Primulina mabaensis (Gesneriaceae), a new species from a limestone cave of northern Guangdong, China

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Abstract

We describe and illustrate the new species Primulina mabaensis from northern Guangdong, China. Its generic placement in the recently recircumscribed Primulina is confirmed by phylogenetic analyses of ITS and trnL-F intron-spacer DNA sequences. Primulina mabaensis is similar to P. repanda var. guilinensis, differing from the latter by its much larger flowers with corollas 2.5–3.0 cm (vs. 8–10 mm) long and corolla tubes 2.0–2.5 cm (vs. 6–8 mm) long and ca. 7 mm (vs. ca. 3 mm) in diameter at the corolla mouth. Primulina mabaensis is currently only known from limestone caves and rock surfaces of a karst tower in the Maba Man Archeology Site.

Key words: Chirita, Chiritopsis, ITS, molecular taxonomy, Old World Didymocarpoid Gesneriaceae, rare plant, Sino-Vietnamese limestone karst, trnL-F intron-spacer

Introduction

The region stretching across the border areas of southern China and northern Vietnam is renowned for its spectacular limestone karst terrains and rich biodiversity (Xu 1995, Hou et al. 2010, López-Pujol et al. 2011). As karst ecosystems elsewhere in Southeast Asia (Clements et al. 2006), the Sino-Vietnamese limestone karst flora is also distinctive in harboring a myriad of species-rich plant genera with exceptionally high endemicity. Aspidistra Ker Gawler (1822: p628; Asparagaceae; e.g., Lin et al. 2010), Begonia Linnaeus (1753: 1056; Begoniaceae; Peng et al. 2012), Elatostema Forster & Forster (1775: 53; Urticaceae; e.g., Wei et al. 2011), Impatiens Linnaeus (1753: 937; Balsaminaceae; e.g., Yu et al. 2009), Polystichum Roth (1800: 31; Dryopteridaceae; He & Zhang 2011) and several genera of Gesneriaceae (Wei 2010, Weber et al. 2011a, Liu et al. 2012, Wen et al. 2012a, Xu et al. 2012a) are but a few of the many species-rich and highly diversified genera, represented by species often confined to a few caves and crevices of limestone formations in the Sino-Vietnamese karsts.