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INFECTIOUS AGENTS IN BIRDS, AND FOREST ALTERATION IN NORTHERN COSTA RICA

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INTRODUCTION

In Central America, forestry exploitation and agricultural expansion have raised concerns about biodiversity conservation, including bird diversity.

OBJECTIVE

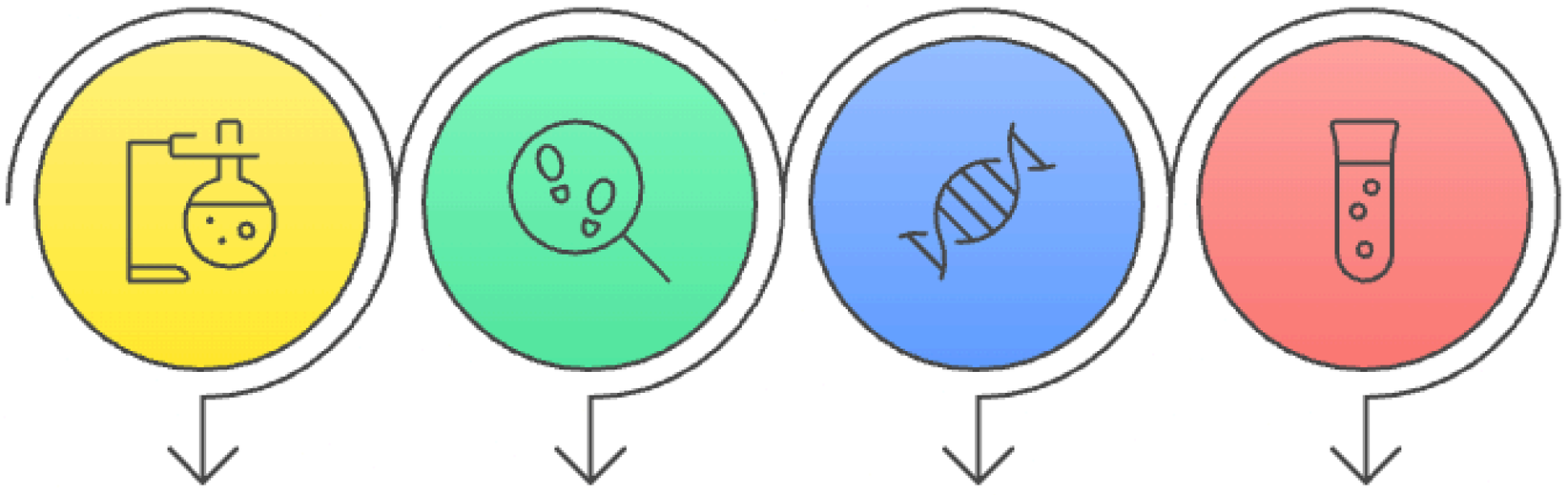
To assess host-parasite relationships and habitat influence in birds and their ticks across forest fragments with varying degrees of alteration.

METHODOLOGY

From 2008 to 2010, nine forest fragments were sampled in the Huetar Norte Conservation Area, Costa Rica. A total of 838 birds were captured. Biological samples and 555 ectoparasites from 407 birds were analyzed using flotation tecnique, microscopy, DNA/RNA extraction, and PCR techniques.

CATHARUS USTULATUS
Illustrative image, HarmonyonPlanetEarth, Wikimedia Commons

Sample analysis methods



RESULTS

The frequencies of endoparasites did not differ by level of forest alteration or agricultural use; only six *Amblyomma* spp. ticks were positive for *Rickettsia* spp. These were found in the non-harvested/low crop intensity, non-harvested/high crop intensity, and harvested/high crop intensity categories. No *Anaplasma* spp., *Borrelia* spp. or *Chlamydia psittaci* were found.

CONCLUSION

These sites were similar regarding bird health status and pathogens. These results seem to support the dilution effect proposed for habitat fragmentation and transmission of infectious agents.

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