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A Taxonomic Survey of Bryophytes and Lichens in University of Sri Jayewardenepura

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Abstract

Bryophytes are the simplest and most primitive land plants in the world. They do not produce flowers, seeds or fruits and do not consist of a true vascular system. Lichen is a symbiotic association between filamentous fungus, which is a mycobiont and photosynthetic organism/organisms which is a photobiont consisting of a microalga, cyanobacterium or both. Sri Lanka is considered as a biodiversity hotspot, which also has a huge variety of bryophytes and lichens. When considering the University of Sri Jayewardenepura (UoJ), there are several different bryophytes and lichen species that can be found when carefully observed. But there is no research done to find and identify them. The present study was carried out as a taxonomic survey of bryophytes and lichens present within the premises of the UoJ. The major objective was to prepare taxonomic keys for both bryophytes and lichens. Specimens were identified up to the genus level with a thorough observation of morphological and anatomical characters compared with the available literature. Morphological and anatomical characters were observed using hand lens, compound light microscope, dissecting microscope and measurements were taken using a projection microscope. Taxonomic keys to separate genera for bryophytes and lichens, illustrations, photos and taxonomic notes are provided for a more comprehensive knowledge. The geographic distribution of each taxon was recorded as GPS coordinates. Voucher herbarium specimens and permanent slides were prepared and deposited in the herbarium at the Department of Botany, UoJ. A total of 29 specimens (13 bryophytes, 16 lichens) were identified up to their generic level. Phylum Bryophyta consisted of 9 genera that belong to 7 families while phylum Marchantiophyta consisted of 3 genera. There weren't any hornworts. When considering the lichens, 16 genera that belonged to 11 families were identified. They belonged to the classes Arthoniomycetes, Dothideomycetes and Lecanoromycetes. This taxonomic study provides a primary idea about bryophyte and lichen diversity within the UoJ. This study will be helpful for future surveys on bryophytes and lichens within the university and for taking conservation measurements to protect them.

Keywords: *Bryophytes, Genera, Lichens, Taxonomy*