NEW TAXA

NEW TAXA OF ASPIDISTRA (ASPARAGACEAE) FROM CENTRAL VIETNAM

Summary. A new variety, Aspidistra elatior var. vietnamensis and a new species, A. zinaidae discovered in central Vietnam (Quang Nam and Thua Thien – Hue provinces) are described and illustrated. First discovery represents the only verified finding in continental Asia of the widely cultivated species – A. elatior, incorrectly regarded before as endemic of Osumi Islands (Japan). New variety distinctly differs from typical cultivated plants of the type variety in the smaller flowers, much thicker rhizome and in the peltate stigma with straight (not revolute) lobes. The second taxon has close relations to A. marasmioides and A. bicolor, but distinctly differs in densely grouped leaves, the perigone lobes straight upright, the white, shallowly trifid stigma, much smaller flowers and in unusual shape of the stamens.

Key words: Aspidistra elatior var. vietnamensis, Aspidistra zinaidae, new variety, new species, Asparagaceae (Convallariaceae), flora of Vietnam.

INTRODUCTION

Recent botanical field exploration works distinctly designated southeastern mainland Asia, particularly area of southern China and eastern Indochina, as very important center of the genus Aspidistra Ker Gawl. diversity and species formation (Brauchler, Ngoc, 2005; Lang, 1981; Li, 2004; Liang, Tamura, 2000; Tillich, 2005, 2006; Tillich, Averyanov, 2008; Tillich et al., 2007). More than 50 new species and varieties of this genus were discovered and described from this area during last years, and succeeding expeditions in earlier unstudied localities bring each time more and more new discoveries. Two of such novelties are described and illustrated below.

Aspidistra elatior Blume var. vietnamensis

Aver. et Tillich, var. nov.

Described from central Vietnam («Quang
Remnants of primary closed evergreen broad-leaved forests on very steep slopes of hill composed with solid highly eroded limestone at elevations 400–500 m a.s.l. Terrestrial herb forming large colonies in shady places, particularly on rich soils of flat depressions between rocks. Flowering under cultivation was observed at June – July. In known habitats not rare (LR).

**Etymology.** Variety name refers to the area of its distribution.

**Note.** Distribution of the widely cultivated *Aspidistra elatior* regarded as an endemic to Japan remains unclear. Literature data noted that the species originated from Kuroshima, Suwanose, and Uji Islands (Osumi Islands, S of Kyushu, Japan), where it grows abundantly in understory of *Castanopsis sieboldii* forests (Li, 2004; Liang, Tamura, 2000). A well documented species from Ohsumi Islands is *A. insularis*, which was described based on specimens from the herbaria of Osaka and Munich (Tillich, 2006). Taking into account the current knowledge on the variability of *A. elatior*, it seems to be possible that this species may be reduced to a variety of *A. elatior* in the future. *Aspidistra elatior* was also said to be of Chinese origin, but no wild plants have been hitherto found in China (Liang, Tamura, 2000). Actually, our discovery of *A. elatior* in Vietnam is the first record of this species in continental Asia. It is noticeable that mainland specimens distinctly differ from many cultivated plants of the type variety in the smaller flowers, much thicker rhizome and in the peltate stigma with straight (not revolute) lobes. On the basis of clear morphological differences, we describe our plants as a new variety, which may be also regarded as a separate species with distinct geographically isolated distribution. Voucher specimens for this record were collected in Quang Nam province of central Vietnam. Identical plants were also observed in a number of limestone areas throughout the northwestern part of the country where it forms many large colonies. In most observed colonies, the leaves of *A. elatior* var. *vietnamensis* bear yellowish spots, however, samples with uniformly green, unspotted leaves were also occasionally found.

The taxonomic problem with *Aspidistra elatior* is further complicated by the conclusion of Ying (2000). He regarded three Taiwanese species described by Hayata (1912, 1920) as conspecific and reduced them all to *A. elatior* var. *attenuata* (Hayata) S.S. Ying. However, Taiwanese Aspidistras are highly variable in flower characters, judging from Hayata’s descriptions (1912, 1920). A careful revision of the genus in Taiwan is urgently needed. The affinity between the Vietnamese variety and Taiwanese congeners should closely be surveyed in the future.
Fig. 1. *Aspidistra elatior* var. *vietnamensis*. Digital epitype: d-EXSICCATES OF VIETNAMESE FLORA 0179/HAL 1211aa (all photos and design by L. Averyanov).
Aspidistra zinaidae Aver. et Tillich, sp. nov.

Described from central Vietnam («Thua Thien – Hue province, Nam Dong district, Thuong Lo municipality, Cha Mang river basin, around point 16°07’53”N 107°43’27”E. Primary evergreen broad-leaved lowland forest on very steep hill slopes composed with stratified shale at elev. 400–500 m a.s.l. Terrestrial herb on very steep rocky shady river slope. Common. 11 April 2007, L. Averyanov, N.S. Khang, A. Averyanova, N.D. Phuong, L.V. Hung, HAL 11111a»).

Type («Plant flowered under cultivation. 5 December 2011, coll. L. Averyanov, HAL 11111b») – LE. Epitype – d-EXSICCATES OF VIETNAMESE FLORA 0191/HAL 11111b (fig. 2).

Rhizome terete, epigeous, ascending to erect, much and densely branching, 4–8 mm in diam., densely nodal, with numerous thick rigid, semi woody, straight roots. Callathysl convolute, cuneate, young dull reddish-brown, later light yellowish-brown, papyraceous, to 8 cm long and 1(1.4) cm wide. Leaves very dense, petiolate. Petiole stiff, erect, straight, (4)6–10(12) cm long. Leaf blade upright to almost horizontal, lanceolate to narrowly elliptic, attenuate at base and apex, (12)15–30(35) cm long, (1.5)2–5(6) cm wide, plicate, dark uniformly green above, light green below, with prominent midvein on lower surface and 1–5 inconspicuous secondary veins at both sides. Flowers odorless, numerous, pedunculate (rarely subsessile), kept in horizontal position, not widely opening. Peduncle purple-violet to almost white at apex, (2)5–30(40) mm long, 1–2 mm in diam., appearing in groups, kept horizontally to obliquely ascending, with 3–4 bracts; bracts broadly ovate to almost orbicular, concave, papyraceous, with scarious, lacerate margins, white to dull dirty purple, obtuse, 3–6 mm long and wide. Perigone shallowly urceolate, (6)8–10 mm in diam., of 6 lobes, tube broad, 4–6 mm long, 4–5 mm in diam., glossy white outside, deep purple inside. Lobes clearly in two circles, broadly triangular-ovate, slightly concave, obtuse to almost orbicular at apex, fleshy, smooth, straight or hardly reflexed, 4–6 mm long, 3–4 mm wide, upper surface smooth, dark dull brown-violet, outside glossy white with a narrow dull-brown margin, lobes of inner whorl (petals) slightly smaller than outer lobes (sepals). Stamens 6; inserted at middle part of tube, anthers sessile to subsessile, bean-shaped, 2–3 mm long, about as long as wide, pollen sacs facing the style, embedded into an unusually broad, fleshy, white connective; pollen brightly yellow. Pistil mushroom-shaped, peltate; ovary inconspicuous; style stout, white, cylindrical, 2.5–3.5 mm tall, 1–1.5 mm in diam.; stigma fleshy, discoid to shortly obpyramidal, entirely white, indistinctly 3 lobed, 2.5–3.5 mm in diam., upper surface of stigma smooth to indistinctly verrucose. Fig. 2.


Ecology. Primary and secondary evergreen broad-leaved lowland and hill forests on soils derived from stratified shale at elev. 400–500 m a.s.l. Terrestrial herb on shady steep rocky river valley slopes. Flowering under cultivation was observed at November – December. In known habitats very common (LR).

Etymology. Species is named after Mrs. Zinaida Zaitseva, an excellent gardener for our living plant collections at the Komarov Botanical Institute of the Russian Academy of Sciences. For many years she succeeded in growing even small cuttings to well flowering specimen.

Note. The species is closest to A. marasmioides Tillich and A. bicolor Tillich. It shares with both species the 6-merous flower, the perigone tube cup-shaped and outsides silvery-white, and the mushroom- or desk-like pistil; from A. marasmioides it deviates by the densely grouped leaves (vs. spaced on a long creeping rhizome), the perigone lobes straight upright (vs. reflexed), and the stigma white and shallowly trifid (vs. pink and hemispherical); from A. bicolor it is mainly distinguished by much smaller flowers (8–10 mm in diam. vs. 25–35 mm), and the lobes upright (vs. reflexed). Additionally, it is distinguished from both species by the unusual shape of the stamens.

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Fig. 2. *Aspidistra zinaiidae*. Digital epitype: d-EXSICCATES OF VIETNAMESE FLORA 0191/HAL 11111b (all photos and design by L. Averyanov).
**LITERATURE**


*Hayata B.* *Aspidistra attenuata* Hayata spec. nov. // Icones Plantarum Formosanarum, 1912. – Vol. 2. – P. 145–146.


