Conservation Challenges for Terrestrial Vertebrates (Birds) in Canada

Bridget Stutchbury

1 in 5 terrestrial vertebrates in Canada is nationally listed as a Species at Risk
This amounts to almost 150 species
Almost half of these species are birds
A third are reptiles or amphibians

We have about 40 amphibian and 50 reptile species in Canada
Sadly, 42% of all amphibians and 77% of all reptiles in Canada are Species at Risk
Most species are at the northern limit of their ranges in S. Canada

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15% of these are listed as Species at Risk
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Boreal Forest Birds

Olive-sided Flycatcher

-3.9%/year

Wintering in Tropics

Spring Migration

Fall Migration

Breeding

Causes of Bird Declines

- Most (80%) of our birds are migratory and face threats inside and outside of Canada

Songbirds Breed in Small Forest Patches

But Produce Few Offspring

Nesting Success is 50% Lower in Forest Fragments

Cats kill about 200-300 million birds per year in Canada

Volunteer cat wearing Kitty-cam

Victim: Eastern Phoebe
Threats to Canadian Wood Thrushes on the ‘wintering’ grounds

Stanley et al. (2014) Cons Biol

Migratory bottleneck in spring
Light Pollution (blue: fall route; red: spring route)

25 million songbirds are killed in Canada each year from Window-Collisions

Yellow Warbler, White-throated Sparrow, Ovenbirds, Gray-cheeked Thrush and Swainson's Thrush

Small Forest Patches are Important Stopover Sites on Migration

York University, Toronto

Threats: Canada’s Migratory Birds

- Habitat Loss & Fragmentation
- Invasive Species (cats)
- Pesticides & Contaminants?
- Climate Change?

Global Patterns of Bird Diversity

Pimm et al. (2014) Science

DNA Barcoding and Birds

- DNA barcoding can identify possible new bird species in poorly studied regions, and cryptic species that look similar
- DNA barcoding has also been used in ecological studies of bird diets and seed dispersal…. who pooped the seed?