

Hanthana Mountain Range: A Sanctuary for Sri Lankan Lichens

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Lichens, a unique symbiosis of algae or cyanobacteria with multiple fungi, exhibit diverse forms, including crustose, fruticose, foliose, and intermediate squamulose forms. Sri Lanka, a renowned biodiversity hotspot, offers ideal habitats for lichen communities, particularly in the Hanthana Mountain Range. This protected area, located in the central highlands at an elevation ranging from 1000 to 1200 meters, boasts of unique climatic conditions conducive to lichen proliferation, such as a mean annual temperature of 23°C to 25°C and a mean annual rainfall of 2000 mm. In a comprehensive study, lichen samples were collected using random sampling methods, two meters off the trail, from 20 localities in the Hanthana Mountain Range during the rainy season. These samples were identified through standard morphological and chemical analysis techniques (K test and C test) and categorized into 12 genera belonging to 9 families. The results revealed a substantial diversity, with 42% of the samples being crustose, 36% foliose, and 22% fruticose lichens, highlighting the rich lichen diversity in the area. Diversity indices further underscored this richness, with the Shannon diversity index recorded at 1.92 for crustose lichens, 1.32 for foliose lichens, and 0.68 for fruticose lichens. One-way ANOVA revealed a significant *p*-value of 0.016, indicating notable diversity differences among the lichen forms. These findings affirm that the Hanthana Mountain Range provides an excellent habitat for lichen growth, fostering a remarkable diversity of these symbiotic organisms. This study underscores the ecological importance of the Hanthana Mountain Range and its role in supporting lichen biodiversity. The significant diversity and distribution of lichens in this area not only highlight the unique climatic and environmental conditions but also emphasize the conservation value of the Hanthana Mountain Range. As such, the area proves to be an excellent terrain for lichen research and conservation efforts, contributing to the broader understanding of lichen ecology and biodiversity in Sri Lanka.

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