

Discovery of Some Fissidens Species (Bryophyta, Fissidentaceae), New to Sri Lanka

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Abstract

Sri Lanka is rich with its Bryoflora (mosses, liverworts and hornworts) even it is a small island. There are 560 species of mosses in the country and Fissidentaceae is the richest monogeneric family among Sri Lankan moss flora, with 38 species of Fissidens. Fissidens is an acrocarpous moss with distichous, alternate and complanate leaves with costae (very rarely lack), size ranges from a few mm (minute bud like) to several cm (medium sized) and the presence of vaginant lamina is very characteristic to the family. Preliminary survey of mosses conducted in Hakgala Botanic Gardens, including the edge adjacent to Hakgala Strict Nature Reserve and Peradeniya Royal Botanic Gardens on August 08 and 10, 2012 respectively with special emphasis on the genus Fissidens. This study was done as a practical component of the National Workshop on Evolution, Biodiversity and Conservation of Sri Lankan Bryoflora organized and conducted by National Herbarium, Department of National Botanic Gardens, Sri Lanka (August 06-12, 2012). Random opportunistic sample collections were done, using a pair of forceps, into paper packets, after careful observations in the field using a set of hand lenses (x10, x15 & x20). Identification was done up to species level and further up to varietal level following some standard taxonomic keys and texts, using stereoscopic and light microscopes. Nine species of Fissidens were identified from the collections; Fissidens anomalus Mont., F. bryoides var. bryoides Hedw., Fissidens ceylonensis Dozy & Molk., Fissidens crenulatus Mitt., Fissidens crispulus Brid., Fissidens flaccidus Mitt., Fissidens gardneri Mitt., F. hyalinus and Fissidens taxifolius Hedw. (F. hyalinus is a species without costae). Four species out of nine have not previously been recorded from Sri Lanka, viz. F. bryoides var. bryoides, F. crenulatus F. hyalinus and F. taxifolius. Therefore, the discovery of these four new species of Fissidens is announced here for the first time, as new species for Sri Lanka. F. bryoides var. bryoides and F. hyalinus, Fissidens taxifolius recorded from Hakgala Botanic Gardens, and F. crenulatus from Peradeniya Royal Botanic Gardens. With addition of 4 new species, number Fissidens species rose to 42 and hence the number of Sri Lankan moss flora increased to 564 species. The necessity of careful systematic collections, proper identification and determination, reporting and taking suitable measures for in situ conservation of these tiny mosses is a timely requirement. Hence, further survey of Fissidens is being conducted at present.

Keywords: Sri Lanka, Bryoflora, Fissidentaceae, Fissidens