pedicel and ovary 1.5–3.3 cm. Dorsal sepal obovate-oblong, 2–3.6 × 0.8–1.5 cm, obtuse, margins undulate; lateral sepals similar, ca. 3 × 1 cm. Petals subrhombic, 2–2.5 × 1.1–1.9 cm, reticulately veined, base twisted, margins undulate, apex obtuse; lip 3-lobed, ca. 2.2 × 2.2 cm; lateral lobes erect, unequally bifid, flexuous, narrowly ovate, falcate, ca. 9 × 3 mm, dentate on apical margin; mid-lobe clawed, obovate, dilated and bilobulate at apex, ca. 9 × 9 mm across apex; lobules orbicular, ca. 5 × 4 mm, serrate-denticulate; spur cylindrical, base conic, straight, 1.8–2.5 cm. Column fleshy, ca. 6 mm; foot long. Fl. unknown.

Epiphyte. S China [Bhutan, NE India, Myanmar].

This species is included here on the basis of a record from S China (without precise locality) by Pearce and Cribb (Orchids Bhutan, 539. 2002).

