

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

凤蝶兰属 feng die lan shu

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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).

