

Species diversity and habitats of pteridophyte flora at Hunnasgiriya in the Knuckles range

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Pteridophytes of the world comprise about 11,300 species belong to 58 families. They are important due to their contribution of biodiversity as rainforest understory species. About 360 Pteridophytes species have been recorded in Sri Lanka, although little information is available on this plant category. The Knuckles range has been identified as one of the biologically richest and hydrologically importance areas in the country. However, assessment of biological richness is almost based on higher plants and fauna in the Knuckles range. Among 35 peaks in the Knuckles range, Hunnasgiriya is one of the spectacular peaks, rises above 900 m. It is considered as an unique ecosystem in the Knuckles range. The present investigation was carried out to study species diversity and their ecological adaptation of Pteridophytes in Hunnasgiriya mountain to provide base line information on their diversity, taxonomy, endemism and preferable habitats. In preliminary field assessment, two major streams were selected as priority area for the Pteridophytes. While walking along two major streams, their feeding streams and streamside banks (from streamside bank to 100 m distance), almost all Pteridophytes species were identified at species level through observation morphologically and subsequently with the help of preserved specimens at the National Herbarium. At selected locations, different species were counted to identify their preferable habitats on the basis of number of individuals per unit area.

A total of 56 species of Pteridophytes belong to 35 genera and 19 families were recorded and identified from area studied. Out of 56 species recorded, 91% represented fern species whilst the rest (9%) was fern allies. Fourteen percent of Pteridophytes found in the study area is endemic to Sri Lanka. Two species, namely *Asplenium gardneri* (Aspleniaceae) and *Diplazium beddomei* (Woodsiaceae) have identified as rare species. Family Polypodiaceae was represented by the highest number of Pteridophyte species (12 species), whilst family Aspleniaceae included 5 species. Three broad habitats of Pteridophytes in Hunnasgiriya mountain were identified as terrestrial (55%), epiphytes (32%) and lithophytes (on moist rocks) (13%) on the basis of number of individuals in each habitat. Majority of epiphytic Pteridophytes were associated with *Eleocarpus* spp., *Semecarpus* spp. and *Calophyllum* spp. due to the presence of dense bryophytes on tree trunk and branches. A complete check list of Pteridophyte species and their herbarium sheets were prepared for further studies.