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# USE OF SPOROPHYTIC CHARACTERS IN THE IDENTIFICATION OF MOSSES (PHYLUM BRYOPHYTA)

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Phylum Bryophyta (Mosses) is the most specious group among bryophytes. According to most recent literature, 575 species of mosses have been recorded from Sri Lanka, and 11% of them are endemic. Mosses, like all other bryophytes, have a life cycle with a dominant, haploid gametophytic generation and a dependent diploid sporophytic generation. Identification of mosses is therefore a challenging task. Hence, the present study was carried out to investigate the use of sporophytic characters in the identification of mosses. Fresh samples of mosses along with sporophytes were collected into paper packets and annotated with collection details. Collected specimens were thoroughly surveyed for their morphological and anatomical characters using dissecting, light and compound microscopes. All the characteristic features of gametophyte and sporophyte were recorded for each specimen studied. Samples were identified up to the generic/species level using available taxonomic keys and monographs. Identified samples were authenticated using protologues. A total of 11 families, 23 genera and 54 species of mosses were identified during the study with two species recorded as new to Sri Lanka: *Tortella flavovirens* (Bruch) Broth and *Hyophila propagulifera* Broth. Unique characters for different taxonomic levels such as pomiform capsule for family bryaceae, nematodontous peristome for genus *Ceratodon*, and needle-like awn in operculum of *Fissidens ceylonensis* were identified. Taxonomic keys were prepared based on the selected unique sporophytic characters. With the two new records identified during this study, the number of recorded moss species of Sri Lanka increases from 575 to 577.

**Keywords:** Morphology, Mosses, Sporophytes, Taxonomy