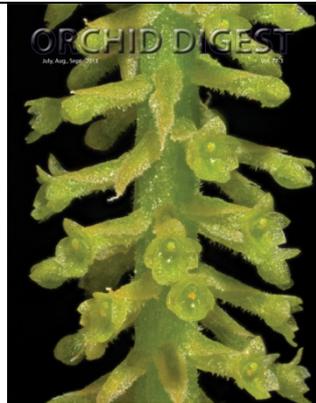


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THUNIA ALBA (LINDL.) REICHB.F. A RARE WILD ORNAMENTAL ORCHID FROM THE ANDAMAN ISLANDS IN THE BAY OF BENGAL

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Thunia alba
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The Andaman-Nicobar Islands, about 647 nautical miles away from the Coromandel Coast of the Peninsular India in the Bay of Bengal, is an insular 'hot spot' of plant diversity. *Thunia alba* is rather a little known orchid from the Andaman Islands, probably on the verge of extinction from the insular habitats. The occurrence the taxon was first reported by Balakrishnan and Nair in 1976 from South Andamans. Nevertheless, their herbarium specimens (Nair 3764) are not traceable at PBL and CAL; besides, the species has not been reported afterwards until 2012. Interestingly, this is being relocated by the author as an epiphyte on a common endemic tree, *Lagerstroemia hypoleuca*, from Mayabanther Island of the North Andaman group.

THUNIA ALBA (LINDL.) REICHB.F. A RARE WILD ORNAMENTAL ORCHID FROM THE ANDAMAN ISLANDS IN THE BAY OF BENGAL

SAM P. MATHEW

THE ANDAMAN-NICOBAR Islands, about 647 nautical miles away from the Coromandel Coast of the Peninsular India in the Bay of Bengal, is an insular 'hot spot' of plant diversity which covers an area of 8,249 sq km (3185 sq miles) with a coastal line of 1,962 km (1219 miles). This archipelago constitutes about 306 major islands and 206 islets and rocks and geographically occurs between the longitudes 92° 12" E to 93° 57" E and latitudes between 6° 45" N to 13° 41" N. Geologically, the Andaman-Nicobar Archipelago is "continental" in origin and considered as the emergent peaks of a submerged mountain range in the Bay of Bengal in continuation with the Arakan Yoma Mountains of Myanmar to the Moluccas Islands of the Indonesia. The origin of the Indian Ocean islands are mostly a result of the split up and drifting apart of the Gondwanaland which happened about 225 million years ago in the early Triassic period. The larger fragments formed the continents of Africa including Madagascar, Antarctica, Australia, and Indian Sub-Continent. The sea space left between these major land masses forms the Indian Ocean. According to Renvoize (1979), the Andaman-Nicobar Archipelago was isolated from the continental land masses of Myanmar in the north and Sumatra Island (Indonesia) in the south during Tertiary or Cretaceous periods of the Paleozoic era, and Sewell (1839) suggests the Andaman group of islands separated from the Nicobar group probably prior to the Triassic period of the Paleozoic era. The floristic composition and phytogeographical affinities of the Andaman Islands support the geological origin of these islands from the Arakan Yoma Mountain ranges. The insular floristic composition of the Andaman Islands demonstrates more plant species common in distribution with Northeast India, Bangladesh, Myanmar in the north and also link with Thailand and Malay Peninsula in the east. However, the Andaman flora also have links with the Western Ghats and Sri Lanka and also towards Indo-African, Indo-Pacific

floras, although these regions are widely separated by the sea, indicating its Gondwana connections in the remote past. The climatological features endorse a climatic climax of typical tropical lowland rainforest vegetation in the Andaman-Nicobar group of islands. It has been officially estimated that about 83% of the of the land area in these islands are covered by dense rain forest vegetation which could be designated as "humid tropics," ranging from sea level up to an altitude of 732 m (2,418 feet) at Saddle Peak, the highest point in this archipelago.

Wild orchids are one of the most fascinating ornamental groups of plants among the islands of the Andaman-Nicobar Archipelago having a wide range of distribution from hill tops to mangrove swamps at sea level. The orchid flora demonstrates a unique status as a transitional zone between South Asia and Southeast Asia coupled with multi-dimensional floristic affinities to nearer and distant geographical regions predominantly towards Northeast India, Southeast Asia, Malaysia, and to the Western Ghats of the Peninsular India. According to a recent official estimation on insular orchids (Pandey & Diwakar, 2008), these islands are known to host 152 taxa including 20 endemics. About 20 taxa including 10 endemics are critically endangered and near extinction.

Thunia alba (Lindley) H. G. Reichenbach is a beauti-



Thunia alba

©S. P. Mathew



Thunia alba

ful orchid, very rare and on the verge of extinction in the Andaman Islands. From taxonomic point of view, two varieties have been recognized for this species viz., *Thunia alba* (Lindley) H. G. Reichenbach var. *alba* and *Thunia alba* (Lindley) H. G. Reichenbach var. *bracteata* (Roxburgh) N. Pearce & P. J. Cribb. The former variety *alba* differs from latter in having a yellow patch with chestnut brown stripes on lip. This species is remarkable with very showy white flowers and growing either as an epiphyte or terrestrial with soil containing enough humus. The phytogeography of this species is interestingly confined to certain regions of South Asia to Southeast Asia. The natural occurrence of this taxon has been reported in Nepal, Bhutan, Northeast India, Myanmar, Andaman Islands, Indonesia, Malaysia, Thailand, Vietnam, and Yunan. The variety *bracteata* has so far been reported in Nepal, Bhutan, and Northeast India.

The occurrence of this species in the Andaman Islands in the Bay of Bengal was first reported by Balakrishnan and Nair in 1976 from Ferrargunj, South Andamans and its herbarium specimen (Nair 3764) deposited at the Botanical Survey of India, Andaman Islands (PBL). However, these specimens are not traceable at PBL and CAL. Balakrishnan and Nair (1976) also commented on their observation that this species was very rare. This species has not been relocated or reported since Balakrishnan & Nair until 2012. Interestingly, this beautiful orchid was relocated during a recent plant exploration by the author from Mayabanthar Island of the North Andaman group. It was found growing as an epiphyte on a lower branch of a *Lagerstroemia hypoleuca* tree. Only one specimen was found and no further specimens were located even though we carried out an intensive exploration of different regions of the island. This rediscovery has much relevance in phytogeography demonstrating its geographical corridor of distribution from Nepal, Bhutan, and Myanmar towards Malesia through the Andaman Islands.

Thunia alba (Lindl.) Reichb. f., Bot. Zeitung (Berlin) 10 : 764. 1852; Balakr. & Nair, Bull. Bot. Surv. India, New records of orchids from Andaman Islands 18: 149 -154. 1976. *Phaius albus* Lindley in Wallich, Pl. Asiat.

Rar. 2: 85.1831.

Epiphyte c. 110 cm with tufted stem c. 2 cm thick, articulate. Leaves 10- 25 x 2 - 4 cm with amplexicaul sheathing at base, lanceolate or slightly elliptic-lanceolate, acuminate. Inflorescence terminal 8-12 milky white flowers, floral bracts c. 4 x 1.8 cm, boat shaped; sepals c. 6 x 1cm, elongate, ovate to lanceolate, acuminate to subapiculate at apex; petals c. 6 x 1.5 cm, ovate to lanceolate, acuminate to subapiculate at apex; lip c. 5 x 3 cm, yellow with chestnut stripes, irregularly fimbriate; spur cylindrical, c. 1 cm, apex obtuse. Column c. 2 cm.; pollinia 8, elongate, unequal Capsule ellipsoid, c. 4 x 2 cm.

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About the Author

Sam P. Mathew, a plant taxonomist, received his doctorate from the University of Kerala on the flora of the South Andaman Islands in the Bay of Bengal. He is currently working as a scientist at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute where he is actively engaged with the genetic conservation and maintenance of a gene bank for medicinal and aromatic plants of Peninsular India and Andaman-Nicobar Islands. He is also focusing on the characterization and *ex-situ* conservation of insect repellent plant species used by the primitive tribes of the Andaman-Nicobar Islands. He recently started a new project on documentation of micro-fungal flora of the Andaman Islands.



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