

Short Communication

Impatiens kamrupana Gogoi, J. Sarma & Borah (Balsaminaceae): A new record for Meghalaya, India

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ABSTRACT

Impatiens kamrupana Gogoi, J. Sarma & Borah, a lesser known endemic species hitherto known to occur only from Assam, is reported for the first time from Meghalaya, North East India. A brief description, photo plate and other relevant notes are provided for easy identification.

Keywords: Assam, Endemic, Khasi hills, Jewel weed

INTRODUCTION

The genus *Impatiens* L. is one of the mega diverse genera of angiosperms (Moonlight *et al.* 2024), offers a plethora of unexplored benefits for gardeners (Kottaimuthu *et al.* 2021). Currently, the genus comprises about 1120 accepted species (POWO 2024), distributed in the tropical and subtropical regions of the Old World as well as in the northern temperate regions (Fischer 2004). There are about 300 species in India (modified after Kumar & Arya 2024), maximum diversity is recorded in Western Ghats, the Eastern Himalayas and North-eastern states (Bhaskar 2012; Gogoi *et al.* 2018; Kumar *et al.* 2022). Hitherto, 44 species have been recorded from Meghalaya (Mao *et al.* 2016), of these, *Impatiens acuminata* Benth. ex Hook.f. & Thomson, *I. angustiflora* Hook.f., *I. benthamii* Steenis, *I. cothurnoides* C.E.C.Fisch., *I. depauperata* Hook.f., *I. formosa* Hook.f., *I. paludosa* Hook.f., and *I. sashinborthakurii* Gogoi, Sherpa & Murug. are strict endemics, confined to specific habitats of this state (Gogoi *et al.* 2019, 2020).

During the recent botanical survey carried out in East Khasi Hills and Nongkyllem wildlife Sanctuary, Meghalaya, we collected few peculiar specimens of *Impatiens*, which was notable for its bicoloured flowers with sub-bucciniform lower sepal and bicoloured lateral united petals. After critical examination of specimens and consultation of relevant literature (Borah *et al.* 2019), the specimens are identified as *Impatiens kamrupana* Gogoi, J. Sarma & Borah, an endemic species of Assam so far not been reported from the state of Meghalaya (Mao *et al.* 2016; Gogoi *et al.* 2020). Later, the identity was confirmed by matching the specimens with digital type specimens housed in Indian Virtual Herbarium. A brief description along with photographs are provided here to facilitate its easy identification in the field.

Taxonomic Treatment

Impatiens kamrupana Gogoi, J. Sarma & Borah, Phytotaxa 395 (1): 36. 2019; Gogoi & al. in S.S. Dash & A.A. Mao, Fl. Pl. India Annot. Checkl. Dicot. 1: 212. 2020 (Fig. 1).

Annual herbs, ca. 1.2 m tall. Leaves simple, alternate, ovate to elliptic, 5.5–15 × 2–5 cm, cuneate to attenuate at base, margin crenate, acuminate at apex. Inflorescence 3–6 flowered fascicles; flowers bicoloured, whitish-purple; pedicels 1.2 cm long. Lateral sepals 2, ovate, 3–3.6 × 1.3–1.6 mm. Lower sepal sub-bucciniform, 1.8 × 0.9 cm, white to yellowish white, prominent red nerves inside, beaked; spur linear, 0.6–1.2 mm long. Dorsal petal sub-orbicular, 0.9–1.1 × 0.8–1 cm, white, emarginated at apex. Lateral united petals subequal, bilobed, 2–2.5 cm long; basal lobe obovate, 0.7 × 0.6 cm; distal lobe rounded, 0.8 × 1.5 cm, purple; dorsal auricle 2.2–2.6 × 1.4–1.7 mm. Ovary ovoid, 4–5 mm long, glabrous. Capsules ovoid, 1.4–2 × 0.6 cm, turgid at middle, ridged, pointed at apex, glabrous; seeds many, 2–3 mm long, ovoid, hairy.

Flowering and Fruiting: August–October.

Distribution: India (Assam, Meghalaya [present report]). Endemic.

Specimen examined: India, Assam, Simla Reserve Forest, Nokedonga, 190 m, 27 Sept 2018, S. Borah & J. Sarma 0007 (CAL [digital images with barcode CAL0000033633!, CAL0000033634!, CAL0000033635!]); Meghalaya, Ri-Bhoi Distr., Nongkhylllem Wildlife Sanctuary, (25°46'59" N and 91°51'18" E), 715 m, 17 September 2023, Y Mahesh 143881 (ASSAM!); East Khasi Hills Distr., Nongspung, (25°54'17" N and 91°39'10" E), 567 m, 17 July 2024, N. Odyuo *et al.* 143341 (ASSAM!).

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Figure 1. *Impatiens kamrupana* Gogoi, J. Sarma & Borah (A) plant in natural habitat, (B & C) Inflorescence, (D–F) close up of flower, (G) lateral sepals, (H) lower sepal, (I) lateral united petals, (J) dorsal petal, (K) pedicel with androecium, (L & M) Capsule with pedicel, (N) seeds.

Note: Borah et al. (2019) described *Impatiens kamrupana* based on collections from Simla Reserve Forest, Assam, India. Singh et al. (2021) did not accept the specific status of *I. kamrupana* and treated it

as a heterotypic synonym of *I. tripetala* Roxb. ex DC. However, based on our results of observations on living plants in a different population of *Impatiens kamrupana* from Meghalaya, we agree with Borah et al. (2019) and Gogoi et al. (2021) to treat *Impatiens kamrupana* as a distinct species. Though *Impatiens kamrupana* closely resembles *I. tripetala* but it can be easily distinguished from the latter by its alternate leaves (vs. opposite leaves in *I. tripetala*), sub-bucciniform lower sepal (vs. saccate lower sepal in *I. tripetala*), straight to slightly curved spur (shortly hooked spur in *I. tripetala*) and lateral united petals bicoloured, basal lobe white and distal lobe purple (vs. lateral united petals unicoloured, pink or partially purple in *I. tripetala*).

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