History

• A research colony of wild finches was caught in July and treated for coccidia with sulfa drugs for two weeks.

• In mid-September, the birds were placed into flocks for an experiment, and a week later multiple birds began showing signs of swollen abdomens and ruffled feathers.

• The birds were given probiotics and vinegar water. In the previous year, these same researchers had issues with *Macrorhabdus ornithogaster*. 
Gross Description

• 4 birds sampled
• Birds exhibited atrophy of the pectoral muscles and thin body condition
• The dorsal aspects of the liver lobes were diffusely mottled tan to maroon
• Most tissues had no significant findings
Ancillary Tests

• Culture for chlamydophila: negative

• Acid fast stain for *Mycobacterium avium*: negative

• PCR for atoxoplasmosis: positive
Morphologic Diagnosis

• **Liver**: Lymphohistiocytic hepatitis, severe, chronic, with intrahistiocytic merozoites

• **Spleen**: Lymphohistiocytic splenitis, multifocal, moderate, chronic, with intrahistiocytic merozoites
Atoxoplasmosis

- *Atoxoplasma* spp are host specific apicomplexian parasites that infect passerine bird species
- Endemic in wild bird populations
- Major cause of mortality wild caught colonies of passeriform birds kept in zoos or research facilities
  - Attributed to stress from being in captivity and poor sanitation
Atoxoplasmosis

- Life cycle similar to *Isospora* spp, but unlike other coccidians, which reproduce exclusively in enterocytes, the sporozoites and merozoites of *Atoxoplasma* spp can infect mononuclear cells.
- Merozoites enter into circulation and spread to other organs, including the liver, spleen, and lung.

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References


QUESTIONS?