

A preliminary taxonomic survey of leafy liverworts from some selected localities of Sri Lanka

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Bryophytes with a dominant haploid generation and a dependent sporophyte in their life cycle are the first group of plants that successfully colonized the terrestrial habitats. Bryophytes include three distinct groups based on the morphological heterogeneity of the gametophyte and these are currently included in three distinct phyla; Marchantiophyta (liverworts), Bryophyta (mosses) and Anthocerotophyta (hornworts). Sri Lankan leafy liverworts are very poorly researched with only a very few collections done by past foreign scientists. There are no proper taxonomic studies conducted on this group. Based on the most recent, revised checklist of Sri Lankan liverworts and hornworts, there are 25 families, 64 genera and 286 species of leafy liverworts. Therefore the objective of the present study was to carry out a preliminary taxonomic survey of the leafy liverworts present in Sri Lanka to initiate further taxonomic and systematic studies on this important plant group.

Fresh specimens of leafy liverworts were collected from some selected localities including Dothalugala, Loolcondera, Hakgala, Sinharaja Forest Reserve, Trincomalee, Anuradhapura, Dambulla, Kantale, and Hortain Plains. The collected specimens were thoroughly surveyed for their macro and micro morphological and anatomical characteristics. Using the available keys, monographs and other taxonomic literature, the collected specimens were identified to generic and/or to species level. Taxonomic descriptions, illustrations and taxonomic keys were prepared for all the species identified.

The present study identified a total of 14 families, 26 genera and 46 species of leafy liverworts with 3 new records in Sri Lanka; *Heteroscyphus planus* (Mitt.) Schiffn. (Lophocoleaceae), *Drepanolejeunea tricornua* Herzog. (Lejeuneaceae) and *Creatolejeunea cornuta* (Lindenb.) Steph. (Lejeuneaceae). Leafy liverworts are highly diverse in their leaf arrangement, leaf lobe and lobules, under-leaves and also by various anatomical characters. Majority of the leafy liverworts encountered during the present study were epiphyllous and epiphytic. Identification of the taxa of leafy liverworts and explorations of their habitat diversity will emphasize the importance of conservation of these plants. Further field explorations should be carried out throughout the country to collect samples of leafy liverworts for detailed morphological and molecular studies.

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