

# *Oberonia prainiana* King & Pantling (Orchidaceae, Malaxidinae) a new addition to the flora of Assam, India

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## Abstract

A little known epiphytic orchid, *Oberonia prainiana* King & Pantling, is here described and illustrated with detailed photos and line drawing. This species is added for the first time to the orchid flora of Assam from Karbi Anglong district. A key to all species present in the state is also provided.

## Résumé

Une orchidée épiphyte peu connue, *Oberonia prainiana* King & Pantling, est ici décrite et illustrée avec des photos détaillées et des dessins au trait. Cette espèce, observée dans le district de Karbi Anglong, est ajoutée pour la première fois à la flore d'orchidées de l'Assam. Une clé de toutes les espèces présentes dans l'état est également fournie.

**Keywords:** Karbi-Anglong, new record, taxonomy

**Mots-clés:** Karbi-Anglong, nouvel enregistrement, taxinomie

## Introduction

During a field trip to the forested area of Hamren in Karbi Anglong district, Assam on 16 March, 2018, the second author collected an epiphytic orchid without flower which could not be determined immediately. The orchid was put in cultivation at the Kaziranga Orchid and Biodiversity Park of Assam and flowered under observation in 10 April 2021. On the basis of available literature (King & Pantling, 1898; Hegde, revised, 2017; Pradhan, 1979; Chowdhery, 1998; Pearce & Cribb, 2002; Lucksom, 2007; Chen *et al.*, 2009; Gogoi & Yonzon, 2013, 2016; Gogoi, 2014a, 2014b, 2018, 2019; Misra, 2019, Singh *et al.*, 2019) and a critical examination of the flowers, the specimen has been identified as a representative of *Oberonia prainiana* King & Pantling (1895: 331). The plant is known from India (Arunachal Pradesh, Sikkim, W. Bengal and Uttarakhand), Nepal, Malaysia and Thailand. This new population observed in the district of Karbi Anglong is here added to the flora of the state of Assam.

The genus *Oberonia* Lindley (1830: 15) is characterised by epiphyte or rarely lithophyte medium sized plants, with coriaceous or fleshy, flat, ensiform leaves; sub-erect or drooping inflorescences with many densely arranged small-sized flowers; subsimilar sepals and petals; entire or 3-lobed lip; very short column and 4 pollinia. According to Chen *et al.* (2009) and Govaerts *et al.* (2021), 278 species are mainly distributed in tropical S and SE Asia but also found in tropical Africa, Madagascar, the Mascarene Islands, the Philippines, New Guinea, NE Australia, and the SW Pacific islands to Tahiti. In India this genus is represented by 74 species (Misra, 2019), of which 14 species are found in Assam state (Gogoi, 2018, 2019). With the recently observed population of *Oberonia prainiana* the total number of species increases to 15.

A detailed description, together with illustration, information on habitat and a geographic distribution map, is provided in the present manuscript to make species determination easy. The voucher specimen has been deposited at the Herbarium of the Orchid Research Centre Tipi, Arunachal Pradesh, and Herbarium of The Orchid Society of Eastern Himalaya (TOSEHIM), Regional Orchid Germplasm Conservation and Propagation Centre, Assam.

## Taxonomic treatment

*Oberonia prainiana* King & Pantling, *Journal of the Asiatic Society of Bengal* 64(2): 331 (1895).

Type: India, Sikkim Himalaya, West Bengal, sivoke valley of the Teesta, R. Pantling, 225 (Holotype: CAL)

Synonym: *Oberonia brunnescens* Ridley, *Journal of the Linnean Society, Botany* 32: 220 (1896).

Type: Malaysia, 01/06/1883, H.N. Ridley s.n. (Holotype: SING!).

**Specimen Examined:** India, Assam, Karbi Anglong, Hamren, alt. above 500 m, 16/03/2018, fl.10/04/2021 in the Kaziranga Orchid and Biodiversity Park, Gogoi & Hondiqui 00950 (TOSEHIM).

Description from the collected fresh specimen (Fig. 1): Stem very short. Leaves 1.25–2 × 0.38–0.6 cm, oblong-ovate, slightly falcate, sub-acute, fleshy. Inflorescence slender, apical, verticillate, longer than the leaves, 8–10 cm long, erect; peduncle 1.5–2 cm long, terete, smooth, with 3–4 minute bracts; rachis 6.5–8 cm long, terete, glabrous, rather densely flowered in the lower two-thirds, loosely flowered in the upper third; pedicellate ovary 0.65–0.75 mm long; floral bract oblong, subacute, as long as the ovary. Flowers 0.5 × 0.25 mm, reddish brown. Sepals subequal, oblong acute, margin entire, strongly reflexed. Dorsal sepal 0.4–0.5 × 0.2–0.25 mm. Lateral sepals 0.4–0.5 × 0.2–0.3 mm. Petals 0.7–0.75 × 0.2–0.25 mm, oblanceolate-elliptic, obtuse, margin irregularly denticulate, eroded, reflexed. Lip 0.75 × 0.5 mm, elliptic, lanceolate, obtuse, not distinctly lobed, margins deeply denticulate, eroded, base truncate with a circular nectar-bearing pit just under the column. Column 0.23 mm long, broad and thick, dilated at the apex. Anther ovate, with 2 locules. Pollinia in 2 pairs, narrowly oblong.

Flowering: April-May

Distribution: India, Nepal, Malaysia and Thailand.

Habitat: Epiphytic on trees in dense forest.

Present Availability Status: The species was found only in a single locality. Degradation of habitat due to rapid urbanization, illegal logging possibly will make the species threatened in near future.



**Fig . 1: *Oberonia prainiana***

A. plant in natural habitat; B. plant with inflorescence; C. close up of inflorescence

## Key to the species of *Oberonia* from Assam state

1. Lip not distinctly lobed
  - 2a. Lip circular or ovate, margins sub-entire, inflorescence connate to apical leaf ..... *O. pachyrachis*
  - 2b. Lip elliptic, lanceolate, margins deeply denticulate, eroded inflorescence not connate to the apical leaf ..... *O. prainiana*
- 1b. Lip distinctly lobed
  - 3a. Leaves not articulate at base
    - 4a. Inflorescence connate at the lower part of the apical leaf
      - 5a. Flowers yellowish-green, imperfectly verticillate *O. falcata*
      - 5b. Flowers reddish-brown or greenish to yellow orange, verticillate
        - 6a. Flowers reddish-brown, midlobe of lip narrow towards base, margins smooth ..... *O. obcordata*
        - 6b. Flowers reddish-brown or greenish to yellow orange, midlobe of lip cordate from base, margins crenate ..... *O. emarginata*
    - 4b. Inflorescence not connate at the lower part of the apical leaf
      - 7a. Midlobe of lip bilobed, lobules acuminate to long acuminate at apex
        - 8a. Stem very short or inconspicuous, leaves basal, flowers red ..... *O. rufilabris*
        - 8b. Stem long and visible, leaves distributed along the stem, distichous, flowers green to orange-yellow, sometimes pale red
          - 9a. Leaves 1–3 mm wide, flowers greenish yellow or pale yellow ..... *O. mannii*
          - 9b. Leaves 3–5 mm wide, flowers pale red ..... *O. anthropophora*
  - 7b. Midlobe of lip pectinate
    - 10a. Inflorescence 10–15 cm long ..... *O. jenkinsiana*
    - 10b. Inflorescence 4–5 cm long ..... *O. clarkei*
- 3b. Leaves articulate at base
  - 11a. Leaves 20–50 cm long, lip with a callus at either side of sinus ..... *O. ensiformis*
  - 11b. Leaves commonly 1–20 cm long, lip ecallose
    - 12a. Floral bracts with a long apical awn ..... *O. Falconeri*
    - 12b. Floral bracts without a long apical awn
      - 13a. Scape with narrow wings on both sides, raceme densely flowered ..... *O. mucronata*
      - 13b. Scape wingless, raceme lax flowered

- 14a. Leaves 1.5–6 × 0.4–0.7 cm, raceme 2–8 cm long, lip 2 lobed  
 ..... *O. Pyrulifera*
- 14b. Leaves 8–20 × 0.7–1.5 cm, raceme more than 10 cm long, lip 3  
 lobed ..... *O. acaulis*

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