



## *Aspidistra xuansonensis* (Asparagaceae), a new species from northern Vietnam

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### Abstract

The genus *Aspidistra* is the most diverse in southern China and northern Vietnam. We describe a new species *Aspidistra xuansonensis* from northern Vietnam including two varieties: *A. xuansonensis* var. *xuansonensis* with greenish white perianth and *A. xuansonensis* var. *violiflora* with purple perianth. We present DNA barcoding data of plastid *psbA-trnH* and nuclear 5SNTS regions for these two varieties in comparison with three other species of *Aspidistra*. Morphology of monopodial shoots of *A. xuansonensis* is described in detail. *A. xuansonensis* resembles recently described *A. lingyunensis* but differs in longer leaf petioles, longer lamina, perianth tube shape (tubular, widened at the base vs. funnel-shaped), higher anther position, and pistil shape (suddenly obconic to nearly umbrella-shaped vs. obconic gradually widened to stigma).

**Key words:** *Aspidistra*, taxonomy, shoot system, DNA barcoding, Vietnam

### Introduction

*Aspidistra* Ker Gawler (1822: 628) is a common herb of tropical forests of SE Asia. The genus was described about two centuries ago and now comprises about 120 species (Averyanov & Tillich 2014) including 44 species from Vietnam (Tillich 2014, see also Vislobokov *et al.* 2013, 2014). Most Vietnamese species were described during last ten years. We describe one more new species of *Aspidistra* (*A. xuansonensis*) from northern Vietnam morphologically similar to *A. lingyunensis* Lin & Guo in Lin *et al.* (2014: 60) recently discovered in southern China.

Features of flower are most important in taxonomy of *Aspidistra*. Hence, species determination is impossible without flowers. Usually species were recognized as new when sterile plants from wild turn to flowering in greenhouses (e.g., Bogner & Arnautov 2004, Tillich 2005, Tillich & Leong-Škorničková 2013). Nevertheless, developing tools for identification of sterile material is important for future research in ecology of *Aspidistra* and biodiversity assessment. Therefore, we believe that it is useful to describe as many as possible non-floral characters while naming new species of *Aspidistra*. Shoot morphology was found to be taxonomically significant in *Aspidistra* (De Wilde & Vogel 2005; Averyanov & Tillich 2014), but precise details of shoot structure are not described so far for most species of the genus. We provide a description of shoots in *A. xuansonensis* that can be used for comparison with other species. Our preliminary data show that root anatomy could be to some degree useful in *Aspidistra* (N.A. Vislobokov & D.D. Sokoloff, in prep.) and therefore include data on this character. A potentially useful tool for identification of vegetative material is molecular barcoding (e.g., Filipowicz 2012, González Gutiérrez *et al.* 2013). We proposed testing of two DNA regions (plastid *psbA-trnH* region and the nuclear 5S-NTS region) for barcoding in *Aspidistra* (Vislobokov *et al.* 2014). These regions were found useful at a specific level in other angiosperms (e.g. Pornpongrungrueng *et al.* 2009, Degtjareva *et al.* 2012). We provide a molecular diagnosis of *A. xuansonensis* in comparison with three other species of *Aspidistra* for which molecular data are available.

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