A new species of Begonia section Parvibegonia (Begoniaceae) from Thailand and Myanmar

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Key words
limestone
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taxonomy

INTRODUCTION

Karst limestone in Thailand has an archipelago-like distribution and a rich and highly endemic flora. Many areas of this habitat are under-explored botanically, and are providing a constant source of new species and genera especially in the families Balsaminaceae, Begoniaceae and Gesneriaceae (Phutthai et al. 2009, Sukathan & Triboun 2009, Phutthai & Sridith 2010, Middleton & Möller 2012, Middleton & Triboun 2012). Limestone endemics often have very narrow distributions, which can mean high levels of threat when considered in combination with the high value of their habitat in terms of tourism and mining. Accurately documenting the species diversity of limestone karst habitat is the first step towards securing its future.

The new species described here belongs to Begonia sect. Parvibegonia A.DC. which comprises 33 species and is distributed from Northeast India throughout Indo-China to Java (Doorenbos et al. 1998, Hughes et al. 2015). Members of the section are characterised by their tuberous habit, pistillate flowers with 2 stigmas, 2-locular fruits with one enlarged wing and bifid placenta. In Thailand, 13 species are now recognised from Begonia sect. Parvibegonia (this study, Hughes 2008, Phutthai & Sridith 2010, Phutthai et al. 2012).

Begonia tenasserimensis Phutthai & M. Hughes, sp. nov. — Fig. 1; Map 1

Begonia tenasserimensis is vegetatively similar to and shares the presence of persistent tepals when the fruit matures with B. crenata Dryand., but differs from that species in having an acutely lobed leaf lamina with 3 main veins (vs unlobed with 5 main veins) and a shortly spinose dentate leaf margin (vs crenate), pistillate flowers with 5 tepals (vs 6) and stamineate flowers with lanceolate inner tepals (vs broadly elliptic), and a more branched inflorescence. — Type: D.J. Middleton, K. Bunpha, P. Karaket, S. Lindsay, T. Phutthai, S. Suddee & N. Tetsana 5371 (holo E, barcode E00596936; iso BKF, PSU), Thailand, Satun, Thung Wa District, on eroded limestone with numerous pools and small waterfalls in deep shade gallery forest, N7°06'40" E99°50'36", 140 m, 10 Sept. 2010.

Etymology. The specific epithet ‘tenasserimensis’ is derived from the Tenasserim Range to where the species is endemic.

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Begonia tenasserimensis Phutthai & M. Hughes. a. Habit and habitat; b. adaxial and abaxial leaf lamina; c. inflorescence; d. staminate flower; e. glandular hairs on ovary; f. pistillate flower; g. maturing capsule with persistent tepals. — Photos by Thamarat Phutthai.
Conservation assessment — *Begonia tenasserimensis* is known only from two karst limestone localities in Thailand and one in Myanmar, the latter collected in 1861. Only 25% of the 20,000 km² of karst limestone in Thailand is protected (Clements et al. 2006). The Thai populations of the species are in localities classed as recreation areas (IUCN protected area category VI; an area which is promoted for sustainable use, where conservation and sustainable use can be mutually beneficial; IUCN 2016) and can receive many tourist visitors in the high season. The exact locality of the Myanmar collection is unknown. We consider a category of Vulnerable (VU D2) to be appropriate, as the populations are prone to the effects of human activities or stochastic events within a very short period (IUCN 2012).


Note — Initially we considered the specimens we here use to describe *B. tenasserimensis* a new record for Thailand of *B. crenata* (syn. *B. aliciae* C.E.C. Fischer), an endemic of the Western Ghats in India (Aitawade & Yadav 2012), and although we are now sure they are distinct it seems they are closely allied. In addition to the morphological differences it seems they are also ecologically differentiated. *Begonia tenasserimensis* is a karst limestone endemic and found in lowland seasonal forest at c. 150 m of altitude, on eroded limestone in streams. In contrast *B. crenata* is distributed in montane forest at 900–1200 m altitude (Kumar et al. 2002) and is not restricted to limestone.

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