

A PRELIMINARY TAXONOMIC SURVEY ON BRYOPHYTES

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Bryophytes were the first group of plants to successfully colonize terrestrial habitats. The three phyla of bryophytes; Marchantiophyta (liverworts), Bryophyta (mosses) and Anthocerotophyta (hornworts), form a non-monophyletic group. The Sri Lankan bryoflora is poorly researched, with a limited number of publications. Most explorations and collections of Sri Lankan bryophytes were done by foreign explorers and botanists. Therefore, most of these collections and documentations remain inaccessible to Sri Lankan scientists. Lack of a Bryophyte Flora is a major impediment to further research on this important group of plants within the country. The present taxonomic survey was carried out as an initiative study to explore and document the existing bryophyte flora of the country.

Specimens were collected, from selected localities in the Central Province of Sri Lanka including Peradeniya, Hanthana, Kadugannawa, Nuwara-Eliya, Hakgala, Dotalugala and Loolecondera. Both macroscopic and microscopic characters of the gametophyte and the sporophyte were observed and recorded for each specimen collected, using dissecting and compound light microscopes. Specimens were identified using taxonomic keys, taxonomic descriptions, illustrations and available literature.

The survey identified 95 bryophytes to their generic level with 30 liverworts, 63 mosses and 02 hornworts. Fifteen families were encountered under the Phylum Marchantiophyta (liverworts); Aytoniaceae (1 genus), Cyathodiaceae (1), Dumortieraceae (1), Exormothecaceae (1), Lunulariaceae (1), Marchantiaceae (1), Ricciaceae (1), Metzgeriaceae (1), Pallaviciniaceae (1), Frullaniaceae (1), Solenostomataceae (1), Lejeuneaceae (1), Plagiochilaceae (1), Pleuroziaceae (1) and Schistochilaceae (1). Nineteen moss families were identified under the Phylum Bryophyta: Bartramiaceae (1), Bruchiaceae (1), Bryaceae (4), Dicranaceae (1), Ditrichaceae (1), Fissidentaceae (1), Funariaceae (1), Hypnaceae (3), Leucobryaceae (2), Meteoriaceae (1), Myuriaceae (1), Neckeraceae (2), Orthotrichaceae (2), Plagiotheciaceae (1), Polytrichaceae (1), Pottiaceae (2), Pterobryaceae (1), Rhizogoniaceae (1), Sematophyllaceae (2) and Thuidiaceae (1). Phylum Anthocerotophyta included two families: Notothyladaceae (1) and Anthocerotaceae (1). Repeated field explorations and systematic studies need to be carried out to document the existing bryoflora of the country. Morphological identification of these minute plants is very difficult and requires proper identification keys and expertise knowledge. Bryophytes are highly sensitive to their microclimatic conditions. Therefore, correct identification and documentation of existing bryoflora is essential before implementing conservation measures.

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