



Songbird Monitoring at Isle Royale National Park

There are 130 songbird survey points distributed along eight trails on Isle Royale, and each one has been visited every June since 1996. Data from 1996–2013 were analyzed to identify population trends by species and among guilds (functional groups) organized by *migration strategy* (permanent resident, short-distance migrant, and long-distance/Neotropical migrant); *habitat preference* (grassland/open, wetland, successional/scrub, woodland, urban); *diet* (frugivore, granivore, insectivore, omnivore); and *forage substrate* (air, bark, ground, shrub/low canopy, high canopy).

Overall Trends—Species and Guilds

Data for 88 songbird species were analyzed to assess average proportional change per year. No conclusions could be made for 43 species, generally due to low abundance. **Seven species showed significant increasing** trends (Alder Flycatcher, Red-winged Blackbird, American Robin, Common Yellowthroat, Red-breasted Nuthatch, Swamp Sparrow, and Swainson's Thrush) and **five**

species declined significantly (American Crow, Common Raven, Chipping Sparrow, Cape May Warbler, and Evening Grosbeak).

Only the increasing trend of the **wetland guild** was significant, influenced by population increases among three of the five wetland species (Alder Flycatcher, Red-winged Blackbird, and Swamp Sparrow). Most other guild trends were similarly positive but not statistically significant.

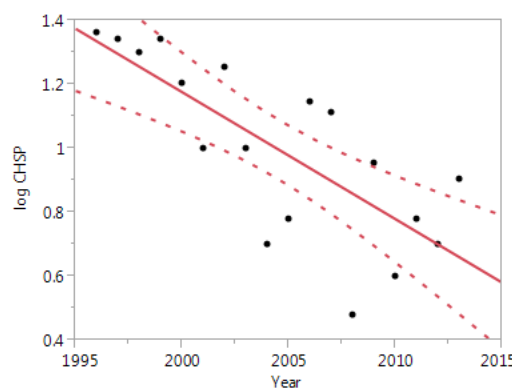
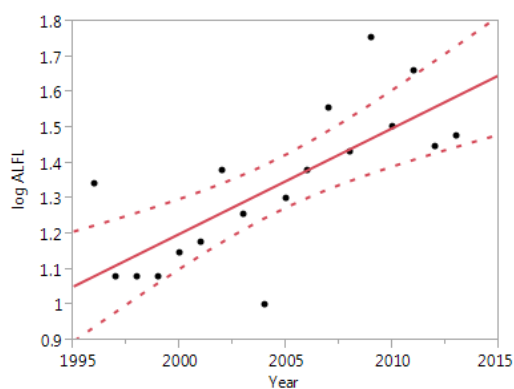
The Take-Away

Most strong or significant trends are in agreement with regional patterns, although Red-winged Blackbirds and Golden-crowned Kinglets are doing better on Isle Royale than in most other places in the western Great Lakes.

The Common Raven continues to be atypical when compared to regional trends. North American Breeding Bird Survey data show ravens increasing since 2003 by 4% per year in Michigan and 3.7% in Minnesota. Ravens are often dependent upon carrion, and wolf-killed moose are likely critical for their winter survival on the island. Yet, limited analyses by other researchers suggest that raven numbers have at best a weak correlation to either wolf numbers or wolf kill rates. Without a more in-depth study of ravens on Isle Royale, we cannot say for sure what might be causing the island population to decline in spite of noted increases everywhere else in the region.



The raven is a common resident of northern forests everywhere except on Isle Royale. Is their decline related to the decline of wolves? Photo by David Hofmann/Wikimedia Commons.



Isle Royale's Alder Flycatcher population (left) is growing at an average rate of 3% per year, but the Chipping Sparrow (right) is declining at a rate of 4% per year. These species abundance data are log-transformed, with linear trend line shown.