

Abstract

Host-parasite associations are born by cospeciations or by host switches. Feather lice have traditionally been used as model parasites for studying these events and underlying ecological factors. By now tens of analyses have addressed comparisons of host and parasite phylogenies to study cospeciations and host switches in lice, however, these analyses are strongly biased towards the temperate zone. Tropical environment could provide new insight into the origin of host-parasite interactions, because it is ecologically unique. This work aims to supplement the knowledge of host-parasite associations in lice using coevolution analyses of two feather lice genera and their passerine hosts in tropical rainforest in Cameroon. It shows that lice in the tropics cospeciate rarely. To assess whether host switches are non-random and occur preferentially between hosts with specific traits, this work also analyses relations between parasite genetic distances and hosts' trait similarities. No effect of host morphology and spatial distribution was found. However, genetic distances of the lice strongly correlate with genetic distances of their hosts.