

Impatiens parkinsonii C.E.C. Fisch. (Balsaminaceae), a new addition to flora of India and notes on its typification

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Abstract

Impatiens parkinsonii C.E.C.Fisch. (Balsaminaceae) is reported as new addition to the flora of India. It was earlier only known from North Myanmar. As there was no holotype assigned for the species, a lectotype is designated here.

Introduction

Impatiens parkinsonii C.E.C.Fisch. (Balsaminaceae) was described by Cecil E.C. Fischer on the basis of a collection made by C. E. Parkinson from North Myanmar in 1925. Parkinson was a Forest Botanist of Burma (Myanmar) and the species was named after its collector. The specific epithet of this species was named in his honour (Fischer 1926). While describing the species, Fischer assigned *C.E. Parkinson 407* as the type; however, this collection consists of two sheets, each one a syntype. Therefore, lectotypification of the name *I. parkinsonii* C.E.C.Fisch. is required.

During a recent plant exploration tour by two of the authors (N.O. and R.D.) to Mon district of Nagaland, North-eastern India under Botanical Survey of India's annual action plan project 'Flora of Eastern Nagaland', a few species of *Impatiens* were collected. After critical examination and subsequent literature study accompanied by examination of herbarium samples deposited at K, one plant collected during this survey was identified as *Impatiens parkinsonii*, being discovered for the first time from India (Hooker 1874, 1905; Toppin 1920, Fischer 1926, Grey-Wilson 1989, 1991; Vivekananthan et al. 1997; Huang 2006; Pusalkar and Singh 2010; Dessai and Janarthanam 2011; Bhaskar 2012; Gogoi and Borah 2013a, 2013b, 2014; Gogoi et al. 2013, Borah et. al. 2015). Until now, this species was only known from Namti Chaung Feeder, Myitkyina district, North Myanmar (North Burma) (Fischer 1926).

A detailed description of this poorly known species is provided, together with coloured images, to enable field botanists, foresters, environmentalists, herbalists, and others. to identify the species in the field. A lectotype is designated from C.E. Parkinson's original collection

Impatiens parkinsonii C.E.C. Fisch. *Bulletin Miscellaneous Information Kew* 1926: 467 (1926).

Lectotype (designated here): Myanmar, Myitkyina district, Namti Chaung Feeder, 11 Dec 1925, *C.E. Parkinson 407* (K000694778!); isolectotype (K000694779!)



Fig. 1. Lectotype of *Impatiens parkinsonii* C.E.C.Fisch., C.E. Parkinson 407 (K000694778!) © The Board of Trustees of the Royal Botanic Gardens, Kew. Reproduced with the consent of the Royal Botanic Gardens, Kew.

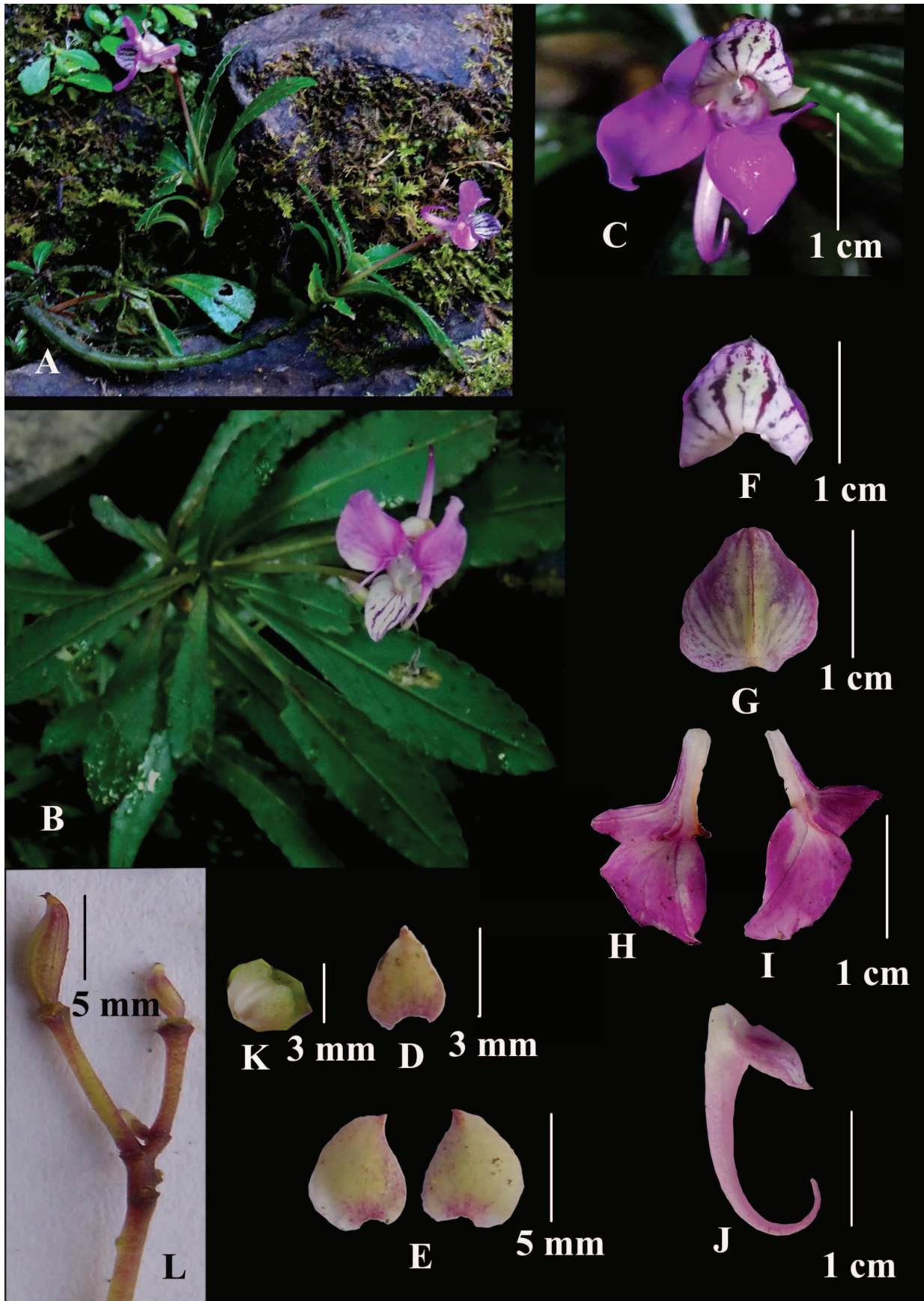


Fig. 2. *Impatiens parkinsonii*. A, B. Plants in natural habitat; C. Close view of flower; D. Bract; E. Lateral sepals; F. Ventral view of dorsal petal; G. Dorsal view of dorsal petal; H. Ventral side of lateral united petals; I. Dorsal side of lateral united petals; J. Lower sepal with spur; K. Stamens; L. Young fruits.

Perennial succulent herbs, unbranched, up to 30 cm tall, prostrate; stem ridged or slightly winged, nodes not swollen. *Leaves* alternate, confined to upper portion of stem, rosulate, sessile to petiolate; *petiole* 0.5–0.8 cm long; *lamina* oblanceolate, 2–6 cm long, 0.5–1.6 cm wide, glabrous, base cuneate to attenuate, margin crenate, setose between teeth, apex acute, lateral veins 4–7 pairs. *Inflorescence* axillary, 1–6-flowered, peduncle up to 5 cm long, floral bud light greenish purple. *Flower* purple with deep purple streaks; *pedicel* up to 1 cm long, green with pink tinge, bract inserted at base, ovate, up to 3 mm long, 2 mm wide, yellowish green with pink tinge at base, persistent, apex acute, mid vein inconspicuous, glabrous. *Lateral sepals* 2, ovate, apex slightly curved, yellowish green with pink tinge, up to 5 mm long, 3 mm wide, margin entire, green, membranous, apex acute. *Lower sepal* navicular, purplish white, up to 3 mm deep, mouth without beak, spur light purple, up to 2 cm long, curved inward or hooked, tip purple. *Dorsal petal* white with purple streaks ventrally, ovate, up to 1 cm long, 1 cm wide, apex obtuse, without beak at apex, dorsally slightly cucullate. *Lateral united petals* light purple, bilobed, 1.5 cm long (whole), basal lobe triangular ovate, apex acute, distinctly clawed, to 3 mm wide, distal lobe dolabriform, apex acute to obtuse, to 7 mm wide, basal auricle brown, up to 1 mm long. *Stamens* 5, slightly curved; anther lobe obtuse. *Capsule* turgid at middle, greenish with purple tinge, glabrous; *seeds* 4 or 5 in each capsule, black, surface smooth.

Phenology: Flowering and fruiting July–December

Distribution and habitat: The species was found growing as moist lithophytes near streams at an altitude of 900 m, in association with *Begonia* sp., *Mycetia* sp. and *Cyathea* sp. Apart from North Myanmar, this species also occurs in the states of Eastern Nagaland and South Eastern Arunachal Pradesh of India.

Other specimens examined: INDIA: Nokyan, Mon district, Eastern Nagaland, 95°13'50.5"E, 26°53'02.6"N, altitude 910 m, *N. Odyuo* & *R. Daimary* 132390, 29 Nov 2014 (ASSAM!); Niusa-Wanu, Tirap district, Arunachal Pradesh, *G. Panigrahi* 16701, 3 Sep 1958; Pusa to Bimalpur, Tirap district, *G. Panigrahi* 16999, 8 Sep 1958 (CAL!).

Lectotypification

Since the type collection (*C.E. Parkinson* 407) of *I. parkinsonii* consists of several elements (mounted on two separate sheet, as held at K; refer above), one sheet (K000694778) has been selected as the lectotype. This sheet was examined by C.E.C. Fischer and closely matches the protologue, including the illustration (Fischer 1926). Since the remaining K sheet of this collection were also examined by Fischer, are regarded as part of the original gathering, and match the protologue, it is here designated as an isolectotype.

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