



Songbird Monitoring at Apostle Islands National Lakeshore

Park biologists began conducting songbird surveys in the Apostle Islands in 1990. Currently, 106 points are distributed on seven islands and part of the Mainland Trail. Data from 1995 through 2009 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 106 songbird species were analyzed to assess average proportional change per year. No conclusions could be made for 55 species, generally due to low abundance. **Seven species increased** significantly (Hermit Thrush, Blue Jay, Yellow-bellied Sapsucker, Northern Parula, Ovenbird, American Robin, and Chipping Sparrow) and **four**

species declined significantly (Tree Swallow, Common Grackle, Brown Creeper, and Yellow-bellied Flycatcher).

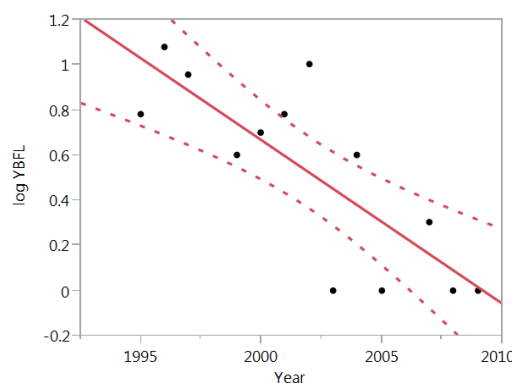
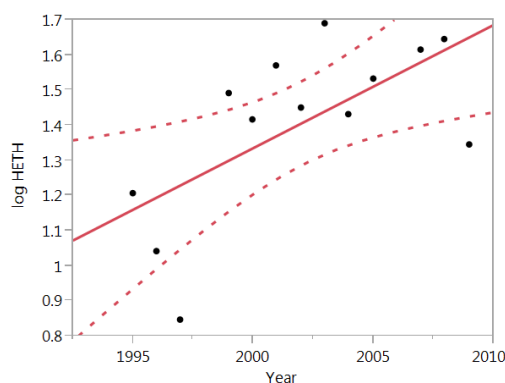
Trends among the guilds were mixed. The Tree Swallow had a strong influence on the **decline of both wetland species and aerial foragers**. Red-winged Blackbird, Common Grackle, and Yellow-bellied Flycatcher were also important driving forces. Generalists were on the rise, particularly those that do well in urban situations. Residents and bark foragers both increased, probably as a result of positive trends for nuthatches and woodpeckers. Ovenbirds (a forest-dwelling warbler species) were very common and had a significant positive trend, which strongly influenced all guilds it is in.

The Take-Away

Species population trends in the Apostle Islands reflect both state and continental trends. Just as the Yellow-bellied Flycatcher is showing the strongest decline at Apostles, it is also declining state-wide, while the Common Grackle is also exhibiting declines across North America. Conversely, a few of Wisconsin's listed "species of concern" (Swainson's Thrush, Cape May Warbler, Canada Warbler) are showing positive trends in the Apostles, which may be due to the park's protected habitats. However, a few other species of concern (Least Flycatcher, Black-throated Blue Warbler, Veery) are showing shallow declining trends, which may indicate that even protected areas cannot sustain source populations for some species that are broadly in decline.



The Hermit Thrush is not the most abundant bird in the Apostle Islands, but it is showing the strongest population increase (see graph below left). USFWS photo/Dave Menke.



With an average population growth of 4% per year, the Hermit Thrush (left) and Blue Jay are showing the strongest population increases in the Apostle Islands, while the Yellow-bellied Flycatcher (right; a species of special concern in Wisconsin) is the most troubled species, dropping at a rate of 7% per year. These species abundance data are log-transformed, with linear trend line shown.