

Epimedium pudingense (Berberidaceae), a new species from Guizhou, China

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Epimedium pudingense S.Z. He, Y.Y. Wang & B.L. Guo (Berberidaceae), a new species from Guizhou, SW China, is described and illustrated. It is similar to *E. sagittatum* in its nodose rhizome, two opposite ternate leaves and saccate petals, but differs by the size and shape of the four inner sepals and by the leaves pilose or glabrous on the abaxial surface.

Key words: Berberidaceae, *Epimedium*, new species, taxonomy

The genus *Epimedium* comprises about 56 species (Ying 2001, Stearn 2002, He 2004). On the basis of flower size, the genus may be divided into two groups, the small-flowered and large-flowered. The wide and fragmented range of the genus from Japan westward to Algeria in N Africa renders many of the species very local, and the major areas of species diversity are in China.

Since 1980, we have been carrying out botanical explorations focusing on *Epimedium* in the Guizhou Province, one of the centers of species diversity for this genus in China, and we have previously described five new species and two new varieties (He 1993, He & Zhang 1994, He & Guo 1996, He & Xu 2003, He *et al.* 2003). In April 1995, we collected an unusual population in the small-flowered group of *Epimedium* from Puding County, southwestern Guizhou. Based on field observations of several years, the population was confirmed to be an undescribed species.

Epimedium pudingense S.Z. He, Y.Y. Wang & B.L. Guo, *sp. nova* (Fig. 1)

Species nova E. sagittato similis, sed laminis subtus calvis, sepalis internis lanceolatis, circa 8–10 mm longis differt.

TYPE: China. Guizhou Province, Puding County, alt. 1300 m, in rock fissures of hill slope, 13.IV.1995, S.Z. He 95413 (holotype HGCM).

Perennial herb; flowering stem 20–35 cm long, bearing 2 opposite leaves. Rhizome nodose, woody, tough and covered with brown scales and fibrous roots. Basal and cauline leaves with 3 leaflets; leaflets coriaceous, narrowly ovate, often 5–9 cm long, 1.5–3 cm broad, apex long-acuminate, base cordate, terminal leaflet with equal rounded lobes, lateral leaflets very oblique with inner lobe smaller and rounded, outer lobes larger and rounded, glabrous on

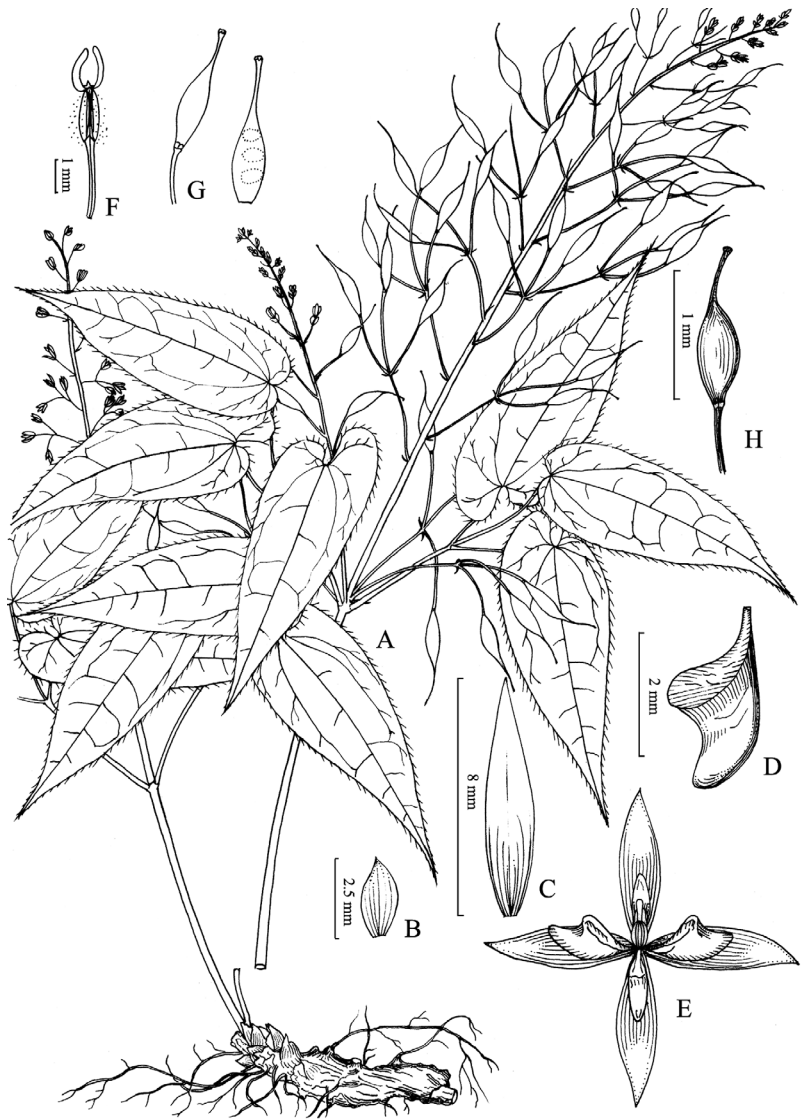


Fig. 1. *Epimedium pudingense* (from the holotype, drawn by Xiang-Li Wu). — **A:** Habit. — **B:** Outer sepal. — **C:** Inner sepal. — **D:** Petal. — **E:** Flower. — **F:** Mature stamen. — **G:** Pistil. — **H:** Capsule.

both sides, margin spinose. Inflorescence compound, usually glabrous, 30–80(–120)-flowered, 10–15(–20) cm long, 3.5–6 cm broad; pedicels glabrous, 0.7–1.2 cm long. Flowers small, white, ca. 7 mm across; outer sepals 4, purple, unequal, the outer pair oblong, ca. 2.5 mm long, ca. 1.4 mm broad, inner pair obovate, ca. 3.5 mm long, ca. 2.3 mm broad; inner sepals 4, white, lanceolate, 8–10 mm long, ca. 1.5 mm broad; petals saccate, brownish-yellow, ca. 3 mm long, with spurs ca. 1 mm long; stamens ca. 4 mm long, filaments ca. 1.8 mm long; pistil ca. 5 mm long, style ca. 2.6 mm. Capsule ca. 1.3 cm long, per-

sistent style ca. 5 mm long. Flowering March to April, fruiting April to May.

Epimedium pudingense is notable among the small-flowered taxa of *Epimedium* for its flower size (7 mm across). It resembles *E. sagittatum* by having a nodose rhizome, two opposite ternate leaves, and saccate petals, but can be distinguished by the size and shape of the four inner sepals and the leaves pilose or glabrous on the abaxial surface. A detailed morphological comparison between the two species is given in Table 1.

Table 1. Morphological comparison between *Epimedium pudingense* and *E. sagittatum*.

	<i>E. pudingense</i>	<i>E. sagittatum</i>
Flower stem	20–35 cm in height	30–50 cm in height
Leaflet	narrowly ovate, 5–9 cm × 1.5–3 cm, long-acuminate at apex, outer lobe of lateral leaflet rounded, underside glabrous	ovate to lanceolate, 5–19 cm × 3–8 cm, acute or acuminate at apex, outer lobe of lateral leaflet deltoid and acute, underside pilose
Panicle	10–15(–20) cm × 3.5–6 cm, 30–80(–120) flowers	10–20(–30) cm × 2–4 cm, 18–50 flowers
Inner sepals	lanceolate, 8–10 mm × 1.5 mm	ovate-deltoid and acute, 4 mm × 2 mm
Outer sepals	outer pair oblong, 2.5 mm × 1.4 mm, inner pair obovate, 3.5 mm × 2.3 mm	outer pair narrowly ovate, 3.5 mm × 1.5 mm, inner pair oblong-ovate, 4.5 mm × 2 mm
Spur	saccate, brownish-yellow, ca. 1 mm long	saccate, brownish-yellow or yellow, ca. 1.5–2 mm long

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