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Aspidistra nankunshanensis (Asparagaceae), a new species from Guangdong, China

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A new species *Aspidistra nankunshanensis* Yan Liu & C.R. Lin (Asparagaceae) from Guangdong province, China, is described and illustrated. It resembles *A. punctatoides* in the shape and size of the flowers, but differs in its adaxially yellow perianth, yellow pistil, and stigma upper surface with four inconspicuous radial lines in the center.

Aspidistra has its main centre of diversity in China and Vietnam. Recently many new species were discovered and described from that region, increasing the total number of species to over 100. In China, *Aspidistra* includes over 75 species and is mainly distributed in the southwest part of the country, especially in Guangxi (51 species), Sichuan (11), Guizhou (9), Yunnan (5) and Guangdong (5) (Liang & Tamura 2000, Li 2004, Tillich 2005, 2006, 2008, Tillich *et al.* 2007, Hou *et al.* 2009, Lin *et al.* 2009, 2010, 2012, Xu *et al.* 2010, He *et al.* 2011, 2011, Gao & Liu 2011, Lin & Liu 2011, Liu *et al.* 2011).

In March 2012, during our investigation of the plants in Guangdong Province, south China, we found in the Nankunshan National Forest Park an unusual *Aspidistra* specimen with fruits and buds only; however, we could not identify it without flowers. In April, we returned to the place for further observations of the species. We found the plant with yellow, bell-shaped flowers. After consulting herbarium specimens and relevant literature on *Aspidistra*, it became apparent that we had a new species at hand.

***Aspidistra nankunshanensis* Yan Liu & C.R. Lin, *sp. nova* (Figs. 1 and 2)**

TYPE: China. Guangdong Province, Longmen County, the Nankunshan National Forest Park, river valley, alt. 369 m a.s.l., 22 April 2012 Chun-rui Lin & Yan Liu 1107 (holotype IBK; isotype IBK, in flower). — PARATYPE: China. Guangdong, Longmen, the Nankunshan National Forest Park, 19 March 2012 Wan-hui Wu 035 (paratype: IBK, in fruit).

ETYMOLOGY. The specific epithet is derived from the name of the type locality, Nankunshan Mountains, Longmen County, Guangdong Province, China.

Herbs perennial, evergreen, rhizomatous. Rhizome creeping, subterete, 6–8 mm thick, covered with scales, nodes dense. Roots numerous. Vaginal leaves 5–6, purple-red, 2–12 cm long, enveloping base of petiole, becoming black-brown when dry. Leaves solitary, 1–2 cm apart; petiole stiff upright, 17–45 cm long, 2–3 mm thick, adaxially sulcate; leaf blade usually oblong-lanceolate to lanceolate, 21–31 cm long, 5–7.5 cm wide, dark green, base cuneate, gradually tapered to petiole, inequilateral, apex long acuminate, margin entire. Peduncle erect

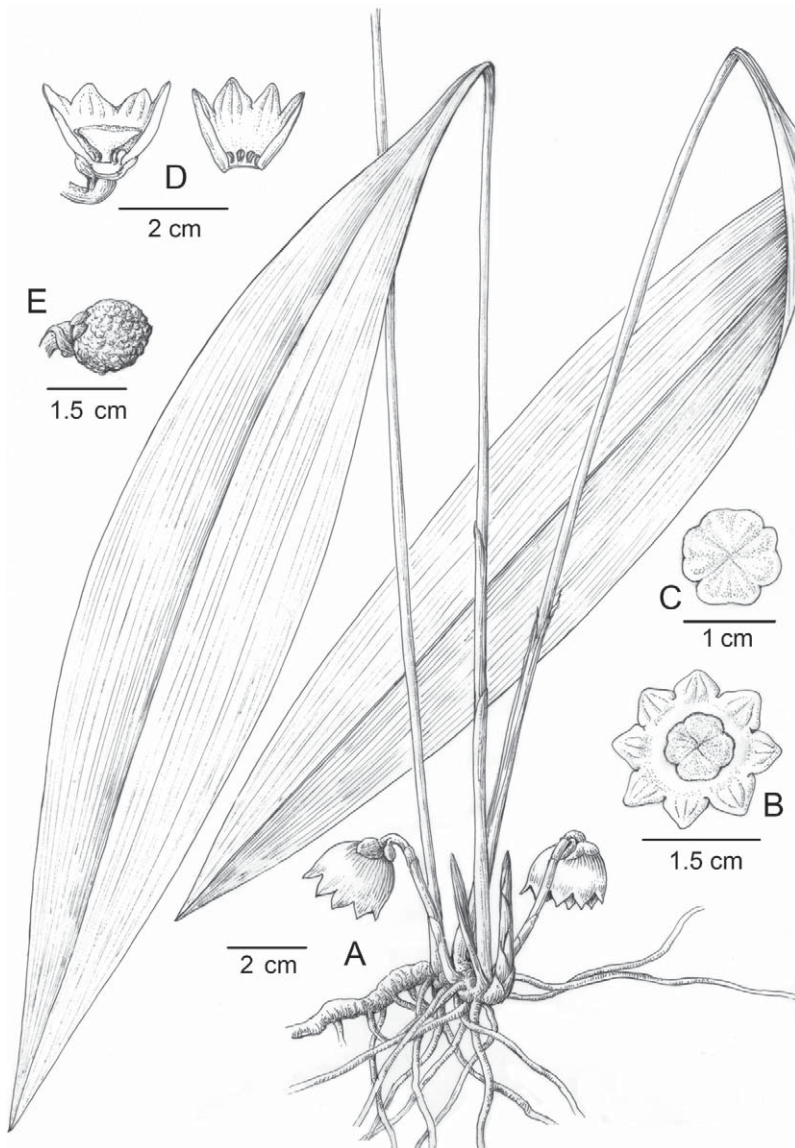


Fig. 1. *Aspidistra nankunshanensis* (drawn from the holotype by Wen-Hong Lin). — **A:** Habit. — **B:** Flower, apical view. — **C:** Stigma, adaxial view. — **D:** Perianth, dissected to show stamens and pistil. — **E:** Fruit.

or declining, purple, 5–6 cm long, with 5–6 bracts, bracts gradually wider from base to top of peduncle, upper most ones at base of perianth broadly ovate, purplish red, 6–8 mm long, 10–12 mm wide, apex obtuse. Flower solitary; perianth campanulate, 10–20 mm long, abaxially purple or yellowish purple, adaxially yellow, slightly 8-lobed apically; lobes explanate, ovate-triangular, 5–7 mm long, 5–8 mm wide at base, adaxially with 2 keels at base; tube 10–13 mm long, 15–18 mm in diam. Stamens 8, opposite to lobes, subsessile, inserted in base of perianth tube,

anthers oblong, white or pale yellow, ca. 2 mm long and 1 mm wide. Pistil yellow, 6–8 mm long, ovary inconspicuous, style short, cylindrical, ca. 1 mm in diam., stigma enlarged, obconical, 5–6 mm long, upper surface flat, ca. 10 mm in diam., with 4 inconspicuous radial lines in center, undulate 4-lobed at margin, lobes emarginate at apex. Berry subglobose, 12–15 mm in diam., tuberculate. Flowering from April to May, fruits mature in March to April next year.

Aspidistra nankunshanensis is currently known only from the Nankunshan National

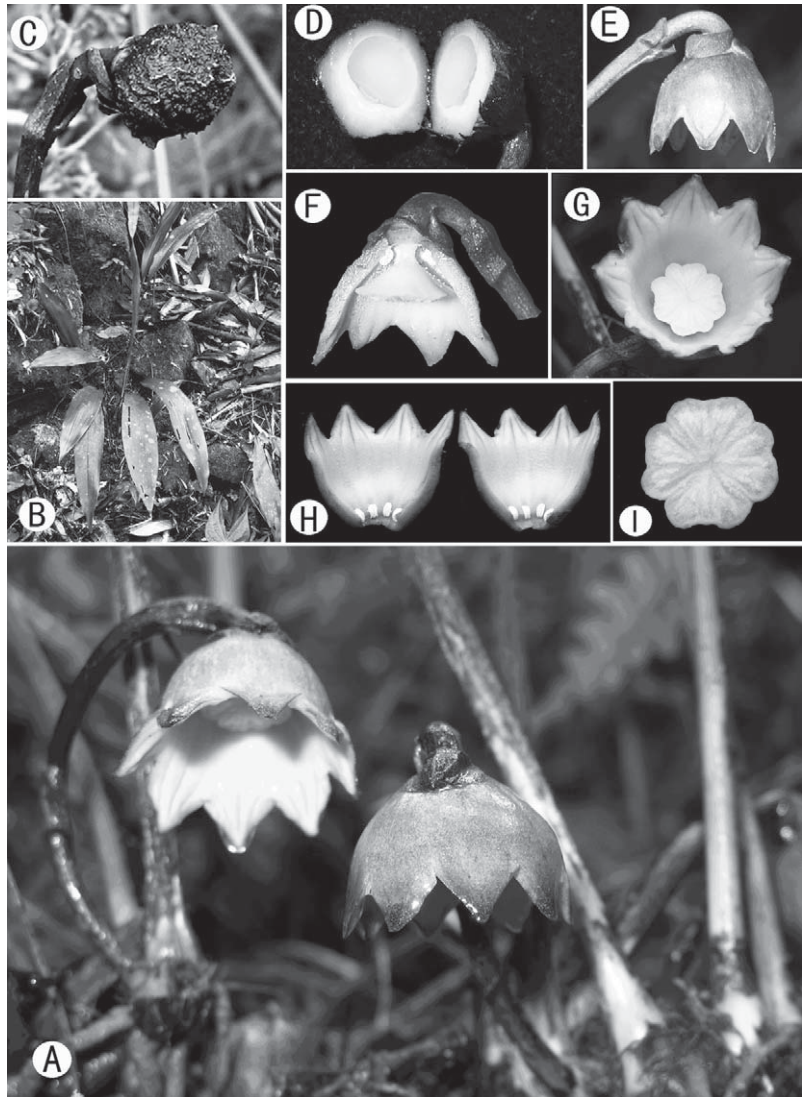


Fig. 2. *Aspidistra nankunshanensis*. — **A:** Flowers. — **B:** Habit. — **C:** Fruit. — **D:** Fruit, dissected to show seed. — **E:** Flower, side view. — **F:** Flower, half of perianth removed to show stamens and pistil. — **G:** Flower, apical view. — **H:** Perianth, dissected to show stamens. — **I:** Stigma, adaxial view.

Forest Park in south-central Guangdong, China. It grows underneath shrubbery in a river valley in evergreen broad-leaved forest, at elevations between 350–450 m a.s.l.

Aspidistra nankunshanensis is similar to *A. punctatoides* (see Lin & Liu 2011) in the shape and size of the flowers, but differs by several characters (see Appendix).

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References

- Gao, Q. & Liu, Y. 2011: *Aspidistra hezhouensis* (Ruscaceae s.l.), a new species from Guangxi, China. — *Journal of Systematics and Evolution* 49: 506.
- He, S. Z., He, K. & Wu, J. Y. 2011: *Aspidistra liboensis* (Ruscaceae), a new species from Guizhou, China. — *Annales Botanici Fennici* 48: 439–442.
- He, S. Z., Xu, W. F., Wang, Y. Y. & Sun, Q. W. 2011: A new species of *Aspidistra* (Ruscaceae) from Guizhou, China.

- *Novon* 21: 187–189.
- Hou, M. F., Liu, Y., Kono, Y. & Peng, C. I. 2009: *Aspidistra daxinensis* (Ruscaceae), a new species from limestone areas in Guangxi, China. — *Botanical Studies* 50: 371–378.
- 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. & Liu, Y. 2011: *Aspidistra punctatoides* sp. nov. (Ruscaceae) from limestone areas in Guangxi, China. — *Nordic Journal of Botany* 29: 189–193.
- 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.
- Lin, C. R., Xu, W. B., Huang, Y. S. & Liu, Y. 2012: *Aspidistra jingxiensis* (Asparagaceae), a new species from Guangxi, China. — *Annales Botanici Fennici* 49: 193–196.
- Liu, Y., Kono, Y., Lin, C. R., Xu, W. B. & Peng, C. I. 2011: *Aspidistra erecta* (Asparagaceae), a new species from limestone areas in Guangxi, China. — *Botanical Studies* 52: 363–369.
- 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., Averyanov, L. V. & Dzu, N. V. 2007: Six new species of *Aspidistra* (Ruscaceae) from northern Vietnam. — *Blumea* 52: 335–344.
- Tillich, H. J. 2008: An updated and improved determination key for *Aspidistra* Ker-Gawl. (Ruscaceae, Monocotyledons). — *Feddes Repertorium* 119: 449–462.
- Xu, W. F., He, S. Z. & Yang, L. 2010: *Aspidistra chishuiensis* (Ruscaceae), a new species from Guizhou, China. — *Annales Botanici Fennici* 47: 118–120.

Appendix. Morphological comparison between *Aspidistra nankunshanensis* and *A. punctatoides*.

	<i>A. nankunshanensis</i>	<i>A. punctatoides</i>
Leaf		
blade (cm)	21–31 × 5–7.5, base cuneate	15–27 × 4.5–7.5, base broadly cuneate to cuneate
petiole (cm)	17–45	11–26
Tube		
size	10–13 mm long, Ø 15–18 mm	5–7 mm long, Ø 10–14 mm
colour of adaxial surface	yellow	blackish purple
Lobes		
number	8	8 (sometimes 6)
colour of adaxial surface	yellow	pale yellow-green with small purple spots
size (cm)	5–7 × 5–8, shorter than tube at the base of perianth tube	5–6 × 3–4, subequal to tube in middle of perianth tube
Stamens		
Stigma		
size	5–6 mm long, Ø 10 mm	5–6 mm long, Ø 10 mm
color	yellow	white adaxially, blackish purple abaxially
adaxial surface	with 4 inconspicuous radial lines	densely papillate and with 4(3) inconspicuous, radial, bifurcate lines
Margin	Undulate, 4-lobed	4(3)-lobed
Flowers	April to May	December to February