ISSN: 1391-8796
Proceedings of 11th Ruhuna International Science & Technology Conference
University of Ruhuna, Matara, Sri Lanka
January 24, 2024

# A preliminary taxonomic survey of epiphytic cryptogams in selected southern lowland rainforests of Sri Lanka

Dilrukshi H.A.C.[1]*, Rubasinghe S.C.K.[2] and Ruklani N.C.S.[2]

[1]*Department of Botany, Postgraduate Institute of Science, University of Peradeniya, Peradeniya, Sri Lanka*
[2]*Department of Botany, University of Peradeniya, Peradeniya, Sri Lanka*

Cryptogams represent a diverse array of organisms that do not produce flowers or seeds; instead, they primarily propagate through spores. Cryptogams including algae, lichens, bryophytes, ferns and fungi, are widely distributed in Sri Lankan lowland forests. However, the diversity of epiphytic cryptogams remains poorly studied in Sri Lanka. The present study aimed to investigate the taxonomic diversity of epiphytic cryptogams in three lowland rainforests in Southern Province: Wilpita, Kottawa, and Pituwala. Fresh samples of epiphytic cryptogams from the selected study sites within the forests were collected and stored in labelled zip-lock bags. Collected samples were examined using dissecting and compound light microscopes to study their morphological and anatomical characteristics. Specimens were identified to their generic or specific levels using taxonomic keys and other taxonomic literature. A total of 151 specimens of epiphytic cryptogams were collected from three forest reserves. Selected study sites of Wilpita forest consisted of 7 genera of epiphytic lichens, 26 species of bryophytes and 5 genera of fungi. Pituwala forest consisted of 5 genera of epiphytic lichens, 20 species of bryophytes, 4 species of fungi and 1 genus of ferns. Kottawa forest consisted of 8 genera of epiphytic lichens, 27 species of bryophytes and 5 species of fungi. The study of epiphytic cryptogamic diversity in lowland rainforests in Sri Lanka contributes significantly to our knowledge of the diversity of epiphytic cryptogams and their responses to environmental change. This knowledge is vital for the conservation and sustainable management of Southern lowland rainforests in Sri Lanka.

**Keywords:** Lichens, Bryophytes, Ferns, Fungi, Diversity, Sri Lanka

**Acknowledgement:** *Financial assistance from the National Research Council (NRC 22-101) is acknowledged.*

*Corresponding author: chalanidilrukshi59@gmail.com