



Lichen mosaic on palm bark composed mainly of *Pyrenula* species, particularly *P. ochraceoflava* (orange).



Vertical banding of epiphytic lichens, mainly *Dirinaria* and *Pyxine* species, on palm bark.

The lichens of the Chagos

Although the surface terrain of the islands actually forming the Chagos Archipelago today is only a few thousand years old—too short a period to allow any endemic (native and restricted to a specific area) terrestrial species to evolve—their geographical setting makes them unique since they are some of the remotest of all tropical islands. The developing lichen flora is largely the product of natural forces: the ability of spores and vegetative propagules to be dispersed over very large distances by wind, water and birds, and accidentally by human beings, and to survive, germinate and acclimatize to their new and often hostile environment is one of the miracles of nature.

Although lichens growing directly on soil and rock, as well as on stone and cement construction materials, gravestones, iron rails, etc of past and present occupations, are rare, they colonize all available tree bark surfaces, particularly in the case of coconut palms where their colourful mosaics are displayed at their best, each lichen thallus generating a delicate and intimate geographic pattern with its neighbour. In habitats frequented by birds, this mosaic is often ill-defined due to the presence of other lichen species which are encouraged by the nutrient enrichment effect of the bird droppings liberally spattering tree trunks and branches.

In the wooded areas, mosses, liverworts and lichens clothe the bark of living trees; the nature of this epiphytic flora changes with age, and as the trunks die, different mosses and liverworts support the decomposition process undertaken mainly by fungi. Lichens are also to be found on the living leaves of some tree species; this is due to the long-lived evergreen nature of the leaves which allows the slow growing lichens to establish themselves.

Despite their young age, remoteness and small terrestrial surface area, the islands have a relatively high biodiversity in terms of their higher plant flora. However, although lower plants are abundant and play significant ecological roles, their diversity is low. To date, 68 species of mainly pantropical lichens have been identified. There are good correlations between lichen biodiversity and island size, and between the Chagos lichen flora and other Indian Ocean island floras. Work on the lichens of the Chagos Archipelago has established baseline data for future studies aimed at monitoring the biodiversity and stability of lichens, which are highly sensitive not only to local disturbance but also to far-ranging global impacts.

Seaward MRD (1999) Cryptogamic flora of the Chagos Archipelago. In: *Ecology of the Chagos Archipelago* (Sheppard CRC & Seaward MRD (eds): Westbury Publishing, for the Linnean Society of London, London.

Seaward MRD (2000) The lichen flora of the Chagos Archipelago, including a comparison with other island and coastal tropical floras. *Tropical Bryology* 18: 185-198.

The Chagos Conservation Trust is a charity (Registered in the UK No. 1031561) established in 1992 whose aims are to promote conservation, scientific and historical research and to advance education concerning the archipelago. The Trust is a non political association.

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