

# ECTOPARASITE INFESTATION OF UNDERSTORY BIRDS IN THE RESERVA NACIONAL ALLPAHUAYO MISHANA

## -COMPARISONS IN BETWEEN FOREST TYPES-

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### Introduction

Western Amazonian lowland forests contain the richest bird communities in the world. Habitat heterogeneity is one of the factors affecting the assemblages of the bird communities and promoting the extraordinary biodiversity. Different forest types, such as floodplain forests, tierra firme, and white sand forests harbor different bird communities, that may experience different environmental conditions and selective pressures, that are affected by both biotic and abiotic factors. One of the biotic conditions to be examined is the presence of ectoparasites.

### Methods

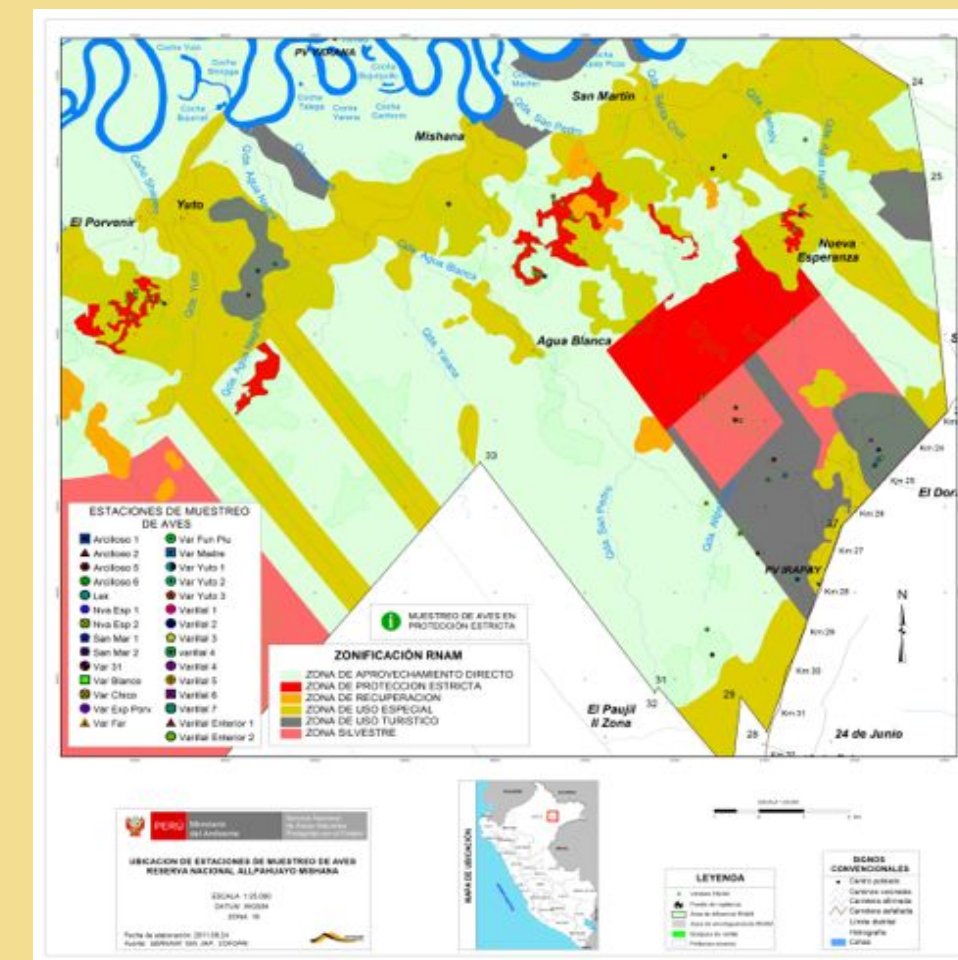
We compared data from mist-net samples collected in the Reserva Nacional Allpahuayo Mishana during fieldwork between 2009-2012.

- visual scanning for ectoparasites
- removal of ectoparasites with pyrethrum powder

We compared parasite prevalence in captured birds according to different habitat types and habitat use.

### Fieldsite:

- Reserva Nacional Allpahuayo Mishana (RNAM)
- Loreto, Peru



### Results

Chiggers (Trombiculidae), the juvenile form of a mite, were found on a large number of species and approximately close to 9 percent of individuals in both compared forest types.

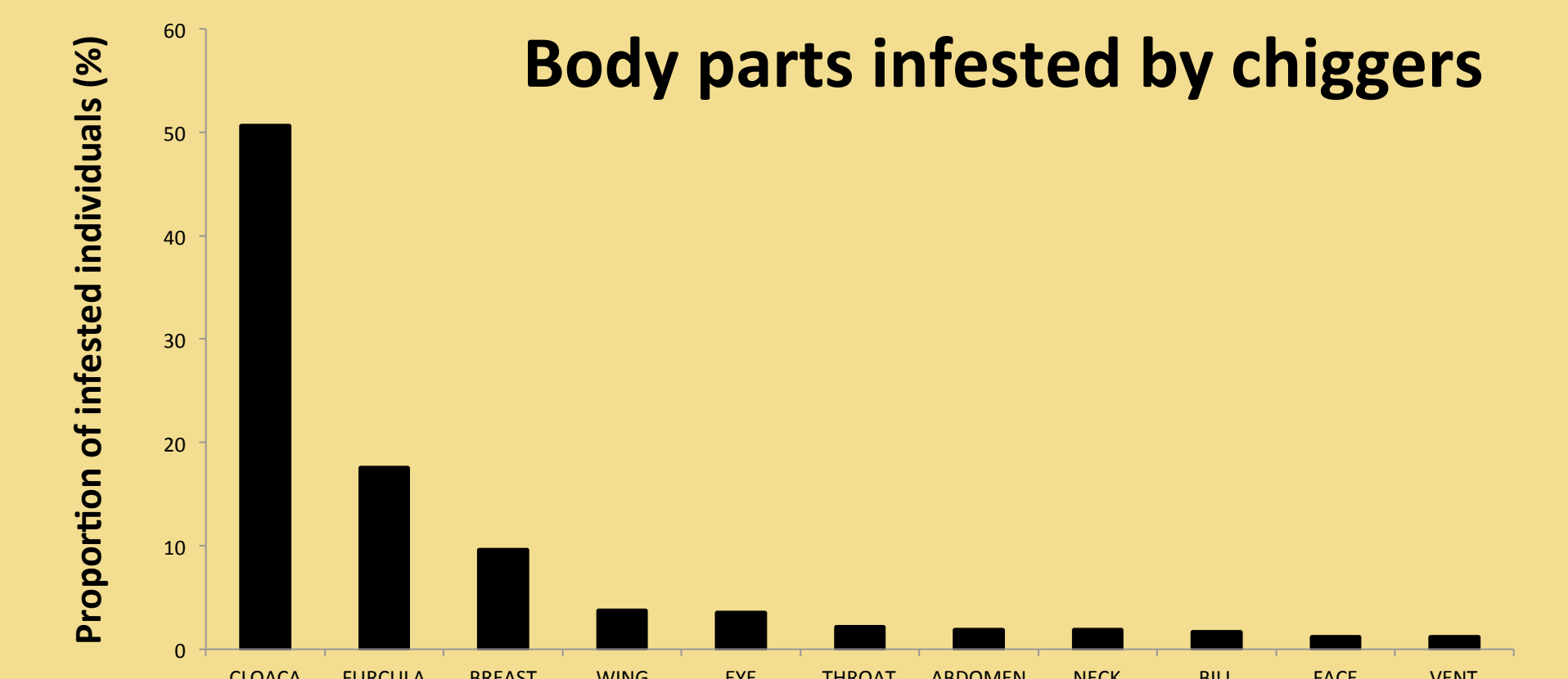
Chiggers are found throughout the world. They most commonly live in forests, grass, fields, and in moist areas around lakes or rivers, found on plants that are relatively close to the ground surface.

### Prevalence in different habitats:

Habitat	Captures	Individuals infected
Tierra firme	1214	107 (8.8%)
White sand forest	4931	465 (9%)

### Prevalence in different host families (N>50):

Family	CHIGGERS PRESENT	Individuals Captured	Prevalence (%)
FURNARIIDAE	8	269	2.97
TROCHILIDAE	12	349	3.44
BUCCONIDAE	4	79	5.06
TYRANNIDAE	24	462	5.19
PIPRIDAE	55	950	5.79
DENDROCOLAPTIDAE	171	1525	11.21
TITYRIDAE	8	66	12.12
THAMNOPHILIDAE	253	2059	12.29
TURDIDAE	20	100	20.00



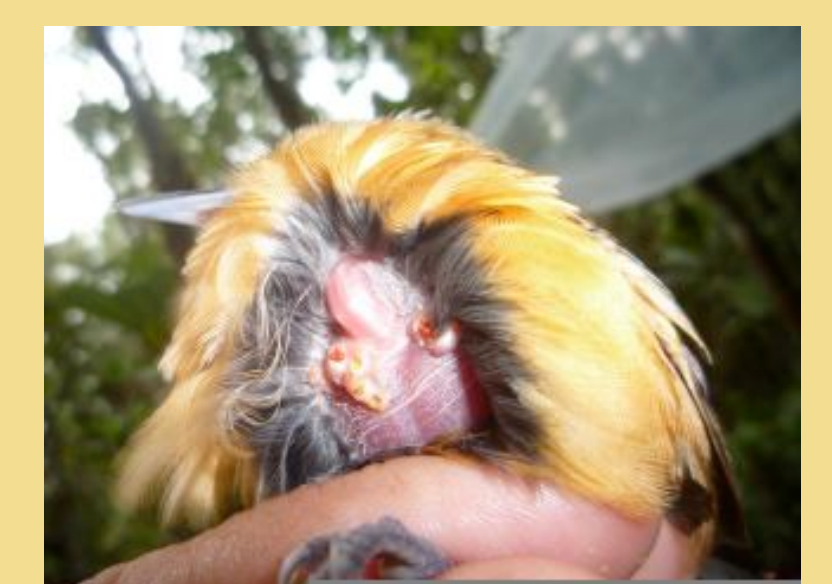
Chiggers in cloaca



Chiggers on breast



Chiggers in furcula



Welts on skin from chigger colonies

### Conclusions

Chiggers are present in understory birds approximately the same levels regarding habitat types. Thrushes and Antbirds seem to have the highest levels of infestation, birds who forage on or near the ground, mostly gleaning insects and fruits from low shrubbery.

However, with mist net samples, we are only sampling one forest stratum, which creates a possible bias in our samples.

Future directions: evaluate mechanisms that maintain these patterns.

### References

P. G. Koehler, F. M. Oi and A. Chaskopoulou. Chiggers. SP134: Pests in and around the Florida Home. Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date May 1991. Revised July 2011.