

# *Phalaenopsis wilsonii* (Orchidaceae: Epidendroideae: Vandaeae), a new record for India

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**Abstract:** *Phalaenopsis wilsonii* Rolfe (Orchidaceae) is reported as a new distributional record for the orchid flora of India from Nagaland. Detailed colour photographs are provided for easy identification. With this addition the genus is represented by six species in Nagaland, India.

**Keywords:** Nagaland, New record, Orchid flora, Taxonomy.

## Introduction

The genus *Phalaenopsis* Blume (Orchidaceae) was established in 1825, with the generic name being derived from the Greek words “*phalaina*” (moth) and “*opsis*” (appearance), referring to moth-like flower. The genus comprises approximately 97 species distributed worldwide (Govaerts *et al.*, 2021). Christenson (2001), divided the genus into five subgenera: *Proboscidioides* (Rolfe) Christenson, *Aphyllae* (H.R.Sweet) Christenson, *Parishianae* (H.R.Sweet) Christenson, *Polychilos* (Breda) Christenson and *Phalaenopsis* Blume. The subgenera *Aphyllae*, *Parishianae* and *Proboscidioides* are distributed in southern China and India, extending to northern Vietnam, Myanmar and Thailand while the subgenus *Polychilos* has a few species distributed as far west as northeastern India, but primarily is centred in Indonesia and the Philippines (Christenson, 2001). Species of *Phalaenopsis* are found throughout tropical Asia and the larger islands of the Pacific Ocean and range from Sri Lanka and southern India in the west, to

Papua New Guinea in the east, to the Yunnan province (southern China) and Taiwan in the north, and to northern Australia in the south. The genus is represented by 15 species in India (Singh *et al.*, 2019).

During a recent field survey to document the vandaceous orchid resources of Nagaland, the authors encountered a seemingly new orchid species in vegetative state (Fig. 1a) and brought it under cultivation at the Orchidarium of the Department of Botany, Nagaland University, during 2018. The specimen flowered during April–June 2021 (Fig. 1b), and was identified as *Phalaenopsis wilsonii* Rolfe, until now considered restricted to China and might have an extended distribution in northern Vietnam. The present report forms a new distributional record for India, and the genus has now six species in Nagaland, namely, *P. deliciosa* Rchb.f., *P. difformis* (Wall. ex Lindl.) Kocyan & Schuit., *P. taenialis* (Lindl.) Christenson & Pradhan, *P. hygrochila* J.M.H. Shaw, *P. yingjiangensis* (Z.H.Tsi) Kocyan & Schuit. and *P. wilsonii* Rolfe (Deb & Imchen, 2008; Deb & Jakha, 2019). A detailed description along with colour photographs are provided for easy identification.

## Materials and Methods

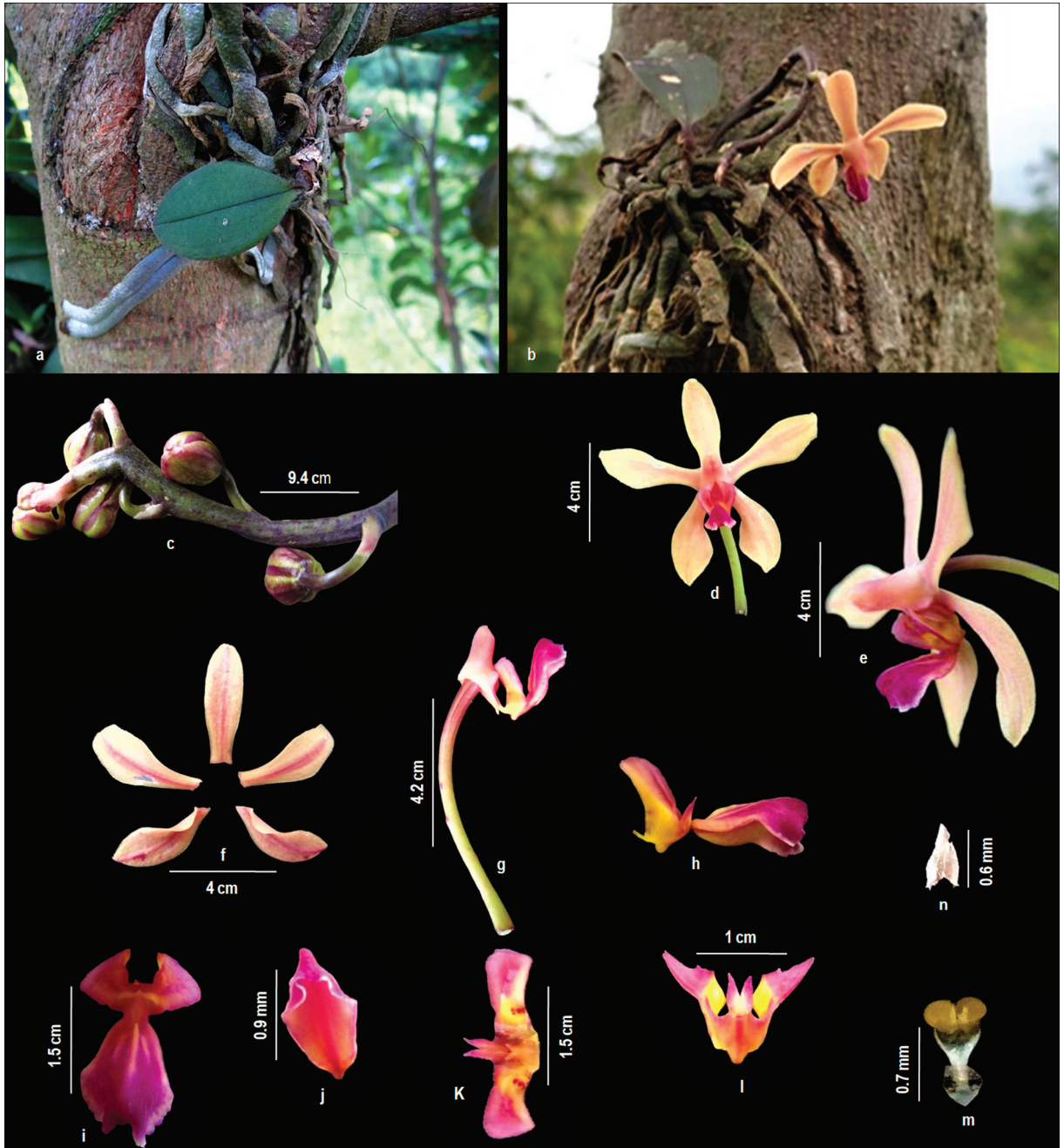
Living specimens of *Phalaenopsis wilsonii* were brought into cultivation at the Orchidarium of the Department of Botany, Nagaland University, in 2018. Identity of the specimen was confirmed on flowering, in consultation with the protologue and other relevant literature (Rolfe, 1909; Christenson,

2001; Chen *et al.*, 2009) and the type specimens housed at K and BM.

**Taxonomic Treatment**

*Phalaenopsis wilsonii* Rolfe, Bull. Misc. Inform. Kew 1909: 65. 1909. *Polychilos wilsonii* (Rolfe) Shim, Malayan Nat. J. 36: 27. 1982. *Kingidium*

*wilsonii* (Rolfe) O.Gruss & Roellke, Orchidee (Hamburg) 47: 149. 1996. *Doritis wilsonii* (Rolfe) T.Yukawa & K.Kita, Acta Phytotax. Geobot. 56(2): 157. 2005. *Type*: CHINA, western China, without precise locality, *E.H. Wilson* 4576 (syn K [K000891370, K000891371 digital images!]; BM [BM000534956 digital image!]).



**Fig. 1.** *Phalaenopsis wilsonii* Rolfe: **a.** Plant in vegetative state; **b.** Plant in flowering; **c.** Inflorescence; **d.** Single flower; **e.** Flower-side view; **f.** Ventral sepals and petals; **g.** Column with pedicelled ovary and 3-lobed lip; **h.** Lip-side view; **i.** Lip-top view; **j.** Lip bottom view; **k.** Lip callosities; **l.** Spur beneath posterior callus; **m.** Pollinia; **n.** Bract (from *J. Kamba* 102; photos by J. Kamba).

*Phalaenopsis minor* F.Y.Liu, Acta Bot. Yunnan. 10: 119. 1988.

*Phalaenopsis wilsonii* Rolfe f. *azurea* Z.J.Liu & Z.Z.Ru, Orchidee (Hamburg) 57: 318. 2006. Fig. 1

Plants c. 4 cm long. Roots well developed, densely verrucose, elongate, fasciculate, fleshy, flattened, greenish. Stem 0.8–1 cm long. Leaves usually 1 or 2, sometimes leafless, 6–7 × 2.2–2.4 cm, purple green, oblong-elliptic, apex acute. Flower stalk 7–10 cm long, arcuate, zigzag. Bracts ovate-triangular, apex acute, c. 6 × 4 mm, membranous. Flowers few, widely opened, 4–5 cm broad, widely spaced. Sepals, petals orange-peach, colour prominent at base, mauve, lip magenta color, column white or pinkish. Dorsal sepal oblong-elliptic, c. 20 × 6 mm, acute or sub-obtuse at apex. Lateral sepals oblique, c. 16 × 7 mm, acute at apex. Petals spatulate, elliptic or oblong-ovate, c. 18 × 8 mm, obtuse at apex. Clawed at lip base, lip three-lobed; lateral lobes erect, sickle-shaped, 5–8 mm, adaxially incised-tipped keel; mid-lobe obcordate when spread, c. 9 × 5 mm, fleshy hump, convex, notched at apex, medium keel raised at base. Column erect, 6–8 mm, adaxial stigmatic cavity. Pedicellate ovary. Anther cap shortly beaked, white-purplish on dorsal side. Pollinia four, in two unequal pairs. Capsules 2–3 × 0.5–0.7 cm, cylindrical.

*Flowering & fruiting:* Flowering from April to May; fruiting from May to July.

*Habitat:* Epiphytic on mossy tree trunks. Only two individuals were spotted growing together.

*Distribution:* China, now in India. Likely to have an extended distribution in northern Vietnam (Christenson, 2001).

*Specimen examined:* INDIA, Nagaland, Zunheboto district, Kithsakita, N 26° 62' 19.2" E 94° 32' 14.2" W, 1529 m, 01.07.2017, *J. Kamba* 102 (Nagaland University Herbarium).

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