

***Aspidistra jiewhoei* (Asparagaceae), a new species from north Vietnam**

Hans-Juergen Tillich¹ and Jana Leong-Škorničková²

¹Ludwig-Maximilians-University, Systematic Botany,
Menzinger Str. 67, D-80638 Munich, Germany
hjtillich@gmx.de

²The Herbarium, Singapore Botanic Gardens,
1 Cluny Road, 259569 Singapore
jana_skornickova@seznam.cz

ABSTRACT. An unusual new species of *Aspidistra* Ker Gawl. (Asparagaceae: Nolinoideae) from north Vietnam, *A. jiewhoei* Tillich & Škorničk. is described and illustrated here.

Keywords. Asparagaceae, *Aspidistra*, Nolinoideae, Vietnam

Introduction

The genus *Aspidistra* Ker Gawl. (Asparagaceae: Nolinoideae) is distributed from Assam (India) in the west to southern Japan in the east, and from Central China southwards to the Malay Peninsula, but the centre of diversity is SE China (Guangxi Province) and adjacent northern Vietnam (Tillich 2005). During the past three decades the number of known species has increased considerably from 11 in 1980 to more than 100 (Tillich & Averyanov 2012), with many novelties reported in last decade from Vietnam (Bogner & Arnautov 2004; Bräuchler & Ngoc 2005; Tillich 2005, 2006; Tillich et al. 2007; Tillich & Averyanov 2008, 2012; Averyanov & Tillich 2012, in press). The total number of known species in Vietnam is currently 37, but as most of the *Aspidistra* species seem to be stenoendemic, it is expected that with continuing floristic explorations its numbers will grow progressively.

The first author has been extensively involved with taxonomy of the genus *Aspidistra*, and provided a comprehensive key to the genus covering 93 species (Tillich 2008). So when an unidentified *Aspidistra* species flowered in the living collections of Singapore Botanic Gardens it was brought to his attention by the second author. It was clear that this unusual species endowed by several unique morphological features represents a new species and is here described below.

In line with the collecting practices as outlined by Tillich (2005), the spirit conserved flower is part of the type specimen as well as colour photo documentation of important characters including the flower dissection.

***Aspidistra jiewhoei* Tillich & Škorničková, sp. nov.**

Similar to *A. lateralis* Tillich, but differs by its stamens overtopping the stigma surface, the pistil closely attached to the perigone wall, and the growth form with upright shoots, bearing the flowers on short peduncles in lateral position and clearly above ground level.

TYPE: *Jana Leong-Škorničková JLS-1871*, Cultivated in the Singapore Botanic Gardens (SBG Acc. No. 20122069), 5 Dec 2012 (holo SING, including flowers in the liquid collection; iso M, HN, both including flowers in the liquid collection). Originally from Northern Vietnam, Tuyên Quang Province, Nà Hang District (collector unknown), donated to Singapore Botanic Gardens by the Singapore Gardening Society. (Fig. 1 & 2.)

Rhizomatous herb up to 35 cm tall. **Rhizome** with very short internodes, diameter 10–13 mm. **Leaves** crowded, cataphylls deep purple when young, up to 12.5 cm long. Petiole 10–20 cm long, stout, stiff, ventrally with a furrow, deeper at apical part, shallower towards the base, basal 5–12 mm swollen. Blade broadly ovate, slightly unequal, 20–30 × 8.5–13 cm, apex acuminate, base rounded, matt dark green above (nearly dark bluish green), light grey-green beneath with strongly protruding midvein and well-visible dark green secondary veins, margin very minutely serrate, making the margin somewhat sharp to touch, revolute. **Peduncle** up to 4.5 cm long, semi-erect at first, later more or less horizontal or descending when the flower opens, its tip bent downward, dark purple externally, with 3 hood-like, dark purple scales, 2 subtending the flower and 1 along the scape. **Perigone** nodding, widely bowl-shaped, 14–15 mm in diameter, with nearly flat, fleshy base, reddish purple to deep purple internally and externally, except sometimes outer basal part lighter (cream-yellowish). Lobes 6 (sometimes 8), ovate-triangular, erect to slightly patent, upper surface smooth, in two whorls of 3 (sometimes 4), outer lobes c. 6–7 × 8–9 mm, inner lobes c. 5–6 × 6–7 mm. **Stamens** 6 (8 in flowers with 8 lobes), inserted at apical part of the tube, overtopping stigma surface, anthers sessile, somewhat sunken in a circular bulge, anther thecae c. 1.3 mm long, bean shaped, separated by light green connective tissue, pollen bright yellow. **Pistil** depressed obconical, c. 3 mm high, outer (lower) surface closely attached to perigone wall. Stigma circular, 5–6 mm in diameter, cream-coloured in the slightly convex centre, margin and lower part tinged with purple red to deep purple, the margin with small lobes. **Fruit** unknown.

Etymology. We name this species in honour of Mr. Tan Jiew Hoe, president of Singapore Gardening Society, for his continuous support of botanical and horticultural research in Singapore as well as in other parts of Asia, particularly in Laos and Vietnam. It was him who first brought this unusual plant to our attention and donated several individuals to the research collections of Singapore Botanic Gardens, where it flowered.

Notes. This species can be readily recognised by stamens overtopping the stigma surface and the obconical pistil, which, by its outer (lower) surface, is closely attached to the perigone wall, lacking any space in between (Fig. 2 A, D, F). The latter feature is so far unique in the genus. The flowers are superficially similar to *A. lateralis* Tillich

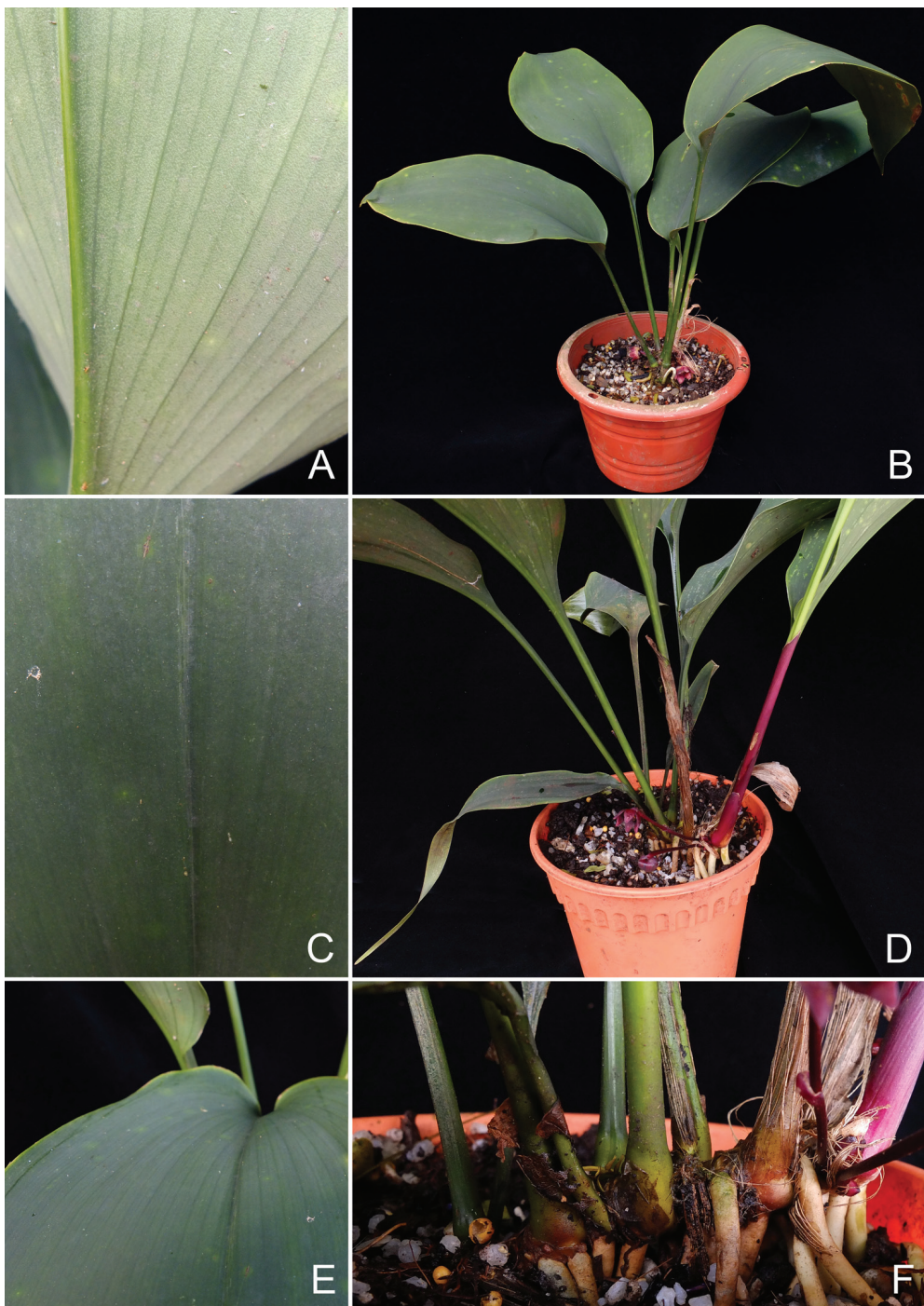


Fig. 1. Vegetative characters of *Aspidistra jiewhoei*. **A.** Leaf surface (abaxial) with well-visible dark green veins. **B.** Habit. **C.** Leaf surface (adaxial). **D.** Basal part of the plant showing young purple cataphyls. **E.** Base of the leaf blade. **F.** Swollen base of petioles. (Photos: J. Leong-Škorničková)

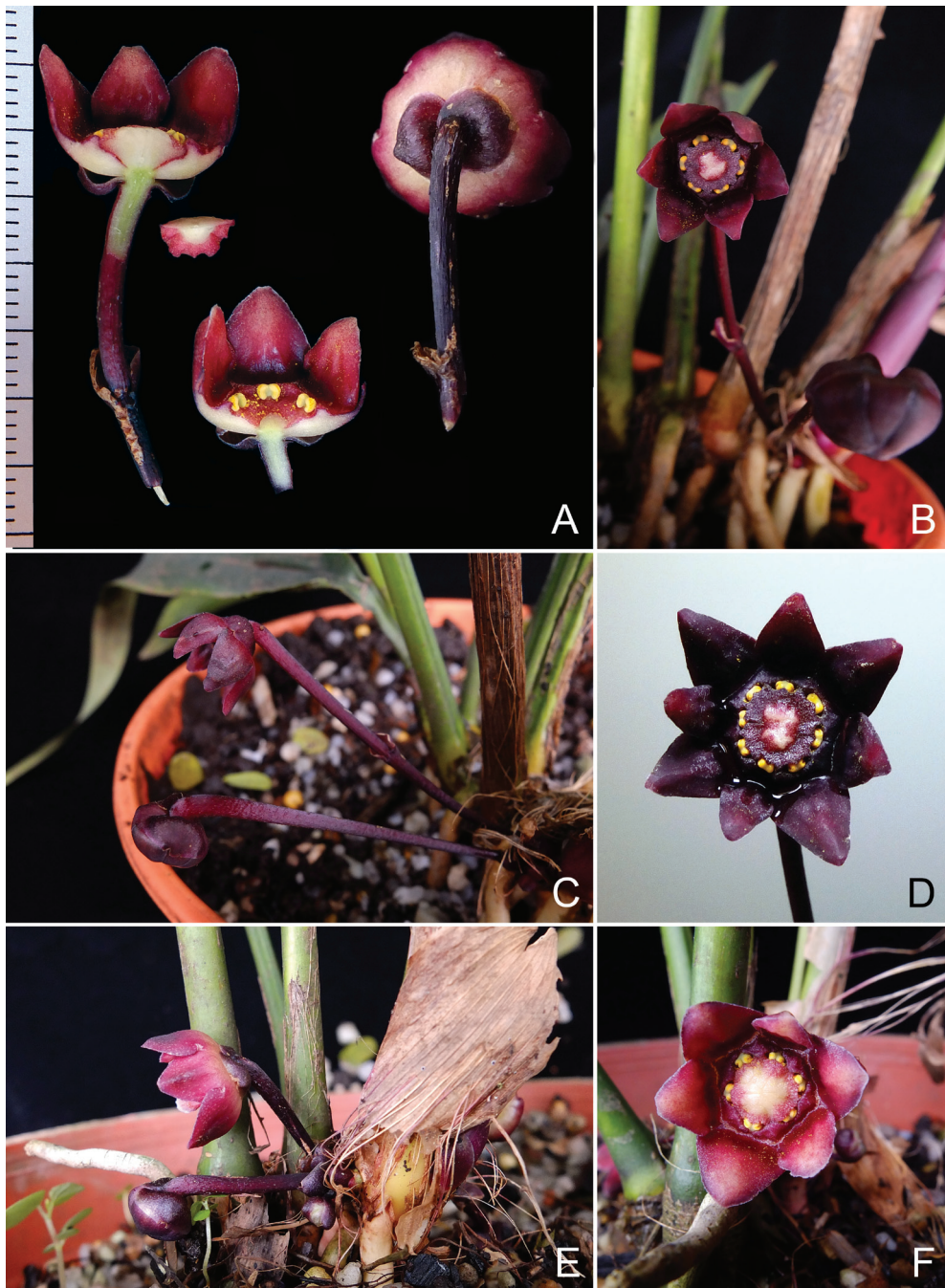


Fig. 2. Floral characters of *Aspidistra jiewhoei*. **A.** Dissection of the flower & detail of the basal part of the flower (scale in mm). **B.** Trimeric flower (front view; cultivated in deep shade condition). **C.** Trimeric flower (side view; cultivated in deep shade condition). **D.** Tetrameric flower with 8 lobes and 8 anthers (front view; cultivated in deep shade condition). **E.** Trimeric flower (side view; cultivated in semi-shade condition). **F.** Trimeric flower (front view; cultivated in semi-shade condition). (Photos: J. Leong-Škorníčková)

from Thừa Thiên–Huế Province, but in that species the stamens are below stigma level, and it differs clearly by its remarkable growth form with upright shoots, bearing the flowers on short peduncles in lateral position clearly above ground level.

It has been observed that trimeric (6 lobes, 6 stamens) as well as tetrameric flowers (8 lobes, 8 stamens) are produced on a single plant. This phenomenon has been reported in *Aspidistra* before, e.g. *A. lateralis* Tillich, *A. guangxiensis* S.Tang & Y.Liu, and *A. leshanensis* K.Y.Lang & Z.Y.Zhou. It is also noticeable that plants cultivated in deep shade produced slightly smaller flowers on longer peduncles, which were darker in colour (Fig. 2 B–D), compared to the plants cultivated under semi-shade conditions, which produced larger, overall slightly more robust flowers, with lighter coloration (Fig. 2 A & E–F).

ACKNOWLEDGEMENTS. The research of the second author is funded by the National Parks Board, Singapore and the Czech Science Foundation, GAČR (grant nos. 521/09/0202 and P506/10/0623).

References

- Averyanov, L.V. & Tillich, H.-J. (2012) New taxa of *Aspidistra* (Asparagaceae) from Central Vietnam. *Turczaninowia* 15: 5–10.
- Averyanov, L.V. & Tillich, H.-J. (in press) *Aspidistra truongii* – a new species of Asparagaceae (Convallariaceae s.str.) from Southern Vietnam. *Taiwania* 59.
- Bogner, J. & Arnautov, N.N. (2004) *Aspidistra locii* (Convallariaceae), an unusual, new species from Vietnam. *Willdenowia* 34: 203–208.
- Bräuchler, C. & Ngoc, L.H. (2005) *Aspidistra renatae* (Ruscaceae) – A new species from Central Vietnam. *Blumea* 50: 527–529.
- Tillich, H.-J. (2005) A key for *Aspidistra* (Ruscaceae), including 15 new species from Vietnam. *Feddes Repert.* 116 (5–6): 313–338.
- Tillich, H.-J. (2006) Four new species of *Aspidistra* (Ruscaceae) from China, Vietnam, and Japan. *Feddes Repert.* 117: 139–145.
- Tillich, H.-J. (2008) An updated and improved determination key for *Aspidistra* Ker-Gawl. (Ruscaceae, Monocotyledons). *Feddes Repert.* 119: 449–462.
- Tillich, H.-J. & Averyanov, L.V. (2008) Two new species and one new subspecies of *Aspidistra* Ker-Gawl. (Ruscaceae) from Vietnam. *Feddes Repert.* 119: 37–41.
- Tillich, H.-J. & Averyanov, L.V. (2012) Four new species of *Aspidistra* Ker-Gawl. (Asparagaceae) from China and Vietnam with a comment on *A. longifolia* Hook.f. and *A. hainanensis* W.Y.Chun & F.C.How. *Gard. Bull. Singapore* 64(1): 201–209.
- Tillich, H.-J., Averyanov, L.V. & Dzu, N.V. (2007) Six new species of *Aspidistra* (Ruscaceae) from northern Vietnam. *Blumea* 52: 335–344.

