



AMEND

CONTINUE

VI International conference on Malaria and other Blood Parasites of Wildlife, and III International Symposium of Wildlife Diseases Research Network

Submission ID

52

Title (required)

Diversity and host specificity of avian haemosporidians at the largest conservation reserve in the Atlantic Forest

Abstract (required)

Haemosporidian (*Plasmodium*, *Haemoproteus* and *Leucocytozoon*) are a highly diverse group of parasites with infections reported in birds worldwide and an important model system for the study of host-parasite interactions. Here we analyzed 576 blood samples from 91 species, among resident and migratory birds, in a remnant of the Atlantic Forest in the Serra do Mar (PESM Curucutu), collected from 2020 to 2022. We performed morphological and molecular analysis (PCR and sequencing of the *cytb* gene) as well as parasite lineage diversity and their relationship with host bird species. We found 59 positive samples for haemosporidian parasites (10.2%), from 19 avian species, distributed in 27 distinct lineages for the three genera of parasites (four new lineages of *Plasmodium* and one of *Haemoproteus*). *Plasmodium* represented 71% of the positives. *Elaenia albiceps* was the only bird species found to be PCR-positive for *Leucocytozoon*. Our morphological investigation revealed the presence of circulating gametocytes of *Plasmodium* and *Haemoproteus* with parasite lineages being found in both resident and migratory bird species, confirming that these parasites can be transmitted in the studied area. To demonstrate the patterns of interactions between bird species and parasite lineages found in PESM Curucutu, we generated an interaction matrix. *Turdus flavipes* was associated with six lineages of *Plasmodium* (mainly pDENPET03, pPADOM09, pTURALB01 and pTUMIG03). It is worth highlighting the high positivity found in *T. flavipes* (27.6%) including the presence of gametocytes and generalist lineages, which may be being spread by this bird species during their regional movements.

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Haematology

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