



Impatiens dalaiensis (Balsaminaceae) a new species from Arunachal Pradesh, India

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Abstract

Impatiens dalaiensis Gogoi & Borah is described and illustrated from Arunachal Pradesh, India. In contrast to the morphologically similar *I. graciliflora* (fruits also clavate) and *I. radiata* (fruits linear-cylindrical), the new species exhibits flower buds with a distinct awn or appendage, lower sepal mouths with an awn or appendage, and the distal lobe of the lateral united petals long-lorate or ribbon-shaped, twisted.

Key words: Anjaw district, chaglagam, novo taxa, NE India

Introduction

Impatiens Linnaeus (1753: 937), a fascinating group of plants with high ornamental and horticultural value, is the largest among the two genera of Balsaminaceae, with more than 900 species distributed worldwide, except in Latin America (Chen *et al.* 2008). Most species occur in Africa and Asia, and the probable centre of origin is thought to be in South China (Yuan *et al.* 2004, Janssens *et al.* 2007, Chen *et al.* 2008, Mabberley 2008). In India, there are 203 species of *Impatiens* recorded, of which 137 species are endemic (Vivekananthan *et al.* 1997, Swaminathan *et al.* 2001). In Arunachal Pradesh, a micro centre of origin and evolution of various angiospermic plants, *Impatiens* is well represented, but has never received serious taxonomic attention.

In 2012, the present authors collected an interesting species from the Dalai valley of Arunachal Pradesh. After critical study and screening of the relevant literature (Hooker & Thomson 1860, Hooker 1875, 1905, 1908, 1909, 1910, 1911, Toppin 1920, Grey-Wilson 1989, 1991, Vivekananthan *et al.* 1997, Swaminathan *et al.* 2001, Huang 2003, Huang *et al.* 2006, Chen *et al.* 2008, Yu 2012, Pusalkar & Singh 2010, Dessai & Janarthanam 2011, Bhaskar 2012, Gogoi & Borah 2013a,b, 2014), we determined that the taxon is a hitherto undescribed species and hence describe it here as new, with illustrations based on living material.

Impatiens dalaiensis Gogoi & Borah *sp. nov.* (Figure 1 & 2 A–G)

Differs from *I. radiata* Hooker by stem bases terete, flower buds with a prominent awn, lower sepal mouth with a distinct awn or appendage, distal lobes of lateral united petals long ribbon shaped, twisted, apex acute, and fruit clavate; from *I. graciliflora* Hooker by flower buds with a distinct awn, lower sepal mouth with an awn or appendage, less than half the length of spur in lower sepal, distal lobe long ribbon shaped, twisted and acute at apex.

Type:—INDIA. Arunachal Pradesh: Anjaw district, 10 km. before Chaglagam on the way from Hyuliang, 96°32'22.84"E, 28°15'19.47"N, 1517 m, 9 September 2012, *R. Gogoi & S. Borah 21828* (holotype CAL!, isotypes ARUN!, ASSAM!)

Herbs, annual, succulent, to 120 cm tall. Stems green, basal portion terete, pink spotted, nodes swollen. Leaves alternate, simple; stipules 2, glandular, 4–5 mm long, base flat; petiole 0.5–2 cm long, glabrous, slightly winged, pink or pink spotted; lamina elliptic to narrowly elliptic, 5–18.5 × 1.5–4 cm, dorsally green with pink tinge, ventrally green, glabrous, margin crenate, base winged, apex acuminate, mid rib dorsally pink. Inflorescence axillary, 12–29 cm long,