

85. TIPULARIA Nuttall, Gen. N. Amer. Pl. 2: 195. 1818.

筒距兰属 tong ju lan shu

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Didicicia King & Prain.

Herbs, terrestrial, slender. Pseudobulbs cormlike and ovate, or narrowly cylindrical, 1–4-noded, sometimes connected to previous year's growth by a persistent slender rhizome. Leaf solitary, arising from apex of pseudobulb, broadly ovate to ovate-elliptic, sometimes with purple spots above and purple below, base abruptly contracted into a long petiole-like stalk. Inflorescence laxly racemose, arising from apex or laterally from near base of pseudobulb, erect, slender, usually enclosed at base by a few sheathing bracts; rachis laxly many flowered; floral bracts very small. Flowers resupinate, small; pedicel and ovary cylindrical-fusiform, slender. Sepals and petals similar though petals slightly smaller, free, spreading, oblong to elliptic; lip ovate or oblong-obovate, entire or 3-lobed, spurred at base; spur spreading backward or ascending, shortly saccate or long, slender. Column erect, stout; anther terminal, incumbent; pollinia 4, in 2 pairs, waxy, with or without a distinct stipe; viscidium inconspicuous; rostellum short, inconspicuous. Capsule pendulous, shortly oblong to almost spherical.

Up to seven species: Bhutan, China, NE India, Japan, Myanmar, and Nepal, and a disjunct species in E North America; four species (two endemic) in China.

- 1a. Lip with a saccate spur at base; spur less than 1 mm 4. *T. cunninghamii*
- 1b. Lip with an elongate, cylindrical spur at base; spur 6–15 mm.
 - 2a. Spur 12–15 mm; sepals 5.5–7 mm 1. *T. szechuanica*
 - 2b. Spur 6–12 mm; sepals 4–6 mm.
 - 3a. Spur 10–12 mm; lip ca. 5 mm 3. *T. odorata*
 - 3b. Spur 6–7 mm; lip ca. 3.5 mm 2. *T. josephii*

1. *Tipularia szechuanica* Schlechter, Acta Horti Gothob. 1: 153. 1924.

筒距兰 tong ju lan

Plants 15–25 cm tall. Pseudobulb narrowly cylindrical, tapering slightly toward base, 1.5–3 × 0.2–0.4 cm, usually 1- or 2-noded, rarely without a node, with 1 or 2 fleshy elongate roots at base. Leaf broadly ovate, 2.5–4 × 1.4–2.5 cm, with 3 prominent veins, base rounded or subtruncate, apex acuminate or obtuse; petiole-like base 1.3–2 cm, channeled. Inflorescence 12–22 cm; peduncle 9–16 cm, with 1 or 2 long tubular sheaths; rachis 3–6 cm, laxly 5–9-flowered; floral bracts deltoid, minute. Flowers spreading horizontally, opening widely, pale purplish brown; pedicel and ovary 4–7 mm. Sepals narrowly oblong-lanceolate, 5.5–7 × ca. 1.8 mm, apex acute. Petals narrowly elliptic, 5–6 × ca. 2 mm, apex acute; lip linear-oblong, 4.5–6.5 × ca. 2.5 mm, 3-lobed near base; lateral lobes broadly ovate, ca. 1.5 × 1.5 mm, margins irregularly incised; mid-lobe ligulate, ca. 4.5 mm; spur spreading horizontally or ascending, slender, 12–15 × ca. 0.7 mm, apex obtuse. Column slightly arcuate, 2.5–3 mm. Fl. Jun–Jul.

• *Picea* and *Abies* forests; 3300–4000 m. S Gansu, S Shaanxi, NW Sichuan, NW Yunnan.

2. *Tipularia josephii* H. G. Reichenbach ex Lindley, J. Proc. Linn. Soc., Bot. 1: 174. 1857 [*"josephi"*].

短柄筒距兰 duan bing tong ju lan

Plants 20–38 cm tall. Pseudobulb narrowly cylindrical to squat and ovoid, 0.5–1.5 × 0.4–0.6 cm, often connected in tight clumps by a short rhizome, 1- or 2-noded, with a few elongate

roots at base. Leaf broadly ovate, 2–7 × 1.5–4 cm, with 3 prominent veins, base rounded or truncate, apex acute; petiole-like base 0.8–3 cm, channeled. Inflorescence sometimes slightly pendulous toward apex, 20–35 cm; peduncle 14–28 cm, with 1 or 2 long tubular sheaths; rachis 6–12 cm, laxly 12–30-flowered; floral bracts deltoid, minute. Flowers spreading horizontally, opening widely, sepals off-white suffused with brownish purple; petals and lip pale green; pedicel and ovary 5–7 mm. Sepals narrowly oblong-lanceolate, 4–5 × ca. 1.5 mm, apex obtuse. Petals linear to narrowly oblong, ca. 4 × 1 mm, apex obtuse; lip narrowly oblong-ovate, ca. 3.5 × 1.5 mm, 3-lobed near base; disk with a pair of small, fleshy oblong calli at mouth of spur; lateral lobes broadly ovate, ca. 1.5 × 1.2 mm, margin irregularly erose, apex obtuse; mid-lobe ligulate, 2–2.2 mm, apex obtuse; spur spreading horizontally or ascending, slender, 6–7 × ca. 0.4 mm, apex acute. Column ca. 2.2 mm; pollinia borne on a distinct stipe. Fl. Aug.

Forests; ca. 2800 m. SE Xizang [Bhutan, NE India, Myanmar, Nepal].

3. *Tipularia odorata* Fukuyama, Bot. Mag. (Tokyo) 52: 243. 1938.

台湾筒距兰 tai wan tong ju lan

Plants 12–25 cm tall. Pseudobulbs ovoid or broadly cylindrical, 1–2.5 × 0.4–0.6 cm, 2–4-noded, with a few elongate roots at base. Leaf abaxially purplish, adaxially green and sometimes

tinged purple, ovate to ovate-elliptic, 3–7 × 1.5–3 cm, margin denticulate and slightly crisped, apex acuminate; petiole-like base purplish, 1.5–6 cm, channeled. Inflorescence purplish brown, 10–23 cm; peduncle 8–15 cm, with 2 or 3 short tubular sheaths; rachis 2.5–8 cm, laxly 10- or more flowered; floral bracts deltoid, minute. Flowers spreading horizontally to slightly pendulous, opening widely; sepals and petals green suffused with brownish purple, lip yellowish green, spur whitish yellow; pedicel and ovary 5–8 mm. Sepals narrowly oblong, 4–6 × ca. 1.5 mm, apex obtuse or acute. Petals lanceolate to linear-lanceolate, 4–5 × ca. 1.2 mm, apex obtuse or acute; lip narrowly oblong-ovate, ca. 5 × 1 mm, 3-lobed near base; disk with a pair of small, fleshy oblong calli at mouth of spur; lateral lobes nearly orbicular, ca. 0.8 mm, margins irregularly undulate; mid-lobe narrowly oblong-ligulate, ca. 3 mm, apex acute; spur spreading horizontally or ascending, slender, 10–12 × ca. 0.5 mm, apex obtuse. Column ca. 3.5 mm; pollinia borne on a distinct stipe. Fl. May–Jun.

- Mossy places in forests; 1500–2600 m. C and N Taiwan.

4. *Tipularia cunninghamii* (King & Prain) S. C. Chen, S. W. Gale & P. J. Cribb, **comb. nov.**

软叶筒距兰 ruan ye tong ju lan

Basionym: *Didickea cunninghamii* King & Prain, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65: 119. 1896.

Plants 10–20 cm tall. Pseudobulbs often connected in clumps or rows by a slender or coralloid rhizome, whitish, ovoid, 1–2 × 0.5–0.8 cm, 2–4-noded. Leaf abaxially brownish purple, adaxially greenish, broadly ovate to cordate, 2.5–4 × 1.7–3.5 cm, with 3 prominent veins, margin slightly undulate, apex acute; petiole-like base 2–3.5 cm, channeled. Inflorescence 12–25 cm; peduncle 10–20 cm, with 2 or 3 long tubular sheaths; sheaths ca. 2 cm; rachis 2–10 cm, laxly 8–15-flowered; floral bracts ovate-deltoid, ca. 0.5 mm. Flowers spreading horizontally, not opening widely, yellowish green and sometimes tinged purple along midvein of sepals and petals; pedicel and ovary 3.5–4 mm; pedicel elongating in fruit. Sepals narrowly oblong, 1.8–2 × 0.5–0.6 mm, apex obtuse. Petals linear-lanceolate, ca. 2 × 0.6 mm, apex obtuse; lip broadly oblong-obovate, cymbiform, 1.5–1.8 × 1.6–1.9 mm, simple, fleshy, apex obtuse, saccate-spurred, fused at base to sides of column; spur saccate-conic, short, ca. 0.3 mm. Column ca. 1 mm; pollinia ovoid-clavate, lacking a stipe. Fl. May–Jul.

Coniferous forests; 2700–2900 m. C Taiwan (Hualian) [India (Sikkim, Uttarakhand)].

