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Aristolochia huanjiangensis (Aristolochiaceae), a new species from Guangxi, China

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Aristolochia huanjiangensis (Aristolochiaceae), a new species from limestone areas in Guangxi, southern China, is described and illustrated. It is compared with the two most similar species *A. scytophylla* and *A. fangchi*.

Aristolochia (Aristolochiaceae) *s. lato* consists of about 400 species of lianas, shrubs, or tuberous herbs with peculiar zygomorphic flowers that are presumably adapted to fly pollination. They grow mainly in tropical and subtropical regions with some species thriving in temperate regions (Kelly *et al*. 2003). In China, the genus is represented by about 48 species, 36 of which are assumed to be endemic (Hwang *et al*. 2003, Liu *et al*. 2009, Xu *et al*. 2011). During a botanical expedition to the limestone areas of Guangxi in southern China in March 2011, we found a peculiar *Aristolochia*, and subsequently found four more populations of it in flower. Careful studies of these plants and checking against the relevant literature indicated that the specimens represented an undescribed species of *Aristolochia*.

Aristolochia huanjiangensis Yan Liu & L. Wu, *sp. nova* (Figs. 1 and 2)

TYPE: China. Guangxi: Huanjiang County, Mulun National Natural Reserve, under dense forests on limestone hill slopes, alt. 700 m a.s.l., 28. Feb. 2011 *W. B. Xu & L. Wu 11102* (holotype IBK; isotype PE).

ETYMOLOGY: The specific epithet is derived from the type locality, Huanjiang County, Guangxi.

Climbing shrubs. Stems slightly complanate, striate, sparsely villous, glabrous when old. Leaves with petiole 4–5 cm, glabrous; leaf blade narrowly ovate to ovate-oblong, 11–15 × 6–10 cm, thin and leathery, abaxial side with sparse, brown or gray pubescence, adaxially glabrous, margin entire, veins pinnate, 4 to 5 pairs, base cordate, sinus 1–1.5 cm × ca. 6 mm, apex acuminate. Flowers often on old woody stems, solitary. Pedicel 1–1.5 cm, pendulous, with dense white pubescence; bractlets ovate-oblong, 2–3 mm, densely white-pubescent. Calyx purple, limb yellow with purple nervules; tube horseshoe-shaped, abaxially sparsely villous; basal portion of tube ca. 25 × ca. 9 mm, inside densely pubescent; limb subrotund-peltate, 3–4 cm in diam., shallowly 3-lobed; lobes equal, broadly deltoid; throat suborbicular, ca. 8 mm. Anthers oblong, ca. 2 mm, adnate in pairs to gynostemium base, opposite to lobe. Ovary

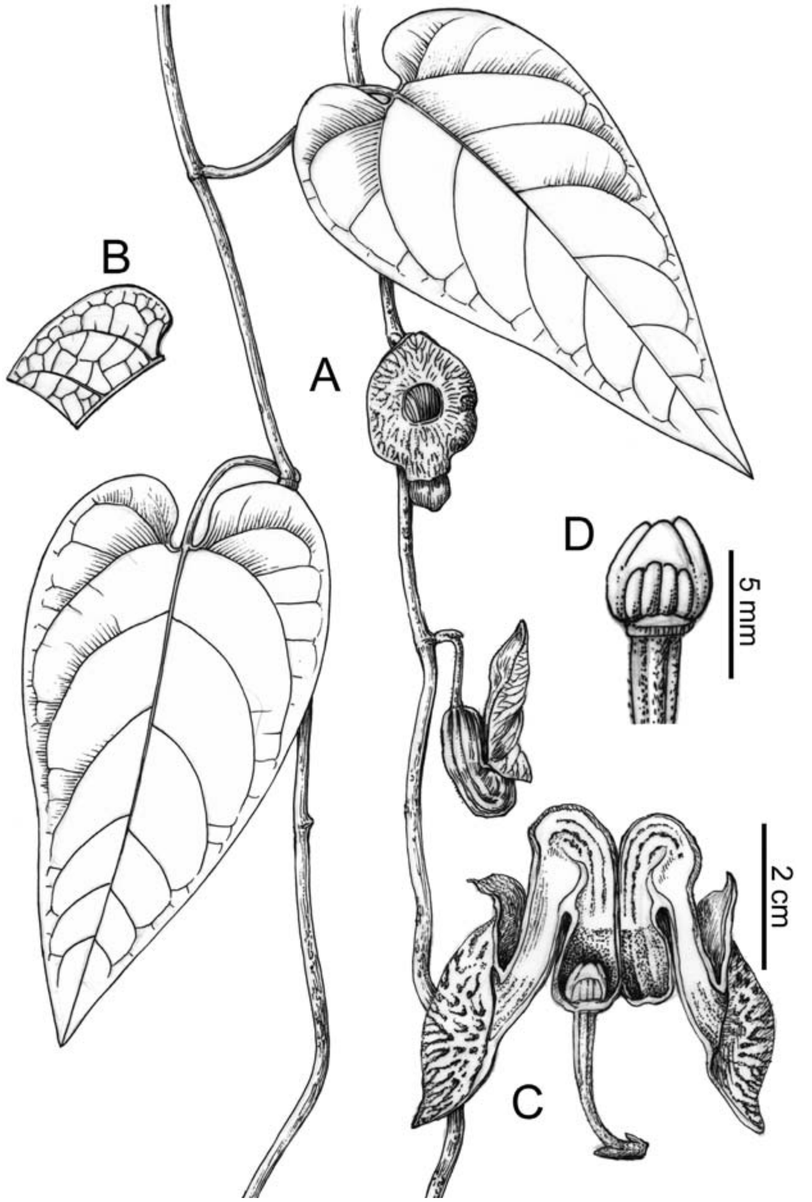

Fig. 1. *Aristolochia huanjiangensis* (from the holotype, drawn by W. H. Lin). — **A**: Habit. — **B**: Enlarged part of leaf blade abaxial surface. — **C**: Flower opened showing the inside structure. — **D**: Anthers and gynostemium.

6-loculed, with dense white pubescence. Gynostemium 3-lobed. Capsule not seen. Flowering from February to March.

Mulun National Nature Reserve is located in the north of Guangxi, and is covered with well-preserved Karst forests, dominated by the families Lauraceae, Fagaceae, Euphorbiaceae, Ebenaceae, and Myrtaceae. To date, 906 plant species belonging to 528 genera and 175 families have been reported from this 158 km^2 area (Zheng *et al*. 1999). Although *A. huanjiangensis* grows in this well-protected area, only five populations are known and fewer than five individuals were seen in each population. Climbing shrubs are traditionally used for medicinal purposes in China. The species therefore needs to be monitored carefully.

Aristolochia huanjiangensis is placed in subgen. *Siphisia*. The species in this group generally have characters such as calyx tube horseshoe-shaped or geniculately curved at middle, limb often 2- or 3-lobed, gynostemium 3-lobed,

Fig. 2. *Aristolochia huanjiangensis*. — **A**: Habit. — **B**: Flower in face view. — **C**: Flower in side view. — **D**: Flower opened. Scales 1 cm.

anthers oblong, adnate in pairs opposite the gynostemium lobes, and capsule usually dehiscing basipetally (Cheng *et al*. 1988). It is similar to *A. scytophylla* (Hwang *et al*. 1981) by having a similar leaf shape, and to *A. fangchi* (Chow *et al*. 1975) by sharing the same flower shape. However, it can be distinguished from the latter two easily by several characters (*see* Appendix).

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Appendix. Morphological comparison of *Aristolochia huanjiangensis*, *A. scytophylla* and *A. fangchi*.

	A. huanjiangensis	*A. scytophylla*	*A. fangchi*
Stems	sparsely villous, glabrous when old	densely tomentose	villous
Leaf blade	narrowly ovate to ovate-oblong, base cordate, abaxial side with sparse brown or gray pubescence	narrowly ovate to ovate-oblong, base cordate, abaxial side with dense brown or gray pubescence	oblong to ovate-oblong, base rounded, abaxial side with dense white villi
Flowers	solitary	3–5-flowered	2–4-flowered
Pedicel	1–1.5 cm	ca. 1.5 cm	5–7 cm
Calyx limb	purple, abaxially sparsely villous, adaxially smooth, throat suborbicular, yellow	purple-red, abaxial side with dense white villi, adaxially papillate near base, throat suborbicular	purple with yellow blotches, abaxially densely villous, adaxially smooth, throat semicircular, white
Calyx tube	horseshoe-shaped	geniculately curved	horseshoe-shaped
Gynostemium	lobes smooth	lobes papillate	lobes papillate
Flowering	February–March	June–April	July–September