

TWO NEW SPECIES OF *BULBOPHYLLUM* THOUARS (ORCHIDACEAE) FROM SOUTHERN WESTERN GHATS, INDIA¹

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(With two text-figures)

Key words: New species, *Bulbophyllum*, Southern Western Ghats, Kerala, India.

Two new species from Kerala, India, namely *Bulbophyllum keralensis* and *Bulbophyllum josephi* are described and illustrated.

INTRODUCTION

The genus *Bulbophyllum* Thou. is included in the subtribe Bulbophyllinae of the tribe Dendrobiae, Subfamily Epidendroideae, which forms one of the largest and most important groups of Orchidaceae (Misra 1997). This is perhaps the largest genus in the Orchid family, with about 1000 species distributed throughout tropical Africa and Asia, extending to Australia, New Zealand, Japan and Korea (Santapau and Kapadia 1966; Seidenfaden 1973, 1979; Abraham and Vatsala 1981). The separation of the genus *Cirrhopetalum* Lindl. is still controversial, since the flowers of *Cirrhopetalum* and *Bulbophyllum* show similarity in fundamental characters. Recently, Garay *et al.* (1994) revised the genus *Cirrhopetalum* and *Bulbophyllum* alliance and reinstated *Cirrhopetalum* as a separate genus.

From the Indian phytogeographic regions, 98 species and 2 varieties of the genus *Bulbophyllum* are known to occur among which 12 species have been recorded from Kerala. During the survey on the epiphytic flora of the Western Ghats, the authors collected two interesting species of *Bulbophyllum* from the

forests of Kerala. On critical examination these species are found to be new to the orchid flora, and are described and illustrated here.

Bulbophyllum keralensis

Muktesh & Stephen sp. nov.

(Fig. 1)

Bulbophyllum macraei affinis, sed in laminis ellipticis emarginatis, sepalo dorsali papillato, sepalis lateralibus liberis lineari-ovatis subulatis induplicatis papillatis, petalis ellipticis cuspidatis papillatis, stelidiis minutis 1.2 mm longis differt.

Typus: INDIA: Kerala, Palghat district, Silent Valley National Park, Sispara, 1,800 m, Stephen 007857 KFRI; (Holotypus KFRI).

In general appearance this species resembles *Bulbophyllum macraei* (Lindl. Reichb. f.) (Jayaweera, 1981), but it differs in having elliptic, emarginate lamina; papillate dorsal sepal; linear-ovate, subulate, induplicate, papillate, free lateral sepals; elliptic, cuspidate, papillate petals and minute, 1.2 mm long stelidia.

Epiphytic pseudobulbous creeping herbs; pseudobulbs 1.2-2 x 0.5-0.7 cm, ovoid, angled. Leaves petiolate, solitary, at the top of pseudobulb, lamina 1.8-6 x 0.8-2 cm, elliptic, emarginate, grooved along midrib, coriaceous. Inflorescence umbel or sub-umbel, peduncle 10-12 cm, with 3 linear sterile bracts; floral bracts

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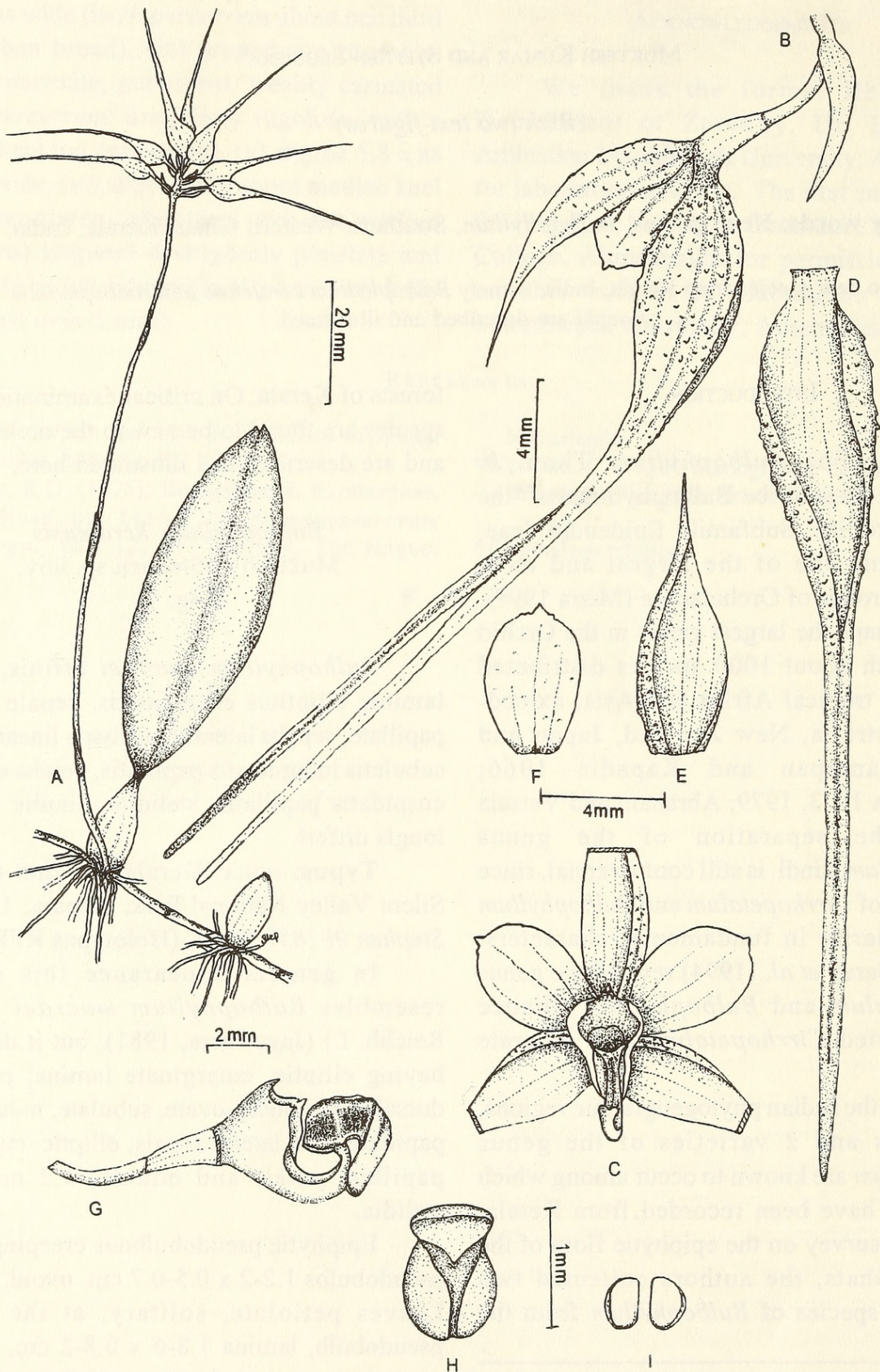


Fig. 1: *Bulbophyllum keralensis* Muktesh & Stephen sp. nov.

A – Habit; B – Single flower with floral bract; C – Flower front view; D – Lateral sepal; E – Dorsal sepal; F – Petal; G – Column with lip; H – Operculum; I – Pollinia.

4-6 x 1-1.2 mm, ovate, acuminate; flowers 4-7, golden yellow with purple tinge, 28-32 x 5-7 mm; sepals dissimilar, dorsal sepals 7-9 mm long, 3.2-3.4 mm at the broadest point, ovate-lanceolate, acuminate, induplicate, papillate at the base, 5-veined; lateral sepals 27-30 mm long, 2.3-2.6 mm broad, parallel, linear-ovate, subulate, 5-veined, free, induplicate, papillate; petals 4-6 x 2-3 mm, elliptic, slightly falcate, 3-veined, cuspidate, entire, slightly papillate; lip 4.6 x 1.2 mm, recurved, tongue shaped, obtuse, pouched, attached to the column foot; column 2.8 x 2 mm, broadly ovate; stelia minute, 0.2 mm long; anther terminal; pollinia 4 in pairs, 0.4 x 0.25 mm; oval shaped; operculum 1 x 0.75 mm, broadly obovate.

Ecology: Epiphytic on moss covered tree trunks in the evergreen shola forests from 1,800 to 2,000 m.

Distribution: So far known only from Kerala – Silent Valley National Park (Palghat) and Wynaad

Fl. and Fr.: August-September.

Other specimen examined: Kerala, Wynaad District, Pakshipadalam, 1,200 m, *Stephen & Michael 008140 KFRI*

Etymology: Named after the state of Kerala, where it was collected.

Bulbophyllum josephi

Muktesh & Stephen sp.nov.
(Fig. 2)

Bulbophyllum elegantulum et *B. acutiflorum* affinis sed in scapo 4-4.5 cm longo folio brevior, sepalo dorsali ovato-lanceolato acuminato induplicato, papillis dispersis, sepalis lateralibus oblongo-lanceolatis acutis papillatis, marginibus apice versus connatis, petalis oblongo-ovatis falcatis, apice apiculato, steliis longis angustis differt.

Typus: INDIA: Kerala, Palghat district, Silent Valley National Park, Punnamala, 850 m.

Stephen 007521 KFRI (Holotypus – KFRI).

Allied to *Bulbophyllum elegantulum* (Rolfe) J.J. Sm. and *Bulbophyllum acutiflorum* A. Rich., but differs in having 4-4.5 cm long scape which is shorter than the leaf; ovate-lanceolate, acuminate, induplicate, dorsal sepal with scattered papillae, oblong-lanceolate, acute, papillate lateral sepals which are connate at upper edges, oblong-ovate, falcate petals with apiculate apex and long narrow stelia.

Epiphytic pseudobulbous, creeping herbs; pseudobulbs 1-1.3 x 0.6-1 cm, ovoid; leaves solitary at the tip of the pseudobulb, lamina 3.7-4.1 x 0.8-1.2 cm, elliptic, emarginate, grooved along midrib, coriaceous; inflorescence umbel or sub-umbel, peduncle up to 5 cm with 1 or 2 sterile bracts; floral bracts minute, 3 mm long, ovate, acuminate; flowers yellow with violet specks, 10 x 3.5 cm, pedicel up to 6 mm long; sepals dissimilar, dorsal sepal 4.5 mm long, 1.5 mm broad; ovate-lanceolate, acuminate, induplicate, scattered papillae at the base, 5-veined; lateral sepals 9.5-10 cm long, 3 mm broad, oblong-lanceolate, acute, papillate; connate at upper edges; 5-veined; petals 3 x 1.6 mm, oblong-ovate, slightly falcate, apex apiculate, 3-veined, speckled with violet, lip tongue shaped, 2.8 mm long, recurved, attached to the column foot; column 1.5 x 1.5 mm, orbicular ovate; stelia 0.7 mm long, anther terminal; pollinia 0.3 x 0.1 mm; operculum ovate orbicular; 0.5 x 0.4 mm.

Ecology: Epiphytic on tree trunks in evergreen forests at 900-1,000 m.

Distribution: Known so far only from the type locality.

Fl. & Fr.: August-September.

Etymology: Named after Dr. J. Joseph, Former Joint Director, Botanical Survey of India, for his valuable contribution to the systematics of Indian orchids.

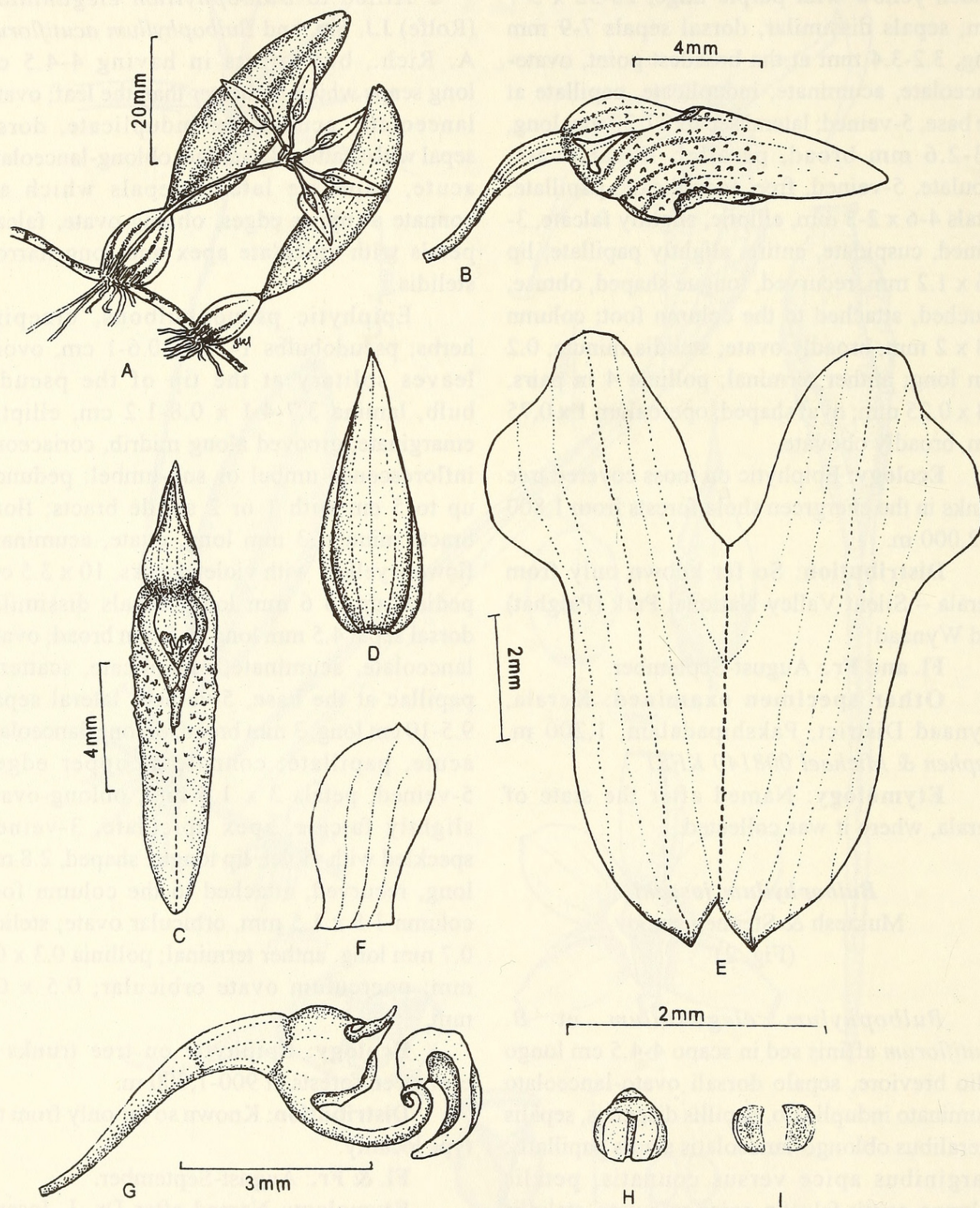


Fig. 2: *Bulbophyllum josephi* Muktesh & Stephen sp. nov.

A – Habit; B – Single flower; C – Flower top view (dorsal sepal lifted); D – Dorsal sepal; E – Lateral sepals; F – Petal; G – Column with lip; H – Operculum; I – Pollinia.

NEW DESCRIPTIONS

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