

Aspidistra letreae (Asparagaceae), a new species from central Vietnam

LEONID V. AVERYANOV¹, HANS-JUERGEN TILLICH², TUAN ANH LE³, VAN THE PHAM⁴, TATIANA V. MAISAK¹ & TIEN CHINH VU⁵

¹ Komarov Botanical Institute, Russian Academy of Science, St. Petersburg, Prof. Popov Str. 2, Russia, 197376;

E-mail: av_leonid@mail.ru; av_leonid@yahoo.com

² H.-J. Tillich, Ludwig-Maximilians-Univ., Inst. of Systematic Botany, Menzingerstr. 67, DE-80638 Munich, Germany.

³ Quang Tri Center of Science and Technology, Mien Trung Institute for Scientific Research, Vietnam Academy of Science and Technology, Dien Bien Phu, Dong Ha, Quang Tri, Viet Nam.

⁴ Institute of Ecology and Biological Resources, Vietnam Academy of Sciences and Technology, 18 Hoang Quoc Viet, Cau Giay, Ha Noi, Vietnam.

⁵ Vietnam National Museum of Nature, Vietnam Academy of Sciences and Technology, 18 Hoang Quoc Viet, Cau Giay, Ha Noi, Vietnam.

Since last account of the genus *Aspidistra* Ker Gawler (1822: 628) in Vietnam reported 43 species (Tillich 2014), at least 25 additional species were discovered and described in this country (Averyanov & Tillich 2014, 2015, 2016, Vislobokov *et al.* 2014a, 2014b, 2016, Leong-Skornickova *et al.* 2014, Olivier 2015, Ly & Tillich 2015, Vislobokov 2015, 2016, Averyanov *et al.* 2016). Meanwhile, the diversity of the genus in Vietnam and allied countries remains insufficiently inventoried. One more new species of *Aspidistra*, named here as *A. letreae* was discovered recently in central Vietnam. This species is described and illustrated with data on its ecology, phenology, tentative relations, distribution and expected conservation status. The new species somewhat resembles *Aspidistra truongii* Averyanov & Tillich (2013: 108), *A. obtusata* Vislobokov (2016: 694) and *Aspidistra zhangii* Averyanov, Tillich & Nguyen in Averyanov *et al.* (2016: 62), but differs clearly by a series of morphological features noted below.

Description of the new species

Aspidistra letreae Aver., Tillich & T.A. Le, *sp. nov.* (Fig. 1)

Type:—VIETNAM. Quang Tri province, Vinh Linh district, Vinh Ha commune, around point 16°5'80.44"N 106°5'24.39"E, primary and secondary evergreen broad-leaved lowland forest at elevation about 100 m a.s.l., terrestrial herb on shady reclined slope, not common, 10 October 2016, Anh Le Tuan, Ta Quoc Khanh, PVT 712 (holotype—LE; isotypes—VNMN). Plate:—d-EXSICCATES OF VIETNAMESE FLORA 0268/PVT 712 (Fig. 1).

Terrestrial perennial herb with epigeous simple or few branching, erect or oblique stem-like stout rhizome (1.5)2–4(5) cm long, Ø (4)5–6(7) mm, densely covered by many, dirty gray or yellowish-gray papyraceous-fibrous remains of cataphylls; leafy apical part of rhizome very short, simple, (0.5)1–1.5(2) cm tall; basal, leafless part dirty gray, more or less flexuose, with many stilt roots. Roots gray straight rigid, Ø (2)2.5–4(5) mm. Cataphylls during anthesis dry, dull pale yellowish, narrowly lanceolate to linear, obtuse, straight, upright, (2)5–16(20) cm long, (2.5)3–6(8) mm wide (being flattened), somewhat broadening at the base. Leaves on individual shoot (3)4(5), petiolate; petiole dark green, stiff, rigid, erect, straight, (10)15–25(30) cm long, Ø (1.5)2–2.5(3) mm, adaxially grooved; leaf blade straight to slightly arching, leathery, more or less flat or slightly conduplicate, narrowly lanceolate to almost linear, tapering to acute apex, with rather broad, shortly cuneate base, (45)50–65(70) cm long, (1.5)2–3(3.2) cm wide, straight or hardly irregularly wavy along margin, uniformly dark grass-green on both sides, with prominent median vein and 4 distinct secondary veins. Flowers 1–2(3), solitary, arising laterally from leafy part of the stem, shortly pedunculate, nutant, widely opening, Ø (3.8)4.5–5(5.5) cm. Peduncle horizontal, down curved, short, (1)1.5–2.5(3) cm long, Ø (2.8)3–3.5(4) mm, light green to dirty olive, almost completely enveloped by (3)4(5) densely imbricate, sterile bracts; sterile bracts dirty olive-greenish tinged with purple-brown to uniformly dark olive-green, broadly ovate, obtuse, with broad base, usually apically splitting, concave, coriaceous, (6)10–15(18) mm long, (8)10–16(18) mm wide (being flattened). Perigonium with 6–7 free lobes, rather uniformly purple-brown to chestnut, fleshy, smooth and glossy, syntepalous part concave, (3.5)4–5(6) mm in depth. Perigonium lobes subequal, fleshy, almost flat or slightly longitudinally convex, smooth and glossy, uniformly purple-brown to chestnut, triangular, (1.2)1.4–1.7(1.8) cm long, (0.8)0.9–1.4(1.5) cm

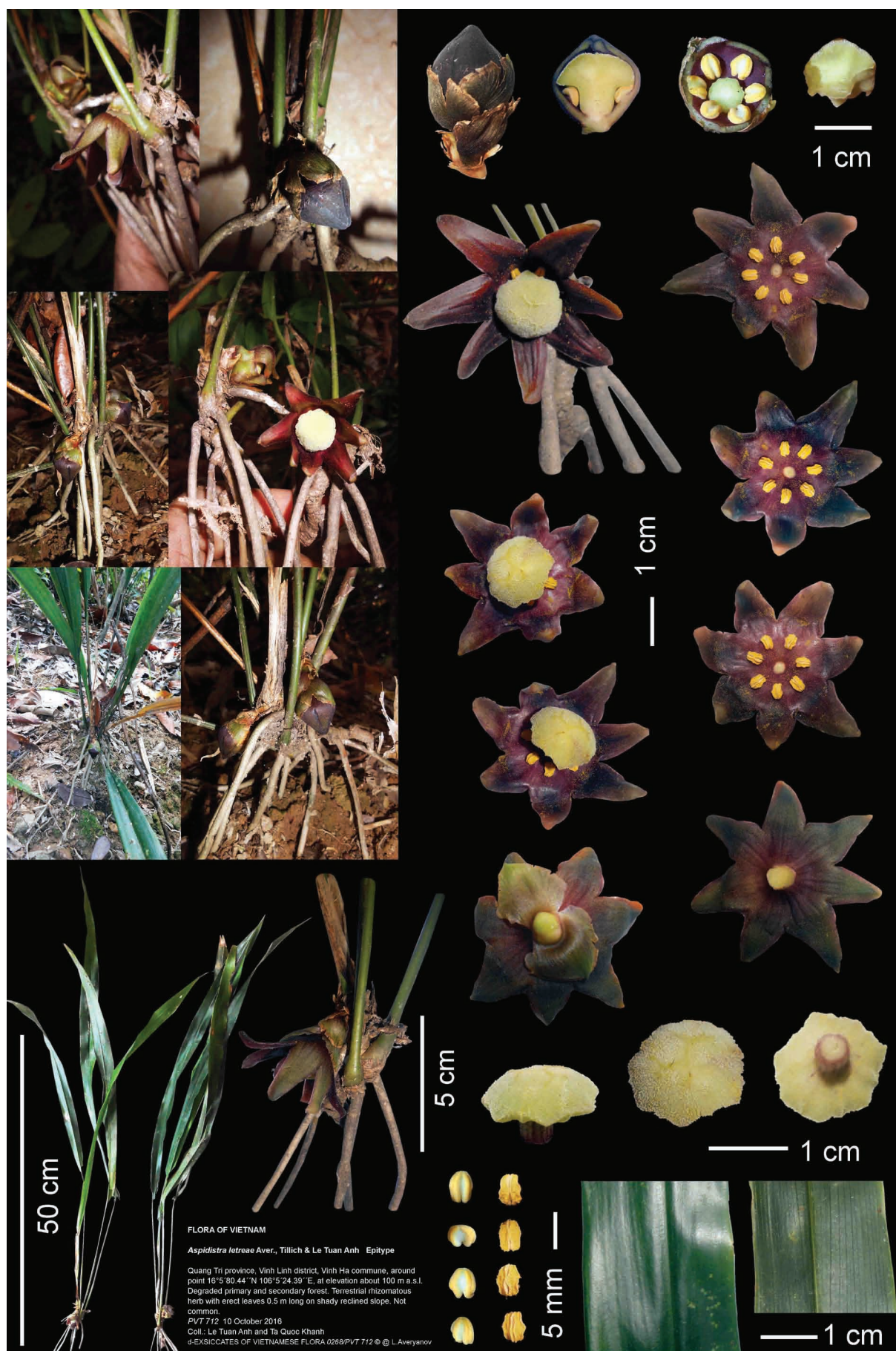


FIGURE 1. *Aspidistra letreae*. Digital epitype, 0268/PVT 712. Photographs of Anh Le Tuan, correction and design by L. Averyanov.

wide, obtuse at apex. Stamens 6–7, sessile, placed in the middle part of syntepalous part of perianth; anthers ovoid, (3)3.2–3.5(3.8) mm long, (2.2)2.5–3(3.2) mm wide, much distant from each other; pollen sacs introrse; pollen bright yellow. Pistil white, mushroom-shaped; style fleshy, shortly cylindrical (5.5)6–7(8) mm tall, Ø (2.8)3–5(6) mm; stigma almost hemispheric, 4–5 mm tall, Ø (12)14–16(18) mm, circular in outline, shallowly irregularly crenulate along margin, or obscurely hexagonal, shallowly ribbed beneath, fleshy, densely papillose, white to light dull greenish. Ovary inconspicuous, very indistinct, white. Fruits unknown.

Etymology:—Species epithet refers to Dr. Le Thi Tre, teacher of Hue University’s college of education, who was an educator of the third co-author of this paper.

Habitat, phenology and conservation status:—Terrestrial rhizomatous herb. Primary and secondary evergreen broad-leaved lowland forest on alluvial soils at elevation around 100 m a.s.l., commonly on shady reclined slopes in assemblage with *Curculigo* sp., *Thottea hainanensis* and *Gomphia serrata*. Not common. Flowering in September–October. Estimated IUCN Red List status DD.

Distribution:—Central Vietnam (Quang Tri province, Vinh Linh district). Endemic of central Vietnam.

Similar species:—The new species, with its nodding flowers, is similar to *Aspidistra truongii* and *A. obtusata*, both described from central Vietnam (Averyanov & Tillich 2013, Vislobokov 2016), but can be clearly distinguished from both. *A. letreae* differs from the first species in presenting much shorter peduncle and circular stigma. From the second species, it differs in the broadly opening campanulate flowers and distinct cylindrical style. From both species it differs in the narrowly lanceolate to almost linear leaves and larger flowers with hemispherical stigma clearly overtopping perigonium tube. The floral morphology of the new species resembles *Aspidistra zhangii*, described from limestone lowlands of northeastern Vietnam (Averyanov *et al.* 2016). However it distinctly differs in the large, narrowly lanceolate to almost linear leaves, twice larger, rather uniformly purple-brown, nutant flowers, triangular, acute perianth lobes and almost circular (not lobed) stigma.

Acknowledgements

The laboratory work, the results of which are presented in this paper, were financially supported by Russian Foundation for Basic Research “Plant taxonomy, geography and biology in local floras of eastern Indochina” (15-04-00419A) and were carried out in the framework of institutional research projects of the Komarov Botanical Institute of the Russian Academy of Sciences.

References

- Averyanov, L.V. & Tillich, H.-J. (2013) *Aspidistra truongii*—a new species of Asparagaceae (Convallariaceae s.str.) from southern Vietnam. *Taiwania* 58: 108–111.
<http://doi.org/10.6165/tai.2013.58.108>
- Averyanov, L.V. & Tillich, H.-J. (2014) *Aspidistra albopurpurea*, *A. khangii*, *A. lubae*, and *A. stellata* spp. nov. (Asparagaceae, Convallariaceae s. str.) from Indochina. *Nordic Journal of Botany* 32: 752–760.
<http://doi.org/10.1111/j.1756-1051.2013.00273.x>
- Averyanov, L.V. & Tillich, H.-J. (2015) *Aspidistra laotica*, *A. multiflora*, *A. oviflora*, and *A. semiaperta* spp. nov. (Asparagaceae, Convallariaceae s. s.) from eastern Indochina. *Nordic Journal of Botany* 33: 366–376.
<http://doi.org/10.1111/njb.00664>
- Averyanov, L.V. & Tillich, H.-J. (2016) *Aspidistra anomala*, *A. elegans*, and *A. sinensis* spp. nov. (Asparagaceae, Convallariaceae s. s.) from China, Laos, and Vietnam. *Nordic Journal of Botany* 34: 141–147.
<http://doi.org/10.1111/njb.01014>
- Averyanov, L.V., Tillich, H.-J., Guo-Xiaoming, Bui, Q.H. & Nguyen, K.S. (2016) Three new species of *Aspidistra* (Convallariaceae) from Vietnam. *Wulfenia* 23: 57–67.
- Ker-Gawler, J.B. (1822) *Aspidistra lurida*. *Botanical Register* 8: pl. 628.
- Leong-Skornickova, J., Tillich, H.-J. & Nguyn, Q.B. (2014) Two new species and one new variety of *Aspidistra* (Asparagaceae: Nolinoideae) from Vietnam. *Gardens Bulletin Singapore* 66: 27–37.
- Ly, N.-S. & Tillich, H.-J. (2015) *Aspidistra averyanovii* and *A. parviflora* (Asparagaceae), two new species Central Vietnam. *Phytotaxa* 282: 53–60.
<http://doi.org/10.11646/phytotaxa.282.1.6>
- Olivier, C. (2015) *Aspidistra tillichiana* (Asparagaceae), a new species from northern Vietnam. *Phytotaxa* 212: 243–245.

<https://doi.org/10.11646/phytotaxa.212.3.7>

Tillich, H.-J. (2014) The genus *Aspidistra* Ker-Gawl. (Asparagaceae) in Vietnam. *Taiwania* 59: 1–8.

Vislobokov, N.A. (2015) Two new species of *Aspidistra* (Asparagaceae: Nolinoideae) from Northern Vietnam: *A. clausa* and *A. triradiata*. *Phytotaxa* 207: 265–272.

<http://doi.org/10.11646/phytotaxa.207.3.4>

Vislobokov, N.A. (2016) *Aspidistra obtusata* sp. nov. (Asparagaceae) from Vietnam. *Nordic Journal of Botany* 34: 694–698.

<http://doi.org/10.1111/njb.01227>

Vislobokov, N.A., Sokoloff, D.D., Degtjareva, G.V., Valiejo–Roman, C.M., Kuznetsov, A.N. & Nuraliev, M.S. (2014a) *Aspidistra paucitepala* (Asparagaceae), a new species with occurrence of the lowest tepal number in flowers of Asparagales. *Phytotaxa* 161: 270–282.

<http://doi.org/10.11646/phytotaxa.161.4.2>

Vislobokov, N.A., Sokoloff, D.D., Degtjareva, G.V., Valiejo–Roman, C.M. & Kuznetsov, A.N. (2014b) *Aspidistra xuansonensis* (Asparagaceae), a new species from northern Vietnam. *Phytotaxa* 173: 226–234.

<http://doi.org/10.11646/phytotaxa.173.3.5>

Vislobokov, N.A., Nuraliev, M.S., Kuznetsov, A.N. & Kunznetsova, S.P. (2016) *Aspidistra cylindrica* (Asparagaceae), a new species from southern Vietnam. *Systematic Botany* 41: 160–165.

<http://doi.org/10.1600/036364416X690750>