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JOSEF BOGNER & NICOLAJ ARNAUTOV

Aspidistra locii (Convallariaceae), an unusual new species from Vietnam

Abstract

Bogner, J. & Arnautov, N.: *Aspidistra locii (Convallariaceae),* an unusual new species from Vietnam. – Willdenowia 34: 203-208. – ISSN 0511-9618; © 2004 BGBM Berlin-Dahlem.

Aspidistra locii from central Vietnam is described as a species new to science and illustrated. It differs from all other species of the genus in its perigone with completely connate tepals, lacking any trace of lobes, and with a very small, central, circular opening of 1.5-2 mm in diameter.

In December 1986 the second author collected during a Russian expedition in Vietnam a sterile live plant of an *Aspidistra* species, which later flowered in the Botanical Garden of the Russian Academy of Sciences in St Petersburg. It was then recognized as a new, undescribed species, very different from any hitherto known species for its peculiar and unique flowers.

The genus *Aspidistra* has some fifty species in China alone and most were described only relatively recently (Gagnepain 1934, Wang & Tang 1978, Liang & Tamura 2000). A few species are known from Vietnam and several others are still undescribed.

Aspidistra locii Arnautov & Bogner, **sp. nova** – Fig. 1-4
Holotypus: Cultivated in the Botanical Garden of the Russian Academy of Sciences St Petersburg from a plant collected in Vietnam, Province Quang Nam, Da Nang district, near Phuoc Son, on 11.12.1986 by *N. Arnautov;* preserved, July 1991, *Arnautov 86-112* (LE).
Paratypi: Cultivated in the Botanical Garden Munich, from the same source as the holotype, 20.3.2004, *Bogner 2815a* (M); 1.4.2004, *Bogner 2815b* (B); 15.4.2004, *Bogner 2815c* (HNU); 25.4.2004, *Bogner 2815d* (M).

A congeneribus tepalis omnino connatis, lobis tepalorum carentibus, orificio 1.5-2 mm diametro in centro perigonii diversa.

Shoot upright, 5-6 cm (and more?) long, 1-1.5 cm in diameter; each shoot with a few plain green leaves and cataphylls, all glabrous. *Roots* very strong and stiff, 2-5 mm in diam. *Cataphylls* linear, 10-15 × 0.8-1.2 cm, becoming brown and dry very soon, ± fibrous with age. *Petiole* (11-)15-33 cm long and 0.3-0.5 cm in diam., somewhat thicker towards the base, terete, canaliculate on the upper side. *Sheath* 0.8-1 cm long. *Leaf blade* elliptic, 20-34 × (6-)7-11 cm, base cuneate and

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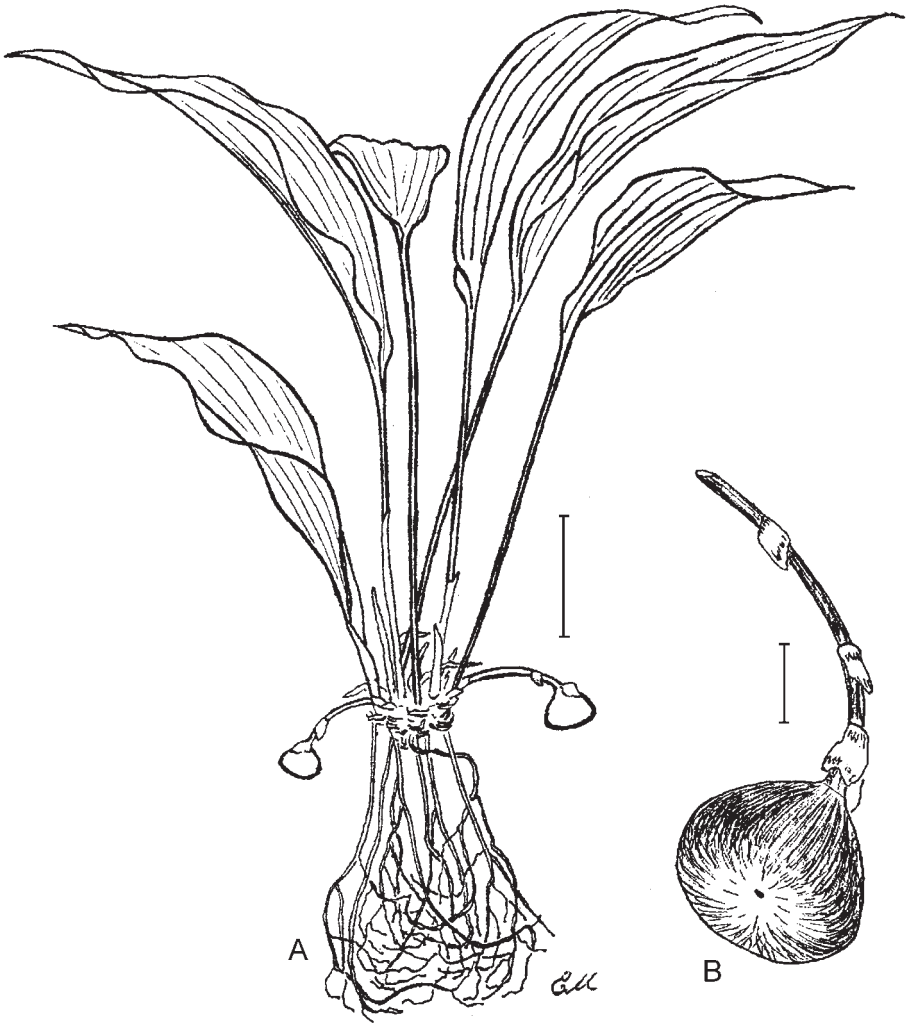


Fig. 1. *Aspidistra locii* – A: habit; B: inflorescence with the single flower. – Scale bars: A = 10 cm, B = 2 cm.

somewhat decurrent on the petiole, apex cuspidate, margin entire, venation parallel-pinnate, middle vein strong, prominent on lower surface and sunken on upper surface, 4-6 primary lateral veins running from the base to a third of the length of the middle vein in an angle of 15-20º towards the apex, second order veins much thinner and more inconspicuous, running between the primary ones. *Inflorescence* with one terminal, pendulous flower only. *Peduncle* 6-11 cm long and 0.4-0.5 cm in diam., thickened below the flower, plain green, with 5-6, 1-1.3 cm long cataphylls, first light green, becoming brown soon, internodes 0.9-4 cm long. *Flowers* broadly conoid, 3-4.5 cm in diam. and 2-3 cm long, rough (slightly papillate) outside, (dirty) yellow to beige, all tepals completely connate and with only a very small opening of 1.5-2 mm in diam. in the usually somewhat sunken centre of the distal side. *Gynoecium* mushroom-shaped, narrowing towards base; ovary and style c. 0.8 cm long and c. 0.5 cm in diam.; stigma very large, 1.6 cm in diam. and c. 0.5 cm thick, four-lobed, each lobe with an inconspicuous incision in the middle, its segments furrowed and the elevated parts with a rough warty surface; ovary unilocular, ovules 3,

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Fig. 2. *Aspidistra locii* – habitus of a flowering plant with two pendulous inflorescences of one flower each. – Plant cultivated in the Botanical Garden Munich; scale bar = 5 cm; photograph by G. Gerlach.

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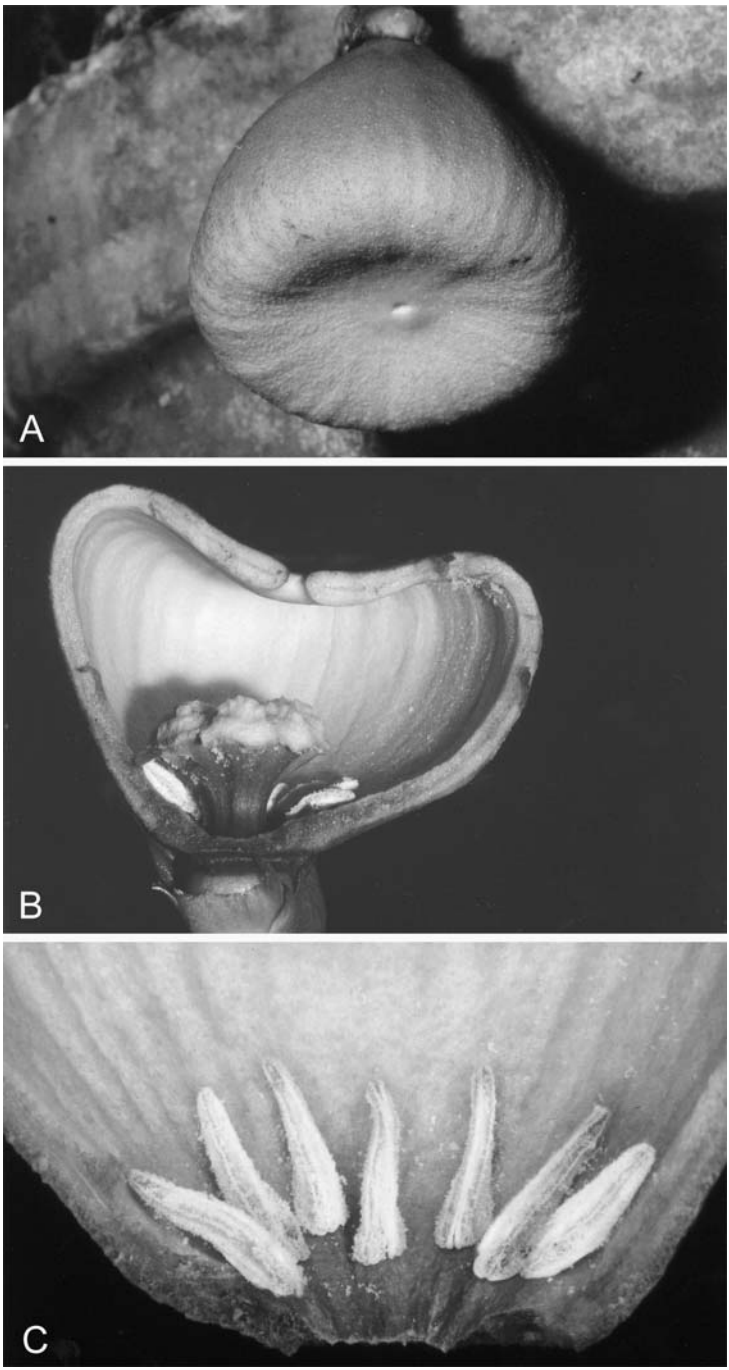


Fig. 3. *Aspidistra locii* – A: pendulous flower in three-quarter view, note the very small opening in the centre; B: opened flower, note the very small opening in the centre, the mushroom-like gynoecium and the stamens below the large stigma; C: lower part of the opened perigone with several subsessile stamens. – Photographs by G. Gerlach from a plant cultivated in the Botanical Garden Munich.

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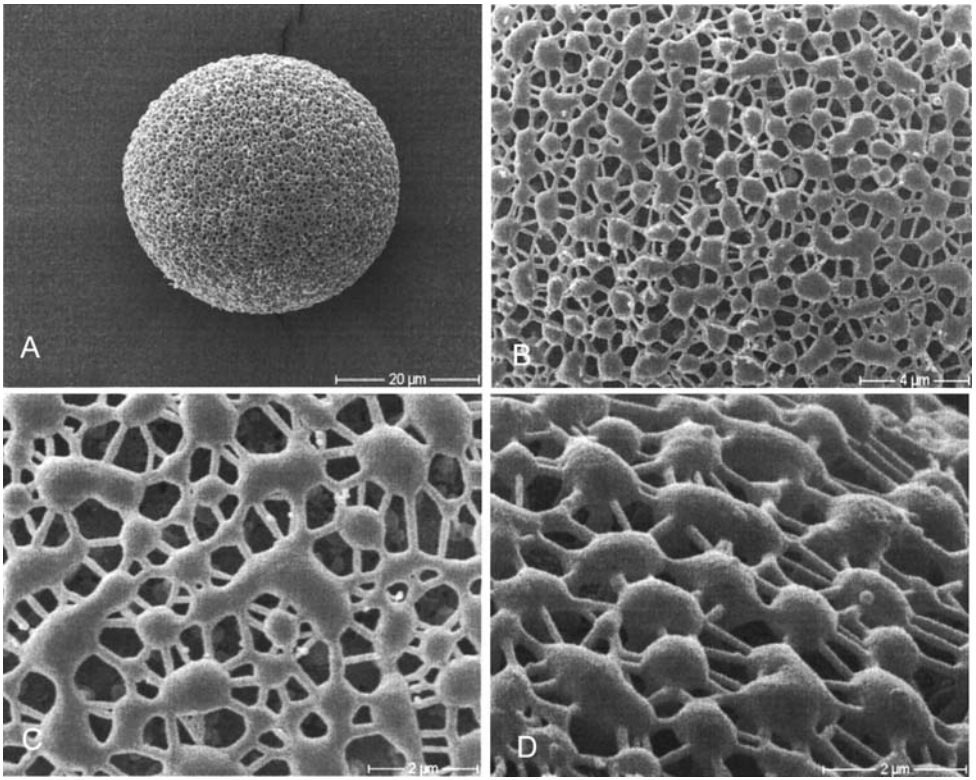


Fig. 4. *Aspidistra locii* – pollen grain (A-D); A: entire pollen grain, B-D: exine in different views and magnifications. – SEM photographs by M. Hesse.

ellipsoid, c. 1 mm long and 0.5 mm in diam., with a short funicle. *Stamens* 12-14, situated below the large stigma and adnate to the perigone near its base, anthers subsessile (filaments very short), elongate, pale yellow, c. 6 mm long and 1.3-1.4 mm wide, surface finely warty. *Pollen grains* ± globular, inaperturate, 35-38 µm in diam., exine irregularly reticulate, the cross-points of the net strongly thickened. *Fruit* unknown.

Eponymy. – *Aspidistra locii* is named in honour of Professor Phan Ke Loc, lecturer in botany at the University of Hanoi, Vietnam.

Chromosome number (pers. comm. G. Petersen, Copenhagen). – 2n = 36, several chromosomes very long, others short, some of medium size.

Distribution. – *Aspidistra locii* is known only from the type locality, where it was found growing on the forest floor in humus-rich soil. Living plants are in cultivation in the Botanical Garden of the Komarov Botanical Institute of the Russian Academy of Sciences, St Petersburg, Russia, and in the Botanical Garden München-Nymphenburg, Germany, where they flower regularly.

Pollination. – Nothing is known about the pollinators, but the unusual morphology of the flower with only a very small opening suggests pollination by very small insects, perhaps flies.

Relationship. – In general appearance *Aspidistra locii* is very distinct from any other known species of this genus, the flower resembling a fig inflorescence. Also the yellow flower colour is

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rather rare in *Aspidistra,* only known from *A. longipedunculata* D. Fang, *A. triloba* Wang & K. Y. Lang, *A. flaviflora* K. Y. Lang & Z. Y. Zhu and *A. fenghuanensis* K. Y. Lang.

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