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

Jyosna R. N. Dessai(1), Laly Joseph(2) and M. K. Janarthanam(1*)

1. Department of Botany, Goa University, Goa – 403 206, India.
* Corresponding author. Tel: +91-832-6519344; Fax: +91-832-2451184; Email: mkjana@yahoo.com

(Manuscript received 17 November 2008; accepted 3 February 2009)

**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 *Scapigerae* Hook. f. & Thomson. Section *Scapigerae* 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 *Scapigerae*. 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.*


*Impatiens bhaskarii* similis, ab amobus floribus lilacinis ad roseis, seminibus omnino pubescentibus, a prima auricula dorsali brevi, a secunda calcare 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 obturate; 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
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 × 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.

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

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.

ACKNOWLEDGEMENTS

The authors thank the Directors/Officers in-charge of BLAT, BSI, CAL, JCB, MH, Department of Botany, Mysore University for permission to consult their specimens; Dr J. F. Veldkamp (L) for the Latin diagnosis; Mr W. Theuerkauf, Gurukula Botanical Sanctuary, Wayanad, Kerala for his valuable input and permission to study live specimens. The first author thanks International Association for Plant Taxonomy for a research grant.

LITERATURE CITED


