

## 78. CREPIDIUM Blume, Bijdr. 387. 1825.

沼兰属 zhao lan shu

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

*Fingardia* Szlachetko; *Glossochilopsis* Szlachetko; *Pseudoliparis* Finet; *Pterochilus* Hooker & Arnott; *Saurolophorkis* Margońska & Szlachetko; *Seidenfia* Szlachetko; *Seidenforchis* Margońska.

Herbs, terrestrial, rarely epiphytic or lithophytic. Roots hairy. Stem cylindric to pseudobulbous, fleshy, often creeping and rooting in basal part. Leaves 2 to several, thinly textured to fleshy, plicate, petiolate, petiole sheathing at base. Inflorescence apical, erect, unbranched; floral bracts persistent, often recurved or reflexed, lanceolate or setose. Flower usually not resupinate, green, brown, yellow, pink, or purple. Dorsal sepal spreading, free; lateral sepals free or fused, spreading. Petals often narrower than sepals, free, spreading; lip erect, flat, usually concave at base, entire to lobed, auriculate at base or lacking auricles, apical margin entire or toothed, lacking a spur, callus absent. Column lacking a foot, with 2 apical arms on either side of clinandrium, rarely with a dorsal wing or protuberance; anther cap movable, dorsal, dorsiventrally flattened, attached by a slender filament, locules opening ventrally; pollinia 4, almost equal in size, in pairs, clavate, waxy, with 1 delicate viscidium or lacking a viscidium; stigma elliptic to transversely elliptic; rostellum often obtuse or rounded at apex.

About 280 species: throughout the Asian tropics and subtropics, Australasia, and Indian Ocean islands, with a few species in temperate Asia; 17 species (five endemic) in China.

- 1a. Lip without basal auricles, narrow, ligulate, entire ..... 1. *C. finetii*
- 1b. Lip auriculate, mid-lobe entire, toothed, or bilobed.
  - 2a. Lip auricles short, never stretching backward and embracing column ..... 2. *C. ramosii*
  - 2b. Lip auricles long, stretching backward and embracing column.
    - 3a. Lip toothed or fimbriate-toothed at apex.
      - 4a. Flowers dark purple or blackish purple; lip with 15–20 fimbriate teeth at apex ..... 3. *C. orbiculare*
      - 4b. Flowers dark red, orange, or yellow; lip with several teeth at apex.
        - 5a. Leaves 2–4; dorsal sepal distinctly longer than lateral sepals ..... 4. *C. ovalisepalum*
        - 5b. Leaves 5–8; dorsal sepal and lateral sepals nearly equal in length ..... 5. *C. bancanoides*
    - 3b. Lip 2-lobed, entire, or emarginate, never toothed or fimbriate-toothed, at apex.
      - 6a. Lip entire or emarginate at apex.
        - 7a. Lip not emarginate at apex; auricles 2–3 mm ..... 6. *C. biauratum*
        - 7b. Lip emarginate at apex; auricles 0.4–0.6 mm ..... 7. *C. concavum*
      - 6b. Lip conspicuously 2-lobed at apex.
        - 8a. Leaves 2, subopposite, appressed to substrate ..... 8. *C. mackinnonii*
        - 8b. Leaves often 3–7, if 2, not as above.
          - 9a. Leaves with colorful markings adaxially, especially stained with white near margins ..... 9. *C. calophyllum*
          - 9b. Leaves plain, without colorful markings.
            - 10a. Pseudobulbs subglobose; center of lip glabrous or glandular-pilose.
              - 11a. Center of lip glabrous ..... 10. *C. bahanense*
              - 11b. Center of lip shortly glandular-pilose ..... 11. *C. sichuanicum*
            - 10b. Pseudobulbs cylindric, cauliform; center of lip not as above.
              - 12a. Dorsal sepal distinctly broader than lateral sepals; basal auricles of lip resembling bat wings ..... 12. *C. insulare*
              - 12b. Dorsal sepal narrower than lateral sepals; basal auricles of lip not as above.
                - 13a. Lip 10–11 mm; petals 8–9 mm ..... 13. *C. acuminatum*
                - 13b. Lip 5–8 mm; petals 2.5–4.5 mm.
                  - 14a. Lip with an indentation on either side below or near middle formed by involute margins ..... 14. *C. khasianum*
                  - 14b. Lip lacking involute margins on both sides below or near middle; indentations, if present, formed by a contraction of margins.
                    - 15a. Pedicel and ovary 6–12 mm, ca. 2 × as long as floral bracts; flowers usually red, ca. 10 mm in diam. .... 15. *C. purpureum*
                    - 15b. Pedicel and ovary 5–6 mm, slightly longer than floral bracts; flowers yellow-green, yellowish, or green, rarely purplish green, 6–7 mm in diam.

- 16a. Ovary 6-ridged; adaxial surface of leaves purplish ..... 16. *C. matsudae*  
16b. Ovary not ridged; adaxial surface of leaves greenish .... 17. *C. hainanense*

**1. *Crepidium finetii*** (Gagnepain) S. C. Chen & J. J. Wood,  
**comb. nov.**

二脊沼兰 er ji zhao lan

Basionym: *Microstylis finetii* Gagnepain, Bull. Soc. Bot. France 79: 127. 1932; *Glossochilopsis finetii* (Gagnepain) Szlachetko; *Malaxis finetii* (Gagnepain) Tang & F. T. Wang.

Plants terrestrial. Stem 2.5–4 cm, cylindric, fleshy, with several nodes, ± enclosed in sheaths. Leaves usually 4, grouped together; petiole sheathlike, toward base ± amplexicaul; blade ovate, ovate-oblong, or ovate-lanceolate, 6–11 × 2–4.2 cm, apex acuminate or subacute. Inflorescence erect; peduncle 15–23 cm, wingless, grooved when dried; rachis 5–14 cm, 20- or more flowered; floral bracts reflexed, 2–4(–6) mm, narrowly lanceolate. Flowers greenish yellow, 3–4 mm in diam.; pedicel and ovary 2–3 mm. Dorsal sepal oblong or narrowly ovate-oblong, 2.8–3.2 × 0.8–1 mm, apex obtuse; lateral sepals narrowly ovate-oblong, 2–3.5 × 1–1.2 mm, apex obtuse. Petals narrowly linear or filiform, 2–3.5 × ca. 0.3 mm; lip superior, subovate-triangular, 1.8–2 × ca. 1 mm, unlobed, apex obtuse; disk with 5 thick longitudinal ridges, with a somewhat Y-shaped projection above. Column erect, ca. 1.5 mm. Capsule ellipsoid, ca. 8 × 3.5–4 mm; fruiting pedicel ca. 2 mm. Fl. and fr. Jul–Sep.

Forests. S and W Hainan [Vietnam].

**2. *Crepidium ramosii*** (Ames) Szlachetko, Fragm. Florist. Geobot., Suppl. 3: 131. 1995.

心唇沼兰 xin chun zhao lan

*Malaxis ramosii* Ames, Philipp. J. Sci., C, 6: 45. 1911;  
*Pseudoliparis ramosii* (Ames) Margońska & Szlachetko.

Plants terrestrial. Pseudobulbs inconspicuous. Leaves usually 2, subopposite, pale green, obliquely elliptic-ovate, 5–8 × 3.5–4.5 cm, base with a sheathlike petiole, margin slightly crisped. Inflorescence erect; peduncle green, 10–12 cm, slender; rachis 10- or more flowered; floral bracts reflexed, very small. Flowers orange; pedicel and ovary ca. 3.8 mm. Dorsal sepal ovate, ca. 5 × 4 mm; lateral sepals obliquely obovate, ca. 4 × 2.8 mm. Petals oblanceolate or obovate, slightly smaller than lateral sepals; lip superior, cordate, ca. 3 × 3 mm, base subcordate and with 2 small auricles on either side, unlobed, apex obtuse; disk with a pair of short dark ridges. Column ca. 1.7 mm, basal half connate to lip, apical part with short broad wings. Fl. Aug–Nov.

Forests; 300–400 m. S Taiwan [Philippines].

**3. *Crepidium orbiculare*** (W. W. Smith & Jeffrey) Seidenfaden, Contr. Orchid Fl. Thailand 13: 18. 1997 [“*orbicularum*”].

齿唇沼兰 chi chun zhao lan

*Microstylis orbicularis* W. W. Smith & Jeffrey, Notes Roy. Bot. Gard. Edinburgh 9: 111. 1916; *Malaxis orbicularis* (W. W. Smith & Jeffrey) Tang & F. T. Wang; *Microstylis tenebrosa* Rolfe ex Downie.

Plants terrestrial. Pseudobulbs ovoid, ca. 1 cm × 7–8 mm, ± enclosed in white membranous sheaths. Leaves often 3, ovate-lanceolate, oblong-lanceolate, or ovate, 4.5–13 × 1.8–4.8 cm, base contracted into a sheathlike, amplexicaul petiole 2.5–6 cm, apex acuminate or long acuminate. Inflorescence erect; peduncle 14–40 cm, wingless; rachis 5–9 cm, usually more than

10-flowered; floral bracts reflexed, linear-lanceolate, 5–7(–10) mm. Flowers dark purple or blackish purple, 6–7 mm in diam.; pedicel and ovary 5–6 mm. Dorsal sepal oblong or broadly linear, 5–6 × 1.2–1.5 mm, margin often revolute, apex obtuse; lateral sepals nearly broadly oblong, ca. 3.5 × 2 mm, base slightly oblique, apex obtuse. Petals narrowly linear, ca. 5 × 0.6 mm; lip superior, suborbicular or broadly obovate-elliptic in outline, 7–8 × ca. 5 mm, apical margin with 15–20 fimbriate teeth 0.5–1 mm, with a central depression; auricles ovate-triangular to narrowly ovate, 3.5–4 mm, surrounding column. Column ca. 1 mm, stout. Fl. Jun.  $2n = 40^*$ .

- Forests; 800–2100 m. S and SW Yunnan.

**4. *Crepidium ovalisepalum*** (J. J. Smith) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 130. 1995.

卵萼沼兰 luan e zhao lan

*Microstylis ovalisepala* J. J. Smith, *Bull. Jard. Bot. Buitenzorg, sér.* 3, 10: 42. 1928; *Malaxis ovalisepala* (J. J. Smith) Seidenfaden; *M. szemaensis* Tang & F. T. Wang.

Plants terrestrial. Stem cylindrical, 1–2 cm, fleshy. Leaves 2–4; petiole ca. 2 cm, sheathlike; blade obliquely ovate or elliptic, 2–6.5 × 1.2–3.5 cm, base cuneate, apex acute. Inflorescence erect; peduncle 8–12 cm, ± longitudinally ridged; rachis 2.5–6 cm, laxly 7- or 8-flowered; floral bracts reflexed, lanceolate, 3–4 mm. Flowers pale green to yellow, 4–5 mm in diam.; pedicel and ovary 3–4 mm. Dorsal sepal narrowly oblong to oblong, 3–3.5 × ca. 1 mm, margin often revolute, apex obtuse; lateral sepals ovate-elliptic, 2.5–3 × ca. 1.5 mm, slightly oblique, margin revolute, apex obtuse. Petals narrowly linear, 3–3.5 × ca. 0.4 mm, apex obtuse; lip superior, nearly broadly obovate or broadly oblong in outline, ca. 5 × 3.5 mm, with a central depression, apex 3-lobed or unlobed; if lip 3-lobed, mid-lobe with 1 or 2 teeth on either side, apex 2-lobed, lobules ovate-lanceolate to lunate; if lip unlobed, margin with several irregular teeth; auricles ovate-triangular to triangular-lanceolate, ca. 2.5 mm, surrounding column. Column ca. 1 mm, stout. Fl. Jun.

Shaded slopes; 600–1500 m. S Yunnan [W Indonesia (Sumatra), Thailand].

**5. *Crepidium bancanoides*** (Ames) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 124. 1995.

兰屿沼兰 lan yu zhao lan

*Malaxis bancanoides* Ames, *Orchidaceae* 2: 129. 1908; *M. miyakei* (Schlechter) Tang & F. T. Wang; *M. roohutuensis* (Fukuyama) K. Nakajima; *Microstylis iriomotensis* Masamune; *M. miyakei* Schlechter; *M. roohutuensis* Fukuyama.

Plants terrestrial. Stem erect, prostrate at base, green, cylindrical, 5–15 cm, 4–6 mm in diam., fleshy, with many nodes. Leaves 5–8, loosely arranged; petiole 3–4 cm; blade elliptic or ovate-elliptic, 4.5–7.5 × 2–3.5 cm, margin crisped, apex acute. Peduncle 14–15 cm; rachis densely many flowered; floral bracts reflexed, linear-lanceolate, ca. 5 mm. Flowers orange-yellow, 2.5–3 mm in diam.; pedicel and ovary ca. 5 mm. Sepals oblong-lanceolate or narrowly elliptic, 2.5–3 × 1–1.5 mm, apex

obtuse; lateral sepals somewhat oblique. Petals narrowly linear, ca. 2.5 × 0.8 mm, apex obtuse; lip superior, suborbicular or slightly square in outline, 3–4 × 2.5–3.5 mm, 3-lobed; lateral lobes triangular; mid-lobe ovate-triangular, apex emarginate, with 1 or 2 teeth on each side; auricles ovate-triangular, ca. 2 mm, surrounding column. Column ca. 1 mm, stout, with 2 broad apical wings. Fl. Sep–Nov.  $2n = 44$ .

Dense forests, along streamsides; 300–400 m. E and S Taiwan [Japan (Ryukyu Islands), Philippines].

Chinese records of *Crepidium copelandii* (Ames) Szlachetko (e.g., in FRPS 18: 113. 1999, as *Malaxis copelandii* Ames) are referable to *C. bancanoides*. True *C. copelandii* is endemic to the Philippines.

**6. *Crepidium biauratum*** (Lindley) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 124. 1995.

二耳沼兰 er er zhao lan

*Microstylis biaurita* Lindley, *Gen. Sp. Orchid. Pl.* 20. 1830; *Malaxis biaurita* (Lindley) Kuntze; *M. brevicaulis* (Schlechter) S. Y. Hu; *M. sutepensis* (Rolfe ex Downie) Seidenfaden & Smitinand; *Microstylis brevicaulis* Schlechter; *M. sutepensis* Rolfe ex Downie.

Plants terrestrial. Stem cylindrical, 2–2.5 cm, fleshy, with several nodes, ± enclosed in membranous sheaths. Leaves usually 3, ovate, oblong-ovate, or subelliptic, 5–10 × 1.8–5 mm, base contracted into a sheathlike, amplexicaul petiole 1.5–3.5 cm, apex acuminate. Inflorescence erect; peduncle 15–21 cm, wingless; rachis 7–9 cm, 20–30-flowered; floral bracts reflexed, narrowly lanceolate, 4.5–6 mm. Flowers purplish red to green, ca. 7 mm in diam.; pedicel and ovary 4–5 mm. Dorsal sepal suboblong or oblong-lanceolate, 6–6.5 × 1.5–2 mm, margin revolute, apex obtuse; lateral sepals narrowly oblong-ovate, ca. 5 × 1.5–2 mm, base oblique, apex obtuse. Petals narrowly linear, ca. 5.5 × 0.3 mm; lip superior, rhombic-elliptic in outline, 4–5.5 × ca. 3 mm, base with a pair of auricles decurrent backward embracing column apex, unlobed, central part with 2 short lamellae, and between lamellae a longitudinal groove; auricles ovate or narrowly ovate, 2–3 mm. Fl. Jun.

Forests; 1300–2500 m. S and W Yunnan [NE India, Laos, Myanmar, Thailand].

**7. *Crepidium concavum*** (Seidenfaden) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 125. 1995.

凹唇沼兰 ao chun zhao lan

*Malaxis concava* Seidenfaden, *Bot. Tidsskr.* 65: 325. 1970.

Plants terrestrial. Pseudobulbs small, enclosed in sheaths. Leaves 2, elliptic-oblong or narrowly elliptic, 7–11 × 1.5–2 cm, base contracted into a sheathlike petiole 1–1.5 cm, apex acuminate. Inflorescence erect; rachis ca. 2 cm, ca. 10-flowered; floral bracts narrowly lanceolate, very small. Flowers 3–4 mm in diam.; pedicel and ovary 3–4 mm. Dorsal sepal oblong, 2–3 × ca. 0.8 mm; lateral sepals rather broad and short, obtuse. Petals narrowly linear, 2–3 × ca. 0.3 mm; lip superior, oblong-ovate or nearly broadly oblong in outline, 2–3 × 1.5–2.5 mm, adaxially with 2 thick short lamellae, base with 2 short auricles decurrent backward ± embracing column, apex emarginate; auricles 0.4–

0.6 mm. Column 2–2.5 mm, stout, upper part winged. Fl. Jun.

Humid places in forests; ca. 1200 m. S Yunnan [Thailand].

**8. *Crepidium mackinnonii*** (Duthie) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 128. 1995.

铺叶沼兰 pu ye zhao lan

*Microstylis mackinnonii* Duthie, *J. Asiat. Soc. Bengal*, Pt. 2, *Nat. Hist.* 71(2): 37. 1902; *Malaxis mackinnonii* (Duthie) Ames; *Seidenforchis mackinnonii* (Duthie) Margońska.

Leaves 2, appressed to substrate, subopposite, ovate or ovate-elliptic, 4–5 × 3–4 cm, base subcordate and amplexicaul. Inflorescence erect, slender; rachis several flowered; floral bracts very small. Flowers 4–5 mm in diam.; pedicel and ovary 2–3 mm. Sepals oblong to ovate, ca. 3 × 1.5 mm. Petals nearly as long as sepals, linear, ca. 0.6 mm wide; lip superior, ovate in outline, 2–3 × 1.5–2 mm, shallowly 2-lobed, base with a pair of auricles decurrent backward embracing column; auricles ovate, 1.5–2 mm. Column short, stout.

C Yunnan [Bangladesh, India].

**9. *Crepidium calophyllum*** (H. G. Reichenbach) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 125. 1995.

美叶沼兰 mei ye zhao lan

*Microstylis calophylla* H. G. Reichenbach, *Gard. Chron.*, n.s., 12: 718. 1879; *Malaxis calophylla* (H. G. Reichenbach) Kuntze; *M. calophylla* var. *brachycheila* (J. D. Hooker) Tang & F. T. Wang; *Microstylis scottii* J. D. Hooker; *M. wallichii* Lindley var. *brachycheila* J. D. Hooker.

Plants terrestrial. Stem cylindrical, 2–3(–5) cm, 2–3 mm in diam., fleshy, with several nodes, ± enclosed in sheaths. Leaves 2–4, adaxially pale brown and stained with white on both sides, obliquely ovate, ovate-elliptic, or narrowly ovate, 3.5–8(–12) × 1.5–4(–5) cm, base contracted into an amplexicaul petiole 1.5–3 cm, margin ± crisped, apex acuminate. Peduncle 7–30 cm, nearly wingless; rachis 2.5–12 cm, 10–20- or more flowered; floral bracts narrowly lanceolate or nearly subulate, 1.5–2.5 mm. Flowers pale yellowish green, lip with purplish red base; pedicel and ovary 2.5–4 mm. Dorsal sepal suboblong, 4–4.5 × 1.5–1.8 mm, margin revolute, apex obtuse; lateral sepals broadly oblong-elliptic, 4–4.5 × 2–2.5 mm, margin revolute. Petals narrowly linear, ca. 4 × 0.3 mm, apex obtuse; lip superior, broadly ovate-elliptic or broadly oblong in outline, 5–5.5 × 3.5–4 mm, base with a central depression surrounded by a fleshy ridge; abruptly contracted toward apex into a short apiculus and shallowly 2-lobed, auricles ovate, 1.7–2.2 mm, decurrent backward embracing column. Column ca. 1 mm, stout, apex with 2 triangular-lanceolate wings. Capsule obovoid-ellipsoid or narrowly obovoid-oblong, 9–13 × 4–5 mm; fruiting pedicel 4–5 mm. Fl. Jul, fr. Sep.

Humus-rich soils in dense forests; 800–1200 m. Hainan, S Yunnan [Cambodia, India (Sikkim), Indonesia, Malaysia, Myanmar, Thailand, Vietnam].

**10. *Crepidium bahanense*** (Handel-Mazzetti) S. C. Chen & J. J. Wood, **comb. nov.**

云南沼兰 yun nan zhao lan

Basionym: *Microstylis bahanensis* Handel-Mazzetti, *Symb. Sin.* 7: 1350. 1936; *Malaxis bahanensis* (Handel-Mazzetti) Tang & F. T. Wang.

Plants terrestrial. Pseudobulbs subglobose, 5–10 mm in diam. Leaves 2; petiole 13–30 cm; blade ovate or ovate-oblong, apex obtuse. Inflorescence erect; peduncle 6–9 cm; rachis 5–10-flowered; floral bracts reflexed, narrowly lanceolate, ca. 3 mm, shorter than pedicel and ovary, apex acuminate. Flowers yellow or brownish red, 3–4 mm in diam. Sepals ovate, ca. 2 mm, margin revolute, apex subacute. Petals linear-ligulate, ca. 2 mm, apex obtuse; lip superior, nearly sagittate-ovate in outline, ca. 4 × 3 mm, attenuate toward apex, apex 2-lobed, with a central glabrous suborbicular callus; auricles ovate, ca. 1 mm, decurrent backward embracing column. Column ca. 1 mm, stout. Fl. Jul.

• On rocks; ca. 2600 m. NW Yunnan.

**11. *Crepidium sichuanicum*** (Tang & F. T. Wang) S. C. Chen & J. J. Wood, **comb. nov.**

四川沼兰 si chuan zhao lan

Basionym: *Malaxis sichuanica* Tang & F. T. Wang, *Acta Phytotax. Sin.* 26: 239. 1988.

Plants terrestrial. Stem erect, ca. 11 cm tall. Pseudobulbs ?subglobose. Leaves 3, erect to spreading, approximate, sub-oblong to oblong-lanceolate, 5–6 × ca. 1.3 cm, obscurely sheathing-petiolate, apex obtuse to acuminate. Inflorescence ca. 12-flowered, 6–7 mm wide; peduncle ca. 12 cm, narrowly winged; rachis ca. 2 cm; floral bracts spreading, narrowly lanceolate, ca. 3 mm. Flowers yellowish, ca. 5 mm in diam.; pedicel and ovary ca. 4 mm. Dorsal sepal oblong, ca. 4 × 1.2 mm, 3-veined, apex obtuse; lateral sepals broadly elliptic-oblong, ca. 3 × 2.2 mm, 3-veined, apex obtuse to rounded. Petals oblong, almost as long as dorsal sepal, ca. 1 mm wide; lip ovate-sagittate in outline, ca. 5.5 cm (including basal auricles), ca. 3.5 mm wide above middle, somewhat concave and glandular-pilose at center, apex narrowed, 2-lobed, lobes ca. 1 mm; basal auricles obliquely ovate, acute, 1.2–1.5 mm. Column fleshy, ca. 1 mm, glabrous; anther cap oblate, ca. 1 mm wide. Fl. Jul.

• Terrestrial on roadsides; 1000–1200 m. C Sichuan (Guanxian).

**12. *Crepidium insulare*** (Tang & F. T. Wang) S. C. Chen & J. J. Wood, **comb. nov.**

琼岛沼兰 qiong dao zhao lan

Basionym: *Malaxis insularis* Tang & F. T. Wang, *Acta Phytotax. Sin.* 12: 36. 1974.

Plants terrestrial, sometimes epiphytic. Stem erect, ± prostrate at base, cylindrical, 3–5 cm, 3–5 mm in diam., fleshy, with several nodes, enclosed in leaf sheaths in early stage. Leaves (2–)4 or 5; petiole 2–4 cm, sheathlike, amplexicaul; blade obliquely ovate or oblong-ovate, 3–8 × 2–3 cm, margin slightly crisped, apex acuminate or subacute. Inflorescence erect; peduncle 10–18 cm, wingless; rachis 2–4 cm, laxly 5–10-flowered; floral bracts reflexed, ovate-lanceolate, 3–4 mm, apex

long acuminate. Flowers 4–5 mm in diam.; pedicel and ovary 6–7 mm. Dorsal sepal orbicular or broadly elliptic, concave, ca.  $3 \times 2.8$  mm, 3-veined, apex obtuse; lateral sepals suboblong, ca. 1.5 mm wide, 3-veined, apex obtuse. Lip superior,  $\pm$  broadly ovate-triangular or ovate-suborbicular in outline, ca. 3.5 mm, base with a pair of auricles spreading backward like bat wings embracing column, apex abruptly contracted and shallowly 2-lobed. Column short, stout, apex with 2 erect armlike appendages. Fl. Jun.

- Dense forests, cliffs. W Hainan.

**13. *Crepidium acuminatum*** (D. Don) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 123. 1995.

浅裂沼兰 qian lie zhao lan

*Malaxis acuminata* D. Don, *Prodr. Fl. Nepal.* 29. 1825; *Crepidium bilobum* (Lindley) Szlachetko; *M. acuminata* f. *biloba* (Lindley) Tuyama; *M. acuminata* var. *biloba* (Lindley) Ames; *M. allanii* S. Y. Hu & Barretto; *M. biloba* (Lindley) Ames; *M. pierrei* (Finet) Tang & F. T. Wang; *M. siamensis* (Rolfé ex Downie) Seidenfaden & Smitinand; *M. wallichii* (Lindley) Deb; *Microstylis biloba* Lindley; *M. pierrei* Finet; *M. siamensis* Rolfé ex Downie; *M. trigonocardia* Schlechter; *M. wallichii* Lindley.

Plants terrestrial, sometimes epiphytic. Stem cylindrical, (1.5–)4–7 cm, 4–6 mm in diam., fleshy, with several nodes, mostly enclosed in sheath. Leaves 3–5, obliquely ovate, ovate-oblong, or subelliptic, (4–)6–12  $\times$  2.5–6 cm, base contracted into a sheathlike, amplexicaul petiole 2–4 cm, apex acuminate. Inflorescence erect; peduncle 12–43 cm, wingless; rachis 3–9(–16) cm, 10- or more flowered; floral bracts lanceolate, 3–4(–6) mm. Flowers purplish red, ca. 1.5 cm in diam.; pedicel and ovary 7–10 mm. Dorsal sepal narrowly oblong or broadly linear, 8–9  $\times$  ca. 2 mm, 3-veined, margin revolute, apex obtuse; lateral sepals oblong, 6–7  $\times$  3–3.5 mm, margin revolute, apex obtuse. Petals narrowly linear, 8–9  $\times$  ca. 0.8 mm, margin revolute; lip superior, ovate-oblong or obovate-oblong in outline, 10–11  $\times$  6–7 mm, shallowly 2-lobed, with a sinus 1(–2) mm deep, with a pair of auricles decurrent backward embracing column, adaxially with a central groove in apical half; auricles  $\pm$  narrowly ovate, 1/5–2/5 length of lip. Column 1–1.5 mm, stout. Capsule obovoid-oblong, ca. 1.8  $\times$  1 cm; fruiting pedicel ca. 7 mm. Fl. and fr. May–Jul.  $2n = 30, 36, 42$ .

Forests, shaded rocks along valleys; 300–2100 m. Guangdong, SW Guizhou, ?Taiwan, SE Xizang, S Yunnan [Bhutan, Cambodia, India, Indonesia, Laos, Myanmar, Nepal, Philippines, Thailand, Vietnam; Australia].

**14. *Crepidium khasianum*** (J. D. Hooker) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 127. 1995.

细茎沼兰 xi jing zhao lan

*Microstylis khasiana* J. D. Hooker, *Fl. Brit. India* 5: 686. 1890; *Malaxis khasiana* (J. D. Hooker) Kuntze.

Plants terrestrial. Stem cylindrical, 7–8 cm, 2–3.5 mm in diam., fleshy, with several nodes, often  $\pm$  naked. Leaves often 4 or 5, obliquely ovate or narrowly ovate-lanceolate, 3.5–7  $\times$  1.5–2 cm, base contracted into an amplexicaul petiole 1.5–2 cm,

apex acuminate. Peduncle 8–11 cm, nearly wingless; rachis 4–5 cm, 20- or more flowered; floral bracts narrowly lanceolate, 2.5–3 mm. Flowers yellowish green, relatively small; pedicel and ovary 3.5–4.5 mm. Sepals oblong-elliptic or ovate-elliptic, 2.4–2.8  $\times$  1–1.2 mm, apex obtuse; lateral sepals somewhat oblique. Petals narrowly linear, 2–2.5  $\times$  ca. 0.3 mm, apex obtuse; lip superior, nearly broadly oblong in outline, 3.5–4 mm, with an indentation on either side below or near middle, formed by involute margin, base with a central depression, surrounded by a fleshy ridge, apex shallowly 2-lobed, sinus ca. 0.5 mm deep; auricles subovate or oblong-ovate, 1–1.2 mm, decurrent backward embracing column. Column erect, ca. 1 mm. Fl. Jul.  $2n = 42$ .

Rock crevices in forests; 1000–1100 m. S and W Yunnan [NE India, Thailand].

**15. *Crepidium purpureum*** (Lindley) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 131. 1995.

深裂沼兰 shen lie zhao lan

*Microstylis purpurea* Lindley, *Gen. Sp. Orchid. Pl.* 20. 1830; *Malaxis liparioides* (Schlechter) Tang & F. T. Wang; *M. purpurea* (Lindley) Kuntze; *Microstylis liparioides* Schlechter; *M. wallichii* Lindley var. *biloba* King & Pantling.

Plants terrestrial. Stem cylindrical, 2–4(–15) cm, 5–7 mm in diam., fleshy, with several nodes,  $\pm$  enclosed in sheaths. Leaves often 3 or 4, obliquely ovate or oblong, 8–16.5  $\times$  3–5.8 cm, base contracted into a sheathlike, amplexicaul petiole 3–4 cm, apex acuminate or caudate-acuminate. Inflorescence erect; peduncle 15–25 cm, nearly wingless; rachis 7–15 cm, 10–30- or more flowered; floral bracts lanceolate, 3–5 mm. Flowers red or occasionally pale yellow, 8–10 mm in diam.; pedicel and ovary 6–12 mm. Dorsal sepal suboblong, 4.5–6  $\times$  ca. 1.5 mm, apex obtuse; lateral sepals broadly oblong or broadly ovate-oblong, 3–4.5  $\times$  2–2.5 mm, apex obtuse or acute. Petals narrowly linear, 4–5.5  $\times$  0.6–0.9 mm; lip superior, subovoid-rectangular in outline, 6–8 mm, abruptly contracted near middle and  $\pm$  shoulder-like, base with a central depression, apex deeply 2-lobed, sinus 1.5–2.5 mm deep; auricles ovate or ovate-lanceolate, 2.5–3 mm, decurrent backward embracing column. Column ca. 1 mm, stout. Fl. Jun–Jul.

Forests, humid places in thickets; 400–1800 m. S Guangxi, W Sichuan, Taiwan, S and SW Yunnan [NE India, Philippines, Sri Lanka, Thailand, Vietnam].

**16. *Crepidium matsudae*** (Yamamoto) Szlachetko, *Fragm. Florist. Geobot., Suppl.* 3: 129. 1995.

鞍唇沼兰 an chun zhao lan

*Microstylis matsudae* Yamamoto, *Icon. Pl. Formosan., Suppl.* 2: 4. 1926; *Malaxis matsudae* (Yamamoto) Hatusima ex K. Nakajima.

Plants terrestrial. Stem purplish green, cylindrical, 7–12 cm, fleshy, with several nodes,  $\pm$  enclosed in sheaths. Leaves 4 or 5;

petiole ca. 2 cm; blade abaxially purplish, obliquely ovate-elliptic or ovate-oblong, 4–10 × 2–3.5 cm. Peduncle 9–12 cm, slender; rachis 5–8 mm, 10- or more flowered; floral bracts reflexed, green, ovate-lanceolate, ca. 3 mm. Flowers green or tinged with purple; pedicel and ovary ca. 5 mm, with 6 raised ridges. Dorsal sepal ovate-elliptic, 2.5–3 × 1.5–1.8 mm, margin revolute, apex subacute; lateral sepals broadly ovate or elliptic, slightly wider than dorsal sepal. Petals linear, ca. 2.5 × 0.5 mm; lip superior, subovate in outline, ca. 4.5 mm, narrowed near middle and shoulderlike, shallowly 2-lobed, sinus ca. 0.5 mm; auricles falcate, ca. 0.5 mm. Column short, ca. 1 mm. Fl. Jun–Jul.

Forests, bamboo forests; 1000–1500 m. S Taiwan [Japan (Ryukyu Islands)].

**17. *Crepidium hainanense*** (Tang & F. T. Wang) S. C. Chen & J. J. Wood, **comb. nov.**

海南沼兰 hai nan zhao lan

Basionym: *Malaxis hainanensis* Tang & F. T. Wang, *Acta Phytotax. Sin.* 12: 37. 1974.

Plants epiphytic or lithophytic. Stem cylindrical, ca. 2 cm, 4–5 mm in diam., fleshy, attenuate toward apex, ± enclosed in sheaths. Leaves 4 or 5, ascending; petiole 2.5–3.5 cm, sheath-like, amplexicaul; blade oblong, 6–8 × 1.5–2.5 cm, apex sub-acuminate. Inflorescence erect, ca. 11 cm, with very narrow wings; rachis ca. 4.5 cm, laxly 6- or 7-flowered; floral bracts often reflexed, lanceolate, 4–5 mm. Flowers pale yellow; pedicel and ovary 5–6 mm. Dorsal sepal oblong, ca. 3.5 × 1.2 mm, apex obtuse; lateral sepals nearly broadly oblong or broadly ovate-oblong, ca. 3 × 1.5–1.8 mm, apex obtuse. Petals narrowly linear, ca. 3.5 × 0.5 mm; lip superior, subovate in outline, 5–6 × ca. 3.5 mm, apex deeply 2-lobed, with sinus 1–1.5 mm deep; auricles subovate, ca. 2.5 × 1.5 mm, decurrent backward embracing column. Column ca. 1 mm, stout. Fl. Jul–Aug.

- On damp rocks; ca. 600 m. S Hainan.

