



Songbirds of Minong

It's a perfect summer morning on the island—a sunrise over Lake Superior, a cool breeze to keep the mosquitoes at bay, and a symphony of birdsong. Life is grand.

The National Park Service has monitored songbird populations on Isle Royale since 1994. The variety of habitats found in the islands provide nesting areas for **89 species of songbirds**. Surveys are conducted in June during the first four hours of daylight. Observers spend five minutes at each of 130 survey points distributed along eight park trails including Passage Island.

2014–2018

A recent analysis of data collected from 2014 through 2018 found four species with the densest populations on the island were heard or seen most often during surveys: Nashville Warbler, White-throated Sparrow, Winter Wren, and Ovenbird. However, among those four species, all but the White-throated Sparrow showed declining trends over the five-year period. The Nashville Warbler showed the greatest decline at 6 birds/mi²/year, but this was not statistically significant. The only statistically significant trend was that of Yellow-bellied Flycatcher, declining at a rate of almost 3 birds/mi²/year.



Among the four most common species at Isle Royale (left to right: Nashville Warbler, White-throated Sparrow, Winter Wren, and Ovenbird), all but the White-throated Sparrow are declining in abundance.

PHOTOS: W.H. MAJORS/WIKIMEDIA COMMONS, NPS PHOTO, NPS/W. GREENE-FRIENDS OF ACADIA, USFWS/S.MASLOWSKI.

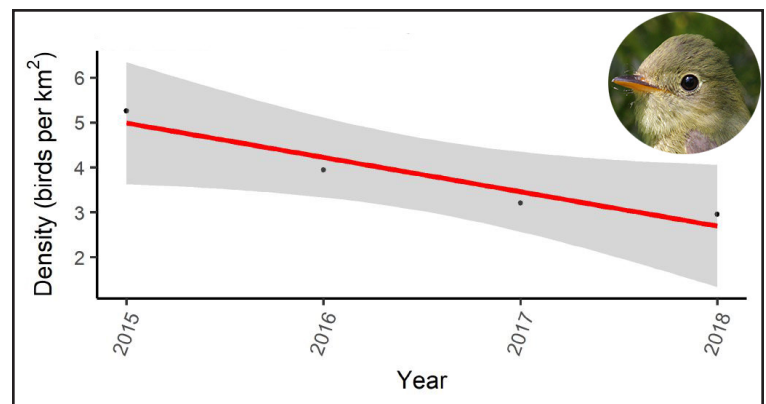
A **guild** is a group of species that share a common trait such as habitat type, nest location, or food source.

Increasing densities of three guilds were not statistically significant, but four guilds showed significant declining



Listening for birds along the trail between Lake Richie and the Greenstone Ridge. NPS PHOTO

trends: insectivores such as warblers and flycatchers (–2 birds/mi²/year), shrub/low canopy foragers such as the thrushes (–3 birds/mi²/year), successional/scrub species such as the flicker and chickadee (–5 birds/mi²/year), and woodland species, which is most of Isle Royale's birds (–2 birds/mi²/year).



The Yellow-bellied Flycatcher, a ground-nesting bird found in boreal forests and bogs, is the only species declining at a statistically significant rate.

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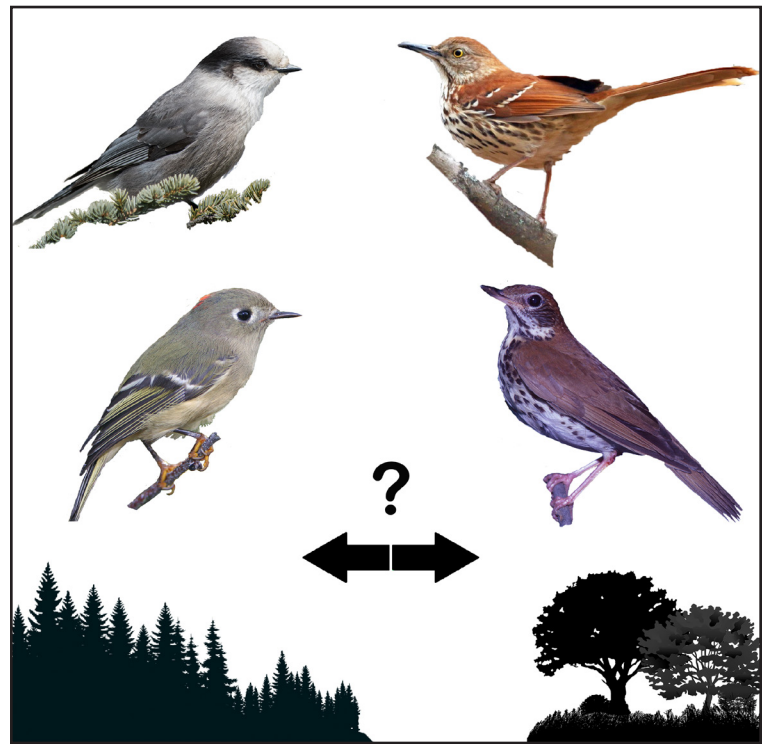
What Will the Future Sound Like?

One study comparing bird population changes under two different climate scenarios predicted high turnover of species populations on Isle Royale by mid-century (2041–2070) if the nation continues on its current path of rising emissions¹. They offer no predictions on the future of the island's four most common species or even the Yellow-bellied Flycatcher, but

some current summer residents are expected to fare worse under future climate conditions, including the American Robin, Least Flycatcher, Mourning Warbler, and Swamp Sparrow. The Gray Jay, an iconic boreal species, is predicted to disappear from Isle Royale in the summer, while species like the Wood Thrush and the Brown Thrasher may begin to colonize the island.

It's important to note that a changing climate is only one part of these possible changes. The habitat these birds depend on will have to shift as well. The Wood Thrush prefers a different kind of forest to the Swainson's and Hermit Thrushes we find on the island now. And the Brown Thrasher prefers a drier, shrubbier landscape than is currently found on the island.

Change is certainly coming, but how much change remains to be seen. Birds will continue to fill the morning with song, but some of the performers may be new.



What does the future hold? Changing climate means a changing forest and a different community of birds. Warmer temperatures will force northern species (*left*) such as Gray Jays and Ruby-crowned Kinglets to follow the boreal forest up into Canada, while species common to woodlands and savannas (*right*) such as Brown Thrashers and Wood Thrushes may expand to the island.

PHOTOS: NPS/R. HANNAWACKER, NPS/K. MILLER, N. DUBROW/MACAULAY LIBRARY-CLO/NPS COLLECTION, USFWS/S. MASLOWSKI.

¹ Wu, J.X., et al. 2018. Projected avifaunal responses to climate change across the U.S. National Park System. *PLoS ONE* 13(3): e0190557.

For more information on songbird monitoring, find this report and others on the Great Lakes Network website, www.nps.gov/im/glkn/landbirds.htm.

Roberts, S.G., Z.S. Ladin, E.L. Tymkiw, W.G. Shriver, and T. Gostomski. 2021. Songbird monitoring in the Great Lakes Network parks: 2014–2018. Natural Resource Report NPS/GLKN/NRR—2021/2217. National Park Service, Fort Collins, Colorado. <https://doi.org/10.36967/nrr-2283974>.