



RESEARCH ARTICLE

Rediscovery and taxonomic note on *Oberonia bellii* Blatt. & McCann (Orchidaceae) in Karnataka after nine decades

Shreyas B., K. Kotresha

Abstract

Oberonia Lindl. is one of the smallest flowering genera which include miniatures endemic to the Western Ghats. During field survey collected *Oberonia* species and conserved ex-situ. This species was examined after flowering and got to know that this is *Oberonia bellii* Blatt. & McCann which was rediscovered after 91 years of T. R. Bell's manuscript with the characters like habit size, inflorescence length and modification, flower size and leaf arrangements.

Keywords: Epiphytic orchid, faintly scented, Uttarkannada district, Verticilaster inflorescence.

Introduction

Orchidaceae is one of the diversity of all angiosperms. The genus *Oberonia* was first described by Lindley in 1830, who dedicated it to Oberon, the mythological king of fairies. While establishing the genus, *Oberonia* Lindl. is an old-world genus of mostly epiphytic herbs comprising about 300 species (Mabberley, 2017). Recognised 13 species of which four were from India (Lindley, 1963). Ansari & Balkrishnan recorded 41 species of *Oberonia* from India in the year 1990. There are around 1256 species under 155 genera, of these 307 are endemic to India. Out of these 63 *Oberonia* species are recorded (Singh S. K. *et al.*, 2019). Flora of Karnataka analysis by B. D. Sharma *et al.*, (1984), included *Oberonia bellii* Blatt. & McCann. In his survey. Flora of Karnataka monocotyledons records 16 *Oberonia* species including *Oberonia belli* and *oberonia*

verticiliata is recorded (Laxminarasimhan *et al.*, 2019). Karnataka records 17 *Oberonia* species in the year 2019 (Sanjappa M. & A. N. Sringshwara, 2019).

Oberonia bellii Blatt. & McCann, J. Bombay Nat. Hist. Soc. 35: 256, 1931; B.D. Sharma *et al.*, Fl. Karnataka Anal.: 274. 1984; Laxminarasimhan *et al.*, Fl. Karnataka Anal. 3: 72. 2019; Sringshwara & Sanjappa. Fl. Karnataka Analysis, 2: 547. 2019.

Pendulous epiphytes, 15-18 cm in length. Leaves thick, coriaceous, narrow, ensiform, falcate or sub-falcate, acuminate, broad at the base, 5-8×1 cm; bent outside at the apex. Inflorescence a raceme, many-flowered, pendent, 15-18 cm long, thin, 1-2 mm thick, 7-8 ridges, flowers spirally arranged when young and in verticillaster when old. Bract 1 mm long, greenish-yellow, smaller than bud, lanceolate, acute, fimbriate. Flower bud globose, orange. Flower 1 × 1 mm, highly scented, yellow-orange, arranged rounded on ridges, pedicellate. Dorsal sepal ovate, acute. The lateral sepal is acute, broader at the base and larger than the dorsal sepal. Petal narrower, ovate-oblong, bent backwards. Labellum 1 mm long, 3-lobed, lateral lobes rounded; midlobe with 2-3 ridges, front lobe divided into two lobes; each lobe with lower margin dentate, gland-dotted, nerved. Column orange, with a sack for pollinia, two ends of column are hooked. Anther cap with 2 sacks, white. Pollinia 1 pair, pear-shaped, light yellow Figure 1-3.

Habit: Pendulous epiphytes.

Habitat: Epiphytic on *Gardenia gummifera* L. f. at 1000 meters altitude in association with *Bulbophyllum sterile* (Lam.) Suresh, *Dendrobium macrostachyum* Lindl. and *Pholidata imbricata* Hook.

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How to cite this article: Shreyas B and Kotresha K (2023). Rediscovery and taxonomic note on *Oberonia bellii* Blatt. & McCann (Orchidaceae) in Karnataka after nine decades. *J. Indian bot. Soc.*, **103**(3):209-211. Doi: 10.5958/2455-7218.2023.00009.8

Source of support: Karnatak University Research Scholarship.

Conflict of interest: None.

Table 1: Differences between *Oberonia verticillata* Wight and *Oberonia bellii* Blatt. & McCann

Characters	<i>Oberonia verticillata</i> Wight	<i>Oberonia bellii</i> Blatt. & McCann
Leaf	Leaf 9-12 × 1 cm across, linear, thick, fleshy, acuminate apex, leaf curved inwards.	Leaf 5-8 × 1 cm across, linear, thickly coriaceous, acuminate apex, leaf bent outside.
Inflorescence	Verticilaster at the early stage, when inflorescence elongates forms a spiral arrangement of flowers rounded on each ridge of scape, 10-12 or 18 cm long, thick.	Spirally arranged at the early stage, when inflorescence elongated it forms verticillasters arranged down the scape, 13-18 or 22 cm long, thin.
Flower	Flower whitish-orange, 3 × 2 mm across.	Flower yellowish-orange, 1 × 1 mm across.
Bract	Lanceolate, acute, larger than flower bud, 2 mm long, serrate margin.	Lanceolate, acute, smaller than flower bud, 1 mm long, fimbriate Margin.
Side lobes of the labellum	Side lobes acute	Side lobes obtuse or rounded

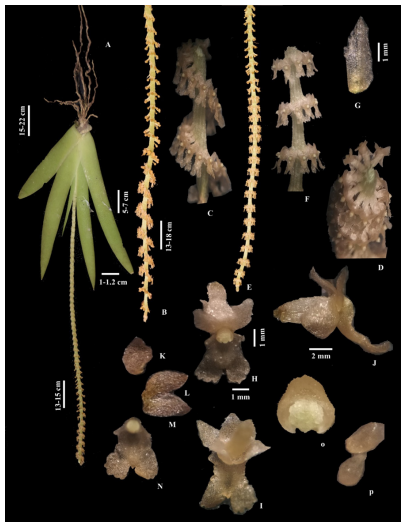


Figure 1: *Oberonia bellii* Blatt. & McCann, A. Habit B. C. & D. Early inflorescence (Spiral). E. & F. Mature inflorescence (Verticilaster) G. Bract H. I & J. Different view of Flowers K. Dorsal sepal L. Petal M. Lateral sepal N. Labellum O. Labellum one side lower lobe P. Pollinia

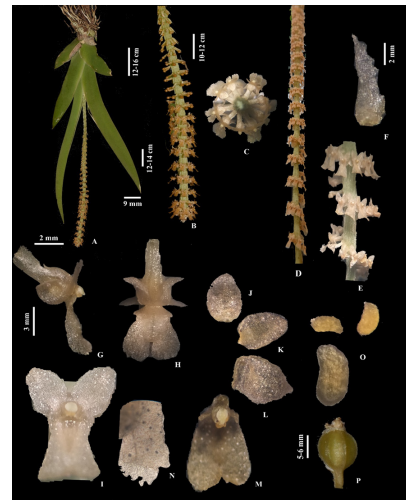


Figure 2: *Oberonia verticillata* Lindl. A. Habit B & C. Early inflorescence (Verticilaster) D. & E. Mature inflorescence (Spiral) F. Bract G. H. & I. Different views of Flower J. Dorsal sepal K. Petal L. Lateral sepal M. Labellum N. Labelum front lobe O. Pollinia P. Fruit

Flowering and Fruiting: July-August.

Distribution: India (Karnataka, Kerala)

Species Examined: India, Karnataka, Uttara Kannada district, Yellapura, Arbail Ghat, 2022, Shreyas Betageri and K. Kotresha, 14°56'11.6"N 74°41'07.2"E, 07-08-2022, 0136 (HKSCD-Herbarium of Karnatak Science College Dharwad).

Discussion

Some authors consider *Oberonia bellii* Blatt. & McCann is the synonym of *Oberonia verticillata* Wight, but there are major differences in both species with characters like habit, leaf, inflorescence and flower size as mentioned in Table 1.

Key to *Oberonia bellii* Blatt. & McCann

- Leaf apex curved inward; inflorescence with leaf scar; flower 2-3 mm long; labellum larger than sepals and petals side lobes acute***O. verticillata***
- Leaf apex curved outside; inflorescence without leaf scar; flower 1 mm long; labellum smaller than sepals and petals, side lobes obtuse***O. bellii***

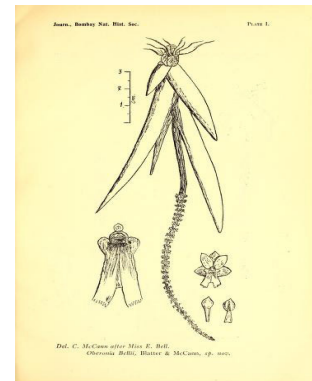


Figure 3: *Oberonia bellii* Blatt. & McCann, sp. nova. Sketch by McCann in the Journal of Bombay Natural History Society (1931)

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