

PRELIMINARY SURVEY OF LICHEN FLORA OF THE HORTON PLAINS

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Lichens by definition are symbiotic organisms composed of a fungal partner, the mycobiont, and one or more photosynthetic partners, the photobiont that may be either a green alga or a cyanobacterium. Although lichens are a conspicuous component of many tropical environments, especially at high altitudes where they may festoon trees or cover rock surfaces growing together in characteristic and often striking communities, the taxonomy and description of these communities are little studied. In Sri Lanka, there is a paucity of knowledge of its lichen flora. In this study we have investigated the lichen flora of the Horton Plains National Park (HPNP). HPNP is a cloud forest in the central highland in Sri Lanka and is located between N 6° 47' – 6° 50' latitude and E 80° 46' – 80° 51' longitude. Altitude ranges from 2100 m to 2300 m above mean sea level. HPNP covers 3160 ha or 9% of the upper montane forest in the country.

Lichen flora found on bark of trees (dbh \geq 5 cm) up to 2 m from the ground level in five selected sites within the HPNP was studied. Microclimatic conditions like light intensity, relative humidity and bark pH of trees were also recorded. Light intensity was measured by a light meter (model SKP 200) and the relative humidity was measured by a relative humidity meter (Lufft Hygrometer) at the time of sampling. Bark samples were removed from each sampled tree at height above 2 m from the ground. The bark pH of all the sampled trees was measured in the laboratory using a flat-ended digital pH meter (Aqua version 1.0).

During the first collection, about 100 lichen specimens belonging to 27 genera and 18 families were identified based on the morphology, anatomy and the reproductive structures present on the thalli, using a stereo microscope and a light microscope. Of them 14 (51.8%) were crustose lichens, 11(40.7%) foliose and the rest were (3.7%) fruticose and leproid type. The most frequently encountered genus of lichens in the five study sites was *Heterodermia*. The presence of *Heterodermia* spp. and *Graphis* spp. in all the study sites and the absence of fruticose lichens such as *Usnea* sp. were significant. Amongst the total collection, blue green algae such as *Nostoc*, *Scytonema* and green algae such as *Trentepohlia* and *Trebouxia* were identified as photobionts.

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