# *Aspidistra longituba* (Ruscaceae), a new species from Guangxi, China

## Chun-Rui Lin & Yan Liu\*

Guangxi Institute of Botany, Guangxi Zhuangzu Autonomous Region and the Chinese Academy of Sciences, Guilin, 541006, China (\*corresponding author's e-mail: gxibly@163.com)

Received 7 Apr. 2010, revised version received 19 May 2010, accepted 10 June 2010

Lin, C. R. & Liu, Y. 2011: *Aspidistra longituba* (Ruscaceae), a new species from Guangxi, China. – *Ann. Bot. Fennici* 48: 519–521.

Aspidistra longituba Yan Liu & C.R. Lin (Ruscaceae) is described and illustrated as a new species from the limestone areas in the Guangxi Zhuangzu Autonomous Region, China. The new species is similar to *A. claviformis*, but differs in its longer perianth tube that is up to 1.6–2 cm, suberect or incurved lobes with basal appendages, and in the articulate style base.

The genus *Aspidistra* (Ruscaceae), including about 100 species, mainly occurs in China and Vietnam. Over 60 species occur in the south and southwest of China (Liang & Tamura 2000, Li 2004, Tillich 2008).

In May 2007, during the course of investigating the limestone plants in southwestern Guangxi Zhuangzu Autonomous Region, China, near the border with northern Vietnam, we collected an unusual Aspidistra specimen in the Napo County. The plant was brought to the Guilin Botanical Garden for cultivation and study. In the following two years, it flowered regularly, making possible a detailed description based on living plant material. Upon careful comparison with all species hitherto known in Aspidistra (Lang et al. 1999, Tang & Liu 2003, Bogner & Arnautov 2004, Brauchler & Ngoc 2005, Tillich 2005, 2006, Hou et al. 2009, Lin et al. 2009, 2010, Xu et al. 2010), it turned out that the plant is a distinct new species, which is described and illustrated below.

# *Aspidistra longituba* Yan Liu & C.R. Lin, *sp. nova* (Fig. 1)

Haec species A. claviformis affinis, a perianthii tubo longiore usque ad 1.6–2 cm longo, lobis ejus parvis, non reflexis basi appendiculatis, stylo articulato differt.

TYPE: China. Guangxi Zhuangzu Autonomous Region, Napo County, Chengxiang Township, alt. 1000 m, on limestone in a valley, 23.V.2007 *Yan Liu L1483* (holotype IBK; isotype IBK).

ETYMOLOGY: The specific epithet 'longituba' is derived from the long tubular perianth.

Herbs perennial, evergreen, rhizomatous. Rhizome creeping, subterete, ca. 7 mm diam., densely covered with scales, Roots numerous. Sheathing leaves 6–8, purplish red, 1–12 cm long, enveloping base of petiole, becoming black-brown when dry. Leaves solitary, 1–2 cm apart; petiole stiff upright, 14–33 cm long, 2–4 mm thick, adaxially sulcate; leaf blade oblong-



Fig. 1. Aspidistra longituba (from the holotype, drawn by Shun-Qing He). - A: Flowering plant. - B: Leaf blade. - C: Flower. - D: Flower with half of perianth removed showing stamens and pistil. - E: Internal view of part of perianth. - F: Pistil. - G: Stigma apical view.

lanceolate to narrow elliptic, 18–29 cm long, 4.5–9 cm wide, green with small yellow-white spots, base cuneate, gradually tapered to petiole, inequilateral, apex long acuminate, margin entire. Peduncle erect or declining, purplish red, 1–4.5 cm long, with 4–6 bracts, bracts broadly ovate to ovate-lanceolate, pale purple, gradually wider from base to top of peduncle, the uppermost adjacent to perianth 1.6–2.4 cm long, 0.8–1.2 cm wide, apex acuminate. Flowers solitary; perianth tubular, 2–2.4 cm long, 6-lobed apically; tube 1.6–2 cm long, 5–7 mm in diam., outside white or sometimes speckled with purple, inside purple; lobes suberect or incurved, unequal in shape, ovate to broadly ovate, 3–4 mm long and 4–6 mm wide, white and sometimes speckled with purplish-red, apex rounded, with appendages at base. Stamens 6, subsessile, inserted at upper end of lower half of perianth tube, anthers yellow, lineate, 5–7 mm long, ca. 1.5 mm wide, distally reaching or just above level of stigma; pistil purplish red, clavate, 1–1.2 cm long, 2–3 mm in diam., ovary inconspicuous, style base articulate, stigma scarcely wider than style, slightly concave and white adaxially, shallowly 3-lobed at margin, lobes unequal. Flowering from April to May.

HABITAT: On shaded rocky limestone slopes in broad-leaved forests.

	A. longituba	A. claviformis
Leaf blade	$18-29 \times 4.5-9$ cm	18–30 $ imes$ 5.5–8.5 cm
Petiole	14–33 cm long	(15–)25–50 cm long
Peduncle	1–4.5 cm long	1–3.5 cm long
Perianth	20–24 mm long, tube 16–20 mm long, diam. 5–7 mm, outside white or sometimes speckled with purple, inside purple lobes 3–4 × 4–6 mm, broadly ovate, suberect or	9–12 mm long, tube 8–12 mm long, diam. 6–7 mm, both sides yellowish white, lobes 4–5 $\times$ 3–4 mm, oblong, reflexed, no appendages at base
	incurved, with appendages at base	
Stamens	inserted at upper end of lower half of perianth	inserted in upper 1/3 of perianth tube, anthers ca. 5 mm
	tube, anthers 5–7 mm long, distally reaching or just above level of stigma	long, distally just below level of stigma
Pistil	10-12 mm long, style base articulate	8–9 mm long, style not articulate

Table 1. Morphological comparison between Aspidistra longituba and	A. claviformi	s.
--	---------------	----

DISTRIBUTION: China. Guangxi Zhuangzu Autonomous Region, Napo County, Chengxiang Township.

ADDITIONAL SPECIMEN EXAMINED (paratype): China. Guangxi Zhuangzu Autonomous Region, Guilin City, Yanshan Township, introduced by Yan Liu from the type locality, cultivated, 18.V.2009 *Chun-Rui Lin 017* (IBK).

Aspidistra longituba is similar to A. claviformis (cf. Wan 1984), but differs e.g. in its longer perianth tube that is up to 1.6–2 cm, suberect or incurved lobes with basal appendages, and in the articulate style base (see Table 1).

#### Acknowledgements

The authors are grateful to Prof. Fa-Nan Wei (IBK) for the Latin diagnosis. We also thank Mr. Shun-Qing He (IBK) for the drawing. This study was supported by 'Western Program for Fostering Personal Ability', CAS (2007) and 'Knowledge Innovation Project' of the Chinese Academy of Sciences, Grant no. KSCX2-YW-Z-0912 to Yan Liu (IBK).

### References

- Bogner, J. & Arnautov, N. N. 2004: Aspidistra locii (Convallariaceae), an unusual, new species from Vietnam. — Willdenowia 34: 203–208.
- Brauchler, C. & Ngoc, L. H. 2005: Aspidistra renatae (Ruscaceae), a new species from central Vietnam. — Blumea 50: 527–529.
- Hou, M. F., Liu, Y., Kono, Y. & Peng, C.-I. 2009: Aspidis-

*tra daxinensis* (Ruscaceae), a new species from limestone areas in Guangxi, China. — *Botanical Studies* 50: 371–378.

- Lang, K. Y., Li, G. Z., Liu, Y., Wei, Y. G. & Wang, R. X. 1999: [Taxonomic and phytogeographic studies on the genus Aspidistra Ker-Gawl (Liliaceae) in China]. – Acta Phytotaxonomica Sinica 37: 468–508. [In Chinese].
- Li, G. Z. 2004: [*The genus Aspidistra*]. Guangxi Science & Technology Publishing House, Nanning. [In Chinese].
- Liang, S. Y. & Tamura, M. N. 2000: Aspidistra. In: Wu, Z. Y. & Raven, P. H. (eds.), Flora of China, vol. 24: 240–250. Science Press, Beijing & Missouri Botanical Garden Press, St. Louis.
- Lin, C. R., Liang, Y. Y. & Liu, Y. 2009: Aspidistra bamaensis (Ruscaceae), a new species from Guangxi, China. — Annales Botanici Fennici 46: 416–418.
- Lin, C. R., Peng, C.-I., Kono, Y. & Liu, Y. 2010: Aspidistra obconica (Ruscaceae), a new species from limestone areas in Guangxi, China. — Botanical Studies 51: 263–268.
- Tang, S. C. & Liu, Y. 2003: Aspidistra guangxiensis (Convallariaceae), a new species from China. — Novon 13: 480–482.
- Tillich, H. J. 2005: A key for Aspidistra (Ruscaceae), including fifteen new species from Vietnam. — Feddes Repertorium 116: 313–338.
- Tillich, H. J. 2006: Four new species in Aspidistra Ker-Gawl. (Ruscaceae) from China, Vietnam and Japan. — Feddes Repertorium 117: 139–145.
- Tillich, H. J. 2008: An updated and improved determination key for Aspidistra Ker-Gawl. (Ruscaceae, Monocotyledons). – Feddes Repertorium 119: 449–462.
- Wan, Y. 1984: [New species of Liliaceae from Guangxi]. — Bulletin of Botanical Research 4(4): 165–171. [In Chinese].
- Xu, W. F., He, H. Z. & Yang, L. 2010: Aspidistra chishuiensis (Ruscaceae), a new species from Guizhou, China. — Annales Botanici Fennici 47: 118–120.