

# *Vanda longitepala* (Orchidaceae), an addition to the flora of India

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**Abstract:** *Vanda longitepala* D.L.Roberts, L.M.Gardiner & Motes of the family Orchidaceae has been added to India's orchid flora from Arunachal Pradesh. A detailed description, illustration and photographs are provided for easy identification.

**Keywords:** Arunachal Pradesh, Epiphytic orchid, New record, Orchid flora, Taxonomy.

## Introduction

During a field trip to the forested areas of Mishmi Hills, Lower Dibang Valley district of Arunachal Pradesh on 16 April 2023, the first author collected an unidentified flowering epiphytic orchid and it was planted at the Regional Orchids Germplasm Conservation and Propagation Centre (Assam Circle), Assam. On critical examination, it was identified as *Vanda longitepala* D.L.Roberts, L.M.Gardiner & Motes which had previously been known only from Myanmar (Roberts *et al.*, 2008) but was never before reported from India. Hence, a detailed description, illustration, and information on habitat and distribution are provided here.

*Vanda* R.Br. comprises c. 90 species widely distributed in tropical Asia to New Guinea and Australia (POWO, 2024; WFO, 2024). Sixteen species occur in India, of which 12 species come from Arunachal Pradesh. *Vanda longitepala* from Arunachal Pradesh forms a new record for India and Arunachal Pradesh, thereby bringing the total number of species in India to 17 species and 13 species in Arunachal Pradesh.

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## Materials and Methods

All the photos were taken with a 6D Mark-II camera (Canon, Ota City, Japan) fitted with an EF 100 mm f/2.8L Macro USM lens. The measurements and species descriptions were made from live plants following the terminology for morphological descriptions by Beentje (2012). Voucher specimens were deposited in TOSEHIM (Herbarium of the Orchid Society of Eastern Himalaya), Regional Orchid Germplasm Conservation and Propagation Centre (Assam Circle), Assam. The types and other specimens of related species were examined from various herbaria (CAL, ASSAM, Orchid Herbarium Tipi and Herbarium of State Forest Research Institute, Arunachal Pradesh). Identification of species confirmed after consultation of the relevant literature (King & Pantling, 1898; Pradhan, 1979; Chowdhery, 1998; Pearce & Cribb, 2002; Lucksom, 2007; Roberts *et al.*, 2008; Chen *et al.*, 2009; Gogoi, 2018, 2019; Misra, 2019; Singh *et al.*, 2019).

## Taxonomic Treatment

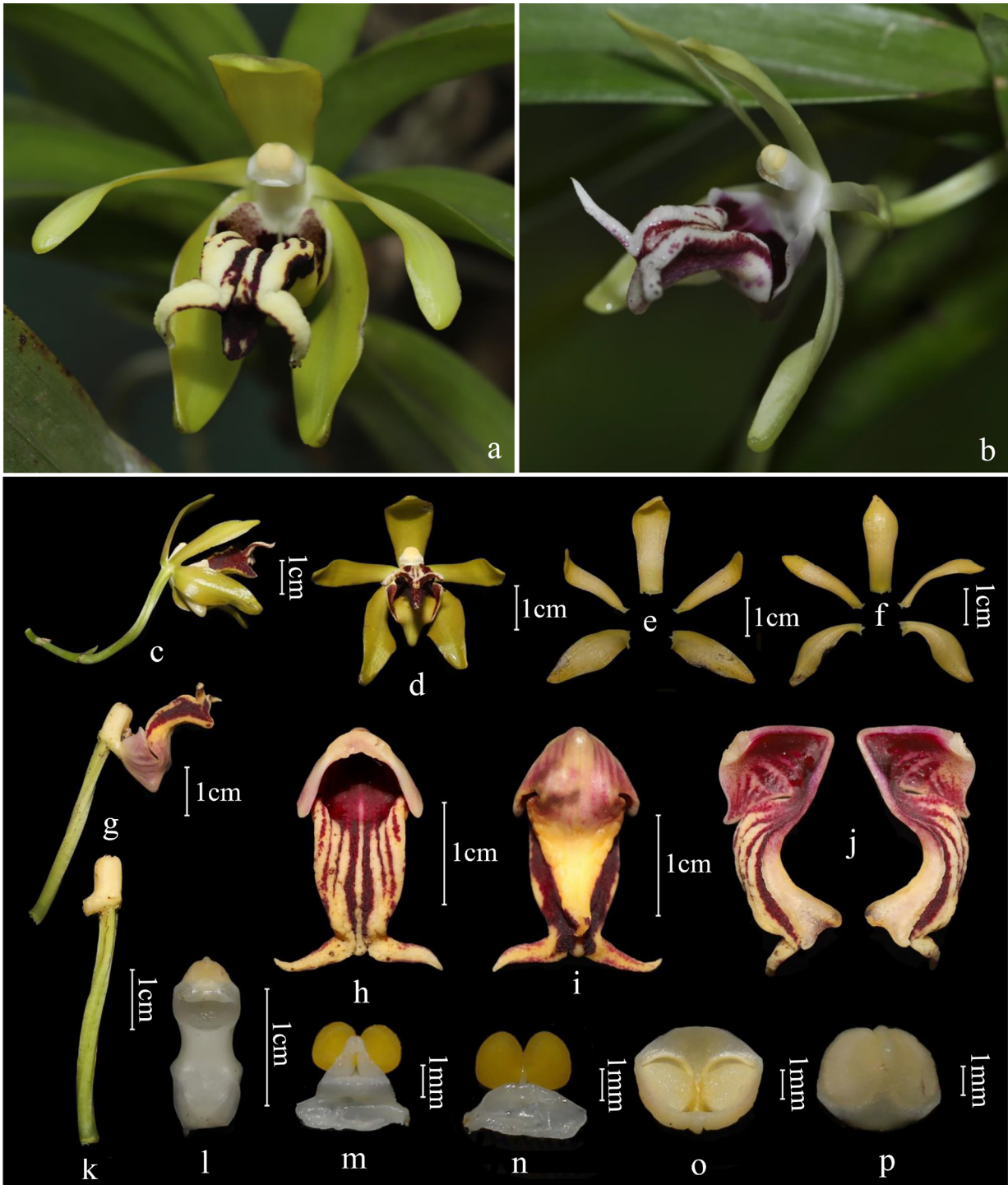
***Vanda longitepala*** D.L.Roberts, L.M.Gardiner & Motes in Kew Bull. 63: 495. 2008 [publ. 2009].  
*Type:* BURMA [MYANMAR], Myitkyina district, near "Black Rock", 1200–1500 m, *Kermode 17331* (holo K).

**Figs. 1 & 2**

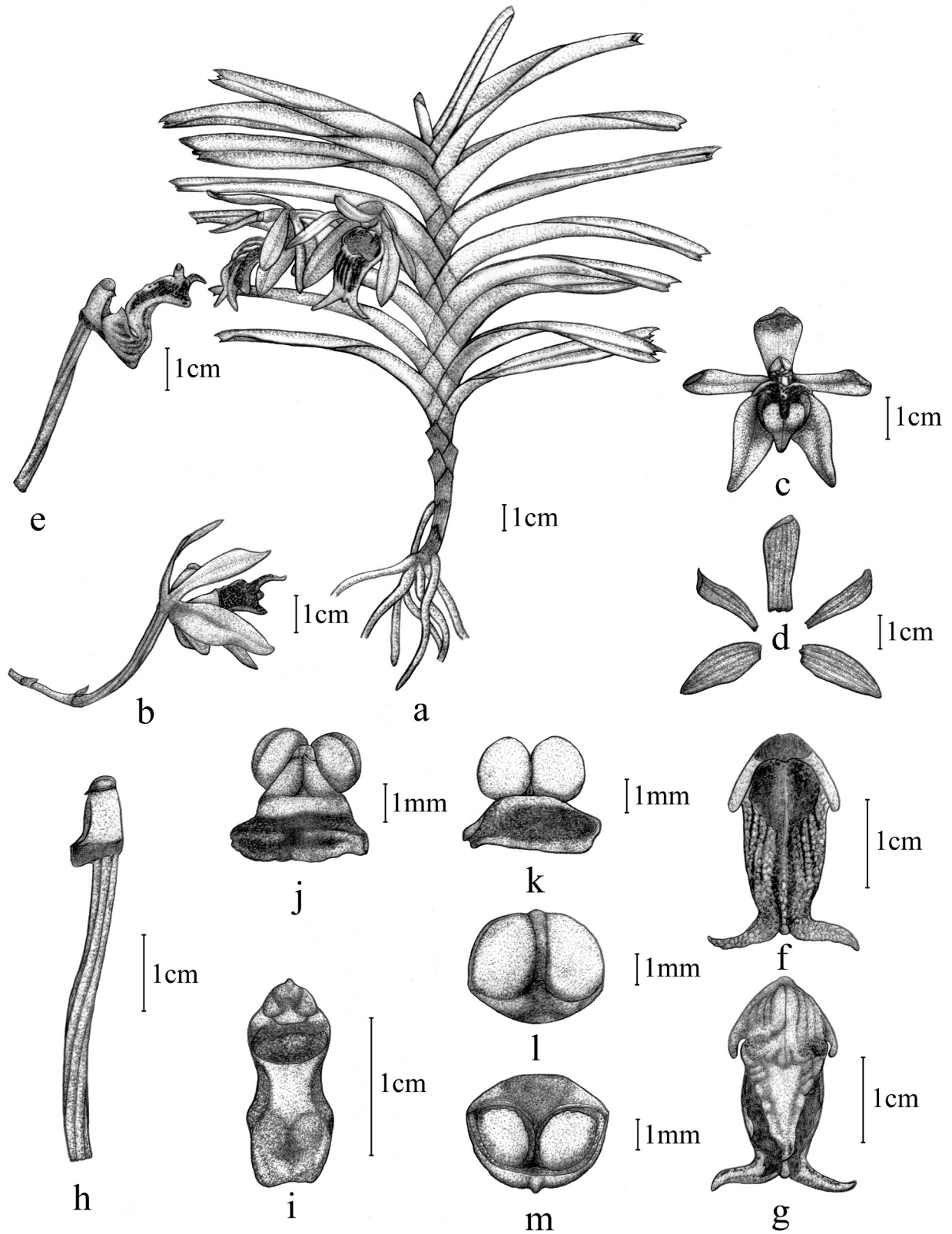
Epiphytic herbs. Stems woody, up to 60 cm high, 0.8–0.7 cm thick. Leaves leathery, arching, unequally apically acutely bilobed, praemorse, up to 7–10.5 × 1.5–2 cm. Inflorescence 2 or 3, 1.5–2 cm long, 1–2-flowered; floral bracts sheathing, ovate, c. 0.4 × 0.4 cm, apex obtuse-acute. Flowers 4.3–4.5 cm across,

thickly textured, widely opening, yellowish green; pedicel ribbed ovary yellowish green, 2.5–3 cm long. Dorsal sepal narrowly ovate, apex obtuse, 2.8–3.2 × 0.9–1.1 cm. Lateral sepals sub-falcate, acuminate, 2.7–3 × 0.7–1 cm. Petals linear, acuminate, 3–3.1 ×

0.3–0.5 cm. Lip 2–2.1 × 1–1.3 cm; yellow to white with dark purple striped, fleshy, spurred; hypochile bilobed, acuminate; epichile rectangular, trilobed at apex, apex cleft sometimes with a short point in sinus; disk rugulose with 2 slender elongated



**Fig. 1.** *Vanda longitepala* D.L.Roberts, L.M.Gardiner & Motes: **a.** & **b.** Flowers in habitat; **c.** Inflorescence; **d.** Front view of flower; **e.** Ventral view of dissected perianth; **f.** Dorsal view of dissected perianth; **g.** Lip with ovary and column; **h.** Dorsal view of lip; **i.** Ventral view of lip; **j.** Longitudinal sectioned lip; **k.** Ovary with pedicel and column; **l.** Front view of column; **m.** Ventral view of pollinarium; **n.** Dorsal view of pollinarium; **o.** Anther cap ventral view; **p.** Anther cap dorsal view. (Photos by Khyanjeet Gogoi).



**Fig. 2.** *Vanda longitepala* D.L.Roberts, L.M.Gardiner & Motes: a. Habit; b. Inflorescence; c. Front view of flower; d. Ventral view of dissected perianth; e. Lip with ovary and column; f. Dorsal view of lip; g. Ventral view of lip; h. Ovary with pedicel and column; i. Front view of column; j. Ventral view of pollinarium; k. Dorsal view of pollinarium; l. Anther cap ventral view; m. Anther cap dorsal view. (Drawings by Khyanjeet Gogoi).

processes on apical margin. Column entire, not constricted at base, c. 0.4 cm long, c. 0.3 cm wide; rostellum triangular; anther-cap cucullate, glabrous, c. 0.4 cm long, c. 0.3 cm broad; pollinia 2, yellow; viscidium, c. 0.1 cm long. Capsule not seen.

*Flowering*: Flowering from March to April; fruiting not seen.

*Habitat*: Epiphytic on tree trunks in tropical mixed evergreen forest at an elevation of 1000 to 1200 m.

*Distribution*: Myanmar and now in India.

*Specimen examined*: INDIA, **Arunachal Pradesh**, Mishmi Hills, Lower Dibang Valley district, 1000 to 1200 m, 16.04.2023, Gogoi LDV01157 (TOSEHIM).

*Notes*: *Vanda longipetala* is morphologically related to *V. cristata* Wall. ex Lindl., but differs in the extremely long tepals, slender linear and acuminate lateral petals, and the lack of a constricted base of the column. The differences between *V. longipetala* and *V. cristata* are shown in the table 1.

Key to the species of *Vanda* from Arunachal Pradesh

1. Stem 15–20 cm long ..... 2
1. Stem 25–90 cm long ..... 4
2. Inflorescence 3–4.5 cm long; flowers 3.5–4.5 cm across ..... *V. cristata*
2. Inflorescence 5–25 cm long; flowers 1.5–2 cm across ..... 3

3. Flowers deep pinkish red; lip simple .... *V. ampullacea*
3. Flowers cream-yellow, lip white, purple or reddish pink; lip 3-lobed ..... *V. testacea*
4. Inflorescence shorter than leaves, 2–7 cm ..... 6
4. Inflorescence longer than leaves, 10–40 cm ..... 5
5. Flowers 2–2.5 cm across, white tinged with pale blue ..... *V. coerulescens*
5. Flowers 8–10 cm across, blue ..... *V. coerulea*
6. Flowers less than 4 cm across ..... 7
6. Flowers more than 4 cm across ..... 9
7. Lip spurred ..... *V. pumila*
7. Lip not spurred ..... 8
8. Leaves broadly linear to oblong, apex unequally 2-lobed ..... *V. alpina*
8. Leaves weakly curved, oblong, apex unequally 3-lobed ..... *V. griffithii*
9. Flowers greenish yellow ..... 10
9. Flowers brownish purple ..... 11
10. Apical portion of lip possess two distinct horn like structures ..... *V. longipetala*
10. Apical portion of lip broadly bilobulate ..... ..  
..... *V. motesiana*
11. Inflorescence 5–10 cm long, laxly 4–6-flowered.  
..... *V. bicolor*
11. Inflorescence 15–25 cm long, 6–10-flowered ... 12

**Table 1.** Differences between *Vanda longipetala* and *V. cristata*.

Characters	<i>Vanda longipetala</i> D.L.Roberts, L.M.Gardiner & Motes	<i>Vanda Cristata</i> Wall. Ex Lindl.
Stem	60 cm high, 0.7–0.8 cm across	18 cm high, 0.6–0.8 cm across
Inflorescence	1.5–2 cm long, 1–2-flowered	3–4.5 cm long, 3–9-flowered
Flowers	4.3–4.5 cm across	3.5–4 cm across
Dorsal sepal	Narrowly ovate, apex obtuse	Oblong-spatulate, apex obtuse-acute
Lateral sepals	Sub-falcate, apex acuminate	Lanceolate, apex obtuse
Petals	Acuminate, 3–3.1 × 0.3–0.5 cm	Falcate-oblong, 1.8–2.8 × 0.2–0.5 cm
Lip	2–2.1 × 1–1.3 cm, yellow with dark purple striped	1.1–2 × 0.4–0.5 cm, yellow to white, striped with violet-purple to red-brown

12. Sepals and petals yellow with brown tessellation, lip bluish-purple ..... *V. tessellata*
12. Sepals and petals greenish to ochre-coloured, with purplish-brown tessellation, lip white with yellow and mauve spots ..... *V. stangeana*

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