



A New Species of Epiphytic *Impatiens* (Balsaminaceae) from the Western Ghats, India

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ABSTRACT: *Impatiens bhaskarii*, a new species is described and illustrated from the Western Ghats, India. It is endemic and confined to the Western Ghats of Karnataka (India). This species is closely allied to *I. stocksii* Hook. f. & Thomson and *I. dendricola* C. E. C. Fisch., but differs in possessing lilac to pink-coloured flowers, a short dorsal auricle, and seeds with hairs all over from the former, and in having lilac to pink-coloured flowers, saccate spur and seeds with hairs all over from the latter.

KEY WORDS: Endemic, *Impatiens bhaskarii*, new species, Western Ghats, India.

INTRODUCTION

The genus *Impatiens* L. is a highly diversified genus and is represented by over 1,000 species (Janssens et al., 2006; Morgan, 2007). The species of the genus are primarily distributed in the tropical and subtropical regions of the Old World while few are distributed in the northern temperate regions (Grey-Wilson, 1980, 1985). About 203 species are found in India (Vivekananthan et al., 1997) to which few more species have been added subsequently.

Western Ghats, one of the 34 biodiversity hotspots of the world, harbours about 90 species of *Impatiens*. It is a region of speciation for the genus *Impatiens* (Bhaskar, 1981; Kumar and Sequiera, 1996) with maximum number of endemic species (Nair, 1991).

During the course of taxonomic studies of the genus *Impatiens* in the Western Ghats, the authors collected specimens of an epiphytic balsam belonging to section *Scapigeræ* Hook. f. & Thomson. Section *Scapigeræ* is confined to Peninsular India with an exception of one species in Sri Lanka. In the Western Ghats region, scapigerous balsams are either with a saccate lip wherein the wing petals are lacking a distinct dorsal auricle or possess spurred lip wherein the wing petals may or may not be with a distinct dorsal auricle. Detailed studies show that the collected specimens are similar to *I. stocksii* Hook. f. & Thomson in their saccate spur and *I. dendricola* C. E. C. Fisch. with respect to their dorsal auricle thus representing the characters of both groups in *Scapigeræ*. Several live specimens of the same entity collected from the type locality are being grown at Gurukula Botanical Sanctuary, Wayanad. Our study of these specimens for variations also reveals that this is a distinct novel taxon. Hence it is being described here as a new species.

TAXONOMIC TREATMENT

Impatiens bhaskarii J. Dessai, L. Joseph & Janarth., *sp. nov.* Fig. 1

Type: INDIA, Karnataka, Chikmagalur District, Charmadi ghat, 15 August 2005, Jyosna R. N. Dessai & M. K. Janarthanam 62 (holotype: CAL; isotypes: BSI, MH).

Impatiens stocksii et *I. dendricola* similis, ab ambobus floribus lilacinis ad roseis, seminibus omnino pubescentibus, a prima auricula dorsali brevi, a secunda calcar saccato differt.

Epiphytic, scapigerous, tuberous herb, 10-15 cm high; tubers creamish brown, spherical to oblongoid, 0.5-0.7 × 0.5-0.8 cm. Leaves radical, 3-7 per tuber, petiolate; petiole 1.5-4 cm long, glabrous; lamina broadly ovate to orbicular, 0.6-4 × 0.5-3.6 cm, base obtuse to truncate, margin crenate, apex acute, retuse to apiculate; crenae apiculate, adaxially hairy, abaxially glabrous. Inflorescence a 6-10-flowered raceme; 1-4 per tuber, scape 5-14 cm long, slender, glabrous. Flowers lilac to pink with a tuft of yellow hairs at the base of the middle lobe, 8-20 mm across, bracteate, pedicellate; bracts ovate, 1.5-2 × 1-1.3 mm, apex acute; pedicel 6-20 mm long, slender, glabrous, deflexed in fruits; lateral sepals 2, asymmetrically ovate, 1.5-2 × 0.5-1 mm, slightly concave, apex acute, distinctly 3-nerved, light green, glabrous; standard orbicular to obovate, 2.5-4 × 3-4.5 mm, white externally, lilac to pink internally, glabrous, apex obcordate; wing petals 2, 8-15 × 6-10 mm, 3-lobed, lobes unequal, basal lobe smaller than the distal and middle lobe, asymmetrically ovate, 3-5 × 1.5-3 mm, middle lobe broadly ovate, 2.5-5 × 2-5 mm, distal lobe oblong, 2.5-6 × 1-3 mm; dorsal auricle short, yellow; lip ovate, 4-5 × 1-3 mm, apex acute, spur saccate. Column ca. 2 × 1 mm, curved; anthers 5, cohering above the pistil, ca. 1 × 0.5 mm, white; filaments 5, ca. 1.5 × 0.5

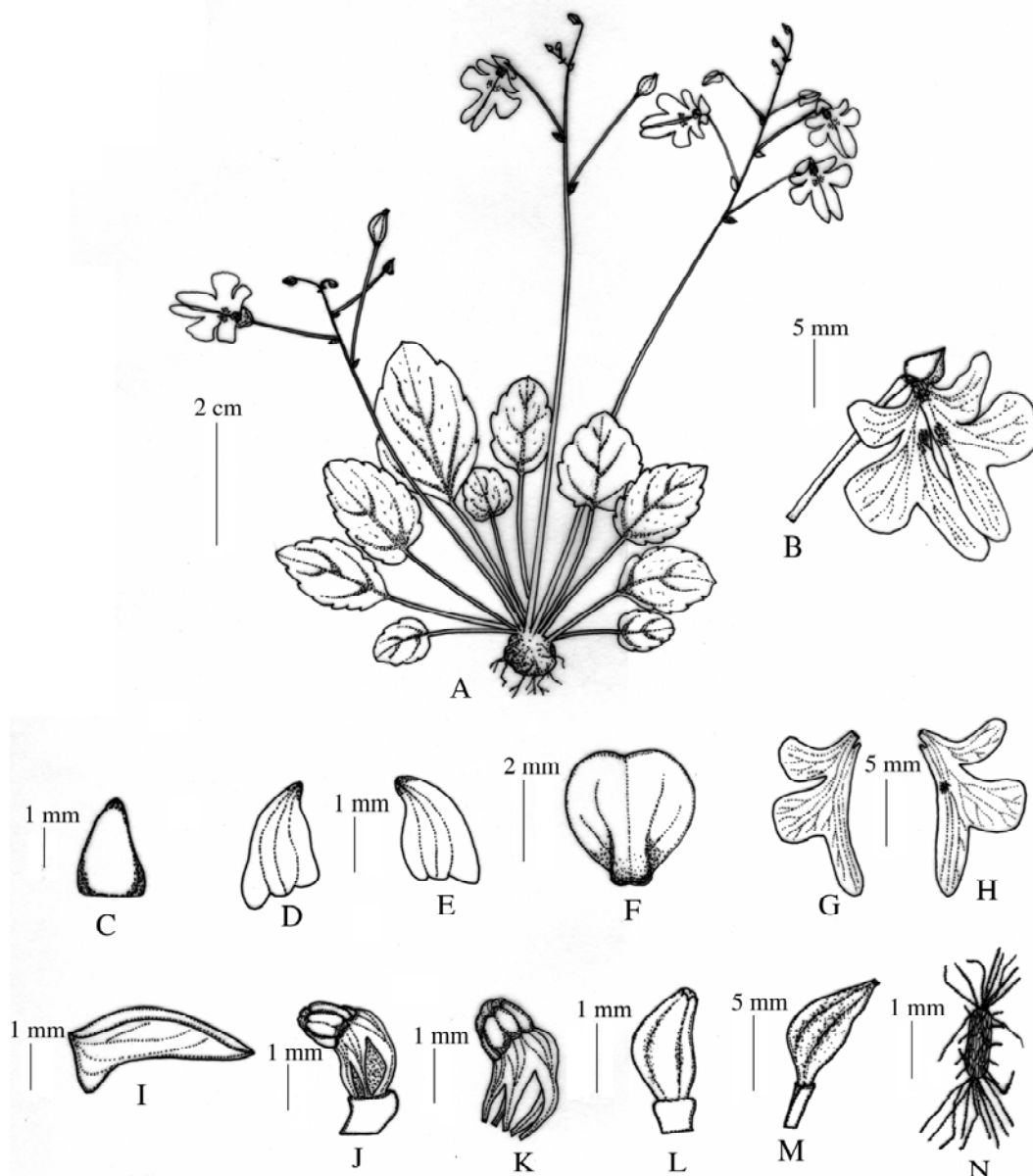


Fig. 1. A: Habit. B: Flower. C: Bract. D, E: Lateral sepals. F: Standard. G: Wing petal (dorsal view). H: Wing petal (ventral view). I: Lip. J: Column. K: Androecium. L: Pistil. M: Capsule. N: Seed. (line drawing by Jyosna Dessai from Jyosna R. N. Dessai & M. K. Janarthanam 62)

mm, narrow and free at base, fused and broad at apex, light pink to white. Pistil ca. 1.5×0.5 mm; ovary lanceoloid to ellipsoid, glabrous; style absent; stigma 5-toothed. Fruit a capsule, $0.6-1 \times 0.2-0.4$ cm, asymmetrically ellipsoid, glabrous, pedicel 1.5-2.2 cm long. Seeds numerous, minute, oblongoid, ca. 1×0.5 mm; testa reticulate, brown, hairy; hairs sparse throughout but long and tufted at both the ends, spirally coiled.

Distribution: Charmadi ghat (type locality) of Karnataka, Western Ghats, India.

Flowering and fruiting: July – August.

Habitat: Epiphyte. Growing on tree branches within moss.

Conservation status: Data deficient; not collected from outside type locality. Specimens collected from type locality are being grown at Gurukula Botanical Sanctuary, Wayanad.

Etymology: The species is named in honour of Prof. V. Bhaskar for his immense contribution towards the understanding of *Impatiens* of south India.

**Table 1. Comparative account of *Impatiens bhaskarii*, *I. dendricola* and *I. stocksii*.**

Characters	<i>Impatiens bhaskarii</i> sp. nov.	<i>I. dendricola</i>	<i>I. stocksii</i>
Flower colour	Lilac pink	White	White
Dorsal auricle	Present	Present	Absent
Spur	Saccate	Clavate	Saccate
Seeds	Hairy throughout, hairs long and tufted at both the ends	Comose	Comose

Note: The species is related to *I. stocksii* and *I. dendricola* but differs in possessing lilac to pink-coloured flowers, short dorsal auricle, and seeds with hairs all over from the former and in having lilac to pink-coloured flowers, saccate spur and seeds with hairs all over from the latter (Table 1).

Impatiens bhaskarii is restricted to the type locality and *I. dendricola* till date is reported from only two localities in Coorg District further south of the type locality of *I. bhaskarii* whereas *I. stocksii* is found growing in the areas occupied by both these species. *Impatiens stocksii* and *I. dendricola* are found growing on moss covered tree trunks while *I. bhaskarii* grows on horizontal lateral branches.

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印度西高止山脈新種附生型鳳仙花

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摘要：本文描述並繪圖介紹特產於印度西高止山脈的鳳仙花一新種：巴斯卡鳳仙 (*Impatiens bhaskarii*)。本種除了是印度特有種外，更侷限分布於西高止山脈。文中提及本種與幹生鳳仙 (*I. stocksii* Hook. f. & Thomson) 及樹生鳳仙 (*I. dendricola* C.E.C. Fisch.) 雖為相近種，然淡紫色到粉紅色的花、囊形的距及全被毛的種子等特徵，是很容易與後二者區別。

關鍵詞：特有種、巴斯卡鳳仙、新種、西高止山、印度。