



Songbird Monitoring at Sleeping Bear Dunes

Can you imagine the forests, lakeshores, and old fields at Sleeping Bear Dunes without any bird song? Birds are an important and very visible group of wildlife in the park, so biologists and volunteers began conducting songbird surveys in 2004. There are 41 survey points distributed around the park, and each is visited during the month of June to count and document what birds are singing (which is how birds defend a nesting territory).

Data for 91 songbird species 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

Five species showed significantly increasing trends (Veery, Eastern Meadowlark, Wood Thrush, American Robin, and Red-eyed Vireo).

No species showed significant declines, and no conclusions could be made for 30 other species, generally due to low abundance. Except for long-distance migrants, all guild trends were increasing, but no trends were statistically significant.

The Take-Away

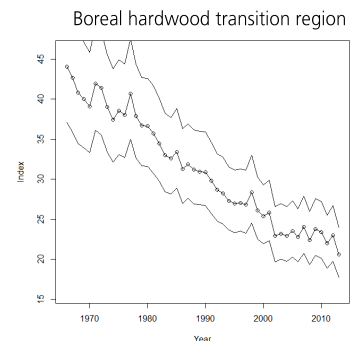
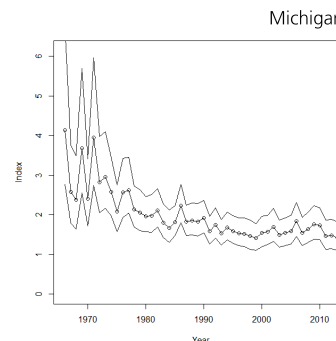
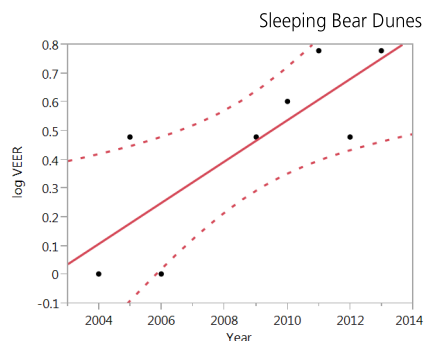
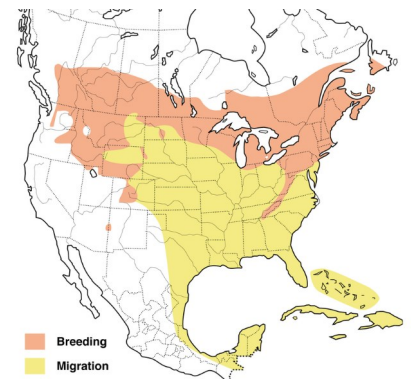
Like they are at Sleeping Bear Dunes, the American Robin and Red-eyed Vireo populations are showing increasing trends region-wide, but the same is not true for the other three species. Despite increasing trends at Sleeping Bear Dunes, populations of the Veery, Eastern Meadowlark, and Wood Thrush are all declining across the region. Could the discrepancies between park and region reflect the benefit of protected park habitats?

Research has shown that fragmentation and loss of second-growth and woodland breeding habitat threatens Veery, especially in southern Michigan. That would account for the bird's state-wide decline, but abundance in the park. However, the Veery prefers habitats with a dense understory, and there is speculation that increased browsing of understory plants by white-tailed deer is creating problems for the Veery population. That is a problem that a park boundary cannot stop.



The Veery is one of three species whose population is increasing at Sleeping Bear Dunes, but is exhibiting steep declines across the state and region. Photo from Wikimedia Commons.

Range map for the Veery, with both breeding and migratory/wintering locations shown. Map from the Birds of North America Online: <https://birdsna.org/Species-Account/bna/species/veery>



Despite increasing at a rate of 7% per year at Sleeping Bear Dunes between 2004 and 2014, the Veery has declined at a rate of 1.17% per year across the boreal-hardwood transition ecoregion and 0.96% per year in Michigan during the same period. Species abundance data for Sleeping Bear Dunes data are log-transformed, with linear trend line shown. Michigan and ecoregion data from the North American Breeding Bird Survey, www.mbr-pwrc.usgs.gov/bbs/spec13.html.