

## *Aristolochia mulunensis* (Aristolochiaceae), a new species from limestone areas in Guangxi, China

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*Aristolochia mulunensis* Y.S. Huang & Yan Liu, a new species of Aristolochiaceae from Guangxi, China, is described and illustrated. It is similar to *A. kwangsiensis*, but differs from it by its calyx limb that is discoid-orbicular, nearly quadrilateral, and has an entire margin; by its protuberance that is adaxially densely verrucose, abaxially purple; and by its purple throat, plus 3-lobed gynostemium with mammillate lobes and a glabrous margin.

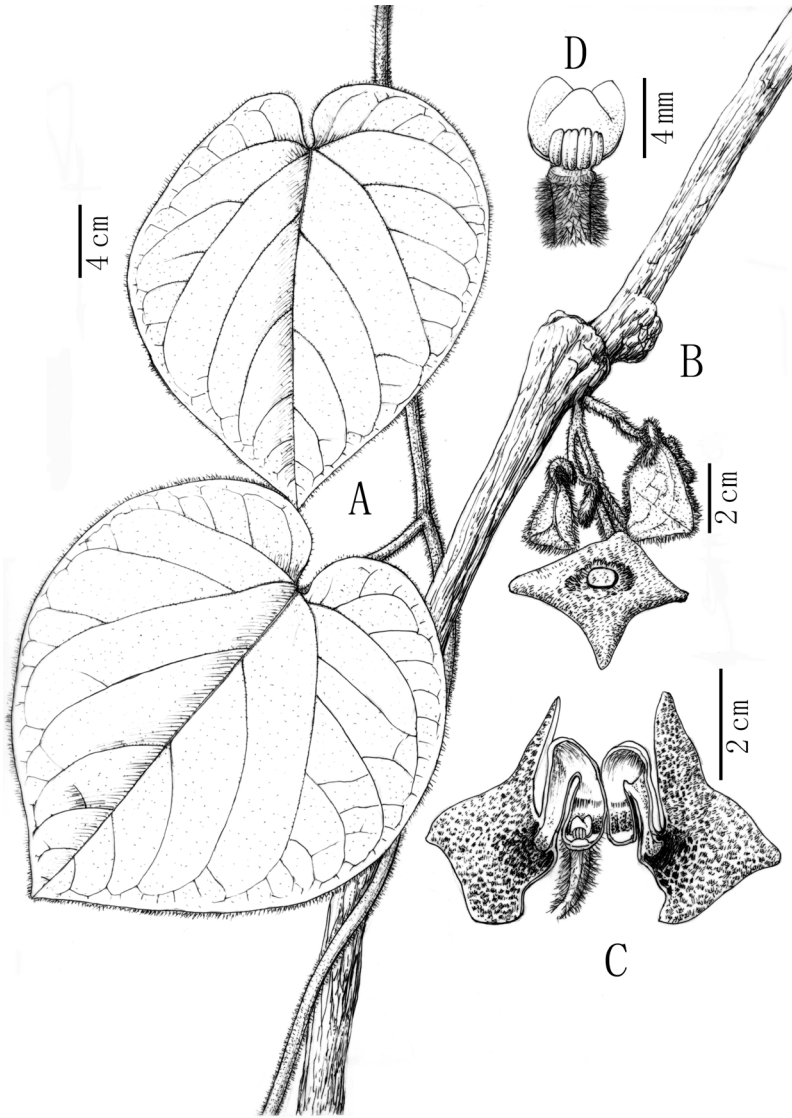
*Aristolochia* includes about 400 species widely distributed in tropical, subtropical and temperate regions of the Old World, and Australia (Huang *et al.* 2003). There are 48 species (36 endemic) in China. Twenty of them are known from the Guangxi Zhuang Autonomous Region, including *A. bambusifolia* and *A. impressinervia*, which are endemic to Guangxi (Qin & Liu 2010). In the course of a floristic survey of limestone areas in Guangxi in 2012, we discovered some peculiar specimens of *Aristolochia* in the Mulun National Natural Reserve. They are similar to *A. kwangsiensis*, especially the vegetative organs, but the flowers are different. After consulting national floras and other relevant literature (Liang 1975, Chow & Huang 1975, Tao 1983, Cheng *et al.* 1988, Ma 1989a, Ma 1989b, Ma & Cheng 1989, Wen 1992, Gonzalez 1999, Zheng 1999, Kelly & Gonzalez 2003, Huang *et al.* 2003, Liu & Deng 2009, Qin & Liu 2010,

Gonzalez *et al.* 2010, Xu *et al.* 2011) as well as numerous herbarium specimens, we made the conclusion that we had an undescribed species at hand.

### *Aristolochia mulunensis* Y.S. Huang & Yan Liu, *sp. nova* (Fig. 1 and Fig. 2A–D)

TYPE: China. Guangxi, Hechi city, Huanjiang county, Mulun National Natural Reserve, on the foothills of thick forests of limestone areas, rare, alt. 614 m a.s.l., 27 April 2012, Yu-Song Huang *et al.* ML1425 (holotype IBK; isotype IBK). — PARATYPES: China. Guangxi, Hechi city, Huanjiang county, Mulun National Natural Reserve, on a hillside of thick forests of limestone areas, rare, alt. 540 m a.s.l., 27 April 2012 Ri-Hong Jiang *et al.* 11685 (IBK), on hillside of sparse forests in limestone areas, rare, alt. 613 m a.s.l., 30 August 1993 Fa-Nan Wei 2185 (IBK).

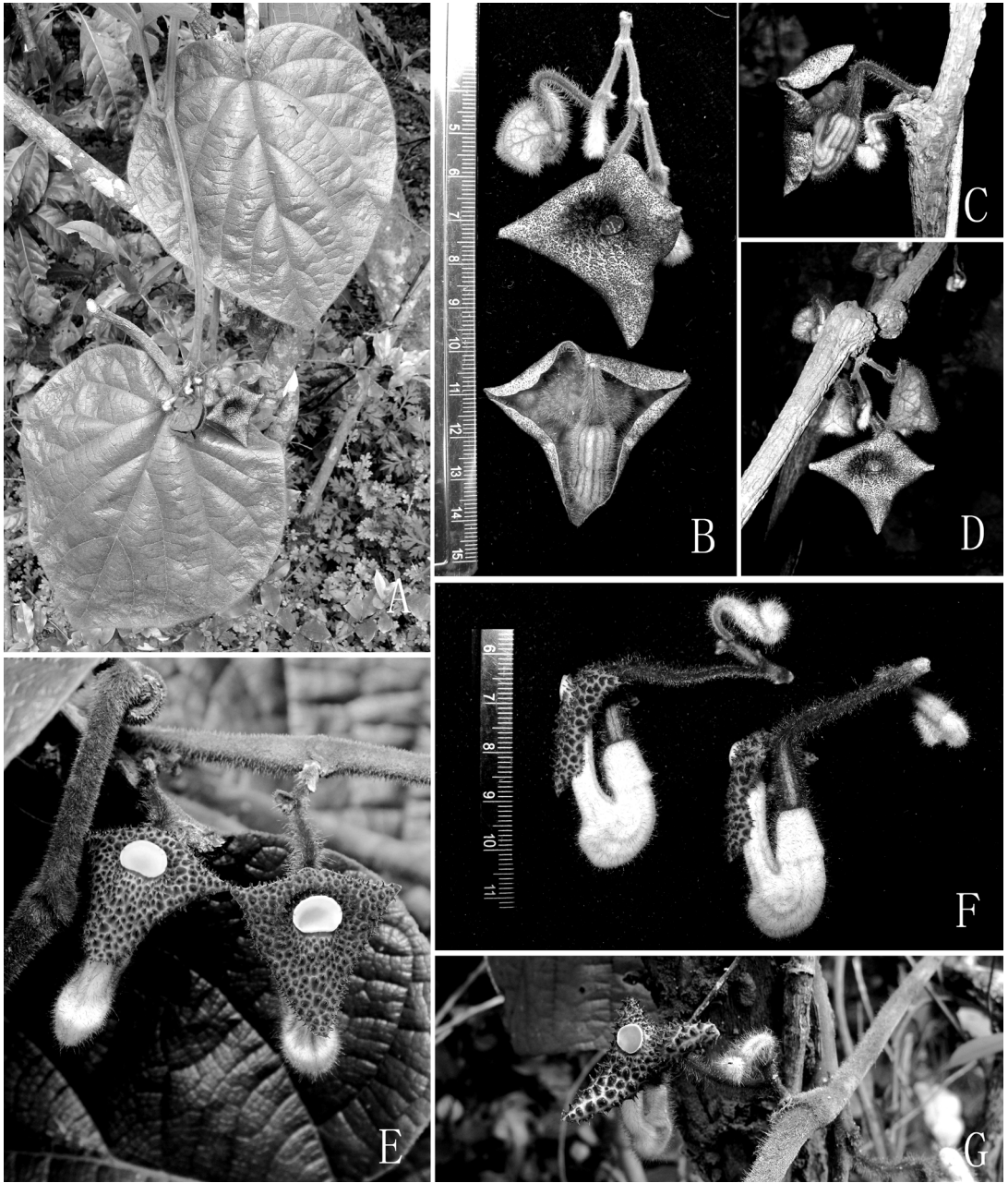
ETYMOLOGY: The specific epithet is derived from the type locality, Mulun National Natural Reserve, Huanjiang county, Hechi city, Guangxi, China.



**Fig. 1.** *Aristolochia mulunensis* (from the holotype and isotype, drawn by W. H. Lin). — **A:** Habit with leaves. — **B:** Habit with flowers. — **C:** Corolla opened showing stamens. — **D:** Stamens and stigma.

Shrubs, climbing. Twigs striate, densely dusty yellow- to brownish-hirsute, old branchlets glabrous. Leaf blade cordate to orbicular, thickly papery to coriaceous, 10–35 × 9–30 cm; apex obtuse or acute; base cordate or auriculate, sinus 2.5–5 cm deep; margin entire, brownish-hirsute; adaxially faintly hirsute, veins densely brownish-hirsute; abaxially densely white-hirsute; basineres 5, lateral veins 3–6 on each side, planar or slightly salient, abaxially conspicuously salient; petiole 5–15 cm long, 3–5 mm in diam., densely brownish-hirsute. Racemes in axils of leafy shoots or stems, 2–4-flowered; pedicel pendu-

lous, 2.5–4 cm long, densely brownish-hirsute; bractlets subulate, 2–4 mm long, densely brownish-hirsute; calyx limb mauve, throat suborbicular, purple, ca. 4 mm in diam.; tube horseshoe-shaped, abaxially densely hirsute, basal portion of tube ca. 9 × ca. 6 mm; limb discoid-suborbicular, usually reflexed, nearly quadrilateral, 3.5–5.5 cm in diam., adaxially mauve, protuberance dark purple, densely verrucose, thinly brownish-hirsute, margin entire, usually reflexed, abaxially purple, densely brownish-hirsute; anthers oblong, ca. 3 mm long, adnate to gynostemium base, opposite to the lobe; ovary terete, ca.



**Fig. 2.** — **A–D:** *Aristolochia mulunensis*. — **A:** Habit. — **B:** Flowers. — **C:** Flowers, side view. — **D:** Flowers, front view. — **E–G:** *Aristolochia kwangsiensis*. — **E:** Flowers, front view. — **F:** Flowers, side view. — **G:** Flower.

1.4 cm long; gynostemium 3-lobed, lobes mammillate, margin glabrous, not volute. Capsule not seen. Flowering in April–May.

*Aristolochia mulunensis* can be distinguished from its closest morphological match *A. kwangsiensis* by several characters (see Table 1).

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**Table 1.** Morphological comparison of *Aristolochia mulunensis* and *A. kwangsiensis*.

Characters	<i>Aristolochia mulunensis</i>	<i>A. kwangsiensis</i>
Calyx limb	discoid-orbicular, nearly quadrilateral; margin entire; protuberance adaxially densely verrucose; abaxially purple	discoid-suborbicular, broadly deltoid; margin distinctly 3-lobed, lobes broadly deltoid; protuberance adaxially acanthoid; abaxially pale green
Calyx throat	purple	yellow
Gynostemium	lobes mammillate; margin glabrous, not volute	lobe apex obtuse; margin decurrent and volute, mammillate

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