
DIVERSITY AND DISTRIBUTION OF LICHENS OF AMBULUWAWA MOUNTAIN

A Gunasekara and SC Wijeratne

Department of Botany, University of Sri Jayewardenepura, Nugegoda

Ambuluwawa Mountain in Gampola District reaches to a height of 1065 meters and vegetation is mostly disturbed.

To study lichens three sites, each 100m² in area, at different elevations (high <990m), (mid 950-870m) and (low 700- 650m) were selected. Three trees *Alstonia macrophylla*, *Albizzia lebbek*, *Macaranga tomentosa* were selected to study corticolous lichens. *Alstonia macrophylla* was present in all sites while *Albizzia lebbek* was present in sites one and three. *Macaranga tomentosa* was present in site two only. Rocks were used for saxicolous species. Total percentage lichen cover and the total number of different lichens were recorded by placing 250cm² quadrat randomly on trunks of trees (six trees and four quadrat /tree and three rocks per site). Light intensity, bark pH of trees and relative humidity were measured in all sites.

In site one, *Parmotrema reticulatum* had the highest percentage cover (29.3%) while *Buellia* sp. 1 had the second highest coverage value (10.6%) on *A. macrophylla*. On rocks, *Diploschistes* sp. had the highest coverage value while *Aspicilia* sp. and *Toninia* sp. was recorded with fairly high coverage. On the trunks of *A. lebbek*, several species of *Usnea* were recorded in this site.

In site two, on *A. macrophylla*, *Pertusaria* sp. 1 was recorded with highest coverage (14.3%) while *Pyrenula* sp. and *Letrouitia* sp. 1 had coverage values of 11.46 and 6.67 respectively. On rocks a species of *Leotogium*, *Dirinaria aegialita* and *Pertusaria* species were recorded with higher coverage values. *Pertusaria* sp. was recorded from all three substrates in this site.

In site three, on *A. lebbek*, *Parmotrema reticulatum* gave the highest coverage value while *Drynaria aegilata* had the second higher value. *Heterodermia* sp.3 had the highest percentage cover on rocks.

Twenty-five different lichens were identified in site one while site two and three had lesser number of lichens. Total number of lichens on *A. lebbek* and *A. macrophylla* differ significantly at lower elevation but not in other two sites at higher elevation.

Statistical analyses of coverage values of lichens on different substrate within a site did not show a significant difference. Coverage values of lichens on same trees, among sites also did not show a significant difference except on *A. macrophylla*. Lichen coverage on rocks was not significantly different between sites one and three.

Light intensity and relative humidity may be having a greater influence on the distribution of lichens. Effect of bark pH on lichen coverage was difficult to interpret.

Forty-five lichens species, which belong to nine genera, were identified in this locality. Eight lichen species were found to be new records in Sri Lanka.

Presence of indicator species such as *Letrouitia*, *Diploschistes*, *Leptogium*, *Heterdermia* and *Pyrenula* with good coverage on Ambuluwawa Mountain indicates absence of air pollution in this area.