



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

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The genus *Aspidistra* Ker-Gawler (1822: 628) (Asparagaceae) has its main centre of diversity in China and Vietnam. In recent years, many new species were discovered and described from that region, increasing the total number of species to over 120. In China, *Aspidistra* includes over 80 species and is mainly distributed in the southwest part of the country, especially in Guangxi Zhuang Autonomous Region (60 species) (Liang & Tamura 2000, Li 2004, Tillich 2005, 2008, Liu *et al.* 2011, Tillich *et al.* 2013, He *et al.* 2013, Lin *et al.* 2013a–b, 2014, Meng *et al.* 2014). When investigating medicinal plants in Qingshitan Natural Reserve, Lantian town, Lingchuan County, northeastern Guangxi in 2013, we collected an unusual *Aspidistra* specimen with linear leaves and urceolar perigone. In March 2014, we returned to the place for further observations of the species, the plant flowered regularly. After consulting herbarium specimens and relevant literature on *Aspidistra*, it became apparent that we had a new species at hand.

Description of the new species

Aspidistra lingchuanensis C.R.Lin & L.F.Guo, *sp. nov.* (Figs. 1, 2)

Type:—CHINA. Guangxi Zhuang Autonomous Region, Lingchuan County, Lantian town, 25°38'9"N, 110°10'7"E, alt. 287 m, 22 March 2013, *Lingchuan traditional Chinese medicine resources Investigation Team 450323130322085* (holotype, IBK!; isotype, IBK!)

Herbs perennial, evergreen, rhizomatous. Rhizome creeping, subterete, 6–8 mm thick, covered with scales, nodes dense. Vaginal leaves 6–8, 2–15 cm long, pale green, enveloping base of petiole, becoming black-brown when dry. Leaves 3–4-tufted; petiole 18–23 cm long, 2–3 mm thick, adaxially sulcate; leaf blade linear, 60–82 cm long, 1.8–3 cm wide, dark green, basally gradually tapering to petiole, apex acuminate, midvein distinct, margin serrulate near apex. Peduncle decumbent or declining, 1.5–4 cm long, with 5–6 bracts, distal 3 or 4 close to flower; the two bracts at the base of perigone broadly ovate, white with purplish red spots, ca. 10 mm long, 15–18 mm wide, apex subobtusate. Flowers numerous, densely arranged; perigone urceolar, fleshy, 6-lobed apically; lobes slightly excurved, white with numerous small purplish red spots, broadly ovate, 6–8 mm long and wide at base, distinctly 2-whorled, margin erose, subobtusate at apex; tube 11–13 mm long, greatest diameter 20–22 mm, the opening reduced to 8–9 mm in diam., abaxially white and with purplish red spots with increasing density from base to top, adaxially blackish purple, the mouth of the tube densely papillate, with 12 keels running down to the middle of the tube. Stamens 6, opposite to lobes, inserted at ca. 2 mm from the base of perigone tube, significantly lower than stigma; anther pale yellow, subglobose, ca. 2 mm long and wide, filaments ca. 1 mm long. Pistil mushroom-shaped, ca. 7 mm long, ovary indistinct, style cylindrical, 2–3 mm long, stigma peltate, rounded hexagon, ca. 15 mm in diam., cream-white, upper surface glabrous, the central part slightly convex, its margin purplish red and slightly 3-lobed, slightly bent upwards. Flowering from March to April.

Distribution and ecology:—This new species is currently known only from Qingshitan Natural Reserve, Lantian town, Lingchuan County in northern Guangxi, China. It grows under evergreen broad-leaved forest, in the river valley at 240–350 m altitude.

Taxonomic relationships:—*Aspidistra lingchuanensis* is similar to *A. caespitosa* Pei (1939: 101) in the leaves linear and perigone urceolar, but differs by the perigone lobes broadly ovate, distinctly 2-whorled, margin erose; the mouth of the tube adaxially densely papillate, and with keels running down to the middle of the tube; stigma margin slightly bent upwards. *Aspidistra lingchuanensis* is also similar to *A. minutiflora* Stapf (1903: 113), however, the

latter species differs in its flower smaller, perigone lobes monocyclic and margin entire, stigma upper surface purplish and with 3 radial, bifurcate lines in center. Detailed comparison of the three species is presented in Table 1.

TABLE 1. Morphological comparison of *Aspidistra lingchuanensis* with *A. caespitosa* and *A. minutiflora*.

♂	<i>A. lingchuanensis</i>	<i>A. caespitosa</i>	<i>A. minutiflora</i>
Leaf			
Size (cm)	60–82 × 1.8–3	52–80 × 1–1.5	26–46 × 1–2.5
Petiole (cm)	18–23	7–17	4–21
Margin	serrulate near apex	entire	serrulate near apex
Peduncle			
Length (cm)	1.5–4	3.5–11	1–2.5
Lobes			
Size (mm)	broadly ovate, 6–8 × 6–8	ovate-lanceolate, 10 × 4	deltoid, 1–2 × 1–1.5
Form	slightly excurved, 2-whorled	suberect, monocyclic	erect, monocyclic
Upper surface	flat	thickened	flat
Margin	erose	entire	entire
Tube			
Size (mm)	11–13 × 20–22	10–12 × 16–20	4.5–5 × 4–6
Papillas	the mouth of the tube adaxially papillate	without papillas	without papillas
Stigma			
Shape	peltate, ♂ 15 mm	umbraculiform, ♂ 12 mm	peltate, ♂ 1.5–2.5 mm
Upper surface	glabrous, the central part slightly convex	with 3 radial lines	with 3 radial, bifurcate lines in center
Margin	slightly bent upwards	bent downwards	flat
Distribution	China: Guangxi; 240–350 m altitude	China: Sichuan; 500–1100 m altitude	China: Hong Kong, Guangdong, Guangxi, Hainan, Hunan; Vietnam: Lam Dong, Thai Nguyen; 250–850 m altitude

Additional specimen studied (paratype):—CHINA. Guangxi Zhuang Autonomous Region, Lingchuan County, Lantian town, 25°38'9"N, 110°10'7"E, alt. 287 m, 26 March 2014, *Lun-Fa Guo 1401* (paratype, IBK!).

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