



## *Aspidistra purpureomaculata*, a new species of *Aspidistra* (Asparagaceae) from Laos

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**ABSTRACT:** *Aspidistra purpureomaculata*, a new species from Pakse, Laos, is described and illustrated. This new species resembles *A. xuansonensis* in the shape of perianth and stigma, but can be distinguished by its perianth tube colour mainly purple and stamens in the middle of the perianth tube. *Aspidistra purpureomaculata* is also similar to *A. laongamensis* in the shape of perianth and the position of stamens but is distinguishable by perianth lobes 6, pale green or white inside, and stigma 6-lobed. Detailed description is provided.

**KEY WORDS:** Asparagaceae, *Aspidistra*, new taxon, taxonomy, Laos.

### INTRODUCTION

The genus *Aspidistra* Ker-Gawler (1822: 628) (Asparagaceae), distributed in tropical and subtropical areas of East, Southeast and South Asia, and Guangxi and Yunnan of China and northern Vietnam as the center of distribution (Li, 2004, Liang & Tamura, 2000, Tillich, 2005, 2008, 2014), encompasses more than 170 species and the number of known species has been increasing rapidly (Averyanov and Tillich, 2017, Averyanov *et al.*, 2018a, 2018b, 2019, Cai *et al.*, 2018, Huang *et al.*, 2018, Lin *et al.*, 2019, Luo *et al.*, 2018, Lý and Tillich, 2017, Lý *et al.*, 2017, Nguyen *et al.*, 2017, Nong *et al.*, 2018, Phonsena and de Wilde, 2010, Vislobokov *et al.*, 2014, Wang *et al.*, 2017, Xu *et al.*, 2017, Zou *et al.*, 2017). Up to now, ca. 9 species of *Aspidistra* have been described in Laos (Averyanov and Tillich, 2014, 2015, 2016, 2017, Averyanov *et al.*, 2018b, 2019, Huang *et al.*, 2018, Jin *et al.*, 2016). The flower structure (especially stigma) of *Aspidistra* species have a great variation, which is recognized as the most important character of morphology diversity of *Aspidistra* (Li, 2004).

During a field survey of Laos in December 2005, an unknown *Aspidistra* species was collected in the wild near Pakse City, Champasak Province. The plant was brought into cultivation in Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences. Recently the plant form flowers. After consulting herbarium specimens and relevant literature, it was identified as a new species. It is described and illustrated below.

### TAXONOMIC TREATMENT

*Aspidistra purpureomaculata* H.C. Xi, J.T. Yin & W.G. Wang, sp. nov.

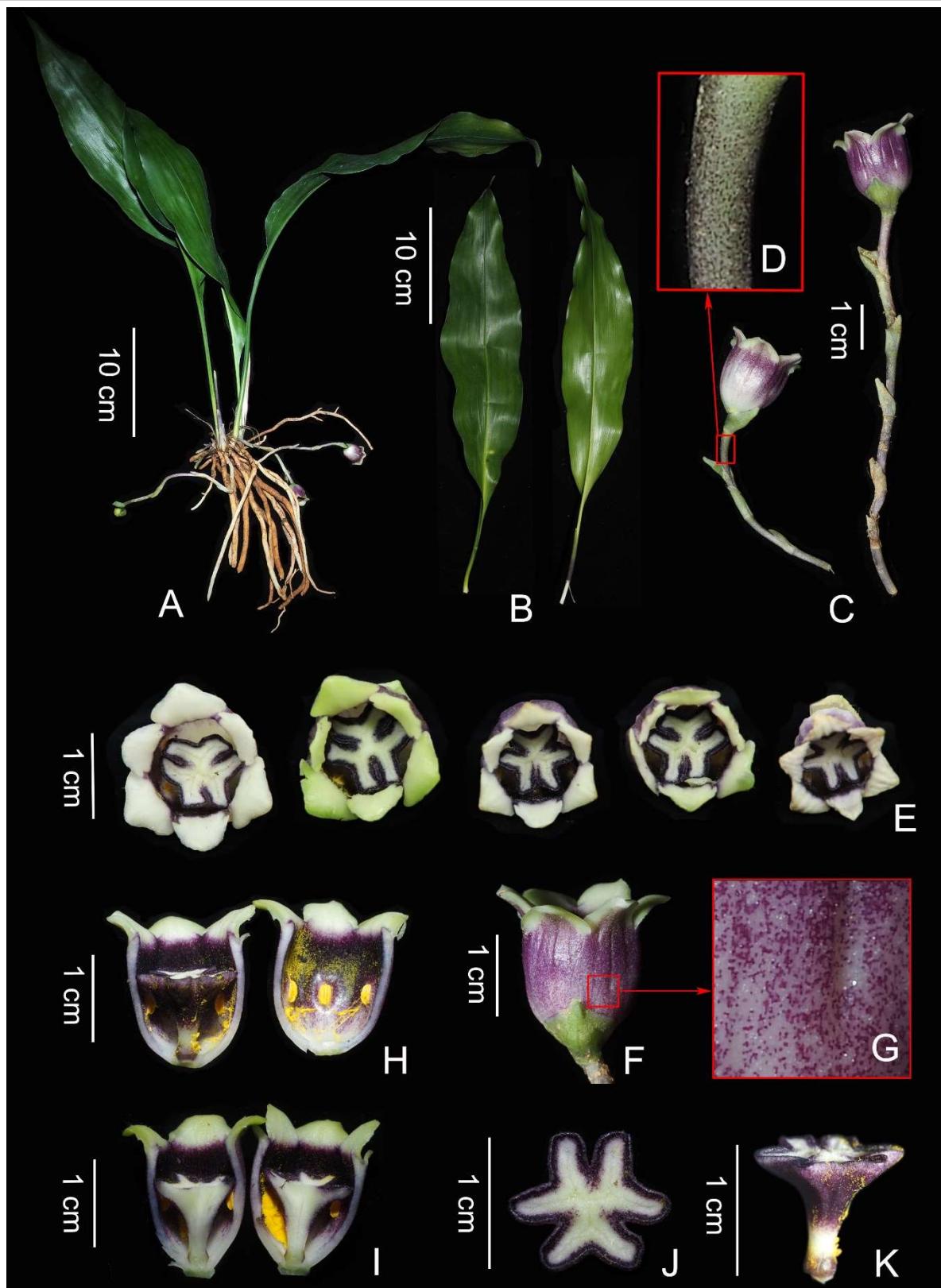
**Fig. 1**

**Type:** Laos, Champasak Province, Pakse City, the

voucher from a cultivated plant at Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences, China, 19 November 2019, Hou-cheng Xi & Wen-guang Wang 1902 (holotype: HITBC0030121; isotypes: HITBC0030122, KUN1348675).

**Diagnosis:** The new species resembles *Aspidistra xuansonensis* N. Vislobokov in the shape of perianth tube and lobes and the shape of stigma, but can be distinguished by its leaf size (especially shorter petiole length), perianth tube colour mainly purple (vs. mainly white) and stamens position in the perianth tube (in the middle vs. at the lower part). *Aspidistra purpureomaculata* is also similar to *Aspidistra laongamensis* C. R. Lin & X. Y. Huang in the shape of perianth and the stamens in the middle of perianth tube but is distinguishable by perianth lobes 6, pale green or white inside (vs. usually 8, yellow), stigma 6-lobed (vs. usually 4-lobed). A detailed morphological comparison of these 3 species is presented in Table 1.

**Description:** Perennial evergreen herb, ca. 30–40 cm tall. Rhizome creeping, subterete, 5–6 mm in diameter, nodes dense. Cataphylls 3–4, purple spotted, turning brown when dry, 1.5–7.5 cm long. Leaves 1 or rarely 2 on each node of rhizome, very close to each other; petiole erect, 5–14 cm in length and 1.5–3 mm in diameter; lamina dark green, oblong-elliptic, 20–30 × 2.5–6.5 cm, apex acuminate, base gradually narrowed into petiole. Peduncle purple-spotted, 4–10 cm long, bracts 4–7, pale green, triangular, 7–13 mm long. Flower solitary at the top of peduncle; perianth urceolate, fleshy, 15–19 mm long, 16–20 mm in diameter, perianth tube purple spotted to completely purple outside, dark purple with white base inside, 12–14 mm long and 13–16 mm in diameter, lobes 6, imbricate, explanate, broadly triangular, adaxially pale green or white and abaxially purple-spotted to pale green or white, 3.5–5 mm long and 5–9 mm wide at base. Stamens 6, inserted in the middle



**Fig. 1.** *Aspidistra purpureomaculata* H.C. Xi, J.T. Yin & W.G. Wang: **A.** Flowering plant; **B.** Leaf surface, adaxial and abaxial; **C.** Peduncle and Flower; **D.** Partial enlargement of peduncle showing purple spots; **E.** Flowers, apical view; **F.** Flower, side view; **G.** Partial enlargement of flower showing purple spots; **H.** Flower with half of perianth removed showing stamens and pistil; **I.** Flower with half of perianth removed showing vertical section of pistil; **J.** Stigma, apical view; **K.** Pistil, side view. (Photos: A-D, F-K. by W.G. Wang; E. by H.C. Xi)

**Table 1.** Morphological comparison of *Aspidistra purpleomaculata*, *A. xuansonensis* and *A. laongamensis*

Characters	<i>Aspidistra purpleomaculata</i>	<i>Aspidistra xuansonensis</i>	<i>Aspidistra laongamensis</i>
Lamina	oblong-elliptical, 20–30 × 2.5–6.5 cm	oblong, 19–46.5 × 5–9.8 cm	oblong-lanceolate to lanceolate, 28–36 × 4–5 cm
Petiole	5–14 cm	18.5–67 cm	12–30 cm
Perianth tube	urceolate, purple spotted to completely purple outside, dark purple inside	widely tubular to campanulate, white outside, white or partly purple inside	urceolate, yellowish white outside and purplish red inside
Perianth lobes	6, adaxially pale green or white and abaxially purple-spotted to pale green or white	6 (rarely 4, 5, 7), greenish white or purple spotted to completely purple at both sides	(6) 8, yellow
Stamens	inserted in the middle of perianth tube	inserted at the lower part of the perianth tube	inserted in the middle of perianth tube
Pistil	mushroom-shaped, ca. 9 mm long	suddenly obconic to nearly umbrella-shaped, 5–8 mm long	mushroom-shaped, 6–8 mm long
Stigma	6-lobed, upper surface dark purple at margin and white centrally, 8–11 mm	4–6–8-lobed, upper surface white, 4–8.6 mm	(3–)4 lobed, upper surface yellow, 6–8 mm

of perianth tube, positioned lower than stigma; anthers oblong, sessile, ca. 2 mm long. Pistil mushroom-shaped, ca. 9 mm long; stigma flat, slightly concave, 7–13 mm in diameter, deeply 6-lobed at margin, adaxially dark purple at margin and white centrally with radiate slightly sunken furrows, abaxially purple.

**Etymology:** The specific epithet “*purpleomaculata*” refers to the purple-spotted flowers, peduncles and cataphylls of the new species.

**Phenology:** Flowering November–December.

**Distribution and Habitat:** Currently known only from the type locality and found growing alongside a river at an elevation of ca. 300 m above sea level.

**Conservation assessment:** Data deficient (DD).

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