

***HABENARIA NICOBARICA* (ORCHIDACEAE), A NEW SPECIES FROM
ANDAMAN AND NICOBAR ISLANDS, INDIA**

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Abstract

A new species of terrestrial orchid *Habenaria nicobarica* Murugan, Alappatt, Prabhu & Arisdason sp. nov. is described from South Nicobar Islands. Key to species of *Habenaria* in Andaman and Nicobar Islands, illustration and photograph of the new species are also provided.

Introduction

Orchidaceae include c. 788 genera (Mabberley, 2008) and c. 25,971 species (Joppa *et al.*, 2011) and distributed widely in the world. In India, orchids are represented by 184 genera and 1129 species (Jalal *et al.*, 2008), of which 150 species belonging to 59 genera are found in Andaman and Nicobar Islands.

The Andaman and Nicobar Islands in India is a repository of diverse species, including 25 endemic orchid species (Misra *et al.*, 2012). The genus *Habenaria* Willd. is estimated to have approximately 750 species and distributed in every continent of the world (Comber, 1990). Among these, 100 species are recorded from India (Santapau and Henry, 1973) and only 1 species, namely *H. andamanica* Hook. f., is reported from Andaman and Nicobar Islands (Choudhury *et al.*, 2011).

During the course of botanical explorations in Great Nicobar Biosphere Reserve and Little Nicobar Tribal Reserve, Andaman and Nicobar Islands, from 2008 to 2011, the authors have collected few interesting specimens of *Habenaria*. On critical study of the specimens and perusal of literature (Hooker, 1890; Jayaweera, 1981; Comber, 1990; Chowdhery, 1998; Mathew, 1998; Sinha, 1999; Pandey and Diwakar, 2008), the authors found it as an undescribed species, which is very closely allied to *Habenaria koodersii* J. J. Sm., but differs in leaf, flower and lip characters (Table 1). Hence, it is described here as a new species, *viz.*, *Habenaria nicobarica* along with key to species, illustration and photograph, for further collection and identification in the field.

***Habenaria nicobarica* Murugan, Alappatt, Prabhu & Arisdason, sp. nov. (Figs 1, 2 b-e).**

Type: INDIA, Andaman and Nicobar Islands: South Nicobar, Little Nicobar Tribal Reserve, Pulopaha (E), 25.11.2008, *C. Murugan* 26630 (*Holotype:* CAL; *Isotype:* PBL).

Diagnosis: *Habenaria nicobarica* is closely related to *H. koodersii* J. J. Sm. but differs in bract size, flower colour and lip characters.

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Tuberous, terrestrial herbs, up to 1 m high. Stems terete. Leaves spiral, 5-8, confined to the middle of stem, oblong-lanceolate, 7-12 × 2-3 cm, rounded with auricled at base, entire at margin, acuminate at apex, 3-veined. Racemes terminal, 10-20 cm long, lax; peduncles terete, 10-25 cm long. Flowers lax, light brown; bracts linear, acuminate at apex, 1.5-2.0 × 0.2-0.3 cm. Dorsal sepal 10-17 mm long with 7 mm long filiform extension, 3-nerved; lateral sepals spreading, c. 10×4 mm with 9 mm long tail, 3-nerved. Petals 2, bilobed; posterior lobe shorter than sepals, erect, linear, c. 10.0 × 0.1 mm; anterior lobe short, acuminate at apex. Lip 3-lobed to the base, mid lobe c. 12 × 2 mm, flat; lateral lobe linear, c. 10 × 1 mm; spur cylindrical, narrowed towards apex, up to 27 mm long. Gynostemium c. 4 mm long. Anther canal c. 2 mm long; lateral rostellar arms as long as anther canals, projecting forward; central lobe indistinct; auricle 2, prominent. Stigma processes large, c. 2.0 × 1.5 mm, rounded at apex. Ovary obconic, c. 2.3 × 0.2 cm, trigonous. Capsules oblong, c. 2.0 × 0.5 cm.

Flowering and fruiting: October - April.

Distribution: India (Nicobar Islands).

Paratypes: INDIA, Andaman and Nicobar Islands: S. Nicobar, Little Nicobar Tribal Reserve, Pulo ulon (N), 26.11.2008, *C. Murugan* 26680 (PBL); Pulo Panja (N), 31.10.2009, *C. Murugan* 27828 (PBL). Pulopaha, 8.4.2011, *C. Murugan* 28322 (PBL); Great Nicobar Biosphere Reserve, 10 km on East-west Road, 31.10.2011, *Joju P. Alappatt* 337 (PBL).

Etymology: The species is named after the Nicobar Islands, the type locality and one of the plant diversity hotspots in India.

Table 1. Comparison of exomorphic characters among *Habenaria koodersii*, *H. nicobarica* sp. nov. and *H. andamanica*.

Characters	<i>Habenaria koodersii</i>	<i>H. nicobarica</i> sp. nov.	<i>H. andamanica</i>
Plant height	40-60 cm	60-100 cm	70-80 cm
Number of leaves	7-9	5-8	7
Leaf size	13.5-17.0 cm long	7-12 cm long	5-15 cm long
Inflorescence	21-31 cm long	10-20 cm long	25-40 cm long
Peduncle	12-19 cm long	10-25 cm long	5-7 cm long
Bract	c. 2.8 cm long	1.5-2.0 cm long	2-3 cm long
Flower colour	Greenish white	Light brown	White with brown
Dorsal sepal	1.1 cm with c. 4 mm long thread	1.0-1.7 cm with c. 7 mm long thread	1.2 cm without thread
Petals	1.0-1.1 cm long, unlobed at base.	1 cm long, lobed at base	1.0-1.4 cm long, unlobed at base
Lip	Mid lobe shorter than side lobe	Mid lobe (c. 1.2 cm long) longer than side lobe	Mid lobe linear, 3-fid (c. 1.5 cm long) longer than side lobe
Spur	Tubular, narrow towards apex	Tubular, c. 2.7 cm long narrow towards apex	clavate

Key to species of Habenaria Willd. in Andaman and Nicobar Islands.

- 1 Flowers white; sepals without filiform attachment near apex; lip laciniate. *H. andamanica*
- Flowers light brown; sepals with filiform attachment near apex; lip 3-fid. *H. nicobarica* sp. nov.

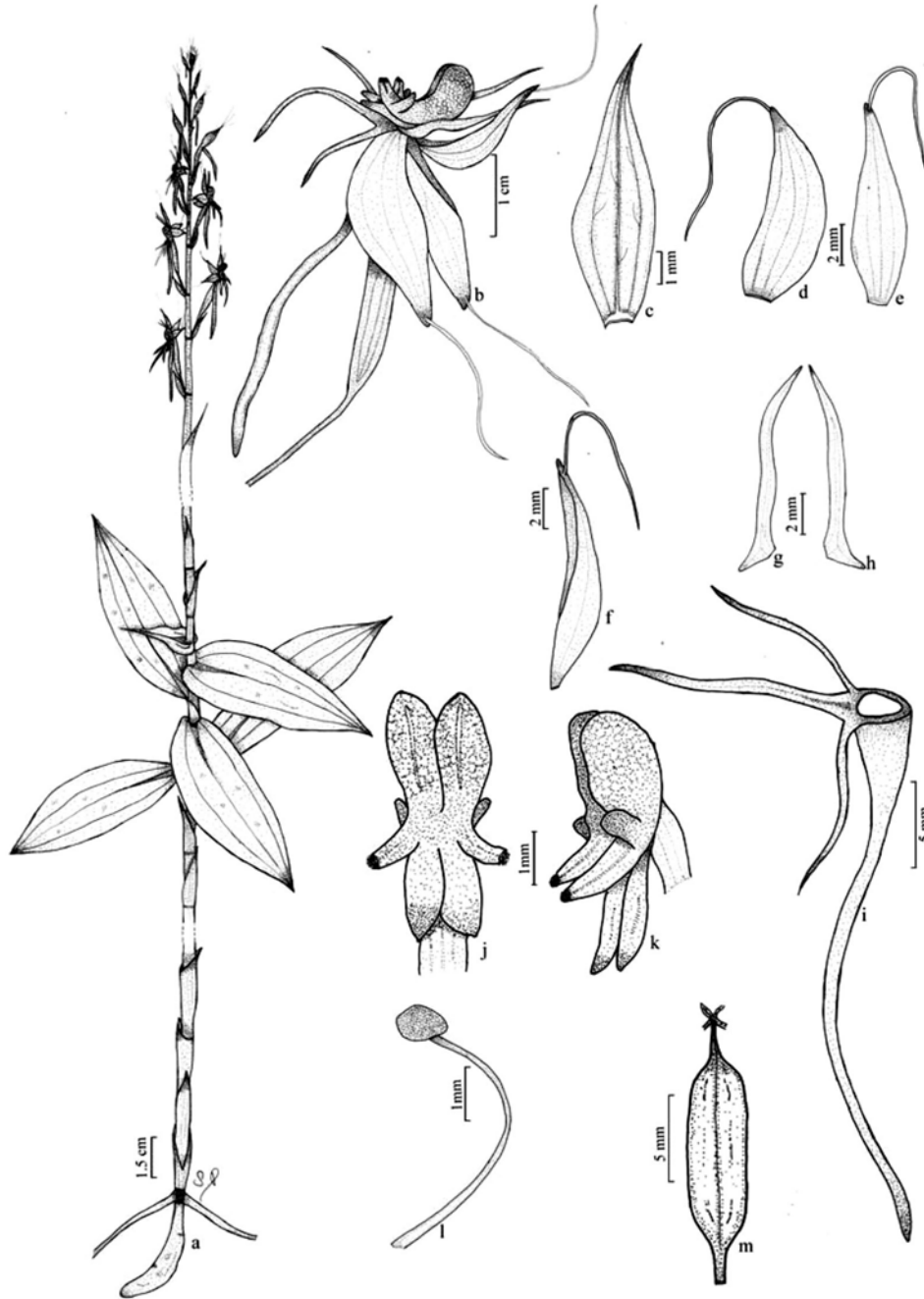


Fig. 1. *Habenaria nicobarica* sp. nov. (Orchidaceae). a. habit; b. flower; c. bract; d-f. sepals; g-h. petals; i. lip; j-k. column; l. pollinaria; m. capsule.

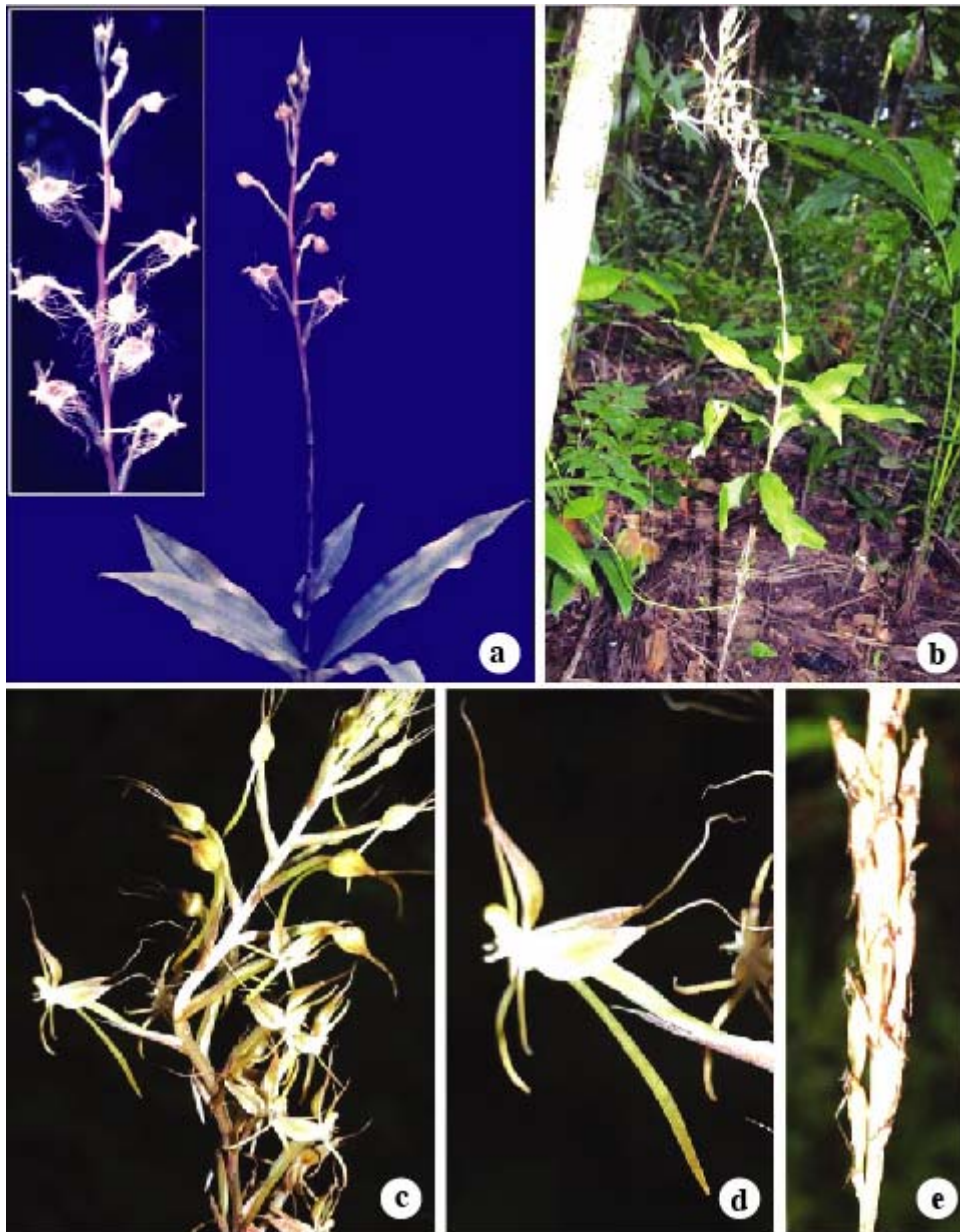


Fig. 2a. *Habenaria andamanica* Hook. f. (Habit with inflorescence); b-e. *Habenaria nicobarica* **sp. nov.** b. habit; c. inflorescence; d. flower; e. capsule.

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