

***OBERONIA JHAE*: A NEW SPECIES OF ORCHID FROM ARUNACHAL PRADESH, INDIA**

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Abstract

A new species *Oberonia jhae* Chowlu *et* Rab (Orchidaceae) is described and illustrated from India. This species is allied to *Oberonia emarginata* King & Pantl, but differs from it in plant height, densely flowered inflorescences, ovate and entire sepals and very short column and lanceolate, acute petals.

Introduction

Genus *Oberonia* (Orchidaceae), established by John Lindley in 1830 is characterised by epiphyte or rarely lithophytes, medium-sized plants with coriaceous or fleshy, flat, ensiform leaves; sub-erect or drooping inflorescence with many densely arranged small-sized flowers; sub-similar sepals and petals; entire or 3 lobbed lip; very short column and 4 pollinia. This genus comprises of more than 200 species with main concentration in tropical Asia and further extending to the pacific islands and Australia, and with a single species in Madagascar and topical Africa (Chen *et al.*, 2009; Chowlu *et al.*, 2014, 2015). In India, it is represented by c. 66 species (Misra, 2007; Chowlu *et al.*, 2014, 2015) of which c. 39 species are found in northeast India (Rao, 2007; Chowdhery, 2009; Chowlu *et al.*, 2014, 2016), 22 species in Arunachal Pradesh (Chowlu *et al.*, 2015) and with this addition the number increases to 23.

During a routine visit to Papum Pare District of Arunachal Pradesh, a few *Oberonias* were collected by the authors in bud stage and brought under cultivation in the garden of Botanical Survey of India, Arunachal Pradesh Regional Centre, Itanagar in Papum Pare District of Arunachal Pradesh. The plant was critically studied and compared with literature of *Oberonia* (Holtum, 1964; Seidenfaden, 1968, 1978, 1992; Dockrill, 1964; Ansari and Balakrishnan, 1990; Seidenfaden and Wood, 1992; Pearce and Cribb, 2002; Averyanov, 2007, 2013; Lucksom, 2007; Chen *et al.*, 2009). Herbarium material deposited at Orchid Research Centre, Tipi, APFH, ARUN, ASSAM, CAL were also studied. After these critical studies it was clearly found that the present species is very much different from the so far known species in various floral characters. Hence, it is described here as a new. Moreover, we also agree with the opinion expressed by Bunpha *et al.* (2013) that all species of the concern genus reported from various countries are to be verified before reaching a conclusion of novelty of a particular taxon, instead of referring only to the floras of the regional and adjacent countries.

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Oberonia jhae* Chowlu et Rab sp. nov*(Fig. 1).**

Diagnosis: *Oberonia jhae* is closely allied to *Oberonia emarginata*, but differs in having shorter leaves (1.5-3.2 cm); smaller flowers, c. 0.5 mm across; sepals, equal, ovate-lanceolate; petals lanceolate, acute, minutely erose-dentate.

Type: India, Arunachal Pradesh, Papum Pare District, Kheel (642 m, 27°13'20.82" & 93°41'55.91", 2 May 2016) *Chowlu-40164A* (*Holotype* ARUN).

Stem c. 1 cm long, enveloped by leafy base. Leaves not jointed, 8-9, 1.5-3.2 × 0.4-0.6 cm, bilaterally flattened, linear-oblong, acute to sub-acute, erect, fleshy. Inflorescence longer than the leaves, 4-7 cm long; peduncle wingless, 0.5-1.0 cm long, erect, with many whorled, triangular-oblong, acute, green sterile bracts; rachis sub-erect or drooping, flowers in a whorl, many flowered; floral bracts 0.8-0.9 × 0.5-0.6 mm, lanceolate, apex long acuminate, minutely papillose. Flowers very minute, c. 0.5 mm across, green; pedicel with ovary 0.5-0.6 mm long, green, shorter than the floral bracts. Sepals sub-equal, c. 0.4 × 0.2 mm, lanceolate, acute, green. Petals c. 0.4 × 0.2 mm, lanceolate, acute, minutely thinner than the sepals. Lip simple, c. 3.5 × 0.3 mm, elliptic-lanceolate, apiculate apex, margin entire. Column short, erect. Pollinia 4.

Flowering: May-June

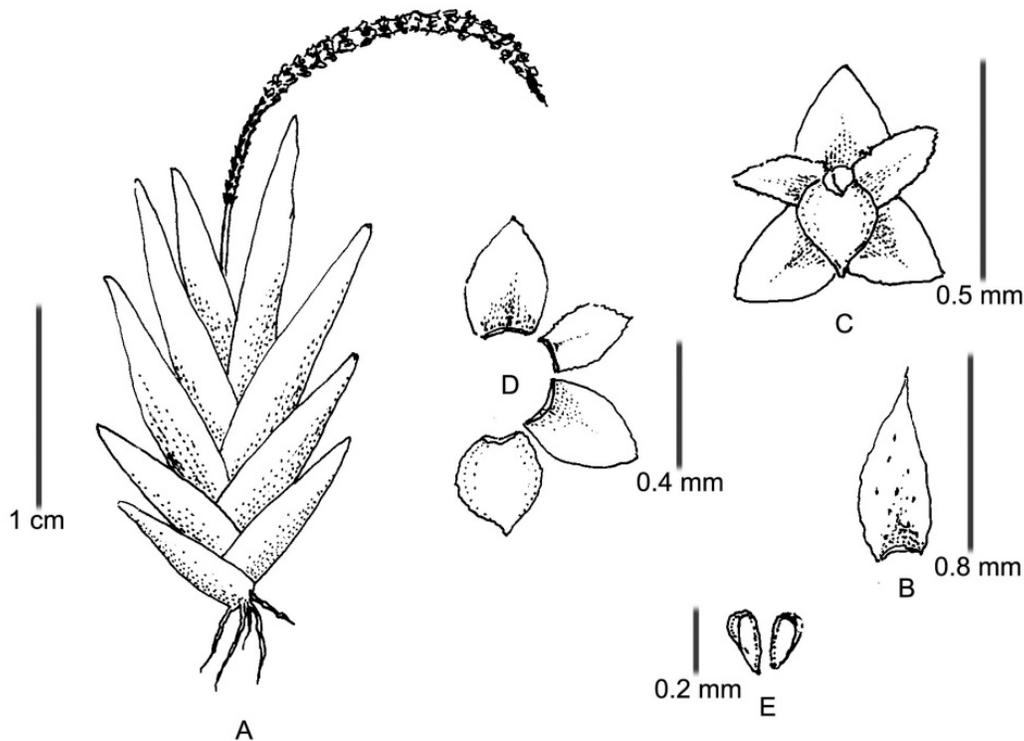


Fig. 1. *Oberonia jhae* Chowlu et Rab sp. nov. A. Habitat; B. Bract; C. Flower; D. Dissected parts; E. Pollinia.

Etymology: The specific epithet is given in honour of first author's teacher, Subash Chandra Jha who is very supportive and a great enthusiast orchid.

Note: The new species *Oberonia jhae* is closely allied to *O. emarginata* but differs from the latter by its leaves, flowers and lip. the comparison between these species is provided in Table 1.

Table 1. Distinguishing characters between *Oberonia jhae* and *Oberonia emarginata*.

Characters	<i>Oberonia jhae</i> sp. nov.	<i>Oberonia emarginata</i>
Leaves	8-9, 1.5-3.2 × 0.4-0.6 cm, linear-oblong	4-5, 1-5 × 0.4-0.9 cm, linear-ensiform
Flower	c. 0.5 mm across	c. 1.0 mm across
Sepals	Equal, ovate-lanceolate, acute	Broadly ovate, acute, minutely papillose
Petals	Lanceolate, acute, minutely erose-dentate	Ovate, recurved, entire
Lip	Elliptic-ovate, simple, margin entire, apiculate at apex	Quadrata, 3-lobed, basal part entire and apical part erose-dentate margins minutely mucronate at apex
Flowering	May	July

Conservation status: *Oberonia jhae* is endemic to Arunachal Pradesh, India which is collected from a single locality Kheel. Intensive survey yielded only 3 mature individuals spread over an area of 1 sq.km of semi-shaded forest patch which is a community forest under the management of local people. The habitat is subjected to high degree of human encroachment for agricultural practices. Moreover, the habitat is close to road side so construction of road like broadening and repairing is another factor for threat. The Jhum cultivation is practiced by local tribal people involving tree cutting, burning and clearance of the forest posing serious threat to the natural habitat. This is an epiphytic species which is very slow in growth. Climate change is another factor for species threat.

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