Host associations and turnover of haemosporidian parasites in manakins (Aves: Pipridae)

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Summary

Parasites of the genera Plasmodium and Haemoproteus (Apicomplexa: Haemosporida) are a diverse group of pathogens that infect birds nearly worldwide. Despite their ubiquity, the ecological and evolutionary factors that shape the diversity and distribution of these protozoan parasites among avian communities and geographic regions are poorly understood. Based on a survey throughout the Neotropics of the haemosporidian parasites infecting manakins (Pipridae), a family of Passerine birds endemic to this region, we asked whether host relatedness, ecological similarity and geographic proximity structure parasite turnover between manakin species and local manakin assemblages. We used molecular methods to screen 1343 individuals of 30 manakin species for the presence of parasites. We found no significant correlations between manakin parasite lineage turnover and both manakin species turnover and geographic distance. Climate differences, species turnover in the larger bird community and parasite lineage turnover in non-manakin hosts did not correlate with manakin parasite lineage turnover. We also found no evidence that manakin parasite lineage turnover among host species correlates with range overlap and genetic divergence among hosts. Our analyses indicate that host switching (turnover among host species) and dispersal (turnover among locations) of haemosporidian parasites in manakins are not constrained at this scale.

Read the full article in Parasitology. [1]

[2]

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