

81. OBERONIA Lindley, Gen. Sp. Orchid. Pl. 15. 1830, nom. cons.

鸢尾兰属 *yuan wei lan shu*

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

Iridorkis Thouars (1809), not *Iridorchis* Blume (1859); *Titania* Endlicher.

Herbs, epiphytic. Stems often enclosed in leaf base, usually clustered, rarely borne on an elongate rhizome, erect or pendulous, short or somewhat elongate. Leaves iridiform and unifacial, rarely terete, often fleshy, articulate or not at base, distichous, usually equitant, often imbricate at base, often dilated near base into flattened sheaths, often with a narrow membranous margin on adaxial side in basal half. Inflorescences terminal, racemose, unbranched, pubescent or glabrous, usually many flowered; peduncle often with sterile bracts below; floral bracts persistent, often erose. Flowers often in whorls, not resupinate, flat, very small, usually only 1–2 mm in diam.; ovary glabrous or papillate. Sepals and petals free, spreading, petals often narrower than sepals, sometimes erose; lip usually spreading, sessile, entire or lobed, margin sometimes erose or fimbriate, occasionally concave at base, with or without calli, spur absent; lateral lobes often embracing column. Column erect, short, lacking a foot, wings usually absent; anther cap terminal, firmly attached to column apex, 2-locular; pollinia 4, cohering in 2 unequally sized pairs, waxy; viscidium absent or abbreviated; stigma transversely reniform to ovate; rostellum protruding.

Between 150 and 200 species: centered in tropical S and SE Asia but extending to tropical Africa, Madagascar, the Mascarene Islands, the Philippines, New Guinea, NE Australia, and the SW Pacific islands across to Tahiti; 33 species (11 endemic) in China.

Oberonia teres Kerr (Bull. Misc. Inform. Kew 1927: 214. 1927), formerly considered endemic to Thailand, was recorded from W Yunnan (Lushui: Gaoligong Shan, ca. 2400 m) by X. H. Jin, H. Li, and D. Z. Li (Acta Phytotax. Sin. 45: 805–806. 2007). The present authors could not confirm this because they have not seen the specimen (*X. H. Jin 7029*, PE).

- 1a. Rhizome elongate, to 7 cm or more, leafy stems arising at intervals of 2–25 mm along rhizome.
- 2a. Leaves not articulate at base; petals linear, slightly falcate; leaves 10–25 × 3–8 mm; stems arising at intervals of 5–25 mm along rhizome 1. *O. pumila*
- 2b. Leaves articulate to basal sheath; petals, leaves, and stems without above combination of characters.
- 3a. Leaves 4–7 mm wide; flowers greenish, sometimes tinged purple; lateral lobes of lip obscurely erose-denticulate 2. *O. seidenfadonii*
- 3b. Leaves 1.5–2 mm wide; flowers pale yellowish brown; margins of lip irregularly serrate 3. *O. sinica*
- 1b. Rhizome abbreviated.
- 4a. Leaves not articulate at base.
- 5a. Peduncle connate in lower part to uppermost leaf, appearing to arise from leaf blade 15. *O. obcordata*
- 5b. Scape not connate in lower part to uppermost leaf.
- 6a. Mid-lobe of lip bilobed, with sinus more than 1/5 length of lip; lobules acuminate to long acuminate at apex.
- 7a. Stem very short or inconspicuous; leaves nearly basal; flowers red; lip with a callus near base.
- 8a. Lateral lobes of lip orbicular; peduncle bracts lanceolate 14. *O. recurva*
- 8b. Lateral lobes of lip filiform; peduncle bracts filiform 13. *O. rufilabris*
- 7b. Stem 1.5–7 cm; leaves cauline, distichous; flowers green to orange-yellow, sometimes pale red; lip without callus.
- 9a. Lateral lobes of lip ± erose or erose-fimbriate on margin 16. *O. arisanensis*
- 9b. Lateral lobes of lip entire.
- 10a. Leaves 1–2(–3) mm wide; flowers greenish yellow or pale yellow; petals slightly longer than sepals 11. *O. mannii*
- 10b. Leaves 3–5 mm wide; flowers pale red; petals and sepals equal in length 12. *O. anthropophora*
- 6b. Mid-lobe of lip entire or shallowly lobed at apex, with sinus less than 1/6 length of lip; lobules obtuse at apex.
- 11a. Floral bracts 4–5 mm, more than 3 × as long as pedicel and ovary 8. *O. longibracteata*
- 11b. Floral bracts 1–2 mm, less than 3 × as long as pedicel and ovary.
- 12a. Petals conspicuously erose at margin; lateral lobes of lip slightly smaller than mid-lobe 7. *O. rosea*
- 12b. Petals entire or inconspicuously erose at margin.
- 13a. Lateral lobes of lip ca. as large as or slightly larger than mid-lobe, margins erose, irregularly laciniate, or fimbriate 6. *O. jenkinsiana*
- 13b. Lateral lobes of lip conspicuously smaller than mid-lobe, margins entire or inconspicuously erose.
- 14a. Sepals broader than petals.
- 15a. Stem conspicuous, 1–2 cm; leaf blade 1–2(–3) cm; pedicel and ovary nearly as long as or slightly longer than floral bracts 4. *O. japonica*
- 15b. Stem inconspicuous; leaf blade 2.5–7 cm; pedicel and ovary shorter than floral bracts 5. *O. variabilis*

- 14b. Sepals and petals equal in width.
- 16a. Mid-lobe of lip obtuse at apex; lateral lobes subovate or ovate-oblong; petals inconspicuously erose at margin 10. *O. menghaiensis*
- 16b. Mid-lobe of lip emarginate at apex; lateral lobes nearly narrowly ovate-lanceolate; petals entire 9. *O. delicata*
- 4b. Leaves articulate at base.
- 17a. Leaves subterete 33. *O. cavaleriei*
- 17b. Leaves laterally compressed.
- 18a. Leaves 20–50 × 1.2–2.2 cm; lip with a callus at either side of sinus 32. *O. ensiformis*
- 18b. Leaves commonly 1–20 cm; lip ecallose.
- 19a. Peduncle foliaceous below, ± connate to uppermost leaf; lip entire 31. *O. pachyrachis*
- 19b. Peduncle cylindrical or compressed cylindrical, never connate to leaves.
- 20a. Petals conspicuously larger than lip, to 2 mm wide 29. *O. latipetala*
- 20b. Petals smaller than or nearly as large as lip, less than 1 mm wide.
- 21a. Lip entire, nearly oblate 30. *O. integerrima*
- 21b. Lip ± 3-lobed, never oblate.
- 22a. Floral bracts with a long apical awn 19. *O. falconeri*
- 22b. Floral bracts without a long apical awn.
- 23a. Scape with narrow wings on both sides, including wings 4–5 mm wide; leaves 1–2.1 cm wide.
- 24a. Lip nearly entire, retuse, margin irregularly lacinate 22. *O. segawae*
- 24b. Lip 3-lobed, apex entire or lobed.
- 25a. Mid-lobe of lip unlobed at apex 27. *O. menglaensis*
- 25b. Mid-lobe of lip 2-lobed at apex.
- 26a. Petals entire 21. *O. gigantea*
- 26b. Petals with erose-toothed margins.
- 27a. Raceme densely flowered, with several hundred flowers borne less than 1 mm apart from each other 25. *O. mucronata*
- 27b. Raceme laxly flowered, flowers to 100, sometimes more, borne up to 3 mm apart from each other 26. *O. gammiei*
- 23b. Scape wingless or nearly so, 2–3 mm in diam.; leaves 2–10 mm wide (excluding *O. gigantea*).
- 28a. Lateral lobes of lip fimbriate at margin 28. *O. austroyunnanensis*
- 28b. Lateral lobes of lip never fimbriate at margin.
- 29a. Lobules of mid-lobe of lip subquadrate or broadly oblong, equal in width and length, erose at margin.
- 30a. Leaves ca. 13 cm; flowers whorled; lateral lobes of lip very small or inconspicuous 23. *O. kwangsiensis*
- 30b. Leaves 1–3.5 cm; flowers scattered; lateral lobes of lip conspicuous 24. *O. cathayana*
- 29b. Lobules of mid-lobe of lip oblong or triangular to lanceolate, longer than wide, nearly entire.
- 31a. Leaves 1.5–6(–8) × 0.2–0.7 cm; raceme 2–8 cm; lateral lobes of lip conspicuous.
- 32a. Stem conspicuous, longer than leaves; leaves 2–4 mm wide 17. *O. caulescens*
- 32b. Stem often inconspicuous, shorter than leaves when present; leaves (3–)4–7 mm wide 18. *O. pyrulifera*
- 31b. Leaves (4.5–)8–20 × 0.7–1.5 cm; raceme more than 10 cm; lateral lobes of lip inconspicuous.
- 33a. Flowers greenish white; mid-lobe of lip with suboblong lobules; leaves 7–10 mm wide, veins conspicuous when dried 20. *O. acaulis*
- 33b. Flowers orange; mid-lobe of lip with triangular lobules; leaves 8–15 mm wide, veins inconspicuous when dried 21. *O. gigantea*

1. *Oberonia pumila* (Fukuyama ex S. C. Chen & K. Y. Lang) Ormerod, *Taiwania* 47: 242. 2002.

宝岛鸢尾兰 bao dao yuan wei lan

Hippeophyllum pumilum Fukuyama ex S. C. Chen & K. Y. Lang, *Acta Phytotax. Sin.* 36: 72. 1998; ?*Oberonia insularis* Hayata.

Rhizome creeping, ca. 1.5 mm in diam., slender, branched, loosely covered by scalelike sheaths at nodes. Stems short, arising at intervals of 5–25 mm along rhizome, 3–5-leaved. Leaves ± distichous-equitant, laterally compressed, elliptic, oblong, or lanceolate, 10–25 × 3–8 mm, fleshy, base not articulate. Peduncle suberect, 3–6 cm; rachis ca. 2.5 cm, densely with many small flowers; floral bracts ovate-lanceolate, 1.5–2 mm.

Flowers opening widely, pale green to pale brownish green, ca. 2 mm in diam.; pedicel and ovary green, ca. 2 mm. Sepals ± reflexed, ovate, slightly concave, 0.8–1 × 0.4–0.5 mm, apex acute. Petals slightly falcate, linear, ca. 1 × 0.2 mm, apex obtuse; lip narrowly ovate-oblong in outline, 1.3–1.7 × ca. 0.6 mm, deeply bilobed, margin irregularly serrate; apical lobes slightly divergent or slightly recurved, linear-lanceolate, ca. 0.7 mm. Column short. Fl. Apr–May or Dec.

- Forests; 800–1600 m. C Taiwan.

Oberonia insularis may prove to be conspecific with *O. pumila*, in which case it would have priority.

The name *Hippeophyllum pumilum* was first published by T. P. Lin (Native Orchids Taiwan 3: 141. 1987) but not validly so because no type was indicated (*Vienna Code*, Art. 37.1). Consequently, *Oberonia pumila*, as published by S. S. Ying (Coloured Ill. Indig. Orchids Taiwan 2: 610. 1990), was not validly published either.

2. *Oberonia seidenfadenii* (H. J. Su) Ormerod, *Taiwania* 47: 242. 2002.

密花鸞尾蘭 mi hua yuan wei lan

Hippeophyllum seidenfadenii H. J. Su, *J. Exp. Forest Natl. Taiwan Univ.* 13: 204. 1999.

Rhizome creeping, ca. 1 mm in diam., branching, nearly completely covered by tubular sheaths. Stems arising at intervals of 6–15 mm along rhizome, 3–5-leaved. Leaves distichous-equitant, laterally compressed, ovate or ovate-lanceolate, 8–15 × 4–7 mm, fleshy, base obliquely articulate. Inflorescence 1.5–2.5 cm, densely many flowered; rachis dilated at middle to 2 mm in diam.; floral bracts ovate, 1.2–1.5 mm, margin obscurely erose. Flowers greenish, sometimes slightly tinged with purple, ca. 1.3 mm in diam.; pedicel and ovary ca. 0.7 mm. Sepals ovate, 0.6–0.7 × 0.4–0.5 mm. Petals linear-oblong, ca. 0.7 × 0.2 mm; lip 3-lobed, basal lateral lobes ca. 1.2 mm, base ± decurrent and slightly surrounding column, saccate-impressed at middle; lateral lobes ovate-triangular, margin obscurely erose-denticulate; mid-lobe bilobed at apex; lobules triangular, 0.2–0.3 mm. Column ca. 0.1 mm. Fl. unknown.

- Epiphytic on tree trunks in broad-leaved forests; 600–1500 m. S Taiwan.

This species is not to be confused with *Oberonia seidenfadeniana* J. Joseph & Vajravelu (*Bull. Bot. Surv. India* 13: 344. 1974), described from India.

3. *Oberonia sinica* (S. C. Chen & K. Y. Lang) Ormerod, *Taiwania* 48: 91. 2003.

套叶鸞尾蘭 tao ye yuan wei lan

Hippeophyllum sinicum S. C. Chen & K. Y. Lang, *Acta Phytotax. Sin.* 36: 70. 1998.

Rhizome creeping, to 7 cm or longer, 1–1.5 mm in diam., slender, loosely covered by scalelike sheaths at nodes, often branching. Stem short, arising at intervals of 2–5 mm along rhizome, 3- or 4-leaved. Leaves distichous-equitant, laterally compressed, ensiform or narrowly oblong-lanceolate, (3–)6–11 × 1.5–2 mm, fleshy, base articulate. Peduncle slightly arching, ca. 3 cm; rachis ca. 2.5 cm, many flowered; floral bracts ovate,

ca. 1 mm, margin slightly erose. Flowers solitary or 1 or 2 together, pale yellowish brown, ca. 2 mm in diam.; pedicel and ovary ca. 0.8 mm. Sepals ovate-elliptic or elliptic, ca. 0.8 × 0.4 mm; lateral sepals usually narrower than dorsal sepal. Petals narrowly oblong, slightly arching, ca. 0.7 × 0.15 mm; lip ovate-oblong in outline, margin irregularly serrate, deeply bilobed; apical lobes nearly parallel to each other, narrowly lanceolate, 0.3–0.4 mm. Column ca. 0.2 mm. Fl. Jun.

- Cliffs in open forests; ca. 1600 m. S Gansu.

4. *Oberonia japonica* (Maximowicz) Makino, Ill. Fl. Japan 1(7): t. 41. 1891.

小叶鸞尾蘭 xiao ye yuan wei lan

Malaxis japonica Maximowicz, *Bull. Acad. Imp. Sci. Saint-Petersbourg* 22: 257. 1877; *Oberonia formosana* Hayata; *O. makinoi* Masamune.

Stem conspicuous, 1–2 cm. Leaves several, distichous-equitant at base, laterally compressed, linear-lanceolate, slightly falcate, 10–20(–30) × 2–3.5(–5) mm, somewhat thick, base not articulate, apex acute or acuminate. Peduncle subterete, 2–8 cm, rather slender, wingless; rachis many flowered; floral bracts ovate-lanceolate, 1(–2) mm, apex acuminate. Flowers yellowish green to reddish orange, less than 1 mm in diam.; pedicel and ovary 1–2 mm, often slightly longer than floral bracts. Sepals broadly ovate to ovate-elliptic, ca. 0.6 × 0.4 mm; lateral sepals often slightly larger than dorsal sepal. Petals suboblong or ovate, ca. 0.6 × 0.4 mm, apex obtuse; lip broadly oblong-ovate in outline, 0.6–0.8 mm, 3-lobed; lateral lobes obliquely spreading, ovate-triangular, entire; mid-lobe elliptic, broadly oblong, or suborbicular, conspicuously larger than lateral lobes, apex emarginate or sometimes with a small tooth in sinus. Fl. Apr–Jul. *2n* = 30.

Epiphytic on trees or lithophytic on rocks in forests; 600–1000 m. N Fujian, Taiwan [Japan (Ryukyu Islands), Korea].

5. *Oberonia variabilis* Kerr, *Bull. Misc. Inform. Kew* 1927: 214. 1927.

密苞鸞尾蘭 mi bao yuan wei lan

Stem very short or inconspicuous. Leaves subbasal, 3–5, distichous-equitant, laterally compressed, linear, straight or slightly falcate, 2.5–7 × 0.4–1 cm, veins obscure, base not articulate, margin often crisped when dried, apex acuminate or acute. Peduncle subterete, 6–10 cm, wingless, lower part often with many whorled sterile bracts; sterile bracts lanceolate, 1.5–2 mm, aristate; rachis 4–7 cm, 2–2.5 mm in diam., many flowered; floral bracts narrowly lanceolate, 1.5–2 mm, apex long acuminate. Flowers ± whorled, green; pedicel and ovary ca. 1 mm, conspicuously shorter than floral bracts. Sepals ovate, ca. 0.8 × 0.5 mm, apex obtuse. Petals suboblong, ca. 1 × 0.4 mm; lip broadly oblong-ovate in outline, ca. 0.8 mm, 3-lobed; lateral lobes subovate-oblong, ca. 0.2 mm, conspicuously smaller than mid-lobe, margin inconspicuously erose or nearly entire; mid-lobe subquadrate or broadly oblong, apex irregularly incised. Column erect, short, stout. Capsule obovoid-ellipsoid, 1.5–2.5 × 1.2–1.8 mm; fruiting pedicel ca. 1 mm. Fl. and fr. Jan–Apr.

Epiphytic on trees. SE Hainan [Thailand, Vietnam].

6. *Oberonia jenkinsiana* Griffith ex Lindley, Fol. Orchid. 8(Oberonia): 4. 1859.

条裂鸢尾兰 tiao lie yuan wei lan

Iridorkis jenkinsiana (Griffith ex Lindley) Kuntze; *Malaxis jenkinsiana* (Griffith ex Lindley) H. G. Reichenbach.

Stem often 1–2 cm. Leaves 4–6, distichous, laterally compressed, linear-lanceolate, slightly falcate, 3–15 × 0.4–0.7 cm, thick, veins obscure, base attenuate, not articulate, apex acuminate or obtuse. Peduncle subterete, 5–13 cm, ± connate in lower part to uppermost leaf, nearly wingless, lower part with many sterile bracts; sterile bracts subulate or narrowly lanceolate, 2–3 mm, aristate; rachis 3–11 cm, densely more than 100-flowered; floral bracts narrowly lanceolate to lanceolate, 1–2 mm. Flowers yellow; pedicel and ovary ca. 1 mm. Dorsal sepal ovate-elliptic, ca. 0.8 × 0.4–0.5 mm, apex obtuse; lateral sepals broadly ovate, ± cymbiform, ca. 0.8 × 0.5–0.6 mm, apex subacute. Petals subovate, ca. 0.6 × 0.3 mm, nearly entire or apical margin inconspicuously erose; lip ca. 0.7 mm, 3-lobed; lateral lobes subquadrate or suborbicular, ca. 0.3 mm, margin irregularly fimbriate, lacinate, or rarely erose; mid-lobe subquadrate, ca. 0.3 mm wide, subtruncate or ± erose. Column ca. 0.3 mm, stout. Capsule subellipsoid, 1.5–2 × ca. 1 mm; fruiting pedicel ca. 0.5 mm. Fl. and fr. Sep–Oct. $2n = 30$.

Epiphytic on trees in forests; 1100–2700 m. W to SE Yunnan [NE India, Myanmar, Thailand, Vietnam].

7. *Oberonia rosea* J. D. Hooker, Hooker's Icon. Pl. 21: ad t. 2005. 1890.

玫瑰鸢尾兰 mei gui yuan wei lan

Oberonia kusukusensis Hayata.

Stem 3–5 cm, enclosed in leaf bases. Leaves several, distichous-equitant, laterally compressed, ensiform, variable in size, to 9 × 0.5 cm, base not articulate, apex acuminate and slightly curved-tipped. Peduncle ca. 10 cm; rachis many flowered, each whorl of flowers 2–3 mm apart; floral bracts oblong, ca. 1.5 mm, apical margin erose. Flowers pale green, sometimes tinged with reddish orange, ca. 2 mm in diam.; pedicel and ovary ca. 1 mm. Dorsal sepal ovate, ca. 0.9 × 0.6 mm, apex obtuse; lateral sepals obliquely ovate, ca. 0.9 × 0.7 mm. Petals rhombic-elliptic, ca. 0.8 mm, margin conspicuously erose; lip ca. 0.9 mm, 3-lobed; lateral lobes slightly smaller than mid-lobe, margin erose; mid-lobe subrectangular, ca. 0.4 mm, margin somewhat irregularly dentate, apex subtruncate and emarginate. Column ca. 0.3 mm. Capsule ellipsoid, ca. 2.5 mm.

Epiphytic on trees in evergreen forests along streams. S Taiwan [Malaysia (Peninsular), Vietnam].

8. *Oberonia longibracteata* Lindley, Gen. Sp. Orchid. Pl. 15. 1830.

长苞鸢尾兰 chang bao yuan wei lan

Iridorkis longibracteata (Lindley) Kuntze; *Malaxis longibracteata* (Lindley) H. G. Reichenbach.

Stem rather short. Leaves subbasal, often 5 or 6 in a tuft, laterally compressed, linear or linear-lanceolate, 3–6 × 0.3–0.6 cm, slightly thickened, veins obscure, base not articulate, apex acuminate. Peduncle subcylindric, 5–7 cm, connate in lower part

to uppermost leaf, appearing to arise from leaf blade, wingless or nearly so, lower part with 1 or 2 sterile bracts; rachis 2.5–3.5 cm, laxly many flowered; floral bracts linear-lanceolate, 4–5 mm, exceeding flowers. Flowers 1–1.5 mm in diam.; pedicel and ovary 1–1.5 mm. Sepals ovate, 0.8–1 × ca. 0.5 mm, apex obtuse. Petals oblong-ovate, ca. 0.8 × 0.4 mm, margin ± erose; lip broadly ovate in outline, ca. 0.7 mm, 3-lobed; lateral lobes ovate to broadly oblong, conspicuously smaller than mid-lobe; mid-lobe subquadrate or broadly elliptic, ca. 0.6 × 0.6 mm, margin inconspicuously erose, apex mucronulate or slightly irregularly incised. Column erect, short, stout. Fl. Oct. $2n = 30$.

Epiphytic on trees in dense forests. SE Hainan [Sri Lanka, Thailand, Vietnam].

9. *Oberonia delicata* Z. H. Tsi & S. C. Chen, Acta Phytotax. Sin. 32: 559. 1994.

无齿鸢尾兰 wu chi yuan wei lan

Stem 1–2 cm. Leaves 5 or 6, distichous-equitant, laterally compressed, ensiform, 0.8–2 × 0.3–0.4 cm, slightly fleshy, base not articulate, margin ± undulate, apex acute. Peduncle 4–10 cm; rachis densely many flowered; floral bracts lanceolate, ca. 2 × 0.6 mm, veins inconspicuous, margin entire, apex acuminate. Flowers pale red; pedicel and ovary ca. 1 mm. Dorsal sepal ovate-elliptic, ca. 0.9 × 0.7 mm, margin entire, apex obtuse; lateral sepals similar to dorsal sepal, ca. 1 × 0.8 mm, apex acute. Petals ovate or oblong-ovate, ca. 0.9 × 0.7 mm, many veined, margin entire, apex obtuse; lip 0.9–1 mm, 3-lobed; lateral lobes nearly narrowly ovate-lanceolate, 0.6–0.7 mm, margin entire, apex acuminate or acute; mid-lobe obovate or broadly obovate, ca. 0.9 mm wide, apex emarginate, sinus apiculate. Column ca. 0.4 mm, upper part slightly dilated. Fl. Aug.

• Epiphytic on trees in forests; ca. 1700 m. N Fujian, S Yunnan.

10. *Oberonia menghaiensis* S. C. Chen, Acta Phytotax. Sin. 20: 190. 1982.

勐海鸢尾兰 meng hai yuan wei lan

Stem conspicuous, 1–2 cm. Leaves often 3 or 4, distichous-equitant, laterally compressed, subensiform, often slightly falcate, 1–3.5 × 0.2–0.5 cm, thickened, veins inconspicuous, base not articulate, apex acuminate or obtuse. Peduncle short, with a few lanceolate sterile bracts; rachis 2.5–7.5 cm, ca. 2 mm in diam., many flowered; floral bracts linear-lanceolate, ca. 2 mm, margin nearly entire, apex long acuminate. Flowers green, ca. 1 mm in diam.; pedicel and ovary ca. 0.8 mm. Sepals ovate-elliptic, 0.8–1 × ca. 0.5 mm, apex obtuse. Petals elliptic, ca. 0.8 × 0.5 mm, margin inconspicuously erose; lip broadly ovate-elliptic in outline, 0.9–1.1 mm, 3-lobed; lateral lobes oblong or ovate-oblong, ca. 0.2 mm, margin nearly entire; mid-lobe suboblate or transversely elliptic, ca. 0.6 × 0.8 mm, margin nearly entire, apex truncate-rounded. Column ca. 0.2 mm, apex 2-winged. Capsule subellipsoid, 1.5–2 × ca. 1 mm; fruiting pedicel ca. 0.8 mm. Fl. and fr. Jul.

• Epiphytic on trees in mixed forests; ca. 1800 m. S Yunnan.

11. *Oberonia mannii* J. D. Hooker, Hooker's Icon. Pl. 21: ad t. 2003. 1890.

小花鸢尾兰 xiao hua yuan wei lan

Stem 1.5–7 cm. Leaves 5–9, distichous, laterally compressed, linear, ± falcate, 1–3 × 0.1–0.2(–0.3) cm, thickened, veins inconspicuous, base not articulate, apex acuminate. Peduncle subterete, 2.5–6.7 cm, wingless; sterile bracts ovate-lanceolate, ca. 1 mm; rachis 2–5.5 cm, ca. 1.5 mm in diam., many flowered; floral bracts ovate-lanceolate, ca. 0.8 mm, margin ± obtusely toothed, apex long acuminate. Flowers greenish yellow or pale yellow, ca. 1 mm in diam.; pedicel and ovary 1–1.2 mm. Dorsal sepal ovate, ca. 0.8 × 0.4 mm, apex obtuse; lateral sepals similar to dorsal sepal, ca. 0.8 × 0.5 mm. Petals suboblong, ca. 0.9 × 0.3 mm, margin inconspicuously erose; lip suboblong in outline, ca. 1.7 mm, 3-lobed and mid-lobe deeply lobed again; lateral lobes ovate, ca. 0.3 mm, apex obtuse; mid-lobe ca. 0.8 mm, with lanceolate or narrowly lanceolate divergent lobules. Column short, stout. Capsule ellipsoid, 1.8–3 × 1.2–1.7 mm; fruiting pedicel 0.7–1 mm. Fl. and fr. Mar–Jun. $2n = 30$.

Epiphytic on trees in forests; 1500–2700 m. N Fujian, SE Xizang, SE Yunnan [India].

12. *Oberonia anthropophora* Lindley, Gen. Sp. Orchid. Pl. 16. 1830.

长裂鸢尾兰 chang lie yuan wei lan

Iridorkis anthropophora (Lindley) Kuntze; *Malaxis anthropophora* (Lindley) H. G. Reichenbach.

Stem 2.5–4.5 cm. Leaves 5–9, distichous, laterally compressed, linear, often slightly falcate, 1.5–5 × 0.3–0.5 cm, thick, veins inconspicuous, base not articulate, margin ± crisped when dried, apex acuminate. Peduncle subterete, 8–10 cm, wingless, sometimes with large greenish foliaceous bracts below; rachis 7–9 cm, 3–4 mm in diam., more than 100-flowered; floral bracts lanceolate, 1–1.5 mm, margin often ± erose-incised, apex long acuminate or aristate. Flowers pale red, 1–1.5 mm in diam.; pedicel and ovary 1–1.5 mm. Dorsal sepal ovate, 0.7–0.8 × ca. 0.4 mm, apex obtuse; lateral sepals broadly ovate, 0.7–0.8 × 0.4–0.5 mm, apex obtuse. Petals suboblong, 0.7–0.8 × 0.2–0.3 mm; lip ca. 2 × 0.4 mm, 3-lobed; mid-lobe deeply lobed again; lateral lobes ovate-oblong to ovate-lanceolate, ca. 0.3 mm; mid-lobe ca. 1 mm, with 2 lanceolate lobules. Column ca. 0.2 mm, stout. Fl. May.

Epiphytic on trees along valleys; ca. 400 m. SE Hainan [Malaysia (Peninsular), Myanmar, Thailand, Vietnam].

13. *Oberonia rufilabris* Lindley, Sert. Orchid. ad t. 8a. 1838.

红唇鸢尾兰 hong chun yuan wei lan

Iridorkis rufilabris (Lindley) Kuntze; *Malaxis rufilabris* (Lindley) H. G. Reichenbach.

Stem short or inconspicuous. Leaves 3 or 4, subbasal, distichous-equant, laterally compressed, linear or linear-lanceolate, 1.5–6.5 × 0.3–0.8 cm, with 3–5 visible veins when dried, central vein relatively thick, base not articulate, attenuate, apex acute or obtuse. Peduncle subterete, 3.5–8 cm, wingless, lower part with many subulate or narrowly lanceolate sterile bracts; rachis 2.5–6.5 cm, 2.5–5 mm in diam., more than 100-flowered; floral bracts narrowly lanceolate, 2–3(–4) mm, apex aristate. Flowers 3 or 4 in a whorl, red, anther cap white; pedicel and ovary ca. 0.5 mm. Sepals ovate, ± cymbiform, 0.8–0.9 × 0.5–

0.6 mm, apex acute or obtuse. Petals suboblong, ca. 0.7 × 0.2 mm, margin inconspicuously erose, apex obtuse; lip 1.2–1.4 × ca. 0.4 mm, 3-lobed; mid-lobe deeply lobed again; lateral lobes transversely spreading, narrowly lanceolate, ca. 0.3 mm; mid-lobe with 2 divergent, lanceolate or linear-lanceolate lobules ca. 0.7 mm, base with a minute, elongate pit. Column ca. 0.5 mm, stout, toothed. Capsule obovoid-ellipsoid, ca. 2 × 1.2 mm; fruiting pedicel ca. 0.6 mm. Fl. and fr. Nov–Jan.

Epiphytic on trees in forests; 800–1000 m. S Hainan, SE Yunnan [Bangladesh, Cambodia, NE India, Malaysia, Myanmar, Nepal, Thailand, Vietnam].

14. *Oberonia recurva* Lindley, Edwards's Bot. Reg. 25(Misc.): 14. 1839.

华南鸢尾兰 hua nan yuan wei lan

Oberonia parvula King & Pantling; *O. setifera* Lindley.

Plants 2.7–8 cm tall. Roots fasciculate. Stem short. Leaves 3 or 4, ensiform-lanceolate, 0.7–3 × 0.15–0.5 cm, overlapping at base, tapering to an acute apex, straight to weakly falcate. Inflorescence erect to decurved, densely many flowered; peduncle terete, stout, bracteate, 0.5–1.5 cm; peduncle bracts lanceolate, acute, ca. 1 mm; rachis terete, grooved, 3.5–6 cm. Flowers ca. 1 mm in diam., uniformly reddish brown; pedicel and ovary ca. 1 mm. Sepals similar, ovate-cordate, acute, spreading, 0.5–0.8 × 0.3–0.4 mm. Petals oblong, 0.4–0.7 × 0.3–0.4 mm, margin weakly crenulate to entire, apex obtuse; lip oblong, 0.6–1 × 0.5–0.8 mm, 3-lobed, base with a large depression; lateral lobes orbicular, margin erose-dentate; mid-lobe with 2 long, obtuse, orbicular, incurved lobules, separated by a deep, obtuse sinus. Column 0.1–0.2 mm tall.

Epiphyte. Guangxi [India].

This species was recorded from Guangxi by Seidenfaden (Dansk Bot. Ark. 25(3): 97. 1968). This record needs confirmation.

15. *Oberonia obcordata* Lindley, Fol. Orchid. 8(Oberonia): 7. 1859.

橘红鸢尾兰 ju hong yuan wei lan

Iridorkis obcordata (Lindley) Kuntze; *I. orbicularis* (J. D. Hooker) Kuntze; *I. treutleri* (J. D. Hooker) Kuntze; *Malaxis obcordata* (Lindley) H. G. Reichenbach; *Oberonia orbicularis* J. D. Hooker; *O. treutleri* J. D. Hooker.

Stem ca. 1 cm. Leaves 2 or 3, distichous-equant, laterally compressed, nearly linear, slightly falcate, 3–10 × 0.5–0.8 cm, thick, veins conspicuous when dried, base not articulate, apex acuminate. Peduncle connate in lower part to uppermost leaf, appearing to arise from leaf blade, with 2 whorls of lanceolate sterile bracts ca. 2 mm below; rachis ca. 4 cm, many flowered; floral bracts lanceolate, 2–3 mm, margin slightly erose, apex acuminate-caudate. Flowers reddish orange or red, 1–1.5 mm in diam.; pedicel and ovary 1–1.5 mm. Dorsal sepal ovate, ca. 0.9 × 0.6 mm, apex acute; lateral sepals broadly ovate, ca. 0.9 × 0.8 mm, apex obtuse. Petals oblong-ovate, ca. 0.8 × 0.4 mm, apex shortly acuminate; lip ovate in outline, slightly longer than sepals, 3-lobed; lateral lobes narrowly ovate, ca. 0.4 mm; mid-lobe subobcordate or oblate, ca. 0.5 × 0.8 mm, apex emarginate. Column suberect, short, stout. Fl. Oct. $2n = 30$.

Lithophytic on rocks in forests; ca. 1800 m. SE Xizang [NE India, Nepal, Thailand].

16. *Oberonia arisanensis* Hayata, Icon. Pl. Formosan. 4: 23. 1914.

阿里山鸢尾兰 a li shan yuan wei lan

Stem 3–6 cm. Leaves many, distichous-equitant, laterally compressed, ensiform or linear, 2–4.5 × 0.3–0.5 cm, base not articulate, apex acuminate or acute. Peduncle 10–12 cm; rachis 6–10 cm, many flowered, whorls 1–2 mm apart from each other; floral bracts ovate-lanceolate, ca. 1.5 × 0.5 mm, margin inconspicuously erose. Flowers reddish orange or reddish brown; pedicel and ovary 0.8–1 mm. Dorsal sepal suboblong or oval-oblong, 0.7–1.5 × 0.5–0.7 mm; lateral sepals recurved, ovate or ovate-triangular, 0.7–1.5 × 0.6–0.8 mm. Petals ovate-oblong or oblong, ca. 1 × 0.5 mm, margin ± erose; lip 1–1.3 mm, 3-lobed; mid-lobe bilobed again, concave at base; lateral lobes obliquely ovate-oblong, 0.4–0.5 mm, margin erose or inconspicuously fimbriate; mid-lobe suboblong, ca. 1 mm, with 2 ovate-lanceolate lobules ca. 0.3 mm. Column ca. 0.2 mm, stout. Fl. Feb–Jun.

Epiphytic on trees in forests; 400–2000 m. Taiwan [Japan (Ryukyu Islands)].

17. *Oberonia caulescens* Lindley, Gen. Sp. Orchid. Pl. 15. 1830.

狭叶鸢尾兰 xia ye yuan wei lan

Iridorkis caulescens (Lindley) Kuntze; *Malaxis caulescens* (Lindley) H. G. Reichenbach; *Oberonia auriculata* King & Pantling; *O. bilobolabella* Hayata; *O. longilabris* King & Pantling; *O. pterorachis* C. L. Tso; *O. yunnanensis* Rolfe.

Stem 1–4.5 cm. Leaves 5 or 6, distichous, laterally compressed, linear, often ± falcate, 1.5–5 × 0.2–0.4 cm, thick, veins obscure, base articulate, margin often crisped when dried, apex acuminate or acute. Peduncle subterete, (3–)5–11 cm, wingless; sterile bracts several, lanceolate, 2–2.5 mm; rachis (2.5–)4–10 cm, 5–6 mm in diam., many flowered; floral bracts lanceolate, 1.5–2(–3) mm, margin irregularly incised or nearly entire, apex acuminate or obtuse. Flowers pale yellow or pale green; pedicel and ovary ca. 2 mm. Dorsal sepal ovate-elliptic, 0.8–1 × ca. 0.6 mm, apex obtuse; lateral sepals subovate, slightly concave, similar to dorsal sepal in size. Petals suboblong, 0.8–1 × ca. 0.3 mm, apex subrounded or ± truncate; lip obovate-oblong or obovate in outline, 1.6–2 × ca. 1.3 mm, deeply bilobed, base with obtuse or inconspicuous auricles; lobules narrowly ovate, ovate, or sublanceolate, 0.7–0.9 mm, apex shortly acuminate or acute. Column short, stout. Capsule obovoid-ellipsoid, 2–2.3 × ca. 1.3 mm; fruiting pedicel ca. 1 mm. Fl. and fr. Jul–Oct. *2n* = 26, 30.

Epiphytic on trees or lithophytic on rocks in forests; 700–2600(–3700) m. Guangdong, W Hubei, S Hunan, W Sichuan, Taiwan, SE Xizang, W to SE Yunnan [Bhutan, India, Nepal, Vietnam].

18. *Oberonia pyrulifera* Lindley, Fol. Orchid. 8(Oberonia): 3. 1859.

裂唇鸢尾兰 lie chun yuan wei lan

Iridorkis pyrulifera (Lindley) Kuntze; *Malaxis pyrulifera*

(Lindley) H. G. Reichenbach; *Oberonia verticillata* Wight var. *khasiana* Lindley.

Stem short or sometimes to 3–4 cm. Leaves subbasal or cauline, 3 or 4(or 5), laterally compressed, usually slightly falcate, 2.5–6(–8) × 0.3–0.7 cm, thick, veins obscure, base articulate, margin often crisped when dried, apex acuminate. Peduncle subterete, 3–11 cm, wingless; sterile bracts many, narrowly lanceolate or nearly subulate, 2–2.5 mm; rachis 2–8 cm, many flowered; floral bracts lanceolate, 1.5–2 mm, margin ± irregularly erose, apex acuminate. Flowers yellow; pedicel and ovary ca. 2 mm. Dorsal sepal ovate-oblong, 0.8–1 × 0.5–0.6 mm, apex obtuse; lateral sepals broadly ovate, 0.8–1 × 0.6–0.7 mm. Petals suboblong, 0.8–1 × 0.3–0.4 mm; lip obovate or obovate-oblong in outline, 1.3–1.8 × ca. 1 mm, deeply 2-lobed, base with obtuse or inconspicuous auricles on either side; lobules broadly lanceolate, ca. 0.6 × 0.3 mm, apex obtuse. Column short, stout. Capsule obovoid-oblong, 2.5–3 × 1–1.5 mm; fruiting pedicel 1–1.5 mm. Fl. and fr. Sep–Nov.

Epiphytic on trees in forests; 1700–2800 m. W to SE Yunnan [Bhutan, India, Thailand].

19. *Oberonia falconeri* J. D. Hooker, Hooker's Icon. Pl. 18: ad t. 1780. 1888.

短耳鸢尾兰 duan er yuan wei lan

Iridorkis falconeri (J. D. Hooker) Kuntze; *Oberonia siamensis* Schlechter.

Stem short or somewhat inconspicuous. Leaves subbasal, 3–6, distichous-equitant, laterally compressed, ensiform, usually slightly falcate, 1.5–8(–11) × 0.7–1 cm, thick, veins inconspicuous, base articulate, apex acuminate. Peduncle subterete, 6–18 cm, wingless, lower part with many linear-lanceolate sterile bracts 3–4 mm; rachis 6.5–13 cm, many flowered; floral bracts lanceolate to oblong-lanceolate, thinly membranous, apex aristate, awn ca. 3 mm, apical margin ± erose. Flowers ± whorled, white or green to greenish yellow; pedicel and ovary 1–1.5 mm. Dorsal sepal ovate or oblong-ovate, ca. 1 × 0.7 mm, apex obtuse or acute; lateral sepals similar to dorsal sepal, ca. 1 × 0.6 mm. Petals suboblong, ca. 1 × 0.3–0.4 mm, margin inconspicuously crisped or slightly obtusely incised, apex obtuse; lip oblong in outline, 1–1.2 × ca. 0.7 mm, base with short auricles on either side, apex bilobed and sinus apiculate; lobules suboblong, 0.1–0.2 mm. Column short, stout. Capsule obovoid-ellipsoid, 2–2.5 × ca. 1.5 mm, ± obtusely 3-ridged; fruiting pedicel 0.7–1 mm. Fl. and fr. Aug–Oct. *2n* = 30.

Epiphytic on tree trunks in forests or thickets; 700–2500 m. S and SW Yunnan [India, Laos, Malaysia (Peninsular), Nepal, Thailand, Vietnam].

20. *Oberonia acaulis* Griffith, Itin. Pl. Khasyah Mts. 76. 1848.

显脉鸢尾兰 xian mai yuan wei lan

Stem rather short or inconspicuous. Leaves subbasal, 3 or 4, distichous-equitant, laterally compressed, ensiform, subfalcate, 4.5–17 × 0.7–1 cm, slightly thickened, veins conspicuous, base articulate, apex long acuminate. Peduncle subterete, 21–23 cm, nearly wingless, with a few very small sterile bracts or sometimes with a greenish foliaceous bract; rachis 14–17.5 cm,

ca. 5 mm in diam., densely many flowered; floral bracts lanceolate, 1.5–2 mm, margin irregularly sharply toothed, apex long acuminate. Flowers greenish to yellowish white; pedicel and ovary 1–2 mm. Dorsal sepal ovate-elliptic, 0.8–1 × 0.5–0.6 mm, apex obtuse; lateral sepals broadly ovate, 0.8–1 × 0.6–0.7 mm. Petals oblong, 0.8–1 × ca. 0.5 mm, apex rounded; lip sub-oblong-ovate in outline, ca. 2 mm, 3-lobed; lateral lobes nearly subovate, margin erose, irregularly incised, or entire; mid-lobe bilobed at apex; lobules parallel to each other, oblong, broadly oblong, or ovate-lanceolate, 0.5–0.7 × 0.3–0.4 mm, apex obtuse, subtruncate, or acuminate. Column very short. Capsule sub-ellipsoid, ca. 3 × 2 mm; fruiting pedicel ca. 0.5 mm. *2n* = 30.

Epiphytic on trees in forests or along forest margins; 1000–2400 m. SE Xizang, S and SE Yunnan [Bhutan, India, Myanmar, Nepal, Thailand, Vietnam].

- 1a. Margins of lateral lobes of lip erose or irregularly incised; apical lobules of mid-lobe oblong or broadly oblong, apex obtuse or subtruncate 20a. var. *acaulis*
- 1b. Margins of lateral lobes of lip entire or nearly entire; apical lobules of mid-lobe nearly ovate-lanceolate, apex acuminate 20b. var. *luchunensis*

20a. Oberonia acaulis var. **acaulis**

显脉鸢尾兰(原变种) xian mai yuan wei lan (yuan bian zhong)

Iridorkis myriantha (Lindley) Kuntze; *Malaxis myriantha* (Lindley) H. G. Reichenbach; *M. sikkimensis* (Lindley) H. G. Reichenbach; *Oberonia myriantha* Lindley; *O. sikkimensis* Lindley.

Lateral lobes of lip with erose or irregularly incised margins; apical lobules of mid-lobe oblong or broadly oblong, apex obtuse or subtruncate. Fl. and fr. Nov–Jan.

Epiphytic on trees in forests; 1000–1600 m. SE Xizang, S and SE Yunnan [Bhutan, N India, Myanmar, Thailand, Vietnam].

20b. Oberonia acaulis var. **luchunensis** S. C. Chen, Acta Phytotax. Sin. 20: 192. 1982.

绿春鸢尾兰 lü chun yuan wei lan

Lateral lobes of lip with nearly entire margins; apical lobules of mid-lobe nearly ovate-lanceolate, apex acuminate. Fl. Oct.

• Epiphytic on trees along forest margins; ca. 2400 m. S Yunnan.

21. Oberonia gigantea Fukuyama, Bot. Mag. (Tokyo) 49: 295. 1935.

橙黄鸢尾兰 cheng huang yuan wei lan

Stem usually pendulous, short. Leaves subbasal, 5–8, distichous, laterally compressed, ensiform, 5–20 × 0.8–1.5 cm, fleshy, base articulate, apex acuminate. Peduncle subterete, 15–20 cm, wingless, lower part with many sterile bracts; rachis relatively long, ca. 8 mm in diam., densely many flowered; floral bracts triangular-linear, ca. 2.5 mm, margin nearly entire, apex acuminate. Flowers greenish or orange, 2–3 mm in diam.; pedicel and ovary nearly as long as floral bracts. Dorsal sepal elliptic, 1–1.5 × 0.5–1 mm, apex obtuse; lateral sepals broadly

ovate, 1–1.5 × ca. 1 mm. Petals oblanceolate, 1–1.3 × 0.5–0.8 mm; lip 1.5–2 mm, 3-lobed; lateral lobes erose at margin; mid-lobe subelliptic or square, 1–1.4 mm, bilobed; apical lobules 5–7 mm. Column very short. Fl. Nov–Dec.

• Epiphytic on tree branches or trunks in broad-leaved forests; ca. 800 m. C and N Taiwan.

22. Oberonia segawae T. C. Hsu & S. W. Chung, Taiwania 53: 165. 2008.

齿唇鸢尾兰 chi chun yuan wei lan

Stem less than 3 cm. Leaves subbasal, 5–8, narrowly ensiform, subfalcate, variable in length, largest 6–13 × 0.3–0.5 cm, fleshy, base jointed. Inflorescences 5–10 cm; peduncle terete, 1.5–3 cm, with many small bracts; rachis many flowered; floral bracts ovate-lanceolate, 2–2.5 mm. Flowers whorled, whitish, sometimes tinged orange, ca. 1.5 mm in diam.; pedicel and ovary 1–2 mm. Sepals spreading, subequal, ovate-triangular, 0.7–0.8 × 0.4–0.5 mm, margin entire. Petals spreading, elliptic-oblong, 0.7–0.8 × ca. 0.2 mm, margin subentire; lip ± perpendicular to ovary, spreading, ovate, nearly entire, base truncate, slightly concave, margin irregularly lacinate, apex retuse; lacinate lobules progressively deeper toward apex. Column globose, ca. 0.3 mm. Capsule ellipsoid, ca. 2 mm. Fl. Aug.

• Epiphytic on branches of broad-leaved trees or on vines in moist forests along streams; 1000–2000 m. Taiwan.

23. Oberonia kwangsiensis Seidenfaden, Dansk Bot. Ark. 25(3): 31. 1968.

广西鸢尾兰 guang xi yuan wei lan

Stem short or nearly inconspicuous. Leaves subbasal, 3–6, distichous-equitant, linear or linear-lanceolate, 6–13 × 0.5–0.6 cm, thick, veins slightly visible when dried, base articulate, apex acuminate. Peduncle 12–13 cm, below with many narrowly lanceolate sterile bracts 3–4 mm, long acuminate; rachis relatively rigid, many flowered; floral bracts linear, ca. 2 mm. Flowers whorled, whorls 1–3 mm apart from each other; pedicel and ovary ca. 1.5 mm. Dorsal sepal ovate, ca. 1 × 0.6 mm, apex obtuse; lateral sepals ovate-elliptic, similar to dorsal sepal in size. Petals oblong, ca. 0.8 × 0.3 mm, margin sometimes inconspicuously erose; lip nearly broadly obovate in outline, ca. 1.3 mm, with a pair of basal lateral lobes erose at margins, lip dilated and deeply bilobed at apex; apical lobules nearly orbicular or square, margin ± erose. Column short, stout. Fl. ?Nov.

Lithophytic on rocks in open forests on limestone hilltops; 600–1200 m. N Guangxi, SE Xizang, SE Yunnan [Thailand, Vietnam].

24. Oberonia cathayana Chun & Tang ex S. C. Chen, Acta Phytotax. Sin. 20: 192. 1982.

中华鸢尾兰 zhong hua yuan wei lan

Stem short. Leaves subbasal, 3 or 4, distichous-equitant, laterally compressed, subensiform, 1–3.5 cm × 2.5–5 mm, thick, veins inconspicuous, base articulate, apex acuminate. Peduncle subterete, 4–6 cm, wingless; sterile bracts many, ovate-lanceolate or narrowly ovate, 1.2–1.6 mm, membranous; rachis 2.5–4 cm, 2–2.5 mm in diam., densely many flowered, each flower borne in a small hollow on rachis; floral bracts ovate-elliptic, ca. 1 mm, apical margin irregularly finely incised. Flowers ca. 1 mm in diam.; pedicel and ovary ca. 0.5 mm. Dorsal sepal

broadly elliptic-ovate, ca. 0.5×0.5 mm, apex rounded; lateral sepals ovate, ca. 0.6×0.3 mm, apex subacute. Petals suboblong, ca. 0.4×0.15 mm; lip broadly oblong-ovate in outline, 0.8–1 mm, 3-lobed; mid-lobe deeply bilobed; lateral lobes square or oblong, margin slightly erose; mid-lobe subobovate-square, apical lobules subquadrate or broadly ovate, adaxially with small silver spots, margin slightly erose. Column short, stout. Fl. unknown.

- Guangxi.

25. *Oberonia mucronata* (D. Don) Ormerod & Seidenfaden in Seidenfaden, Contr. Orchid Fl. Thailand 13: 20. 1997.

鸢尾兰 yuan wei lan

Stelis mucronata D. Don, Prodr. Fl. Nepal. 32. 1825; *Cymbidium iridifolium* Roxburgh; *Iridorkis iridifolia* (Roxburgh) Kuntze; *Malaxis denticulata* (Wight) H. G. Reichenbach; *M. iridifolia* (Roxburgh) H. G. Reichenbach; *Oberonia brevifolia* (J. D. Hooker) Panigrahi; *O. denticulata* Wight; *O. denticulata* var. *brevifolia* (J. D. Hooker) S. Misra; *O. denticulata* var. *iridifolia* (Roxburgh) S. Misra; *O. iridifolia* Lindley var. *brevifolia* J. D. Hooker; *O. smisrae* Panigrahi.

Stem short or inconspicuous. Leaves subbasal, 5 or 6, distichous-equant, laterally compressed, 6–16 cm \times 6–15 mm, thick, veins conspicuously visible when dried, base articulate, apex shortly acuminate or obtuse. Peduncle subterete, 20–25 cm, lower part with narrow wings on both sides, including wings to 4 mm wide, with a few very small sterile bracts below; rachis pendulous, to 16 cm, 5–6 mm in diam., densely many flowered; floral bracts nearly elliptic or oblong, 1.2–1.5 mm, margin erose. Flowers reddish brown; pedicel and ovary ca. 1.5 mm. Dorsal sepal ovate or broadly ovate, 1–1.3 \times ca. 0.8 mm, apex obtuse; lateral sepals slightly narrower, apex acuminate. Petals ovate-oblong, 0.9–1.1 \times ca. 0.6 mm, margin irregularly erose; lip broadly ovate or nearly suborbicular in outline, ca. 1.5 \times 1.5 mm, base decurrent backward, inconspicuously 3-lobed, margin irregularly incised or fimbriate, apex bilobed, sinus ca. 0.5 mm deep. Column short. Capsule ellipsoid, ca. 2.5 \times 2 mm; fruiting pedicel very short. Fl. and fr. Aug–Dec. $2n = 30, 40$.

Epiphytic on trees in forests; 1300–1400 m. S and SW Yunnan [Bangladesh, Bhutan, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines].

26. *Oberonia gammiei* King & Pantling, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 578. 1897.

齿瓣鸢尾兰 chi ban yuan wei lan

Oberonia regnieri Finet.

Stem 1–2 cm. Leaves subbasal, 3–7, distichous-equant, laterally compressed, ensiform, sometimes slightly falcate, 5–15 \times 1–1.5(–2) cm, thick, veins obscure, base articulate, apex shortly acuminate or obtuse. Peduncle subcylindric or slightly compressed, 10–28 cm, lower part with narrow wings on both sides, including wings 2.5–4 mm wide, with several to many very small sterile bracts; rachis 7–18 cm, many flowered; floral bracts suboblong-ovate, 1.4–1.8 mm, margin irregularly dentate or erose. Flowers laxly arranged, borne 2–3 mm apart from each other, whitish green; pedicel and ovary 1.2–1.4 mm. Dorsal sepal broadly ovate, 1–1.3 \times ca. 1 mm, apex obtuse; lateral

sepals ovate, ca. 1.2×0.8 mm. Petals subovate, ca. 1.2×0.8 mm, margin erose; lip subovate in outline, ca. 1.5 mm, inconspicuously 3-lobed; lateral lobes at base of lip, margin erose or inconspicuously incised; mid-lobe apex bilobed; lobules suboblong, ca. 0.6 mm, margin and apex irregularly toothed. Column erect, short. Capsule obovoid-ellipsoid, ca. 4×2.5 mm; fruiting pedicel ca. 1.5 mm. Fl. and fr. Oct–Dec.

Epiphytic on trees or lithophytic on rocks in forests; 500–900 m. Hainan, S Yunnan [Bangladesh, Laos, Myanmar, Thailand, Vietnam].

27. *Oberonia menglaensis* S. C. Chen & Z. H. Tsi, Acta Phytotax. Sin. 20: 193. 1982.

勐腊鸢尾兰 meng la yuan wei lan

Stem very short. Leaves subbasal, 2 or 3, distichous-equant, laterally compressed, ensiform, slightly falcate, 4.5–7.3 \times 1–2.1 cm, thick, base articulate, apex obtuse or acute. Peduncle nearly compressed cylindric, 10–13 cm, with wings on both sides, including wing 2.5–3 mm wide, with several small ovate-lanceolate sterile bracts 1–1.5 mm; rachis 8–11 cm, ca. 2 mm in diam., many flowered; rachis and pedicel pale brown; floral bracts nearly broadly ovate or broadly elliptic, ca. 1.3 mm, margin erose-incised. Flowers white, tinged with pale brown, ca. 1 mm in diam.; pedicel and ovary 0.5–0.8 mm. Dorsal sepal broadly ovate, 0.7–0.8 \times ca. 1 mm; lateral sepals slightly narrower. Petals suboblong, ca. 0.7×0.5 mm, margin slightly erose; lip broadly ovate in outline, ca. 0.8×1 mm, margin fimbriate, unlobed, apex subtruncate. Column short, stout. Capsule nearly ellipsoid-oblong, ca. 2×1.2 mm, with a very short pedicel. Fl. and fr. Nov–Dec.

- Epiphytic on trees in forests; 700–800 m. S Yunnan.

28. *Oberonia austroyunnanensis* S. C. Chen & Z. H. Tsi, Acta Phytotax. Sin. 20: 193. 1982 [*“austro-yunnanensis”*].

滇南鸢尾兰 dian nan yuan wei lan

Stem conspicuous, 2–3 cm. Leaves 2–4, distichous, slightly equitant at base, laterally compressed, linear, 5–11 \times 0.7–1.1 cm, thick, veins visible when dried, base articulate, attenuate toward apex. Peduncle subterete, 8–9 cm, longitudinally grooved, wingless, lower part with several sterile bracts and a greenish foliaceous bract; rachis 6.5–7.5 cm, 2–2.5 mm in diam., many flowered; floral bracts ovate-lanceolate or lanceolate, 0.8–1 mm, margin toothed, apex long acuminate or shortly aristate. Flowers \pm whorled, orange; pedicel and ovary 0.8–1 mm. Dorsal sepal ovate-elliptic, ca. 0.7×0.4 –0.5 mm, apex obtuse; lateral sepals broadly ovate or broadly ovate-elliptic, ca. 0.7×0.5 –0.6 mm. Petals subovate-oblong, 0.6–0.7 \times ca. 0.4 mm, margin conspicuously erose or shortly fimbriate; lip broadly ovate-oblong in outline, ca. 1 mm, base slightly concave, 3-lobed; lateral lobes nearly suborbicular, margin fimbriate, fringes to 0.3 mm; mid-lobe nearly broadly oblong, ca. 0.5 mm, margin inconspicuously erose, apex emarginate or shallowly bilobed. Column ca. 0.2 mm, stout. Fl. Nov.

- Epiphytic on trees in forests; 800–900 m. S Yunnan.

29. *Oberonia latipetala* L. O. Williams, Bot. Mus. Leaflet. 5: 165. 1938.

阔瓣鸢尾兰 kuo ban yuan wei lan

Stem short, ± inconspicuous. Leaves subbasal, 5–7, distichous-equitant, laterally compressed, broadly linear, slightly falcate, (2–)3.5–10 × 0.4–0.8 cm, thick, veins obscure, base articulate, apex acuminate. Peduncle subterete, 10–18 cm, wingless; sterile bracts many, subulate, 3–5 mm; rachis 7.5–10 cm, 4–5 mm in diam., many flowered; floral bracts ovate-lanceolate, apex with awn ca. 2 mm. Flowers purple; pedicel and ovary ca. 0.5 mm. Dorsal sepal ovate-oblong, 1.8–2 × ca. 1.4 mm, abaxially with small setiform projections, margin inconspicuously erose, apex acute or obtuse; lateral sepals ovate, ca. 1.7 × 1 mm, abaxially also with small setiform projections, margin slightly erose. Petals broadly elliptic or orbicular, 2–2.5 × ca. 2 mm, abaxially with small setiform projections near margin, margin inconspicuously erose-denticulate, apex acute or subrounded; lip nearly broadly obovate in outline, 1.8–2 mm, base contracted into a short claw ca. 0.5 mm, margin erose, apex mucronate. Column short, stout. Capsule obovoid-ellipsoid, 4–5 × ca. 3 mm, with a very short pedicel. Fl. Sep–Oct, fr. Mar–Apr.

- Epiphytic on trees in forests; 1500–2400 m. W Yunnan.

30. *Oberonia integerrima* Guillaumin, Bull. Mus. Natl. Hist. Nat., sér. 2, 26: 692. 1954.

全唇鸢尾兰 quan chun yuan wei lan

Stem short. Leaves subbasal, 5–8, distichous-equitant, laterally compressed, ensiform, sometimes slightly falcate, (6–)12–21 × (0.8–)1.1–2.2 cm, thick, veins obscure, base articulate, apex acuminate. Peduncle compressed cylindrical, 13–28 cm, with narrow wings on both sides, including wings 5–6 mm wide, sometimes with several sterile bracts; rachis 6.5–11 cm, 4–5 mm in diam., densely many flowered; floral bracts nearly broadly oblong or orbicular, 1.5–2 × ca. 1.5 mm, margin minutely erose-incised, apex subtruncate. Flowers greenish yellow; pedicel and ovary ca. 0.8 mm. Sepals broadly ovate, 1–1.2 × ca. 1 mm, apex obtuse; lateral sepals somewhat oblique. Petals ovate, ca. 1.1 × 0.5 mm, margin slightly undulate or inconspicuously minutely erose-incised, apex acuminate; lip suboblate, 1.2–1.5 × 1.4–1.6 mm, entire, somewhat irregularly shallowly undulate at margin. Column short, stout. Capsule subellipsoid, 5–6 × 3–3.5 mm, with a very short pedicel. Fl. Sep, fr. next Apr. $2n = 30$.

Epiphytic on trees in forests on limestone; 1000–1600 m. S and SW Yunnan [Laos, Malay Archipelago (Borneo), Vietnam].

31. *Oberonia pachyrachis* H. G. Reichenbach ex J. D. Hooker, Fl. Brit. India 5: 681. 1890.

扁萼鸢尾兰 bian ting yuan wei lan

Iridorkis pachyrachis (H. G. Reichenbach ex J. D. Hooker) Kuntze; *Oberonia umbraticola* Rolfe.

Stem ca. 1 cm. Leaves subbasal, several, inconspicuously distichous-equitant, laterally compressed, ensiform, sometimes slightly falcate, 7–10 × 0.6–1.5 cm, thick, veins obscure, base articulate, apex acute or acuminate. Peduncle foliaceous and fused with leaf in basal half, appearing to arise from inner side of leaf blade; rachis thickly fleshy, many flowered; racemes spike-like; floral bracts ovate-orbicular, ca. 0.8 mm, margin ir-

regularly incised. Flowers pale brown, very small; pedicel and ovary very short, conspicuously shorter than floral bracts. Sepals ovate or elliptic, ca. 0.8 × 0.5 mm, apex obtuse. Petals narrowly oblong, ca. 0.7 × 0.2 mm, apex obtuse; lip ovate, slightly longer than sepals, margin entire, with obtuse basal auricles, apex obtuse or acute. Column short, stout. Capsule subovoid-ellipsoid, ca. 2 × 1.3 mm, with a very short pedicel. Fl. Nov–Mar, fr. May. $2n = 30$.

Epiphytic on trees in dense forests; ca. 2100 m. S Xizang, SW Yunnan [Bhutan, N India, Myanmar, Nepal, Thailand, Vietnam].

32. *Oberonia ensiformis* (Smith) Lindley, Fol. Orchid. 8(Oberonia): 4. 1859.

剑叶鸢尾兰 jian ye yuan wei lan

Malaxis ensiformis Smith in Rees, Cycl. 22: Malaxis no. 14. 1812; *Iridorkis ensiformis* (Smith) Kuntze; *Oberonia iridifolia* Lindley, nom. illeg. superfl.; *O. trilobata* Griffith.

Plants rather large, with a short stem. Leaves subbasal, 5 or 6, distichous-equitant, laterally compressed, ensiform, slightly falcate, 15–50 × 1.2–2.2 cm, thick, veins obscure, base articulate, apex acuminate or long acuminate. Peduncle subterete, 17–35 cm, wingless, with several sterile bracts and sometimes a large, foliaceous bract; rachis stout; raceme 10–25 cm or longer, 5–6 mm in diam., many flowered; floral bracts suberect, suboblong, 2–3 mm, irregularly denticulate on apical margin, apex long acuminate. Flowers green; pedicel and ovary 1–2 mm. Dorsal sepal broadly oblong-ovate, 1.2–1.5 × 0.8–1 mm, apex obtuse; lateral sepals broadly ovate, similar to dorsal sepal in size. Petals ovate-lanceolate, 1.2–1.5 × 0.6–0.7 mm, margin ± erose, apex acuminate; lip broadly ovate-oblong in outline, 1.8–2.2 mm, 3-lobed; lateral lobes ± subquadrate or suborbicular, margin erose; mid-lobe broadly obovate or suboblate, to 1.2 mm wide, bilobed, margin slightly erose; disk with 2 calli, lateral at base of lateral lobes. Column short, stout. Capsule obovoid-ellipsoid, 4–5.5 × ca. 2.5 mm, ridged; fruiting pedicel ca. 0.5 mm. Fl. Sep–Nov, fr. next Mar. $2n = 30$.

Epiphytic on trees in forests; 700–1600 m. N Guangxi, S and W Yunnan [India, Laos, Myanmar, Nepal, Thailand, Vietnam].

33. *Oberonia cavaleriei* Finet, Bull. Soc. Bot. France 55: 334. 1908.

棒叶鸢尾兰 bang ye yuan wei lan

Stem short, often pendulous. Leaves subbasal, 4 or 5, subcylindric or compressed cylindrical, ± laterally compressed and equitant at base, often slightly curved, 4–14 cm × 3–5(–6) mm, fleshy, veins inconspicuous, base with white transparent scarious margin on one side, articulate, apex acuminate. Peduncle cylindrical, 6–9 cm, wingless; sterile bracts many, narrowly lanceolate, ca. 3 mm; raceme pendulous, cylindrical, 4–6 cm, 3–3.5 mm in diam., densely many flowered; floral bracts lanceolate, 2.5–3 mm, membranous, margin irregularly dentate, apex long acuminate. Flowers white or greenish white, lip and column often slightly tinged with pale yellowish brown; pedicel and ovary 0.5–0.8 mm. Sepals subelliptic or oblong-ovate, 1–1.3 × ca. 0.7 mm, abaxially often with setiform projections near apex, veins inconspicuous, apex obtuse; lateral sepals often slightly

wider than dorsal sepal. Petals narrowly oblong, $1-1.2 \times ca. 0.2$ mm, abaxially with setiform protrusions near apex, apex obtuse; lip suboblong, 1–1.3 mm, inconspicuously 3-lobed; lateral lobes with several irregularly fimbriate laciniae on margins; mid-lobe with several similar laciniae on margin, central lacinia to 1 mm, longer than lateral ones. Column short, stout. Capsule subellipsoid, $ca. 4 \times 2.5-3$ mm; fruiting pedicel less than 0.5 mm. Fl. and fr. Aug–Oct.

Epiphytic on branches of trees in forests or thickets; 1200–1500 m. W Guangxi, S and SW Guizhou, Jiangxi, Sichuan, S and SE Yunnan [India, Myanmar, Nepal, Thailand, Vietnam].

Lindley (Gen. Sp. Orchid. Pl. 16. 1830) misapplied the name *Oberonia myosurus* (Forster) Lindley to this species when judging Wallich 1947 to be conspecific with the Pacific island *Epidendrum myosurus* Forster, which is now referred to *Phreatia myosurus* (Forster) Ames (see Seidenfaden, Opera Bot. 124: 19. 1995).

