

***Esmeralda clarkei* Reichenbach f. [Orchidaceae]: a new report for the flora of Nagaland, India**

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[Received 06.03.2014; Revised 28.04.2014; Accepted 10.05.2014; Published 30.06.2014]

Abstract

Esmeralda clarkei Reichenbach f. (Orchidaceae) is reported as a new distributional record to the orchid flora for the Indian state of Nagaland. A detailed description along with a colour photograph of the species in flowering is provided for easy identification in the field.

Key words: *Esmeralda clarkei*, New record, Nagaland.

INTRODUCTION

The genus *Esmeralda* was established by H.G. Reichenbach in his work *Xenia Orchidacea* (1874) based on the plant *Vanda cathcartii* Lindley described in 1853. It is represented so far by three species distributed from Nepal, Sikkim, N.E. India to Thailand through Myanmar and South China. In North East India the genus is represented by two species viz, *E. cathcartii* (Lindley) Reichenbach f. and *E. clarkei* Reichenbach f. (Rao 2007). During a recent floristic inventory in Pangsa village under Tuensang district of Nagaland, at an altitude about 1969 m above MSL, a beautiful epiphytic orchid was collected. After a perusal of literature (Pearce & Cribb 2002; Kurzweil & Lwin 2014) and personal communication with Dr. Hubert Kurzweil, Orchid specialist (Singapore Botanic Garden), the identity of the specimen was confirmed as *Esmeralda clarkei* Reichenbach f. which was not reported so far from Nagaland (Hynniewta *et al* 2000; Deb *et al* 2003; Deb & Imchen 2008). So, the present finding is a new distributional record for the orchid flora of Nagaland. A detailed description along with photographs is provided for easy identification in the field (Plate I). The voucher specimen is deposited in the herbarium of the Department of Botany, Nagaland University, Lumami, Nagaland, India.

Taxonomic treatment:

Esmeralda clarkei Reichenbach f. in Gard. Chron. n.s. 26: 552. 1886. Type: Indian Himalayas, Clarke s.n., cult. Low (Holo. W! Herb. No. 3921, 3922). *Vanda clarkei* (Reichenbach f.) N.E. Brown in Bull. Misc. Inform. Kew 1888: 112. 1888. *Arachnanthe clarkei* (Reichenbach f.) Rolfe in Gard. Chron. ser.3, 4: 567. 1888. *Arachnis clarkei* (Reichenbach f.) J.J. Smith in Natuurk. Tijdschr. Ned.- Indie. 72: 73. 1912.

Plants 30 cm to 1 m tall. Stem covered with 3 – 4 cm long tubular leaf sheaths. Leaves many, distichous, oblong, 13 – 24 x 1.6 – 3.6 cm, unequally bilobed at apex, coriaceous.

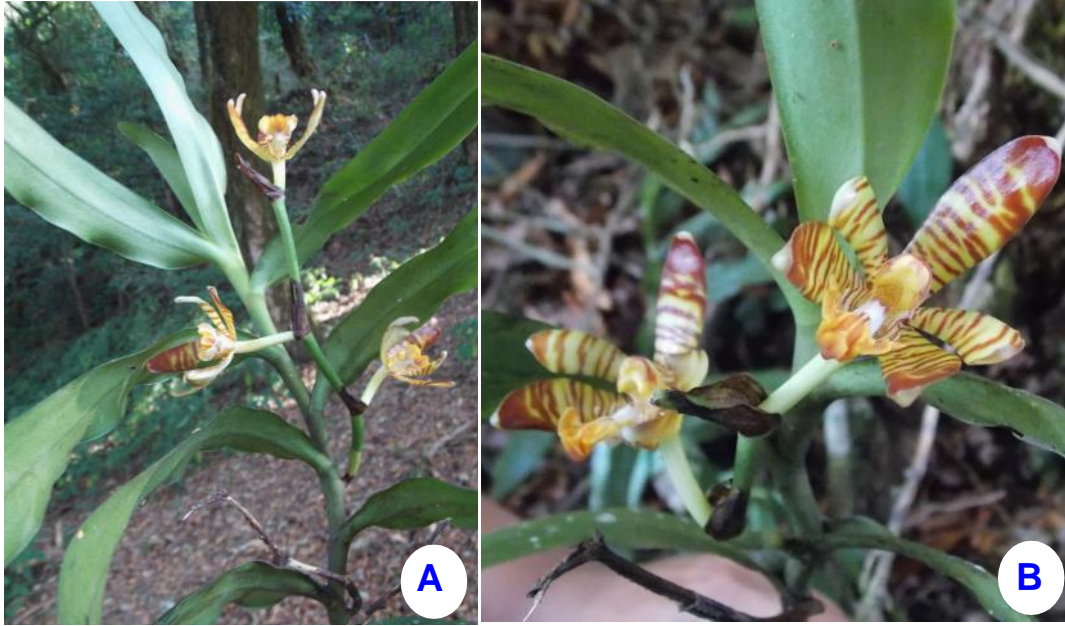


Plate I. *Esmeralda clarkei* Reichenbach f. [Orchidaceae]: **A.** Habit; **B.** Close up flowers

Inflorescence erect, lateral, up to 33 cm long; rachis 12.14 cm long, laxly 3 – 4 flowered. Flowers 5.5 – 7.6 cm in diameter, slightly fragrant, opening widely; sepals and petals yellow with red or brown transversal stripes on inner surface and white externally. Dorsal sepal erect, oblong, obtuse, 3.3 – 3.9 x 0.9 – 1 cm; lateral sepal oblong, falcate, 3 – 3.2 x 0.9 – 1.2 cm. Petals falcate, oblong, obtuse, 2.9 – 3.5 x 0.7 – 0.8 cm. Lip free, pendent, 3-lobed, to 1.7 cm long with reniform midlobe and small erect side lobes, unspurred; disk with several longitudinal keels and 2 raised calli in the centre of the lip. Column stout, clavate, 0.9 – 1.4 cm long. Fruit not seen.

Key to the species known from North-east India

- 1. Sepals broadly oblong-elliptic; sepals and petals white; flowering March to July
..... *E. cathcartii*
- 1a. Sepals narrowly oblong; sepals and petals yellow; flowering December to February.
..... *E. clarkei*

Flowering: December to February.

Specimen cited: Pangsa village, Tuensang district, Nagaland; 24.01. 2014, altitude 1969 m; GPS Location N 26°15' 26.8" and E 95° 06' 59.3"; SDNU 205.

General distribution: Nepal, NE India, Myanmar and China (Yunan).

Note: With the addition of present species, the genus *Esmeralda* is now represented by two species in Nagaland, viz, *E. cathcartii* and *E. clarkei*. The status of *E. clarkei* in the state is yet to be assessed. So far, only two populations have been observed. Habitat loss due to shifting cultivation is the main threat for orchid conservation in Nagaland. Many species of *Dendrobium*, *Vanda*, *Paphiopedilum* are being over exploited for their medicinal and aesthetic values (Deb & Imchen 2011). Effective conservation policy involving community people will help to conserve the rich orchid diversity in Nagaland.

Acknowledgements

Authors are thankful to the Khamniungan people of Noklak, Tuensang Nagaland for support during field work. The authors are also thankful to the University Grants Commission, Govt. of India, New Delhi for financial support to the Department of Botany. Help received from Dr. Hubert Kurzweil, Orchid specialist, Singapore Botanic Garden, for confirming the identity of the species is also duly acknowledged.

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