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Arisaema danzhuense (Araceae), a New Species from the Gaoligong Mountains, Northwestern Yunnan, China

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ABSTRACT. *Arisaema danzhuense* T. S. Yi & H. Li (sect. *Trisecta*) is described as a new species from the Gaoligong Mountains, northwestern Yunnan, China. It is closely related to *A. propinquum* Schott but differs in having a greenish spathe with white stripes and a round apex with an acumen 5 mm long, a greenish petiole and peduncle densely verruculose with whitish spinules, and the terminal leaflet with an acute apex.

Key words: Araceae, *Arisaema*, China.

The genus *Arisaema* Martius is a North Temperate genus comprised of about 170 species (Li, 1980; Mayo et al., 1997). There are 93 species in China (Li & Long, 1998); 35 species are distributed in the Gaoligong Mountains (Li, 2000). The genus has been divided into 10 or 13 sections (Hara, 1971; Murata, 1984). Section *Trisecta* Schott is one of the largest, comprising 15 species that are distributed in Burma, the Himalayas, and western China (Murata, 1984). The section can be distinguished from the other sections by having anthers dehiscing by a horseshoe-shaped slit and the base part of appendix swelling into a disk. *Arisaema danzhuense* is easily recognized as a member of this section with these characters.

Rising between the great Salween and Irrawaddy Rivers, the Gaoligong Mountains lie in the border area between southwestern China and northern Myanmar. There are 4303 species of seed plants recorded in the Chinese part of the Gaoligong Mountains (Li, 2000), thus making it one of the richest biological resource areas in the world.

Arisaema danzhuense T. S. Yi & H. Li, sp. nov. TYPE: China. Yunnan: Gongshan Xian, Danzhu, 3000 m, 1 July 2000, *Li Heng, Bruce Bartholomew & Philip Thomas et al. 12101* (holotype, KUN; isotypes, E, MO). Figure 1.

Haec species *Arisaemati propinquo* Schott affinis, sed ab eo petiolo et pedunculo viridibus, verrucosis, spinulis albidis armatis, foliolorum marginibus purpureis, undulatis, spatha viridi striis albidis ornata in acumen 5 mm longum apice rotundatum desinente atque spadicis appendice viridi differt.

Perennial dioecious herb. Tuber subglobose, 1.5–5 cm diam., brown outside, bearing 5–10 tubercles 0.5–1 cm diam., easily separated from the mother tuber. Cataphylls 2 or 3, oblong-elliptic, to 20 × 5 cm, membranous, greenish. Leaf 1; petiole cylindric, 40–60 × 0.5–2.5 cm, greenish, densely verruculose with whitish spinules, sheathed in proximal 1/3; leaf blade trifoliolate; leaflets sessile or subsessile, green above with dark purple maculations, greenish below, the margins purple; midrib and lateral veins elevated beneath, verruculose with whitish spinules; terminal leaflet depressed rhombic, 15–21 × 16–20 cm, acute at the apex, broadly cuneate at the base, with 7 lateral veins per side, the connective veins 3, 1–15 mm from the margin; lateral leaflets obliquely ovate, 20–30 × 15–21 cm, acuminate at apex, broadly cuneate at the base. Peduncle 40–50 × 0.7–1.2 cm, emerging from petiole sheath, greenish, verruculose and spinulescent. Spathe greenish with white stripes, pale green inside with about 20 longitudinal laminae 1–3 mm wide; tube cylindric, 5 × 3 cm, the throat margins slightly recurved; limb oblong, incurved, 8 × 2–5 cm, the apex rounded with acumen 0.5 cm. Spadix unisexual. Female spadix: fertile portion cylindric, 5.5 × 0.7–1.6 cm; the flowers dense; ovary oblong-ovate, 5 × 2 mm, pale green with green stripes, the style short, the stigma white, pilose; ovules 9, subbasal, erect; appendix flagelliform, 14 cm long, the upper part filiform, tortuous, smooth, greenish, the base swollen to 6 mm diam., truncate and stipitate, the stipe 3 mm long. Male spadix: fertile portion cylindric, 3 × 0.8 cm diam.; synandria stipitate, the stipe 1 mm long; anthers 3 to 5 (mostly 4), obovate, whitish, dehiscing by a horseshoe-shaped slit; apendix as in female spadix.

Distribution. Known only from Gongshan Xian, on the east slope of the Gaoligong Mountains, northwestern Yunnan, China; 3000 m above sea level; in a meadow by a river, among shrubs on a slope.

Arisaema danzhuense is most similar to *A. propinquum* Schott, which is from southern Xizang, China, India, Nepal, Pakistan, Sikkim, and Bhutan

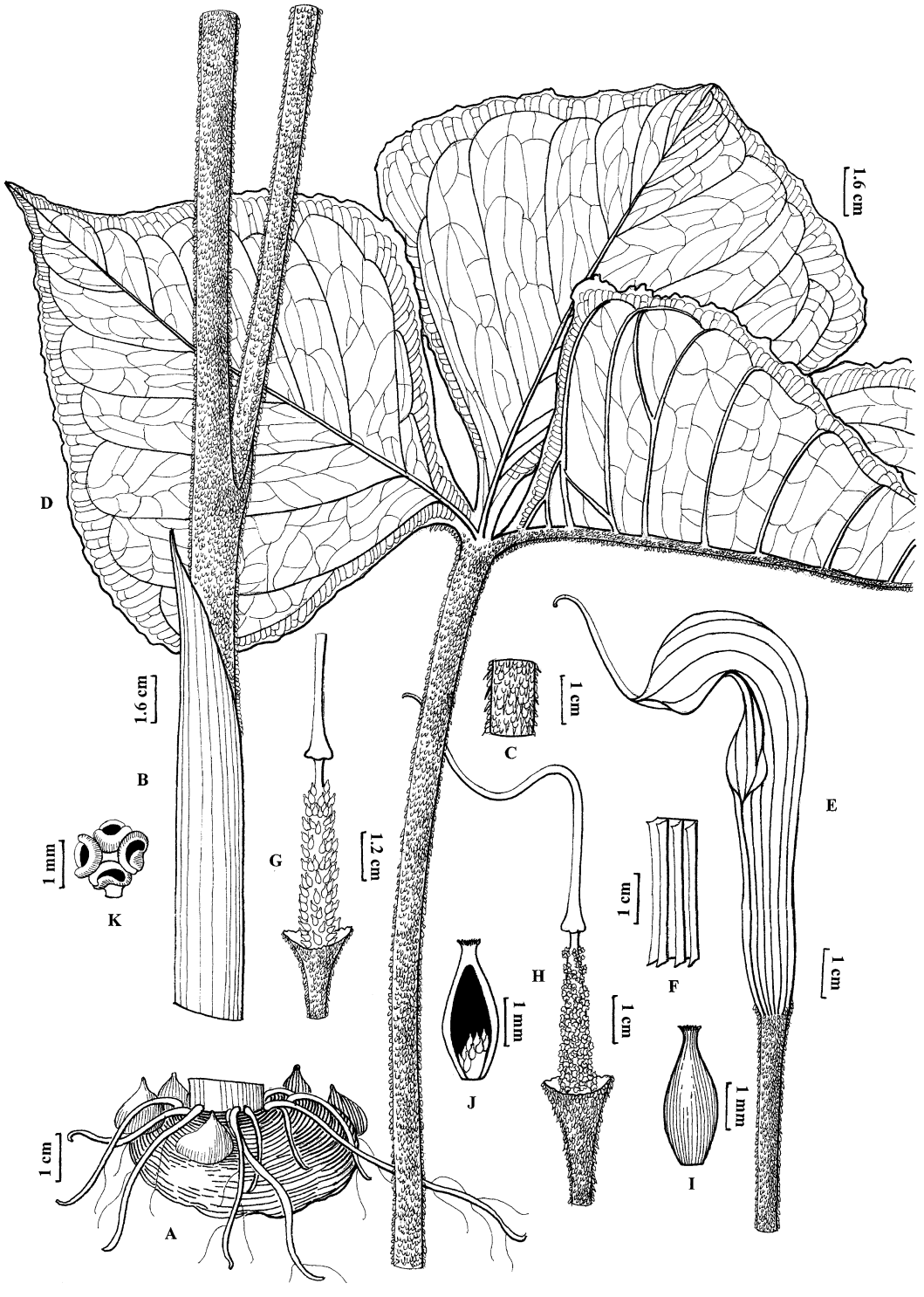

Figure 1. *Arisaema danzhuense* T. S. Yi & H. Li. —A. Tuber. —B. Part of peduncle showing cataphyll. —C. Part of peduncle showing verrucosities and spinules. —D. Leaflets. —E. Inflorescence. —F. Inner part of spathe showing laminae. —G. Female inflorescence. —H. Male inflorescence. —I. Pistil. —J. Longitudinal section of pistil showing ovules. —K. Synandrium. A–G, I, and J from *Heng, Bartholomew & Thomas et al. 12101* (female), and H, K from *Heng, Bartholomew & Thomas et al. 12102* (male). (Drawn by Wang Ling.)

(Li, 1979, 1987), in having anthers dehiscing by a horseshoe-shaped slit and the base part of the appendix swelling into a disk, and middle leaflets elliptic, ovate or rhombic, longer than wide. However, the latter species differs in having terminal leaflets with an acuminate apex, smooth petioles with small dark green or dark purple longitudinal stripes, a purple-spotted peduncle, and a purple spathe with whitish stripes and an acumen 2–3 cm. As species in the same section, *A. elephas* Buchet and *A. asperatum* N. E. Brown are similar to *A. danzhuense* in their peduncle and stem bearing verrucosities or spines, but the two species differ in having an obcordate or obdeltate middle leaflet, a dark purple spathe with whitish green stripes, and an acuminate spathe apex.

This new species is named after its type locality.

Paratypes. CHINA. **Yunnan:** Gongshan Xian, Danzhu, 3000 m, 1 July 2000, *Li Heng, Bruce Bartholomew & Philip Thomas et al. 12102* (KUN, E, MO).

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