

144. **SUNIPIA** Lindley, Orchid. Scelet. 14, 21, 25. 1826.

大苞兰属 da bao lan shu

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Ione Lindley.

Herbs, epiphytic. Rhizome creeping, elongate. Pseudobulbs usually well spaced on rhizome, with 1 leaf at apex. Scape arising laterally from base of pseudobulb; raceme usually several to many flowered, rarely reduced to a solitary flower; floral bracts large or small. Flowers small. Sepals similar; lateral sepals usually ± connate at base along lower margins just below lip. Petals smaller than sepals; lip unlobed or inconspicuously 3-lobed, often ligulate, base usually adnate to column foot, immobile. Column short; foot very short or inconspicuous; rostellum 2-lobed, reflexed; anther terminal, 2-locular, with conspicuous connective; pollinia waxy, 4, subglobose, equal in size, in 2 pairs, with a common Y-shaped stipe and a single viscidium or each pair with a stipe and a viscidium.

About 20 species: Nepal to Myanmar, Thailand, and Vietnam; 11 species (one endemic) in China.

- 1a. Inflorescence many flowered.
 - 2a. Flowers distichous; floral bracts ca. 7 mm, partly covering flowers; stipes with a single, shared viscidium 1. *S. scariosa*
 - 2b. Flowers spirally arranged; floral bracts 2–3.5 mm, not or hardly covering flowers; stipes each with a viscidium 2. *S. thailandica*
- 1b. Inflorescence 1–10-flowered.
 - 3a. Scape 2–3 cm.
 - 4a. Dorsal sepal 4.5–5 mm; lip ca. 2.5 mm 3. *S. intermedia*
 - 4b. Dorsal sepal 7–10 mm; lip 5–6 mm 4. *S. andersonii*
 - 3b. Scape 4.5–40 cm.
 - 5a. Peduncle 10–35 cm.
 - 6a. Lip adaxially with 2 distinct lamellae starting as thick knobs near base, then lower and diverging 5. *S. cirrhata*
 - 6b. Lip adaxially ± without lamellae or with a single median one.
 - 7a. Median sepal more than 1.5 × as long as wide 6. *S. soidaoensis*
 - 7b. Median sepal less than 1.5 × as long as wide 7. *S. annamensis*
 - 5b. Peduncle shorter than 10 cm.
 - 8a. Petals suborbicular, ca. as long as wide 8. *S. rimannii*
 - 8b. Petals elliptic or ovate to obovate, much longer than wide.
 - 9a. Lip margins entire to slightly and minutely crenulate.
 - 10a. Dorsal sepal ca. 7 mm; petals ca. 4 mm; lip gradually contracted into a thickened top 6. *S. soidaoensis*
 - 10b. Dorsal sepal ca. 4.5 mm; petals ca. 1.2 mm; lip abruptly contracted into a thickened top 9. *S. hainanensis*
 - 9b. Lip margins partly distinctly erose-lacerate.
 - 11a. Lip (excluding thickened top part) obovate to pandurate 10. *S. bicolor*
 - 11b. Lip (excluding thickened top part) ovate to lanceolate 11. *S. candida*

1. **Sunipia scariosa** Lindley, Gen. Sp. Orchid. Pl. 179. 1833.

大苞兰 da bao lan

Ione racemosa (Smith) Seidenfaden; *I. scariosa* (Lindley) King & Pantling; *Stelis racemosa* Smith; *Sunipia racemosa* (Smith) Tang & F. T. Wang; *Tribrachia racemosa* (Smith) Lindley.

Rhizome creeping, stout, ca. 4 mm in diam. Pseudobulbs ca. 4 cm apart on rhizome, ovoid or obliquely ovoid, 2–3 cm, ca. 1.5 cm in diam., with 1 leaf at apex. Petiole ca. 1.5 cm; leaf blade oblong, 12–16.5 × ca. 2 cm, leathery, base contracted into petiole, apex obtuse and retuse. Scape to 33 cm; raceme ± nodding, more than 10-flowered; peduncle 8–23 cm, 2–3 mm in diam., sparsely with 3–5 tubular sheaths; floral bracts regularly distichous, broadly ovate, cymbiform, ca. 7 × 6 mm, membranous, apex acute. Pedicel and ovary ca. 2 mm. Flowers small, enclosed in floral bracts, pale yellow. Dorsal sepal ovate, concave, ca. 4.5 × 3 mm, apex acute; lateral sepals obliquely ovate,

± V-shaped-conduplicate, ca. 6.5 × 2.5 mm, with 1 vein, their lower edges connate to each other, apex acute. Petals obliquely ovate, ca. 3 × 2.2 mm, 1-veined, abaxial base with 1 fleshy ligulate appendage, margins denticulate, apex obtuse; lip ligulate, ca. 4.5 × 2 mm, fleshy, adaxial base with a channel and a keel in it, apex obtuse. Column ca. 2 mm; foot inconspicuous; 2 pairs of pollinia with 1 common Y-shaped stipe and a single viscidium. Fl. Mar–Apr.

Tree trunks in open forests; 800–2500 m. S and W Yunnan [NE India, Myanmar, Nepal, N Thailand, N Vietnam].

2. **Sunipia thailandica** (Seidenfaden & Smitinand) P. F. Hunt, Kew Bull. 26: 184. 1971.

光花大苞兰 guang hua da bao lan

Ione thailandica Seidenfaden & Smitinand, Orchids Thailand 4(2): 813. 1965.

Pseudobulbs close, conic, 7–11 mm, ca. 1 cm in diam.,

with 1 leaf at apex. Scape ascending, ca. 7.5 mm; peduncle ca. 1 mm in diam., with 3 or 4 tubular sheaths; raceme ca. 4.5 cm, more than 10-flowered; floral bracts narrowly lanceolate, 2–3.5 mm, apex acute. Pedicel and ovary ca. 2 mm. Flowers purplish red, with pale yellow lip. Dorsal sepal ovate, concave, ca. 4 × 2.5 mm, 3-veined, apex obtuse; lateral sepals oblong, ca. 4.2 × 1.5 mm, base adnate to column foot, their lower edges connate to each other except apices, apex obtuse. Petals broadly oblong or subsquare, ca. 2.2 × 1.5 mm, membranous, 1-veined, abaxial base with 1 appendage, margin entire, apex subtruncate and retuse; basal appendage deltoid, ca. 0.2 mm, fleshy, apex obtuse; lip ligulate or subsagittate, ca. 3.8 × 2.5 mm, adaxially ± scaly on basal half, with 2 round calli at base and 3 longitudinal stripes from base to middle or near apex. Column ca. 1 mm; foot ca. 0.5 mm; 2 pairs of pollinia with 1 common Y-shaped stipe and a single viscidium. Fl. Apr.

Quercus trees in mixed forests; 1400–1700 m. S and SW Yunnan [N Thailand].

3. *Sunipia intermedia* (King & Pantling) P. F. Hunt, Kew Bull. 26: 184. 1971.

少花大苞兰 shao hua da bao lan

Ione intermedia King & Pantling, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65: 120. 1896.

Rhizome creeping, ca. 1.5 cm in diam. Pseudobulbs ca. 3 cm apart on rhizome, ovoid-conic, 5–10 mm, 5–6 mm in diam., with 1 leaf at apex. Leaf shortly petiolate; blade erect, narrowly oblong, 3–4 × 0.4–0.5 cm, leathery, base contracted, apex obtuse and retuse. Scapes solitary or in pairs, erect, 2–3 cm; peduncle slender, with 3 sheaths ca. 8 mm; raceme 7–10 mm, 2- or 3-flowered; floral bracts ovate, ca. 5 × 2 mm, apex shortly acuminate. Flowers pale green. Dorsal sepal lanceolate, 4.5–5 × ca. 1.2 mm, apex acuminate; lateral sepals similar to dorsal sepal, inconspicuously 3-veined, their lower edges connate forming an ovate-elliptic synsepal. Petals linear-lanceolate, 3.5–4 × ca. 0.5 mm, fleshy, basal half ciliate, both surfaces densely papillate, apex obtuse; lip similar to petals, with an orbicular disk ca. 1 mm wide and a linear-cuspidate, involute-margined limb ca. 2.5 × 0.3 mm, both surfaces densely papillate, basal margins sparsely denticulate, apex acute. Column ca. 1.5 mm, base with a foot ca. 0.4 mm; 2 pairs of pollinia with 1 common Y-shaped stipe and a single viscidium. Fl. Aug.

Tree trunks in evergreen broad-leaved forests; ca. 2000 m. SE Xizang [India (Sikkim)].

4. *Sunipia andersonii* (King & Pantling) P. F. Hunt, Kew Bull. 26: 183. 1971.

黄花大苞兰 huang hua da bao lan

Ione andersonii King & Pantling, Ann. Roy. Bot. Gard. Calcutta 8: 159. 1898; *I. andersonii* var. *flavescens* (Rolfe) Tang & F. T. Wang; *I. bifurcatoflorens* Fukuyama; *I. flavescens* Rolfe; *I. sasakii* Hayata; *Sunipia bifurcatoflorens* (Fukuyama) P. F. Hunt; *S. sasakii* (Hayata) P. F. Hunt.

Rhizome creeping, ca. 1.5 mm in diam. Pseudobulbs 1–4

cm apart on rhizome, ovoid, 1–1.5 cm, 3–10 mm in diam., 1-leaved at apex. Leaf subsessile; blade narrowly oblong, 5–10 × 0.7–1 cm, leathery, base cuneate, apex obtuse and retuse. Scape ca. 3 cm; raceme few flowered; floral bracts ovate-lanceolate, ca. 10 × 5 mm. Pedicel and ovary ca. 1 cm. Flowers pale yellow or yellowish green, with deep yellow lip. Sepals free, similar, ovate-lanceolate, 7–10 × 3–5 mm, apical margins ± incurved, apex acute and recurved. Petals narrowly ovate-lanceolate, 5–6 × 2–2.5 mm, abruptly contracted above middle and cylindrical-thickened, inconspicuously 3-veined, basal margins fimbriate, apex obtuse; lip ovate, 5–6 × ca. 2.5 mm, base with 1 fleshy transverse callus, incised margined in basal half, apex obtuse. Column 1–1.5 mm, with a foot 1(–5) mm; rostellum horseshoe-shaped; each pair of pollinia with a stipe and a viscidium. Fl. Sep–Oct.

Tree trunks in forests; 700–1800 m. Taiwan, S and W Yunnan [Bhutan, NE India, Myanmar, N Thailand, N Vietnam].

5. *Sunipia cirrhata* (Lindley) P. F. Hunt, Kew Bull. 26: 184. 1971.

云南大苞兰 yun nan da bao lan

Ione cirrhata Lindley, Fol. Orchid. 2(Ione): [1]. 1853.

Rhizome creeping, 3–4 mm in diam. Pseudobulbs 1–3.5 cm apart on rhizome, ovoid-conic, cylindrical to obpyriform, 2–3.5 cm, 10–15 mm in diam., with a terminal leaf. Petiole 1.4–4 cm; leaf blade elliptic to oblong to obovate, 9–16 × 2–3.1 cm, apex obtuse. Scape from base of pseudobulb, 21–40 cm; raceme to 5.5 cm, laxly 4–8-flowered; peduncle 15–35 cm, slender, with 6 scalelike sheaths; floral bracts 1.9–2.5 mm. Pedicel and ovary 10–15 mm. Flowers (off-)white with purple veins, lip purple. Dorsal sepal lanceolate, 12–24 × 3–5 mm, margin glabrous, apex acuminate; lateral sepals similar, 14–26 × 6–8 mm, with their lower edges connate except near apex, apex acuminate. Petals broadly ovate, 4–5 × 1–1.5 mm, margins entire to erose, apex obtuse; lip lanceolate, 1.5–2 × 0.35–0.7 mm, adaxially with 2 lamellae starting as thick knobs near base, then lower and diverging. Column stout, 2–3 × 1.1–1.3 mm; foot short, attenuate, anther cap in front with 2 distinct projections. Fl. Oct–Dec.

Evergreen forests; 800–1800 m. Yunnan [Bhutan, India, Myanmar].

6. *Sunipia soidaoensis* (Seidenfaden) P. F. Hunt, Kew Bull. 26: 184. 1971.

苏瓣大苞兰 su ban da bao lan

Ione soidaoensis Seidenfaden, Bot. Tidsskr. 64: 220. 1969.

Rhizome creeping, ca. 2 mm in diam. Pseudobulbs ca. 1 cm apart on rhizome, ovoid, 1.3–1.5 cm, 7–10 mm in diam., with 1 leaf at apex. Petiole ca. 7 mm; leaf blade erect, oblong, 5.5–7.5 × 0.9–1.2 cm, thickly leathery, base contracted into petiole, apex obtuse and retuse. Scape erect, 11–22 cm; raceme slightly nodding, 3- or 4-flowered; peduncle 6–17 cm, 1.5–2 mm in diam., sparsely with 3 sheaths ca. 1.5 cm; floral bracts ovate, 8–12 mm, membranous, apex acuminate. Pedicel and ovary ca. 12 mm. Flowers slightly thickly textured. Dorsal sepal ovate-lanceolate, ca. 7 × 4 mm, 6-veined, apex subacute;

lateral sepals lanceolate, ca. 11×3 mm, their lower edges connate to each other in basal half, apex acute. Petals ovate-triangular, ca. 4×2.5 mm, 3-veined, abaxial base with 1 fleshy triangular appendage, margins fimbriate, apex acuminate; lip ovate-triangular, ca. 6×4.5 mm, narrowed and thickened in apical half, apex obtuse. Column ca. 2.5 mm, stout, base with a foot ca. 1 mm; each pair of pollinia with a stipe and a viscidium. Fl. Sep–Oct.

Tree trunks in forests; 1900–2000 m. SW Yunnan [SE Thailand].

7. *Sunipia annamensis* (Ridley) P. F. Hunt, Kew Bull. 26: 183. 1971.

绿花大苞兰 *lǜ huā dà bāo lán*

Ione annamensis Ridley, J. Nat. Hist. Soc. Siam 4: 115. 1921.

Rhizome creeping, ca. 2 mm in diam. Pseudobulbs ca. 1.5 cm apart on rhizome, ovoid, 1.7–2.5 cm, ca. 13 mm in diam., with 1 leaf at apex. Petiole ca. 15 mm; leaf blade erect, oblong, $8.5\text{--}11 \times 2\text{--}2.5$ cm, thickly leathery, base contracted into petiole, apex obtuse and retuse. Scape erect, 15–35 cm; raceme erect, 4–6-flowered; peduncle 12–30 cm, 1.5–2 mm in diam., with 6 sheaths 1.5–2 cm; floral bracts ovate to triangular, 10–12 mm, membranous, apex acuminate. Pedicel and ovary 10–13 mm. Dorsal sepal ovate, ca. $10 \times 6\text{--}7$ mm, 7-veined, apex rounded to obtuse; lateral sepals ovate, $11\text{--}14 \times 5$ mm, lower edges free or \pm connate (see note below) to each other in basal half, apex acute. Petals ovate-triangular, $5.5\text{--}6 \times 5.5\text{--}6$ mm, 3-veined, margins erose-denticulate, apex obtuse; lip \pm cordate to rhombiform, $7\text{--}9 \times 7\text{--}10$ mm, slightly narrowed and thickened in apical half, apex obtuse. Column ca. 2 mm, stout, base with a foot ca. 1 mm; each pair of pollinia with a stipe and a viscidium. Fl. Oct.

Tree trunks in forests; ca. 2400 m. S Yunnan (Lüchun) [Thailand, Vietnam].

X. H. Jin et al. (Acta Bot. Yunnan. 29: 394. 2007) reported *Sunipia annamensis* from the locality given above. Their description may well refer to this species, although they described the lateral sepals as connate. We have not seen the specimen (X. H. Jin 8545, PE). The Chinese record needs confirmation.

8. *Sunipia rimannii* (H. G. Reichenbach) Seidenfaden, Nat. Hist. Bull. Siam Soc. 28: 8. 1980.

圆瓣大苞兰 *yuan bān dà bāo lán*

Acrochaene rimannii H. G. Reichenbach, Gard. Chron., n.s., 17: 796. 1882; *Ione rimannii* (H. G. Reichenbach) Seidenfaden; *I. salweenensis* Phillimore & W. W. Smith; *Monomeria rimannii* (H. G. Reichenbach) Schlechter; *Sunipia salweenensis* (Phillimore & W. W. Smith) P. F. Hunt.

Rhizome ca. 2 mm in diam. Pseudobulbs ca. 1.5 cm apart on rhizome, ovoid, ca. 2 cm, ca. 8 mm in diam., with 1 leaf at apex. Petiole ca. 7 mm; leaf blade erect, oblong, $7\text{--}10 \times 1.1\text{--}1.7$ cm, leathery, base contracted into petiole, apex obtuse and retuse. Scape erect, 5–8 cm; raceme 2- or 3-flowered; peduncle 4–6 cm, slender, with 2 or 3 sheaths; floral bracts ovate-lanceolate, ca. 6 mm, membranous, apex acute. Pedicel and ovary ca. 5 mm. Flowers thinly textured, yellow. Dorsal sepal lanceolate, ca. 8×3 mm, apex acuminate, \pm incurved; lateral sepals lan-

ceolate, ca. 10×2.5 mm, their lower edges connate to each other except apices, apex acuminate. Petals suborbicular, ca. $3 \times 2.5\text{--}3$ mm, margins erose-toothed; lip elliptic-oblong to sub-rhombic, ca. 7×3.5 mm, centrally with a thickened longitudinal band from base to apex and stretching out to form an oblong-conic mucro at apex, margin denticulate. Column ca. 2 mm; each pair of pollinia with a stipe and a viscidium. Fl. Nov.

Tree trunks in forests; ca. 1600 m. W to SE Yunnan [Myanmar, Thailand].

9. *Sunipia hainanensis* Z. H. Tsi, Acta Phytotax. Sin. 33: 590. 1995.

海南大苞兰 *hāi nán dà bāo lán*

Pseudobulbs ca. 5 mm apart on rhizome, ovoid, 1–1.5 cm, 5–7 mm in diam., with 1 leaf at apex. Leaf sessile; blade narrowly oblong, $4.5\text{--}5.5 \times 0.5\text{--}0.6$ cm, leathery, apex obtuse. Scape erect, ca. 5 cm; peduncle with 2 sheaths; raceme ca. 1.5 cm, 6–8-flowered; floral bracts narrowly lanceolate, ca. 4.2 mm, apex acuminate. Pedicel and ovary 3–3.5 mm. Flowers small. Dorsal sepal ovate-lanceolate, ca. 4.5×0.6 mm, margin incurved in apical half, apex long acuminate; lateral sepals similar to dorsal sepal, upper edges incurved, lower edges connate to each other except apices. Petals subobovate, ca. 1.2×0.5 mm, 1-veined, apex obtuse-rounded; lip ovate-lanceolate, ca. 2.5 mm, abruptly contracted and thickened in apical half, apex obtuse. Column very short; foot inconspicuous; each pair of pollinia with a stipe and a viscidium. Fl. Mar–Apr.

• Tree trunks in forests; ca. 900 m. Hainan.

10. *Sunipia bicolor* Lindley, Gen. Sp. Orchid. Pl. 179. 1833.

二色大苞兰 *èr sè dà bāo lán*

Bulbophyllum bicolor (Lindley) J. D. Hooker (1890), not Lindley (1830); *Ione bicolor* (Lindley) Lindley.

Rhizome creeping, elongate, usually branched, ca. 2 mm in diam. Pseudobulbs 2–3 cm apart on rhizome, nearly pyriform, 1–2 cm, ca. 1 cm in diam., 1-leaved at apex. Petiole 3–5 mm; leaf blade oblong, $3\text{--}9 \times 0.6\text{--}1.6$ cm, leathery, base contracted into petiole, apex obtuse and retuse. Scapes 1–3, sub-erect, 4.5–8 cm; peduncle 1.5–4 cm, slender, with 3 or 4 membranous sheaths to 0.6–1 cm; raceme 3–4 cm, usually 3–10-flowered; floral bracts ovate-lanceolate, $7\text{--}9 \times$ ca. 2.5 mm, membranous, apex acute. Pedicel and ovary 2–3 mm. Flowers thinly textured; sepals and petals whitish with purplish red stripes; lip purple-red. Dorsal sepal ovate-lanceolate, $8\text{--}10 \times$ ca. 2.5 mm, 3-veined, apex acute-acuminate; lateral sepals similar to dorsal sepal, base adnate to column foot, lower edges connate to each other with free apices. Petals ovate or ovate-oblong, ca. 3×2 mm, 1-veined, margins denticulate, apex obtuse-rounded; lip pandurate, ca. 6×3.5 mm, adaxially with 1 thickened ridge from base to apex and swollen at both ends, base subrounded-auriculate on both sides, margin erose-lacerate, apex obtuse. Column stout, ca. 1 mm long and wide; foot ca. 0.5 mm; each pair of pollinia with a stipe and a viscidium. Capsule ovoid, ca. 5 mm, ca. 3 mm in diam. Fl. and fr. Jul–Nov. $2n = 40$.

Tree trunks in forests, rocks along valleys; 1900–2800 m. SE Xizang, SE to W Yunnan [Bangladesh, Bhutan, India, Myanmar, Nepal, N

Thailand].

11. *Sunipia candida* (Lindley) P. F. Hunt, Kew Bull. 26: 183. 1971.

白花大苞兰 bai hua da bao lan

Ione candida Lindley, Fol. Orchid. 2(Ione): 3. 1853;
Bulbophyllum candidum (Lindley) J. D. Hooker.

Rhizome creeping, ca. 1.5 mm in diam. Pseudobulbs 1.5–2 cm apart on rhizome, ovoid, 1–1.5 cm, 5–7 mm in diam., with 1 leaf at apex. Leaf shortly petiolate; blade erect, narrowly oblong, 3–6 × 0.4–0.7 cm, leathery, apex obtuse and retuse. Scapes solitary or in pairs, erect, 5–9 cm; peduncle yellowish green, 2–4 cm, slender, with 2 or 3 tubular sheaths ca. 6 mm; raceme 3–4 cm, usually 7- or 8-flowered; floral bracts narrowly lanceolate, 5–7 mm, membranous, apex acuminate. Pedicel and ovary 4–7 mm. Flowers thinly textured; sepals and petals greenish white; lip yellow in apical half and white in basal half. Dorsal sepal ovate-lanceolate, ca. 6 × 1.5 mm, apex acuminate; lateral sepals similar to dorsal sepal, their lower edges connate to each other except apices. Petals ovate, ca. 3 × 1.5–1.7 mm, membranous, 1-veined, margins erose, apex acute; lip ovate-lanceolate, abruptly contracted near middle, 5.6–6 × 1.6–2 mm, adaxially with 1 thickened keel from base to apex, margins

erose-lacerate in basal half, apex obtuse. Column white, ca. 1 mm; foot ca. 1 mm; each pair of pollinia with a stipe and a viscidium. Fl. Jul–Aug. $2n = 40$.

Tree trunks in forests; 1900–2900 m. S and SE Xizang, NW to S Yunnan [Bhutan, NE India].

