



JOURNAL OF BIODIVERSITY AND CONSERVATION

OPINION

Addition of a host plant of an epiphytic orchid species (*Vanda testacea* (Lindl.) Rchb.f.) from Indo Burma Biodiversity Hotspot, India

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ARTICLE INFO

Article History

Received: 17 April 2018

Received in revised form: 25 April 2018

Accepted: 25 May 2018

Keywords: Host plant, Conservation, Manipur, *Ficus*

North-East India is one of the unique biodiversity hotspot among the world's mega biodiversity hotspot comprises eight states of India including Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura (De & Singh, 2017). It occupies 7.7 % of India's total geographical area supporting 50 % of the flora, of which 31.58% is endemic (De & Medhi, 2014). The region is rich in Orchids, Ferns, Oaks, Bamboos, Rhododendrons, Magnolias *etc.*

About 1331 species of orchids belonging to 186 genera reported from the country. Among them 34 species of orchids from North-East India are listed as threatened and 85 species are endemic to this region (Gurung & Gurung 2016). Indo-Burma biodiversity hotspot encompasses 2,373,000

square kilometres of tropical Asia east of the Ganges-Brahmaputra lowlands (Stephen *et al.* 2015). It includes the Himalayan chain and the associated foothills in Nepal, Bhutan and India. It begins in Eastern Bangladesh and then extends across North-Eastern India, South of the Brahmaputra River which covers nearly all of Myanmar, part of Southern and Western Yunnan Province in China, all of the Lao People's Democratic Republic, Cambodia and Vietnam, the vast majority of Thailand and a small part of Peninsular Malaysia.

In India it is spreaded in states like Arunachal Pradesh, Assam, Meghalaya, Manipur, Tripura, Mizoram, Nagaland and Sikkim and the neighbouring countries include Bhutan, Southern

China and Myanmar. Orchid mycorrhiza differ from most other type of micorrhiza, as they occur in stem as well as root, and fungus many recolonise older cells (Latr et al. 2008). Orchid mycorrhizas are morphologically different from other mycorrhizas and involve a phylogenetically distinct group of soil fungus (Rasmussen & Rasmussen, 2014).

Orchid mycorrhiza has long been considered as a means of carbon transfer to the plant (Zhao et al. 2014). The prevailing flow of substances towards the seedling, offering a system of carbon acquisition which is different from photosynthesis. This allows orchid seedlings to delay the development of photo-assimilating structures and, in some cases, omit photo-assimilation entirely. It also provides the option of simultaneous or alternating use of the two means of carbon acquisition.

Rhizoctonia best suited in orchid seedling mycorrhiza other include Basidiomycetes and Ascomycetes (Rasmussen et al. 2015). Studies has revealed that *Vanda testacea* is generally reported with host plant *Mangifera indica*, *Castanopsis* sp., *Dalbergia sisoo*, *Phoebe hainesiana*, *Lagerstroemia speciosa*, *Terminalia* sps., *Schima wallichii* (Linthoingangi et al. 2015).

During our biodiversity work on 15th April 2018, the authors were searching for some medicinal plants near the small patches of forest in Imphal East. It was a great time, when they noted a beautiful yellow *Vanda* with purple lip. The host plant was specifically noted after observation in the areas, and it was found that it was bloomed only on *Ficus* species (Figure 1).

Literature survey indicated that no reports are available for *Vanda testacea* with host plant as *Ficus* species. Therefore, it can be concluded that it

is a new addition in the host plant of said *Vanda* species. The findings also bring attention towards the conservation of such lesser known *Vanda* species through the conservation of its host species.

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Figure 1: Flowers and host plant in study area