



Breeding Bird Surveys

Importance

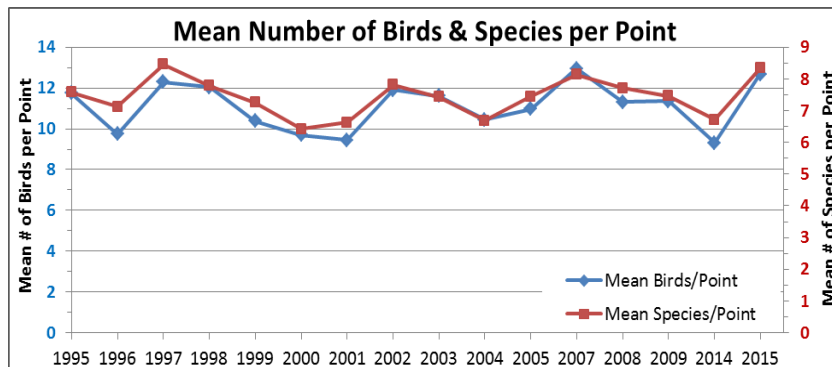
Apostle Islands National Lakeshore, with its maritime forests, wetlands and sandscapes, provides important habitat for many species of birds including those moving through during migration and those choosing to stay and nest.

Breeding Bird Surveys have been completed annually in Apostle Islands National Lakeshore most years since 1990. These surveys are done in early summer with objectives of monitoring long term trends of breeding bird populations, identifying important habitats and determining the regional role of the lakeshore. The surveys are conducted on the mainland unit and seven islands: Devil's, Long, Oak, Outer, Raspberry, Sand and Stockton Islands.

In 2014, the Breeding Bird Survey was updated to increase focus on wetland habitats. Wetlands are very productive ecosystems which provide good habitat for birds. Wetlands are also highly sensitive ecosystems threatened by climate change. An increased focus on wetland habitats will help determine how birds use the wetlands and any impacts of climate change on the wetlands and bird species.



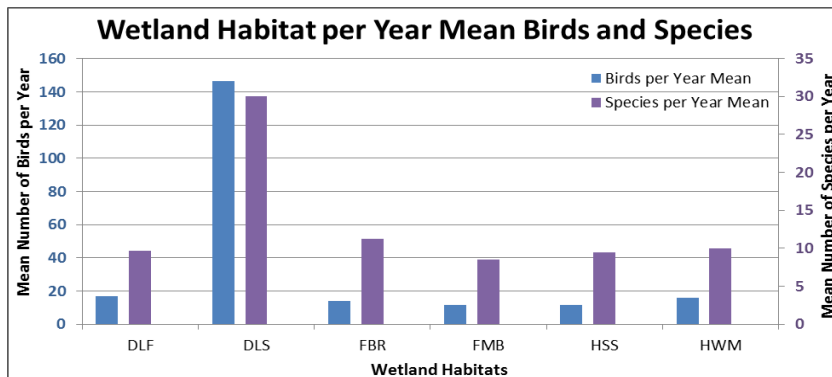
Northern Flicker, Bear Island



Data and Trends

Long term Breeding Birds Survey data is from surveys conducted since 1995. Between 1995-2009 106 points were surveyed; since a route update in 2014 76 were surveyed. A 10 minute count survey was done at each point.

- **Total Birds:** A mean of 1,121 birds/year and 11 birds/point. Birds per point mean has been increasing slightly over time.
- **Total Species:** 135 different species observed since 1995, with a mean of 72 species/year and 7 species/point. Total species/year has been decreasing slightly over time. Most abundant species are Ovenbird, Red-eyed Vireo, Black-throated Green Warbler, Nashville Warbler and American Redstart.
- **Wetland Habitats:** mean of 198 birds/year for 2014-15 and 16 birds/point for all years. Species abundance: a mean of 38 species/year for 2014-15 and 10 species/point for all years. Both birds and species per point means are above the total per point means for all habitats.
- **Most abundant guilds:** Nesting: Ground nesters, closely followed by Shrub/Sub-canopy and Canopy. Migration: Long Distance. Vegetation Preference: Deciduous Forest.



Management Implications

Understanding which bird species are using the park and how this changes over time provides important information regarding their success and serves as an index of ecosystem health. Birds are already impacted by climate change evidenced by earlier migration, altered geographic distribution, and mismatched timing between migration and the spring season as well as reproduction and peak food availability. Recent research shows that even common species play a role in ecosystem function and their decline could disrupt these services, which is especially important to understand in light of climate change.



Ovenbird