



Aspidistra brachypetala (Asparagaceae), a new species from Guangxi, China

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ABSTRACT: *Aspidistra brachypetala* C.R. Lin & B. Pan (Asparagaceae) is described and illustrated from Guangxi Zhuang Autonomous Region, China. It is similar to *A. urceolata* Wang et Lang in perianth urceolate and the same form and size of leaf, but differs by the shoot upright, perianth tube 10–14 mm long, 9–11 mm in diam., stamens inserted in the middle of tube, pistil mushroom shaped, stigma 8–10 mm in diam.. This new species is currently known from Shiwandashan Natural Nature Reserve, which lies in southern Guangxi.

KEY WORDS: Asparagaceae, *Aspidistra brachypetala*, China, Guangxi, new species, taxonomy.

INTRODUCTION

In the course of investigating Extremely Small Population of Wild Plant of Guangxi, China in 2017, we discovered an unusual *Aspidistra* Ker-Gawler (1822: 628) with shoot erect in Shiwandashan Natural Nature Reserve, Guangxi. The plant was brought to the Guangxi Institute of Botany, Guilin. In the next year it flowered with urceolate perianth, making possible a detailed description based on living plant material. Consultation of herbarium material and careful comparison with all *Aspidistra* species hitherto known from China and neighbouring countries (Averyanov and Tillich, 2013; Bogner and Arnautov, 2004; Lang, 1981, Li and Lin, 2016; Liang and Tamura, 2000; Lin *et al.*, 2013, 2019; Liu *et al.*; 2011, Pan *et al.*, 2019; Tillich, 2005, 2014; Tillich and Averyanov, 2008; Vislobokov *et al.*, 2016, 2019; Wu *et al.*, 2012), we conclude that the plant is a new species which is described below.

TAXONOMIC TREATMENT

Aspidistra brachypetala C.R. Lin & B. Pan, *sp. nov.*

短瓣蜘蛛抱蛋 Figs. 1 & 2

Type: CHINA. Guangxi: Fangchenggang City, Shiwandashan Natural Nature Reserve, rare, alt. ca. 560 m, 10 November 2017, Bo Pan P955. Specimens pressed from plants introduced to Guilin Botanical Garden, Guilin City, Yanshan Township, 28 March 2019, C.R. Lin 1306 (holotype IBK!; isotypes IBK!)

Herbs perennial, evergreen. Rhizome creeping, but distally vertically ascending 4–6 cm high, the upright shoot is supported by stilt roots, stem subterete, 5–7 mm thick, internodes unequal, 5–10 mm long. Vaginal leaves 3–5, green with purple-brown spots, 2–6 cm long, becoming fibrous remnants covering the stem. Leaves solitary, 8–15 mm apart; leaf blade usually oblong-elliptic to lanceolate, 14–20 cm long, 2.8–5.5 cm wide,

green, base cuneate, gradually narrowed into petiole, inequilateral, apex gradually acuminate, with 5–7 secondary veins at both sides of the midvein, the midvein and the secondary veins somewhat prominent at lower surface, margin entire; petiole slightly stiff, 5–14 cm long, ca. 2 mm thick, somewhat thicker towards the base, adaxially sulcate. Peduncle 1.5–3 cm long, bracts 4–6, two of them adnate to flower base, broadly ovate, 7–10 mm long, 8–11 mm wide, green with purple spots, apex obtuse. Flowers solitary; perianth urceolate, contracted at mouth, fleshy, abaxially bluish white densely with purplish red spots to purplish red, 13–15 mm long, shallowly 6-lobed apically; lobes subequal, triangular-ovate, small, 2–3 mm long and 2–3 mm wide at base, upright or slightly curved outward, adaxially bluish white slightly with purplish red spots, sometimes purplish red, papillose at base, and with slightly erose margin; tube adaxially dark red, 10–14 mm high, 9–11 mm in diam., the opening reducing to 3–4 mm. Stamens 6, opposite to lobes, inserted in the middle of perianth tube, filaments horizontal, dark red, ca. 1 mm long, anthers yellow, broadly elliptic, ca. 1 mm long, 1–1.5 mm wide, distally reaching or just above level of stigma. Pistil mushroom shaped, dark red, 6–7 mm long, ovary indistinct, style cylindric, 3.5–4.5 mm long, 2–3 mm in diam., stigma peltate, enlarged, 8–10 mm in diam., upper surface matt and verrucose, slightly convex in center, margin 3-lobed, lobes emarginate at apex, slightly bent upwards at margin. Flowering from March to April.

Etymology: Because the perianth lobes short and small, we give the specific epithet “brachypetala”. Chinese name is “短瓣蜘蛛抱蛋” (duǎn bàn zhī zhū bào dàn), which means the perianth lobes are short.

Distribution and ecology: *Aspidistra brachypetala* is currently only known from the type locality in Shiwandashan Natural Nature Reserve, Fangchenggang City, in southern Guangxi Zhuang Autonomous Region, China. It grows under ever-green broad-leaved forest.

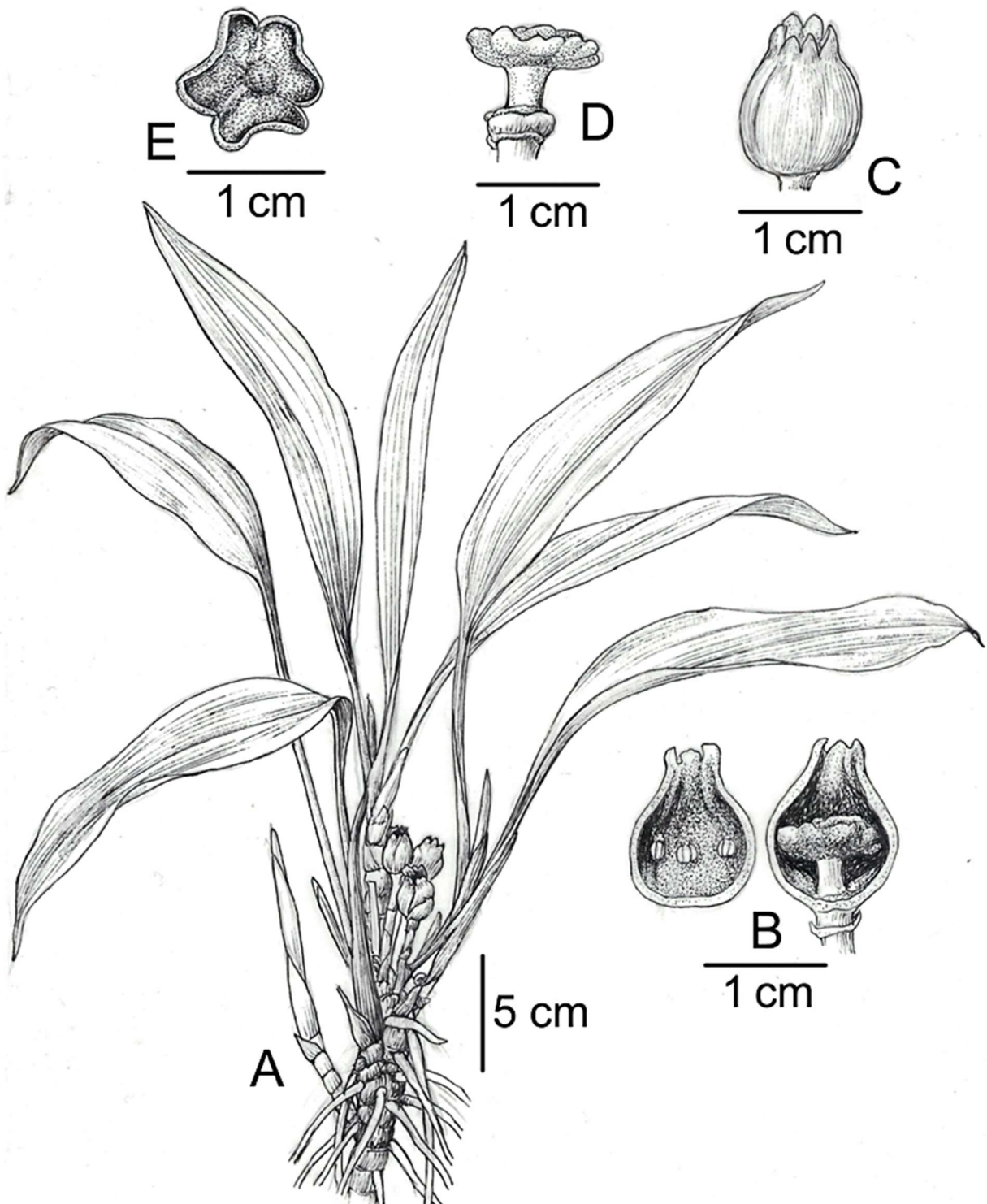


Fig. 1. *Aspidistra brachypetala* sp. nov.: A, flowering plants; B, perianth, dissected to show stamens and pistil; C, flower in side view; D, pistil; E, stigma, adaxial view.

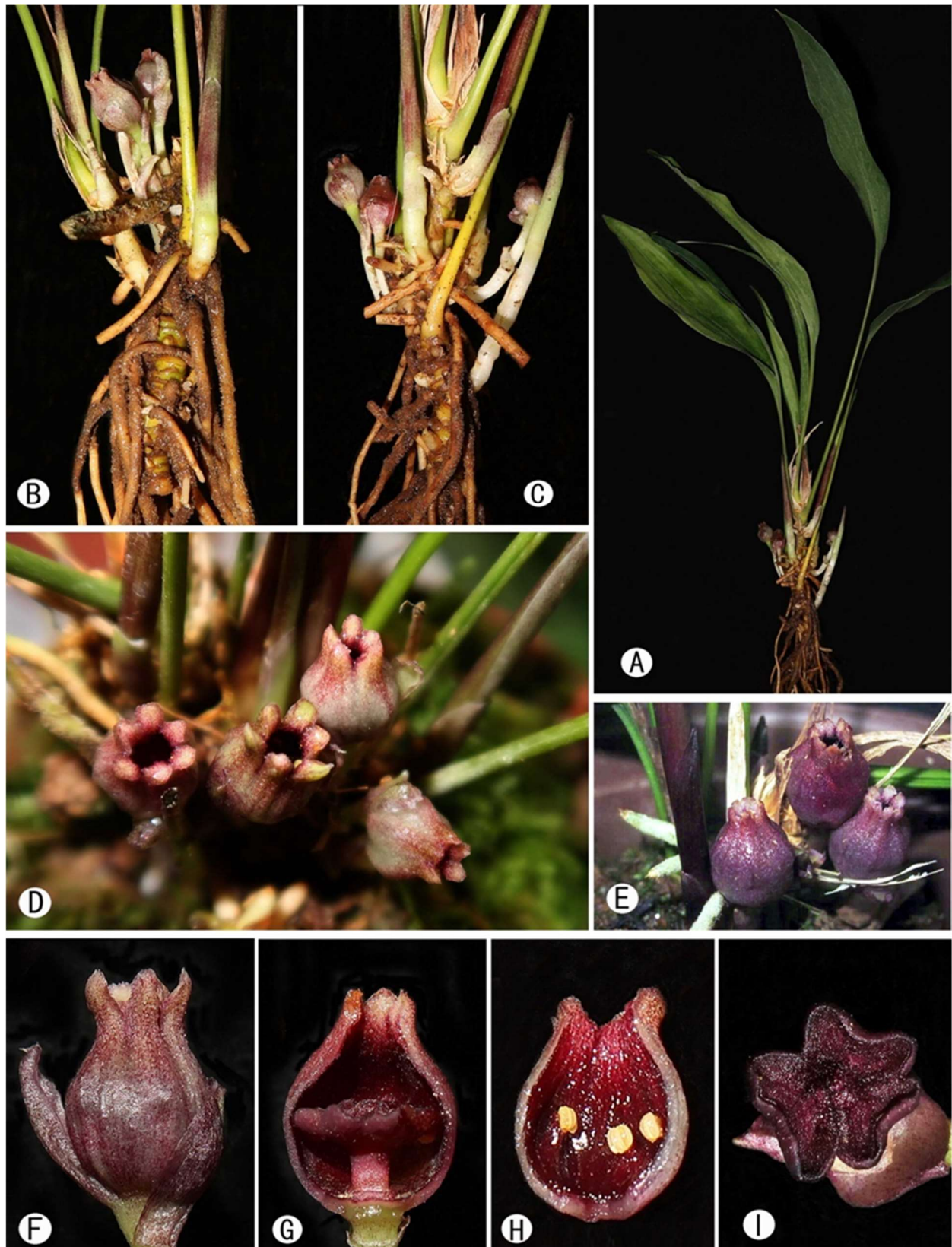


Fig. 2. *Aspidistra brachypetala* sp. nov.: **A.** flowering plants; **B–C.** distal part of the rhizome ascending to vertical orientation; **D–E.** flowers; **F.** flower in side view; **G.** perianth, dissected opened to show pistil; **H.** perianth, dissected opened to show stamens; **I.** stigma, adaxial view.

**Table 1.** Morphological comparison of *Aspidistra brachypetala* sp. nov. with *A. urceolata*, *A. globosa* and *A. micrantha*

	<i>Aspidistra brachypetala</i>	<i>A. urceolata</i>	<i>A. micrantha</i>	<i>A. globosa</i>
shoot	upright	creeping	creeping	erect
Leaf	14–20×2.8–5.5 cm	20–25×3–4 cm	15–19×4.3–6.2 cm	10–19×2–6 cm
Petiole	5–14 cm	6–16 cm	17–27 cm	5.5–11 cm
Perianth colour	with purplish red spots to purplish red outside, dark red inside	with purple spots	white to yellow	whitish green outside, purple inside
Tube	urceolate, 10–14×9–11 mm	urceolate, 5×5 mm	globoid, 2.8–4.4×4.3–6.4 mm	globoid, 5.5–9×6.7–8.4 mm
Lobes	2–3×2–3 mm	1×1 mm	1–1.8×1.5–2 mm	1×1.3–2 mm
Stamens	in the middle of tube	in the bottom of tube	in the middle of tube	in the middle of tube
Pistil	mushroom shaped, 6–7 mm long	clubshaped, 2 mm long	clubshaped, 2–3 mm long	clubshaped, 4.1–5 mm long
Stigma	peltate, ϕ 8–10 mm, dark red, 3-lobed at margin	conical, ϕ 1.5 mm, 3-lobed at margin	diskshaped, ϕ 1.7–2.7 mm, white with purple mottling, hexagonal	widely obconical, ϕ 5–6 mm, purple, with ridges at margin

Similar species: *Aspidistra brachypetala* resembles *A. urceolata* Wang et Lang (1981:381) in the form and size of leaf, perianth urceolate, but shoot erect (vs. creeping), differs by perianth tube 10–14×9–11 mm (vs. 5×5 mm), stamens inserted in the middle of perianth tube (vs. inserted in the bottom of tube), pistil mushroom shaped (vs. clubshaped), stigma ϕ 8–10 mm (vs. ϕ 1.5 mm). *Aspidistra brachypetala* is also similar to *A. micrantha* Vislobokov & Nuraliev (2019: 289) and *A. globosa* Vislobokov & Nuraliev (2016:46), the detailed comparison of the four species is presented in Table 1.

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