Biocomplexity of Introduced Avian Diseases: Pathogens Subproject

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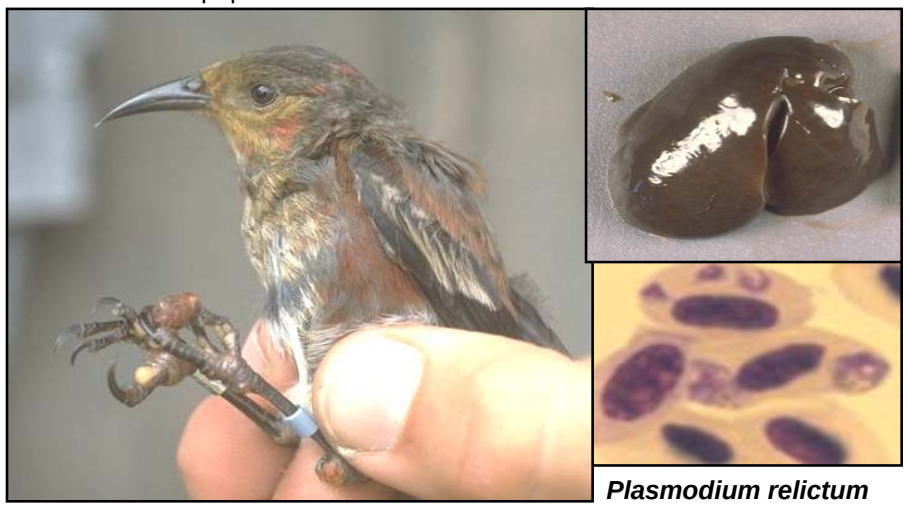
Apapane with Avian Pox

Malarial lesions on liver



Plasmodium relictum

Objectives:

- ☆ Determine whether low-elevation native species have evolved resistance to malaria
- ☆ Determine how pox and malaria interact during sequential infections
- ☆ Characterize genetic differences among pox isolates

Accomplishments:

- ☆ Low elevation Amakihi have lower morbidity and mortality from malaria
- ☆ Pox can increase the magnitude and impact of disease outbreaks by interacting with malaria
- ☆ At least 3 genetically distinct strains of pox virus are cycling in forest bird populations

Significance:

- ☆ Low-elevation native forests are important for speeding co-evolution of introduced pathogens and native birds
- ☆ Pox may play a significant role in epizootic disease outbreaks, particularly if genetic variants differ in virulence