

138. PHREATIA Lindley, Gen. Sp. Orchid. Pl. 63. 1830.

馥兰属 fu lan shu

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

Plexaure Endlicher.

Herbs, epiphytic. Stems pseudobulbous or caulescent, former 1–3-leaved, latter with up to 12 leaves, very short or elongate. Leaves distichous or arranged in a fan, erect to spreading, terminal, sometimes fleshy, jointed on equitant sheaths, articulate. Inflorescences lateral or arising from base of pseudobulb, racemose, laxly to densely many flowered. Flowers resupinate, pale green or white, minute, opening widely or not, often self-pollinating. Sepals similar, free, sometimes connivent; lateral sepals often ± adnate to column foot forming a mentum. Petals often smaller than sepals; lip often with a basal claw attached to end of column foot, base concave or ± saccate, margin entire or obscurely 3-lobed. Column short, with a conspicuous foot; anther terminal, obtuse at apex; pollinia 8, in 2 groups of 4, waxy, attached by a narrow caudicle to a small viscidium.

About 190 species: from Sri Lanka and mainland Asia, through SE Asia, to Australia, New Guinea, and the Pacific islands, most species occurring in Indonesia and New Guinea; four species (two endemic) in China.

- 1a. Stem elongate, not pseudobulbous, pendulous, 10–20 cm 4. *P. caulescens*
- 1b. Stem very short or pseudobulbous, less than 3 cm.
 - 2a. Stem very short, not pseudobulbous, enclosed in leaf sheaths; leaves 4–6(–10) 1. *P. formosana*
 - 2b. Stem pseudobulbous, ovoid to subglobose, ± naked; leaves 1–3.
 - 3a. Pseudobulbs subglobose or ovoid, taller than broad; lip minutely hairy 2. *P. morii*
 - 3b. Pseudobulbs flattened globose, broader than tall; lip glabrous 3. *P. taiwaniana*

1. *Phreatia formosana* Rolfe ex Hemsley, Ann. Bot. (Oxford) 9: 156. 1895.

馥兰 fu lan

Octarrhena formosana (Rolfe ex Hemsley) S. S. Ying; *O. kotoinsularis* (Fukuyama) S. S. Ying; *Phreatia evrardii* Gagnepain; *P. kotoinsularis* Fukuyama.

Stems tufted, very short, not pseudobulbous, enclosed in leaf sheaths. Leaves subbasal, 4–6(–10), distichous on short stem; leaf blade linear, 7–13 × 0.8–1 cm, base slightly contracted and dilated into equitant sheaths, articulate, apex obtuse or retuse. Inflorescence axillary, erect, 6–7 cm, slender, with 3 ovate-lanceolate sheaths below middle; rachis 2–5 cm, many flowered; floral bracts subovate, 1–1.5 mm. Flowers white or greenish white, ca. 2 mm in diam.; pedicel and ovary 2–3 mm. Dorsal sepal elliptic-ovate, ca. 1.5 × 1 mm, obtuse; lateral sepals obliquely ovate-triangular, ca. 1.5 × 1.5 mm. Petals subelliptic, ca. 1 × 0.6 mm; lip suboblate, ca. 1 × 1.3 mm, base with a short claw and slightly saccate. Column short, foot distinct. Capsule ellipsoid, ca. 3 × 1.5 mm. Fl. Aug, fr. Sep–Oct.

Epiphytic on trees in open places of forests; 800–1800 m. C and S Taiwan, S Yunnan [Thailand, Vietnam].

2. *Phreatia morii* Hayata, Icon. Pl. Formosan. 4: 58. 1914.

大馥兰 da fu lan

Pseudobulbs tufted, ovoid-globose, ca. 1.5 cm in diam., often covered with membranous sheaths, with 2 or rarely 3 leaves at apex. Leaf blade narrowly oblong or narrowly elliptic, 8–18 × 1.5–2.5 cm, base contracted and with convolute sheaths, articulate, apex acute. Inflorescence arising from base of pseudobulb, 30–40 cm tall, slender, with 4–6 lax sheaths below; rachis ca. 10 cm, many flowered; floral bracts narrowly elliptic, ca. 4.5 mm. Flowers white, not opening widely; pedicel and

ovary ca. 3.5 mm. Dorsal sepal ovate-elliptic, ca. 2.8 × 2–2.3 mm, concave, rounded; lateral sepals obliquely ovate, ca. 3 × 2.5 mm. Petals ovate-oblong, 2.2–2.5 × ca. 1.6 mm; lip contracted near middle, with a basal globose sac and a distinct claw, and an ovate limb distally; limb minutely hairy adaxially. Column short, with a distinct foot. Fl. Jun.

• Epiphytic on tree trunks or lithophytic on rocks along stream-sides; below 1500 m. Taiwan.

3. *Phreatia taiwaniana* Fukuyama, Bot. Mag. (Tokyo) 49: 441. 1935.

台湾馥兰 tai wan fu lan

Thelasis taiwaniana (Fukuyama) S. S. Ying.

Rhizome creeping. Pseudobulbs contiguous, nearly flattened globose, 3–5 cm, ca. 8 mm in diam., apex 1- or 2-leaved. Leaf blade linear or narrowly oblong, 1.5–4.5 × 0.3–0.8 cm, base slightly contracted and with sheaths, articulate, apex obtuse or acute. Inflorescence arising from base of pseudobulb, 5–10 cm, slender, with several sheaths; rachis 1–2 cm, many flowered; floral bracts elliptic, ca. 2.6 mm. Flowers white, opening widely; pedicel and ovary 2.5–3 mm. Dorsal sepal triangular-ovate or triangular-oblong, 2–2.5 × 1–1.3 mm, obtuse; lateral sepals subtriangular or ovate-triangular, oblique, ca. 2.5 × 2 mm. Petals oblong-ovate, 1.7–2 × ca. 1 mm; lip ovate-cordate, 1.5–2 mm, base shortly clawed and with a shallow sac. Column short, foot distinct. Fl. Jun–Jul.

- Epiphytic on large trees in moist forests; 800–1500 m. Taiwan.

4. *Phreatia caulescens* Ames, Orchidaceae 2: 200. 1908.

垂茎馥兰 chui jing fu lan

Octarrhena caulescens (Ames) Ames.

Stem tufted, pendulous, usually 10–20 cm, not pseudobulbous, completely enclosed in overlapping brown basal leaf sheaths. Leaves many, distichous on upper part of stem; leaf blade linear, ca. 6 × 0.6 cm, acute. Inflorescence axillary, lateral, arching, ca. 8 cm, slender; rachis conspicuously longer than peduncle; floral bracts ovate, ca. 3 mm, acute. Flowers whitish, ca. 3 mm in diam.; pedicel and ovary ca. 3 mm. Sepals ovate, ca. 1.5 × 1 mm, acute. Petals elliptic, ca. 1.3 × 1 mm, acute; lip ± broadly oblong, ca. 1.5 × 1 mm, with short claw and a shallow sac at base. Column short. Fl. Aug.

Epiphytic on large tree trunks at forest margins; ca. 1500 m. S Taiwan [Philippines; Pacific islands (Vanuatu)].

