

**Host Plant Preference of Genera *Dendrobium* and *Bulbophyllum*
(Family: Orchidaceae) in Sri Lanka**

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Orchids are a well-known plant family for their restricted distribution in the wild. Most epiphytic orchids are hosted by specific trees and hence it's abundance may be influenced by the availability of suitable host trees and epiphytic composition. The distribution of many epiphytic orchids in nature indicates that they display strong species specificity in selecting hosts and noticeably lacking on other trees. *Dendrobium* and *Bulbophyllum* are epiphytic genera and mostly have restricted distribution in the natural environments. Furthermore; they display a biased distribution towards host trees. Therefore, the study aims to investigate the host tree preference of the species of *Dendrobium* and *Bulbophyllum* with a view to provide important information for the conservation of these species. Wet forests in Matale (Knuckles mountain range), Nuwara Eliya (Hakgala nature reserve, Horton Plains National Park, Pidurutalagala mountain, Kandeela forest reserve), Baddulla (Namunukula mountain), Kegalle (Makandawa forest reserve), Ratnapura (Sinharaja rain forest, Peak wilderness), Kurunegala (Kankaniyammulla forest), Galle (Hiyare rain forest, Kottawa forest, Morningside forest) districts were explored for the distribution of two genera; *Dendrobium* and *Bulbophyllum*. Specimens were collected randomly from the selected sites; three plots of 500m× 500m size per each site, and relevant data of host plants were recorded such as tree height, girth at breast height (GBH), tree bark characteristics (bark colour, nature of the moss cover and bark texture) and the abundance of orchid species on the host tree. Further, herbarium specimens of host trees and the orchids were prepared for identification. Presence of orchid species on the identified host trees was counted and, percentage of frequency was calculated. It was revealed that the orchids are mostly associated with hosts with dense moss cover and rough tree barks. Sixty five percent of species of *Dendrobium* and *Bulbophyllum* were found on hosts having 51-100 cm GBHs. Further, these orchids have shown preference to plant families; Myrtaceae (26%), Lauraceae (23%) and Phyllanthaceae (16%) as their hosts, whereas, with respect to the genus specificity, highest percentage of these orchids have shown preference to genera *Syzygium* (family Myrtaceae) and *Glochidion* (family Phyllanthaceae) as their hosts. Findings of the present study have revealed that the species diversity and species richness of genera *Dendrobium* and *Bulbophyllum* were high in the montane forests located in Nuwara Eliya (Horton Plains Nature Park, Kandeela forest reserve and Pidurutalagala mountain) and Matale (Knuckles mountain range) districts. This might be due to the fact that these forests were characterized by high humidity and high elevation. Chemical composition, distribution of moss cover and fungi associated with tree barks of these preferred host trees, would provide new insight for the conservation of these epiphytic orchid species.

Keywords: *Bulbophyllum*, *Dendrobium*, Host preference, Orchidaceae, Sri Lanka