

## 55. LECANORCHIS Blume, Mus. Bot. 2: 188. 1856.

孟兰属 *yu lan shu*

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Herbs, mycotrophic. Rhizomes creeping or ascending, cylindric, slender, slightly rigid or subfleshy, branched or simple. Stem suberect, slender, branched or simple, with sparse scalelike sheaths. Raceme terminal, usually several to 10-flowered; floral bracts small, membranous. Flowers usually resupinate, small or medium-sized, with 1 small toothed cup (calyculus) between ovary and perianth, with abscission layer above calyculus near perianth base. Sepals and petals free, similar; lip base clawed, usually by canaliculate claw connate to column foot forming a tube, rarely free, spurless, upper part 3-lobed or unlobed; disk often hairy or papillose. Column rather slender, slightly dilated toward apex, slightly clavate; anther subterminal, 2-locular; pollinia 2, granular-farinaceous, without caudicle or conspicuous viscidium; rostellum short. Fruit a cylindric capsule.

About ten species: SE Asia to the Pacific islands, north to S China and Japan; four species (one endemic) in China.

Hsu and Chung (Taiwania 54: 83. 2009) recently added three species of *Lecanorchis* to the flora of China based on new discoveries in Taiwan. However, detailed accounts have yet to be published. Two of the three species, *L. suginoana* (Tuyama) Serizawa (Bunrui 5(1): 38. 2005) and *L. virella* T. Hashimoto (Ann. Tsukuba Bot. Gard. 8: 1. 1989), are also known to occur only in Japan, from where they were originally described. The third, *L. triloba* J. J. Smith (Bull. Dep. Agric. Indes Neerl. 19: 26. 1908; *L. javanica* Blume), is more widespread throughout parts of mainland SE Asia, the Malay Archipelago, New Guinea, and S Japan. The present authors have not seen Chinese material for any of these species. In the absence of refutable material, the three taxa are omitted from the following account.

- 1a. Lip simple, ca. 1.5 mm wide ..... 4. *L. nigricans*
- 1b. Lip ± 3-lobed, more than 3 mm wide.
  - 2a. Raceme 13–21-flowered; sepals 9–10 mm ..... 1. *L. multiflora*
  - 2b. Raceme 3–9-flowered; sepals 11–25 mm.
    - 3a. Sepals 11–14 mm; mid-lobe of lip sparsely hairy adaxially ..... 2. *L. japonica*
    - 3b. Sepals 18–25 mm; mid-lobe of lip densely hairy adaxially ..... 3. *L. thalassica*

**1. *Lecanorchis multiflora*** J. J. Smith, Bull. Jard. Bot. Buitenzorg, sér. 2, 26: 8. 1918.

多花孟兰 *duo hua yu lan*

Plants 20–30 cm tall, with fleshy rhizomes underground. Rhizomes 3–4 mm in diam., branched, with nodes, nodes with amplexicaul sheaths; sheaths membranous, margin toothed. Stem suberect, slender, noded, nodes with sheaths; sheaths ovate to broadly ovate, 4–6 mm, membranous, base amplexicaul. Raceme terminal, 8–10 cm, 13–21-flowered; floral bracts ovate, 2–3 mm, membranous. Flowers 9–10 mm; lip 3-lobed; mid-lobe hairy adaxially; disk with 2 calli. Capsule (immature) 1.7–2 cm.

Forests in limestone areas; 600–700 m. S Yunnan [Indonesia, Malaysia, Thailand].

**2. *Lecanorchis japonica*** Blume, Mus. Bot. 2: 188. 1856.

孟兰 *yu lan*

*Lecanorchis cerina* Fukuyama; *L. cerina* f. *albida* (T. P. Lin) S. S. Ying; *L. cerina* var. *albida* T. P. Lin; *L. ohwii* Masamune.

Plants ca. 33 cm tall. Rhizome 5–6 mm in diam., fleshy. Stem tinged with white, black when fruiting, slender, with 4 sheaths below middle; sheaths tubular, 5–7 mm, membranous, amplexicaul. Raceme terminal, 4–5 cm, 3–7-flowered; floral bracts ovate to ovate-lanceolate, 2.5–3 mm; pedicel and ovary 1.4–2 cm, slender; calyculus 0.8–1 mm tall, ca. 1 mm wide, 6-toothed. Sepals oblanceolate, 11–14 × 2–2.5 mm, apex obtuse. Petals similar to sepals; lip base clawed, canaliculate claw con-

nate to column along margin forming a tube; tube 3.5–4 mm; distal free part nearly obovate or obovate-lanceolate, 8–9 mm, 3-lobed; lateral lobes subovate; mid-lobe broadly elliptic or orbicular, ca. 3 × 4 mm, adaxially densely barbate-villous, margin crisped and erose; disk barbate-villous. Column 7–10 mm, apex slightly dilated. Capsule erect, cylindric, 2–4 cm. Fl. May–Jul.

Forests; 800–1000 m. N Fujian, SW Hunan, Taiwan [Japan].

**3. *Lecanorchis thalassica*** T. P. Lin, Native Orchids Taiwan 3: 153. 1987 [“*thalassicus*”].

灰绿孟兰 *hui lu yu lan*

*Lecanorchis japonica* Blume var. *thalassica* (T. P. Lin) S. S. Ying.

Plants to 50 cm tall. Rhizome ascending. Stem erect, reddish brown, with black dots, unbranched, with several sheaths; sheaths dark brown, 3–4 mm. Raceme terminal, 3–4 cm, 4–10-flowered; floral bracts persistent, ovate, ca. 2 mm; pedicel and ovary 2.5–3.3 cm; calyculus very small, ca. 1 mm tall, margin toothed. Flowers not widely open, margin grayish green and yellowish. Dorsal sepal oblanceolate, ca.  $20 \times 5$  mm, apex obtuse; lateral sepals falcate-oblanceolate, ca.  $20 \times 3$  mm. Petals obovate-lanceolate to spatulate, ca.  $20 \times 6$  mm, apex obtuse or rounded; lip obovate, ca. 1.6 cm, cuneate toward base, distal part 3-lobed, basal half connate to column forming a tube; tube ca. 8 mm, contracted near middle, swollen part ca. 3 mm wide; lateral lobes erect, abaxially purple, suborbicular, adaxially shortly villous; mid-lobe entire, suborbicular, ca. 5.5 mm, abaxially with several purple bands, adaxially densely yellow villous, apex emarginate; disk with yellow hairs extending to mid-lobe. Column ca. 9 mm, apex dilated. Fl. May.

- Broad-leaved forests; 1400–2000 m. C Taiwan.

4. **Lecanorchis nigricans** Honda, Bot. Mag. (Tokyo) 45: 470. 1931.

全唇盂兰 quan chun yu lan

*Lecanorchis oligotricha* Fukuyama; *L. purpurea* Masamune; *L. taiwaniana* S. S. Ying.

Plants 12–40 cm tall. Rhizome ascending, ligneous, with short scales at nodes. Stem erect, blackish, slender, often branched, remotely with several sheaths. Raceme terminal, 3–5 cm, 5–8-flowered; floral bracts ovate-triangular, 2–4 mm; pedicel and ovary purplish brown, 1–2 cm, slender; calyculus ca. 0.8 mm tall, denticulate. Flowers almost opening widely; sepals and petals brownish to nearly whitish, sometimes tinged with purple, concave. Sepals narrowly oblanceolate,  $10\text{--}16 \times 2\text{--}3$  mm, apex acute; lateral sepals somewhat oblique, falcate-lanceolate,  $12\text{--}14 \times$  ca. 2.5 mm. Petals oblanceolate-linear, similar to sepals in size; lip whitish, tinged with purple, narrowly oblanceolate to obovate-spatulate, nearly as long as sepals, adaxially  $\pm$  papillose-hairy, unlobed. Column white, 6–10 mm, slender. Fl. Aug–Oct.

Damp places in forests; 600–1000 m. Fujian, N Taiwan [Japan (Ryukyu Islands)].

