

***Eulophia andamanensis* Rchb.f. [Orchidaceae: Epidendroideae: Cymbidieae: Eulophiinae] : an addition to the Orchid flora of Mainland India**

Khyanjeet Gogoi

TOSEHIM, Regional Orchids Germplasm Conservation & Propagation Centre (Assam Circle),
Daisa Bordoloi Nagar, Talap, Tinsukia 786 156, Assam, India
E-mail: khyanjeetgogoi@gmail.com

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Abstract

Eulophia andamanensis Rchb.f. of Orchidaceae has been added to the orchid flora of Mainland India. A detailed description, illustration with photographs have been provided in this article.

Key words: *Eulophia andamanensis*, Manas National Park, new record, terrestrial orchid.

INTRODUCTION

During a field trip to the forested area of Manas National Park in the Chirang district of Assam on 12 October, 2016, the author collected an unidentified terrestrial orchid in its vegetative condition. The orchid was planted at the Regional Orchids Germplasm Conservation and Propagation Centre (Assam Circle), Assam and flowered under observation in April, 2018. On the basis of available literature (King & Pantling 1898; Pradhan 1979; Chowdhury 1998; Pearce & Cribb 2002; Lucksom 2007; Rao 2010; Gogoi 2018) and critical examination of the flowers, it was identified as *Eulophia andamanensis* Rchb.f. that has earlier been known from Nicobar Islands, Andaman Islands (type), Myanmar, Laos, Vietnam, Cambodia, Peninsular Malaysia and Sumatra (Pedersen et al. 2014) but was never before reported from the Indian mainland. Hence, a detailed description, illustration, information on habitat and distribution has been provided in the present manuscript. The voucher specimen has been deposited at the Herbarium of the Department of Life Science, Dibrugarh University and Herbarium of The Orchid Society of Eastern Himalaya (TOSEHIM), Regional Orchid Germplasm Conservation and Propagation Centre (Assam Circle), Assam.

The genus *Eulophia* was first described by John Lindley in 1821. The name “*Eulophia*” was derived from the Greek words “eu” (well) and “lophos” (plume), referring to the crested ridges of the lip in most species (Pridgeon et al. 2009). They are usually terrestrial or ground orchids, although some are epiphytes, and rarely, lithophytes (Chen *et al.* 2009).

About 200 species distributed tropical and subtropical regions, most diverse in Africa, but also widespread from Madagascar and the Mascarene Islands to C and tropical Asia, the SW Pacific islands, and N and NW Australia (Chen *et al.* 2009). According to Misra (2007) 32 species in India (9 species endemic viz. *Eulophia campbellii* Prain, *E. emiliana* C.J. Saldanha, *E. kamarupa* Sud. Chowdhury, *E. mannii* (Rchb.f.) Hook.f., *E. nicobarica* N.P. Balakar. & N.G. Nair, *E. obtusa* (Lindl.) Hook.f., *E. ochreatea* Lindl., *E. pratensis* Lindl. and *E. santapau* Panigrahi & Katakai). In Assam the genus was represented so far by 9 species (Gogoi 2018)

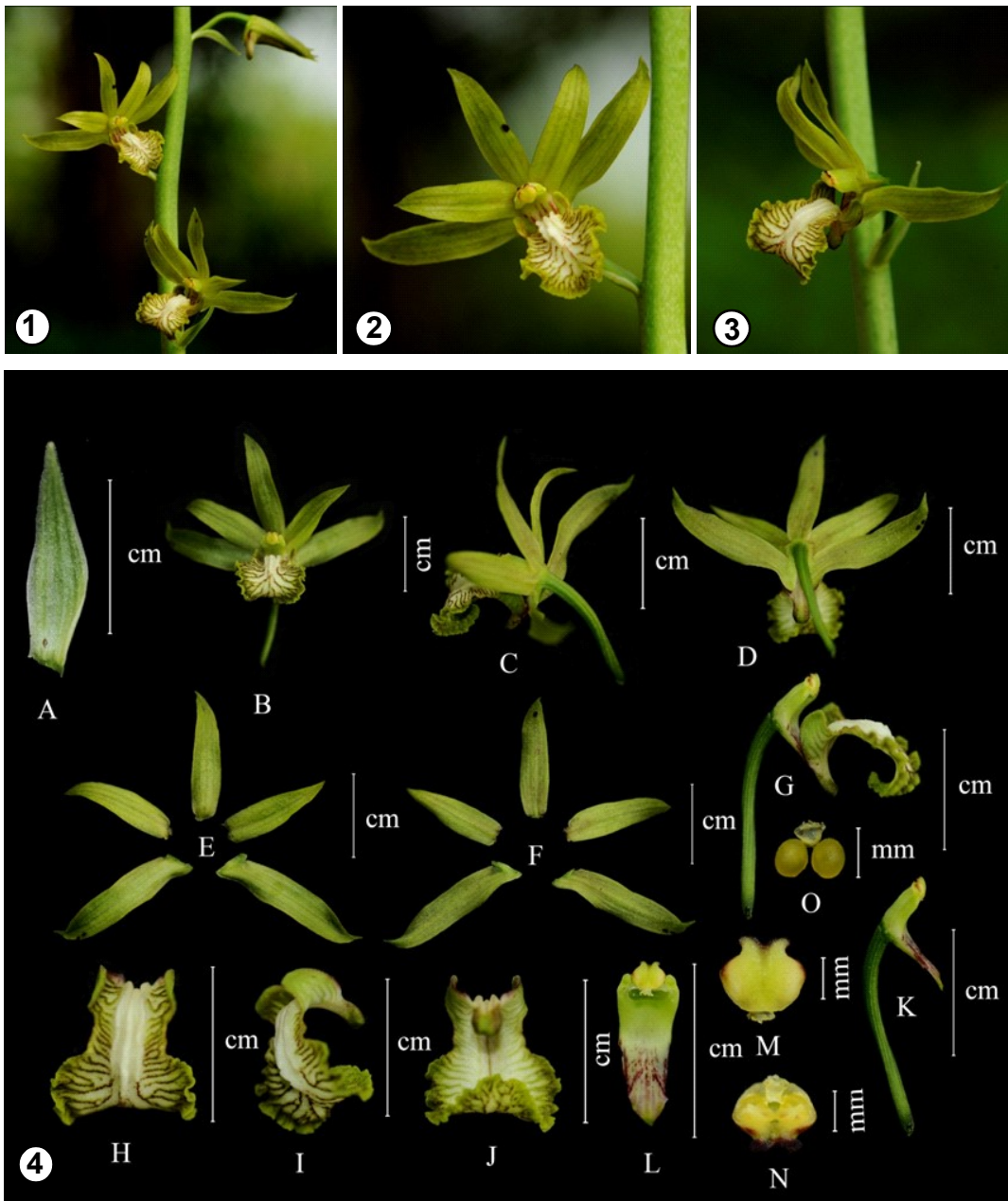


PLATE - I: *Eulophia andamanensis* Rchb.f. : Figs. 1 – 3. Different views of flowers; Fig. 4. A. floral bract; B, C & D. flower; E & F. perigone, ventral and dorsal views; G. lip with ovary and column; H, I & J. lip; K. pedicel, ovary and column; L. column; M, N. ventral and dorsal views of anther cap with pollinarium; O. pollinarium.

viz. *Eulophia bicallosa* (D. Don) P.F. Hunt & Summerh., *E. dabia* (D. Don) Hochr., *E. graminea* Lindl., *E. herbacea* Lindl., *E. kamarupa* Sud. Chowdhury, *E. mannii* (Rchb. f.) Hook. f., *E. pauciflora* Guillaumin, *E. spectabilis* (Dennst.) Suresh and *E. zollingeri* (Rchb. f.) J.J. Sm. In the present paper, *Eulophia andamanensis* Rchb.f. is reported for the first time from Mainland India and the orchid flora from Assam, hence, now comprises of ten species of *Eulophia*.

Eulophia andamanensis Rchb.f., Flora 55: 276. 1872; Hook.f., Fl. Brit. India 6: 8. 1890; Pradhan, Indian Orchids II, 460. 1979; Kumar & Manilal, Cat. Ind. Orch., 74. 1994; Misra, Orch. India, 299. 2007; Pedersen, Henrik A.E. et al. Flora of Thailand, 12, 2: 502. 2014; Karthigeyan, Jayanthi, Sumathi & Jalal, Richardiana 15: 47. 2014. *Graphorkis andamanensis* (Rchb.f.) Kuntze, Revis. Gen. Pl. 2: 662. 1891. *Cyrtopera andamanensis* (Rchb.f.) Rolfe, Gard. Chron., ser. 3, 18: 581. 1895. *Eulophia keithii* Ridl., J. Linn. Soc., Bot. 32: 333. 1896. *E. poilanei* Gagnep., Bull. Mus. Natl. Hist. Nat., sér. 2, 3: 683. 1931. [PLATE - I]

Type: [K000078337 (K) from Malaysia; K000078335 (K) from Singapore]

Plants pseudobulbous. Pseudobulbs (corms) obliquely conical, fusiform, 2.5–8.0 × 1.3–2.9 cm. Leaves 3–7, linear to narrowly lanceolate, acute to acuminate, 3–40 × 0.5–1.5 cm. Inflorescence racemose, 24–40 cm, 5- to many-flowered; peduncle green, 8–5 cm long; floral bracts shorter than ovary. Flowers suberect to spreading, opening widely, mainly green to brownish green; lip white with green margins and maroon veins. Sepals acute to acuminate, sometimes mucronate; dorsal sepal linear to lanceolate, 1.1–2 × 0.1.2–0.4 cm; lateral sepals obliquely linear to lanceolate, 1.2–2.0 × 0.1–0.4 cm. Petals obliquely linear-lanceolate, acute to acuminate, sometimes mucronate, 0.9–2.0 × 0.2–0.3 cm, glabrous. Lip 3-lobed, 0.8–1.2 × 0.5–1.2 cm when flattened, widest across mid-lobe, spurred at base, glabrous on the ventral surface; mid-lobe obovate to elliptic or suborbicular, rounded, margins undulate; ornaments of 3 entire to somewhat warty keels starting from the labellum base and terminating on the mid-lobe; lateral keels shorter than the median; spur subclavate, straight to slightly incurved, 0.3–0.4 cm long. Column 0.3–0.5 cm long; column foot subequal to column proper, not forming a spur. Ovary with pedicel 1.0–2.4 cm long. Capsule pendent 2.5–2.9 × 1.0–1.4 cm.

Specimen Examined: Manas National Park, Assam, *Gogoi 00766*, dated 12.10.2016; Dibrugarh University Herbarium.

Distribution in India: Nicobar Islands, Andaman Islands and Manas National Park (Assam and Bhutan border) in the Chirang district of Assam.

General Distribution: India [Nicobar Islands, Andaman Islands (type), Assam], Myanmar, Laos, Vietnam, Cambodia, Peninsular Malaysia, Sumatra.

Habitat: Terrestrial orchid seen growing in a mixed deciduous forest.

Flowering: March – May.

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