

24. STREPTOPUS Michaux, Fl. Bor.-Amer. 1: 200. 1803.

扭柄花属 niu bing hua shu

Chen Xinqi (陈心启 Chen Sing-chi); Minoru N. Tamura

Herbs perennial, with a creeping rhizome. Stem erect, simple or distally branched. Leaves alternate, sessile, ovate to lanceolate, thin, many veined, base sometimes amplexicaul. Flowers usually 1 or 2 on an axillary, slender peduncle partly adnate to stem, rarely 2–4 flowers in a terminal inflorescence. Flowers campanulate or subrotate. Tepals 6, free, outer ones usually slightly wider than inner. Stamens 6, inserted at or near base of tepals; filaments usually flat at base; anthers basifixed. Ovary 3-loculed; ovules (2 or 3 or)6–8 per locule. Style columnar or very short. Fruit a berry, globose, several to many seeded.

About ten species: temperate regions of the N hemisphere; five species (two endemic) in China.

- 1a. Flowers (2 or)3 or 4 in a terminal inflorescence; tepals cuspidate-caudate at apex 1. *S. ovalis*
- 1b. Flowers 1 or 2, on an axillary, slender peduncle partly adnate to stem; tepals acuminate at apex.
- 2a. Leaves ciliate-denticulate at margin.
 - 3a. Style very short or indistinct; stigma subentire; peduncle curved but not geniculate 2. *S. koreanus*
 - 3b. Style distinct, columnar, 3–4 mm; stigma deeply 3-lobed; peduncle geniculate near middle 3. *S. obtusatus*
- 2b. Leaves entire at margin.
 - 4a. Tepals 8–10 × 3–4 mm; anthers longer than filaments 4. *S. simplex*
 - 4b. Tepals 6.5–8 × 1–2 mm; anthers shorter than filaments 5. *S. parviflorus*

1. *Streptopus ovalis* (Ohwi) F. T. Wang & Y. C. Tang in F. T. Wang & Tang, Fl. Reipubl. Popularis Sin. 15: 49. 1978.

卵叶扭柄花 luan ye niu bing hua

Disporum ovale Ohwi, Bot. Mag. (Tokyo) 45: 385. 1931;
Prosartes ovalis (Ohwi) M. N. Tamura.

Rhizome elongate, slender, ca. 2 mm thick. Stem sometimes branched distally, ± flexuous, 20–45 cm, pubescent. Leaves oblong, ovate-lanceolate, or ovate-elliptic, 4–11 × 2–4 cm, thinly papery, base cordate, margin ciliate-denticulate, apex long acuminate. Flowers (2 or)3 or 4 in a terminal, umbel-like inflorescence, suberect; pedicel 1.5–3 cm, pubescent. Tepals white, spotted with purple, ovate-lanceolate, 8–9 × 2–3 mm, apex cuspidate-caudate. Filaments ca. 3 mm; anthers elliptic. Ovary globose, winged along angles. Style 3.5–4 mm, much longer than ovary; stigma distinctly 3-lobed. Berry 2- or 3-seeded. Seeds suborbicular, furrowed. Fl. May, fr. Aug.

Forests. SW Liaoning [Korea].

Tamura (in Kubitzki, Fam. Gen. Vasc. Pl. 3: 171. 1998) included this species in the American genus *Prosartes* D. Don. Further studies are needed in order to ascertain whether this species should be included in *Prosartes* or *Streptopus*.

2. *Streptopus koreanus* (Komarov) Ohwi, Bot. Mag. (Tokyo) 45: 189. 1931.

丝梗扭柄花 si geng niu bing hua

Streptopus ajanensis Tiling var. *koreanus* Komarov, Trudy Imp. S.-Peterburgsk. Bot. Sada 20: 476. 1901.

Rhizome elongate, slender, ca. 1 mm thick. Stem simple or branched distally, 15–40 cm, sparsely hispidulous. Leaves ovate-lanceolate to ovate-elliptic, 3–10 × 1–3 cm, thinly papery, base rounded, margin ciliate-denticulate, apex mucronate. Flowers 1 or 2 on an axillary peduncle; peduncle wirelike, ca. 1.5 cm, not geniculate, elongate in fruit. Tepals yellowish green, narrowly ovate, 2–3 × ca. 1 mm, minutely tuberculate adaxially, base connate, apex acuminate. Filaments very short, flat; anthers obcordate, minutely tuberculate basally. Ovary globose,

smooth. Style indistinct; stigma subentire. Berry 6–9 mm in diam. Seeds many, oblong, slightly curved. Fl. May, fr. Jul–Aug. Forests; 800–2000 m. Heilongjiang, Jilin, Liaoning [Korea].

3. *Streptopus obtusatus* Fassett, Rhodora 37: 102. 1935.

扭柄花 niu bing hua

Streptopus geniculatus F. T. Wang & Tang.

Rhizome elongate, slender, 1–2 mm thick, with numerous hairy roots. Stem simple or branched distally, 15–35 cm, glabrous. Leaves ovate-lanceolate or oblong-lanceolate, 5–8 × 2.5–4 cm, base cordate, margin ciliate-denticulate, apex mucronate. Peduncle axillary, 2–2.5 cm, jointed and geniculate near middle, with a swollen gland at joint, 1-flowered. Flowers nodding. Tepals yellowish, sometimes spotted with purple adaxially, oblong-lanceolate to lanceolate, 8–9 × 1–2 mm. Stamens 3.5–4.5 mm; filaments short, broad; anthers 3–4 mm. Ovary smooth. Style 3–4 mm; stigma deeply 3-lobed. Berry 6–8 mm in diam. Seeds elliptic. Fl. Jul, fr. Aug–Sep.

• Coniferous forests; 2000–3600 m. Gansu, W Hubei, Shaanxi, Sichuan, Yunnan.

4. *Streptopus simplex* D. Don, Prodr. Fl. Nepal. 48. 1825.

腋花扭柄花 ye hua niu bing hua

Rhizome 1.5–2 mm thick. Stem simple or branched distally, 20–50 cm, glabrous. Leaves grayish glaucous abaxially, lanceolate to ovate-lanceolate, 2.5–8 × 1.5–3 cm, base rounded or cordate, margin entire, apex acuminate. Peduncle axillary, 2.5–4.5 cm, neither jointed nor geniculate, glabrous, 1-flowered. Flowers nodding. Tepals pink or white, spotted with purple, ovate-oblong, 8–10 × 3–4 mm. Stamens 3–3.5 mm; filaments flat, basally widened, 1–1.5 mm; anthers ca. 2 mm. Style slender, 5–6 mm; stigma 3-lobed, lobes revolute, ca. 1 mm. Berry 5–6 mm in diam. Fl. Jun, fr. Aug–Sep. $2n = 16, 32^*$.

Forests, bamboo thickets, hillsides along streams, alpine grasslands; 1700–4000 m. S Xizang, Yunnan [Bhutan, Myanmar, Nepal, Sikkim].

5. *Streptopus parviflorus* Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 10: 89. 1887.

小花扭柄花 xiao hua niu bing hua

Streptopus mairei H. Léveillé.

Rhizome short, thickened. Stem usually branched distally, 20–50 cm, glabrous. Leaves lanceolate to ovate-lanceolate, 4–8 × 1.5–4 cm, thinly papery, base cordate, margin entire, apex acuminate. Peduncle 2.5–4 cm, glabrous, neither jointed nor geniculate, 1- or 2-flowered. Flowers nodding. Tepals white, lanceolate, 6.5–8 × 1–2 mm. Stamens 3–3.5 mm; filaments 1.8–2.2 mm; anthers ca. 1 mm. Style ca. 2.5 mm, slightly longer than ovary; stigma 3-lobed. Berry 5–8 mm in diam., many seeded. Seeds oblong, curved. Fl. Jun, fr. Aug–Sep.

• Forests, thickets, alpine grasslands; 2000–3500 m. SW Sichuan, NW Yunnan.

