

STUDIES ON SRI LANKAN LICHEN FLORA

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Lichens are the symbiotic phenotype of nutritionally specialized fungi that live as ecologically obligate biotrophs in symbiosis with algal and/or cyanobacterial photobionts. The fungal partner is dependent on nutrients from photosynthesis or nitrogen fixation of photobiont partner. The algal partner is never found in a sexual state. About 8% of terrestrial ecosystems are dominated by lichens in situations where vascular plants are at their physiological limits. Most lichens are crustose type, growing closely appressed to the substratum of rock, wood or occasionally soil. Some are less attached to the substratum and are referred to as foliose or fruticose. Foliose and fruticose lichens form only a minority of species, but they are the most abundant in vegetation. Over twenty seven species of algae have been found in lichens, the commonest being *Trebouxia*. The 14370 species of lichen-forming fungi constitute about 98% Ascomycotina and about one-fifth of all known fungi. Lichens are very slow-growing, most crustaceous species rarely grow more than a few millimetres a year. Foliose and fruticose lichens grow faster (about one centimetre a year).

Tropical lichens are one of the least studied Cryptogams. The taxonomy and chemistry of Sri Lankan lichen flora remain incompletely understood. Only about 550 lichen species are recorded from Sri Lanka, 37% and 31% of them were crustose and foliose type respectively. In 1996 we initiated a research program to explore the biologically active compounds of lichens of Sri Lanka. Forty six lichens were so far tested for insect larvicidal, antitermite and antifungal activity. The lack of trained lichenologists in Sri Lanka, has limited taxonomical work in the country. In order to overcome this problem and create interest among the local scientific community on lichen systematics, the first-ever national workshop on lichens was held at the University of Peradeniya this year. This led to the identification of 52 lichens to genera and 13 to species level and establishment of a lichen herbarium at the Royal Botanic Gardens, Peradeniya. This presentation outlines records available on Sri Lankan lichens and information on lichens collected from the Botanic Gardens at Peradeniya and Hakgala.