

Begonia liuyanii (sect. *Coelocentrum*, Begoniaceae), a new species from limestone areas in Guangxi, China

Ching-I PENG^{1,*}, Shin-Ming KU^{1,2}, and Wai-Chao LEONG¹

¹Herbarium, Research Center for Biodiversity, Academia Sinica, Nangang, Taipei 115, Taiwan

²Department of Life Sciences, National Cheng-Kung University, Tainan 701, Taiwan

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Abstract. *Begonia liuyanii*, a new species of sect. *Coelocentrum* from limestone areas in southwestern Guangxi Zhuang Autonomous Region, China, is described and illustrated. A somatic chromosome number of $2n = 30$ was determined. *Begonia liuyanii* is similar to *B. filiformis* in having small flowers and glandular-hispid inflorescences but is distinguishable by its larger leaves (16-38 × 12-32 cm vs. 9-22 × 9-14 cm), sparsely setose (vs. tomentose) upper surface of the leaves, maculation absent (vs. with white maculation in intercostal area on adaxial leaf surface), and usually thyrsoid (vs. cymose) inflorescence.

Keywords: *Begonia filiformis*; *Begonia liuyanii*; *Begonia masoniana*; Begoniaceae; China; Chromosome number; Guangxi; Limestone flora; New species; Rare species; sect. *Coelocentrum*.

Introduction

Towards a taxonomic revision of Chinese *Begonia*, we have made many field expeditions in recent years. Our surveys have resulted in the discovery of a number of new species, e.g., *B. coptidifolia* H. G. Ye, F. G. Wang, Y. S. Ye & C.-I Peng (Ye et al., 2004), *B. curvicarpa* S. M. Ku, C.-I Peng & Yan Liu and *B. luochengensis* S. M. Ku, C.-I Peng & Yan Liu (Ku et al., 2004) and *B. fangii* Y. M. Shui & C.-I Peng (Peng et al., 2005). Tropical limestone areas are rich in species and, in a taxonomic sense, are among the least studied types of habitat in the world (Wong et al., 2003). In southern China, all the species of *Begonia* sect. *Coelocentrum* Irmsch. grow on limestone between 300 and 1,300 m elevation (Shui et al., 2002). In this paper we report the discovery of yet another new species in sect. *Coelocentrum*, *B. liuyanii* C.-I Peng, S. M. Ku & W. C. Leong, from southwestern Guangxi Zhuang Autonomous Region, an area noted for its karst landscape and cave systems. A careful study of the literature, herbarium specimens and plants, both in the wild and in cultivation in the experimental greenhouse, reveals that *B. liuyanii* is sharply distinct from such congeners as *B. filiformis* Irmsch. and *B. masoniana* Irmsch. ex Ziesenh.

Species Description

Begonia liuyanii C.-I Peng, S. M. Ku & W. C. Leong, sp. nov.—TYPE: China. Guangxi Zhuang Autonomous Region, Longzhou Xian, Jinlong Zhen, Nonggang Nature Reserve, 22°28'34" N, 106°54'17" E, elev. ca. 200 m, broadleaved forest on mountain slope, 12 Sep 2003;

type specimen pressed from plant cultivated in an experimental greenhouse, *Wai-Chao Leong 3624-A* (holotype: HAST; isotypes: A, IBK). 劉演秋海棠

Figures 1, 2, 3

B. filiformis similis ob sed floribus parvis et inflorescentiis glanduloso-hispidis, foliis majoribus (16-38 × 12-32 cm vs. 9-22 × 9-14 cm), supra sparse setosis (vs. tomentosis), haud maculatis (vs. supra inter costas albo-maculatis) differt.

Plant monoecious; epipetric; perennial; rhizomatous. Rhizome stout, 10-20 cm long, 1-2.5 cm thick, internodes 0.8-1.3 cm long, brown, villous when young, glabrate when old, with few white, prominently raised, sometimes spine-like, small protrusions. Stipules caducous, narrowly triangular (rarely oblong ovate with apex obtuse), ca. 2-2.5 cm long, 1-1.3 cm wide, brownish, herbaceous, abaxially lanulose-villous, margin ciliate, weakly to strongly keeled, apex aristate, arista 5-7 mm long, horn-like. Leaves 2-5, alternate, simple, asymmetric, unlobed, widely ovate or suborbicular, base strongly oblique-cordate, margin inconspicuously irregularly repandly denticulate and shortly ciliate, apex shortly acuminate, 23-38 cm long (basal lobes included), 16-32 cm wide, adaxially green or dark green, abaxially pale (reddish when young), lacking maculation, subcoriaceous, surface somewhat nitid, flat or somewhat rugose, adaxially sparsely setose (trichomes conical or needle-like with base slightly swollen, nearly erect, straight or slightly curved at apex, 0.5-1 mm long, whitish-hyaline), abaxially lanuginous, particularly pronounced on veins; venation basally 6-7-palmate, midrib distinguishable, pinnate along midrib, with 1-3 major lateral veins on each side, other primary veins dichotomously branching or nearly so, tertiary veins percurrent or reticulate, divergence angle 60-85°, minor veins reticulate, all veins on abaxial surface prominently raised; petiole terete, 13-22 cm long, 5-10 mm

*Corresponding author. Fax: +886-2-2789-1623; E-mail: bopeng@sinica.edu.tw