

## **Extended distributional record of *Calanthe hancockii* Rolfe (Orchidaceae): A critically endangered species from Nagaland, India**

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### **Abstract**

*Calanthe hancockii* Rolfe (Orchidaceae) collected from Fakim Wildlife Sanctuary forms a new distributional record for the orchid flora of Nagaland.

**Key words:** *Calanthe hancockii*, Critically Endangered, Extended distribution, Nagaland

### **INTRODUCTION**

During the course of floristic exploration in Fakim Wildlife Sanctuary (FWS), under Kiphire district of Nagaland, India, in May 2010, a curious terrestrial orchid was collected. On reviewing literatures the species was identified as *Calanthe hancockii* Rolfe. Recently, Kumar *et al.* (2014) recorded the species from Mizoram and that was its first distributional report from India. Also, they assessed *C. hancockii* as critically endangered in context of Indian flora.

The genus *Calanthe* R. Brown (Orchidaceae) is represented by ca. 207 species globally (Clayton & Cribb 2013). It is distributed in tropical and subtropical Asia, Japan, SE Asia, New Guinea, Australia, Pacific Islands, South Africa, Madagascar, islands of the Indian Ocean, and the neotropics. About 32 species of *Calanthe* is reported from India (Misra 2007), whereas Clayton and Cribb (2013) mentioned the occurrence of 28 species. The present collection of *C. hancockii* from FWS is a new distributional record for the Orchid flora of Nagaland. The collected specimen is deposited at the Herbarium of the Department of Botany, Nagaland University, Lumami. A detailed description, photographs and habitat ecology is provided to facilitate its easy identification.

So far, *Calanthe hancockii* has been reported only from China, India (Mizoram and Nagaland) and Myanmar.

### **TAXONOMIC TREATMENT**

*Calanthe hancockii* Rolfe, Bull. Misc. Inform. Kew 1896 (119): 197. 1896; Chen *et al.* in *Flora of China* 25: 304. 2009; Clayton & Cribb, *The genus Calanthe*: 132. 2013; Kumar *et al.*, *Telopea* 16: 213. 2014. [Figure 1]



**Figure 1.** *Calanthe hancockii* Rolfe: A. Habit; B. Close-up of inflorescence; C. Close-up of Flower

Terrestrial herbs, 30 – 85 cm high. Rhizome inconspicuous. Pseudobulbs ovate to conic, with 3 or 4 sheaths. Leaves 3, petiole 5 – 20 cm long; lamina elliptic to elliptic-lanceolate, 15 – 40 x 5 – 12 cm, undulate, acute, gradually narrowed towards the base, puberulent on lower surface; pseudostem 8 – 25 cm long. Racemes arise from leaf axils, 20 – 80 cm long, erect, densely puberulent; rachis laxly 7 – 30-flowered; floral bracts persistent, shorter than ovary, narrowly lanceolate, 7 – 10 x 3 – 4 mm, pale greenish-yellow, glabrous. Flowers slightly nodding, greenish-yellow with pale brownish tinge, large. Sepals similar, oblong-lanceolate, 22 – 35 x 6 – 10 mm, puberulent outside, 5 – 7-veined, acute or acuminate; lateral sepals slightly narrower. Petals sub-elliptic, 20 – 25 x 5 – 7 mm, 3-veined, acute to acuminate; lip adnate to column, 3-lobed, bright yellow, sometimes with greenish-brownish tinge; keels raised, median keel nearly reaching apex of mid lobe, lateral keels slightly shorter; lateral lobes falcate-oblong, obliquely truncate at tip; mid-lobe narrowly obovate-oblong, acute to acuminate or sometimes rounded; spur slender, yellowish, 2 – 3 mm, puberulent outside, white-pilose around mouth. Column ca. 6 mm long, finely pubescent; rostellum 2-lobed; anther cap beaked, ovate; pollinia 8, narrowly ovoid; viscidium suborbicular. Ovary oblong-obclavate, green, sparsely pubescent; stigma large, 1-lobed.

**Flowering:** April – June

**Habitat:** On humus rich shady places of broad-leaved temperate forest.

**Distribution:** China, India (Mizoram, Nagaland), Myanmar.

**Specimen cited:** Nagaland, Kiphire district, Fakim Wildlife Sanctuary, 1800 m, 14 May 2010, *Rongsen NU-1368*.

**IUCN-Status:** Based on IUCN (2012) criteria, Kumar *et al.* (2014) assessed *C. hancockii* and proposed the species be treated as critically endangered (CR) in India. Though, they could not assess the status at global level due to insufficient data available on Chinese and Burmese specimens and populations. Based on personal field observations and collection we also support the view of Kumar *et al.* (2014).

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