

# *Oberonia similipalense* S. Misra, a new orchid from the Simlipal forest of Odisha, India

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## ओबेरोनिया शिमिलिपालेंस एस. मिश्र, भारत में ओड़ीशा के शिमिलिपाल वन से प्राप्त एक नवीन ऑर्किड

सरत मिश्र

### सारांश

इस लेख में ओड़ीशा के शिमिलिपाल वन से प्राप्त एक नवीन प्रजाति का वर्णन किया गया है जो ओबेरोनिया लिंडल. (ऑर्किडेसी) वंश का है। अंडाकार, नुकीला, विदीर्ण किनारा युक्त अकोष्ठकीय सतह; एक पतली पुष्पवृत्त जो सामान्यतः संकीर्ण खड्गाकार पत्तियों से लम्बी होती है इसके महत्वपूर्ण लक्षण हैं जो इसे ओबेरोनिया से संबद्ध अन्य जातियों से पृथक् करते हैं।

### ABSTRACT

A new species of *Oberonia* Lindl. (Orchidaceae) from the Similipal forest, Odisha is described here. A slender inflorescence, usually longer than the narrowly ensiform leaves; an ovate, acute, unlobed lip with lacinate margin, are important characters of this species to separate it from allied species of *Oberonia*.

**Keywords:** *Oberonia*, Orchidaceae, New species, Similipal, Odisha, India

### INTRODUCTION

Orchidaceae has several group of curious looking plants of which the genus *Oberonia* Lindl. is one. These are small epiphytic erect or pendulous plants without a prominent stem; with a few distichous, laterally strongly compressed, fleshy, ensiform leaves and a terminal inflorescence with minute green-yellow-brown flowers. We have in India 74 species (Misra 2019) of *Oberonia* widely distributed in the Mainland and in the Bay Islands.

Taxonomic revision of *Oberonia* in Mainland Asia was undertaken by Seidenfaden (1968, 1978). Ansari & Balakrishnan (1990) have followed Seidenfaden's system of classification in their revisionary work of the Indian *Oberonia*. Both the above works are provided with scientific illustrations, very much necessary in systematics. In the above work much importance has been laid on the form of the labellum, the most valuable structure of the flower, for delimitation of species in *Oberonia*.

During my study of the orchid flora of Odisha, I found the Similipal forest (A Biosphere Reserve, a Tiger Reserve and a National Park of India), a small geographical area above 2750 sq. km, to be the best region in the state, which housed as many as 98 orchid species. There are six species of *Oberonia* in Odisha, all of which are there in Similipal. One species among these six species was found to be quite uncommon. It has very narrow and rather thin leaves; the flowers are born in whorls on a slender rachis of the inflorescence that is slightly longer than the leaves. The lip is quite unique here in the sense that it is unlobed, unlike being variously lobed in other oberonias of India (barring *O. pachyrachis* Rchb.f. ex. Hook.f., which has other separate characters, like the flowers are arranged spirally on the inflorescence which is adnate to the uppermost leaf). In my earlier work this species was hesitantly identified first (Misra 1986) as *O. verticillata* Wight, and subsequently (Misra 1989a, 1989b, 1997, 2000, 2004, 2014, 2019 and Misra & al. 2004) as *O. gammiei* King & Pantl.

In the subsequent years many new species of oberonias have been described in India. Nowhere a species with the floral features like that of the *Oberonia* from Similipal was found. I have a strong feeling therefore, that our plant in question is quite distinct and deserve the status of a new species. It is therefore, described here with analytical drawings, as a new species. Additional figures of the flower of *O. gammie* as provided by Seidenfaden (1968); and the figure of the lip of *O. mucronata*, as provided by Misra (2009) are also provided here for comparison.

## TAXONOMIC TREATMENT

***Oberonia similipalense* S. Misra sp. nov.**

*Oberonia verticillata* auct. non Wight 1851; Misra 1986.

*Oberonia gammiei* auct. non King & Pantl. 1897; Misra 1989a; Misra 1989b; Misra 1997; Misra 2000; Misra 2004; Misra & al. 2004; Misra 2014; Misra 2019.

Type: INDIA, Odisha state, Mayurbhanj district, Similipal forest, Meghasani, c. 1100 m, 19.08.1987; Sarat Misra 1340 (Holotype CAL); Bhanjabasa, c. 900 m, 16.06.1985 Sarat Misra 832 (Paratype CAL).

## DIAGNOSTIC CHARACTERS

*Oberonia similipalense* identified by its small stature and narrow leaves; a slender inflorescence, usually longer than the leaves, with minute flowers arranged in whorls; lip unlobed, ovate, minutely acute; margins irregularly lacinate; laciniae progressively longer from base upward; column globose; clinandrium apical.

## MORPHOLOGICAL DESCRIPTION

Short pendulous epiphytes in small tufts, 95–130 mm long in flowers. Leaves 4–5, unequal, narrowly ensiform, acuminate; or linear, subulate, subfalcate, fleshy, 85–120 × 3–5 mm (largest), overlapping and jointed at base. Inflorescence 35–92 mm long, commonly longer than leaves, spiciform; peduncle short, 15–35 mm long, 0.5–1.2 mm thick, terete, ridged, with many narrowly lanceolate, subulate, adpressed sterile bracts in whorls right from base; spike slightly curved sub-cylindric, c. 4 mm across, densely whorled. Bracts exceeding ovary, basal one-third sheathing, distal two-third deflexed, narrowly ovate-lanceolate, apiculate, irregularly serrulate, c. 2.5 × 1.2 mm. Pedicel with ovary c. 1.3 mm long, 0.3 mm thick, slightly dilated above, finely ridged. Flowers minute, non-resupinate, greenish yellow, inodorous, c. 1.7 × 1.7 mm. Sepals subequal, c. 0.8 × 0.5 mm, veinless; dorsal spreading, ovate, rounded; laterals reflexed, concave, obliquely ovate-lanceolate, rounded. Petals widely spreading, elliptic-oblong, apex sub-orbicular, minutely notched, margin feebly undulate,

sparingly gland-dotted, 3-veined; veins feeble, central one up to about three-fourth the length, laterals shorter, up one-fourth the length of lip. Lip spreading, more or less at right angles with the ovary, sessile, slightly concave, unlobed, ovate, broadest at base, c. 1.2 × 1 mm; margin irregularly lacinate; laciniae progressively longer from base upward; apex minutely acute, (appears emarginate due to the narrow space between the two apical laciniae); sparingly gland-dotted, feebly 3-veined; the central vein continuing to about the middle; laterals longer, continuing to apex, branched right from the base, branches continuing to about the middle of lip. Column minute, globular, c. 0.5 × 0 mm; clinandrium cupular. Anther terminal, orbicular-quadrate, front edge broadly triangular, cream-coloured, c. 0.3 × 0.3 mm; pollina 4, cohering in pairs, each pair c. 0.23 × 0.15 mm, hemi-ovoid.

*Flowering*: August.

*Ecology*: In evergreen to semi-evergreen hill-forests, between 800–1100 m, in moist valleys, preferring near water courses, epiphytic on moss-covered slender branches of trees or shrubs at low heights, under dense shade.

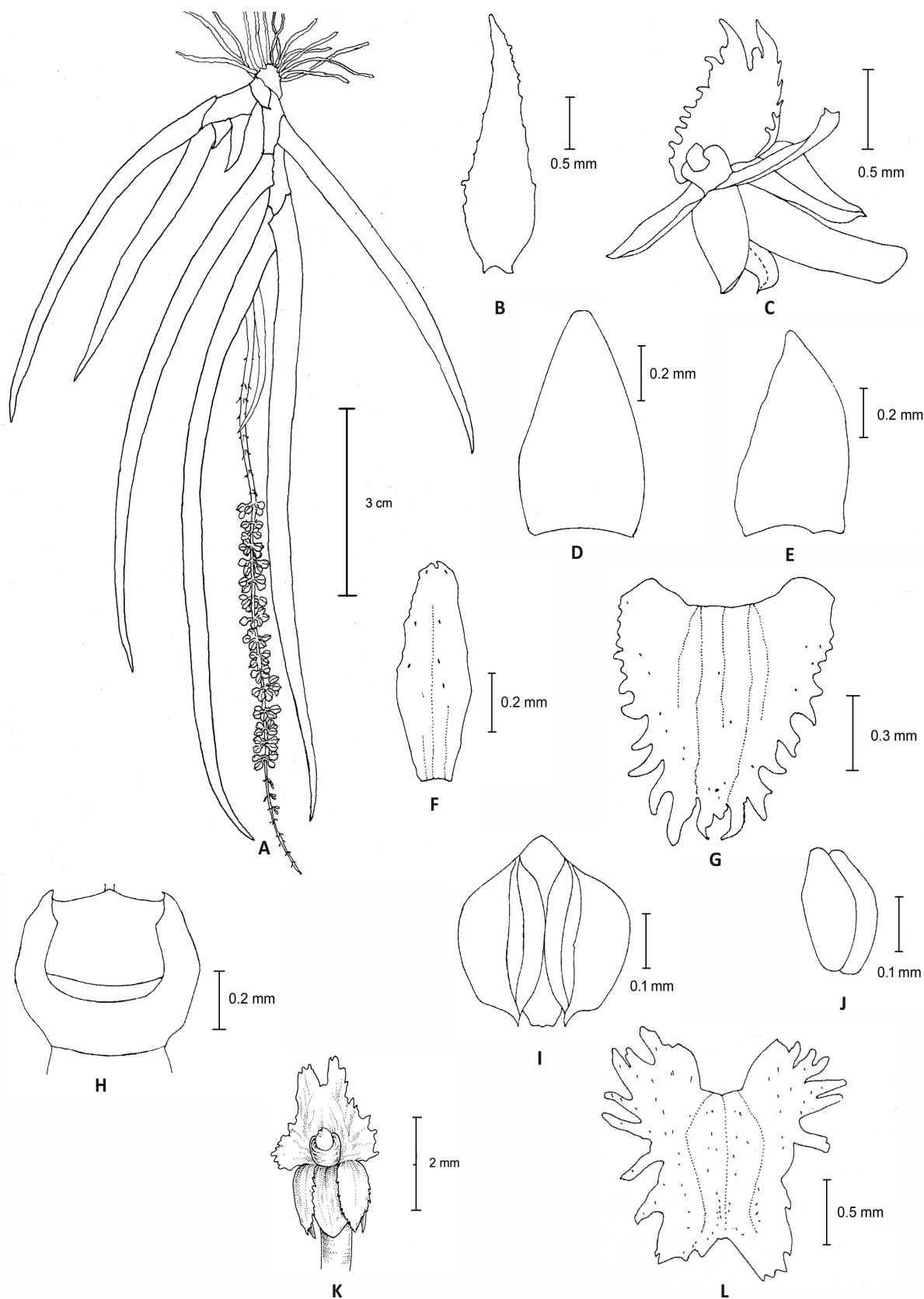
*Field notes*: Flowering from top progressively downwards; in bloom for 10–15 days; fruiting continues through October end. The plants are rather delicate and fail to flower in culture under garden conditions.

*Occurrence*: Similipal forest (Badamakabadi, Baniapada, Bhanjabasa, Chaukundanala, Garandianala, Jenabila, Khairiburu, Matughara, Meghasani, Pakaladihanala (near origin), Tarinibila, U. Barhakamuda, Udiabasa); occasional.

*Distribution*: India, endemic.

## TAXONOMIC TREATMENT

*Oberonia similipalense* is somewhat nearer to *O. gammiei* King & Pantl. and *O. mucronata* (D. Don) Ormer. & Seidenf. Seidenfaden in his monumental work on *Oberonia* Lindl. of Mainland Asia (Seidenfaden 1968, 1978) has maintained the above two species distinct. Singh & al. (2019) and Misra (2019) have followed Seidenfaden in treating the two distinct. Ansari & Balakrishnan (1990) in their revisionary work of *Oberonia* from India have, however, treated *O. gammiei* conspecific with *O. mucronata* (earlier described as *O. denticulata* Wight). In both the above species the leaves are broadly ensiform; the petals are ovate to ovate-lanceolate; the lip is quadrate or ovate in outline, distinctly 3-lobed; midlobe quadrate in outline, 2-lobed; the lobules parallel or often diverging, with a distinct, often broad, sinus in between.



**Fig. 1.** *Oberonia similipalense* S. Misra: A. habit, B. Bract, C. Flower, D. dorsal sepal, E. Lateral sepal, F. petal, G. lip, H. column, I. operculum, J. pollinia (A. S. Misra 832; B-K: S. Misra 1340; drawn by S. Misra); K. *Oberonia gammiei* in Seidenfaden (1968); L. *Oberonia mucronata* in S. Misra (2004).

The new species on the otherhand, has narrowly ensiform leaves; petals elliptic oblong, narrowed to base, margins only feebly undulate; the lip is unlobed, ovate, margin irregularly laciniate; the laciniae progressively longer upward; apex minutely acute; the apex appears retuse due to the narrow space present in between the two apical laciniae. The other two species are elements of moist deciduous forests, in partly open situations, while the new species is an element of evergreen or semi-evergreen forests in highly moist localities, in dense shade. I have examined *O. similipalense* from several localities in Similipal and found the characters to be distinctly different from other oberonias.

## ACKNOWLEDGEMENT

I am grateful to Dr. S. S. Dash, Scientist-E, Botanical Survey of India for his valuable suggestions.

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