



Monitoring a Singing Wilderness at Voyageurs

In *The Singing Wilderness*, author Sigurd Olson writes about loon song and the “high calling of birds” during migration.

“I have discovered that I am not alone in my listening; that almost everyone is listening for something, that the search for places where the singing may be heard goes on everywhere.”

It’s true, and the things we listen for are intangible and as real as the birds who fill the days with song. It is those birds that we listen for each June as we conduct annual songbird surveys at 60 different points across the park.

The National Park Service has monitored songbird populations at Voyageurs since 1995. **More than 100 species of songbirds have been documented here**, many of them, such as the Canada Jay and the White-throated Sparrow, representative of the conifer forests that extend from here to the Arctic. We recently analyzed the data collected during surveys from 2014 through 2018 to see how songbird populations are doing.

2014–2018

An average of 55 species heard at the survey points each year (range =51 to 59). *The six most commonly heard species* were Nashville Warbler, Ovenbird, Red-eyed Vireo, Red-breasted Nuthatch, White-throated Sparrow, and Blue Jay. Those same six species also had the highest population densities, each with >79 birds per square mile (mi²). The only statistically significant population trend was the Black-and-white Warbler, which declined at a rate of 3 birds/mi²/year over the five-year period.

What Will the Future Sound Like?

One study comparing bird population changes under two different climate scenarios predicted high turnover of species populations at Voyageurs by mid-century (2041–2070) if the nation continues on its current path of rising emissions¹. The Red-breasted



Biologist Atlee Hargis conducts a songbird survey while protected against mosquitos. NPS PHOTO/E. BURKE



The most commonly heard species during bird surveys in 2014 through 2018 were (left to right, top) Nashville Warbler, Ovenbird, Red-eyed Vireo, (bottom) Red-breasted Nuthatch, White-throated Sparrow, and Blue Jay. NPS and U.S. Fish and Wildlife Service photos except Nashville Warbler © William H. Majoros/Wikimedia Commons.

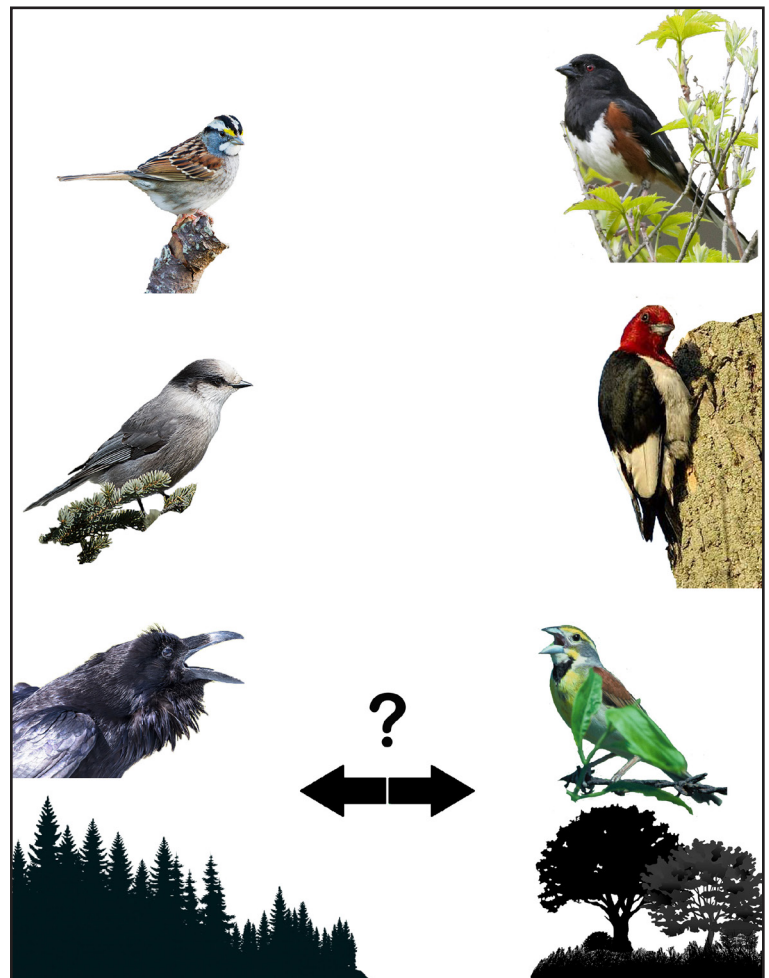
Nuthatch and the White-throated Sparrow, two of the most common species in the park today, are predicted to be extirpated from the park by mid-century, with the nuthatch maybe only appearing during the winter months. *Extirpation* is not extinction, but it does mean a bird species will no longer be found in a place where it has traditionally been. It will have to move elsewhere

to find the proper climate or habitat for nesting and raising young.

Meanwhile, the populations of birds more commonly found in open country and residential areas such as the Blue Jay, American Goldfinch, Baltimore Oriole, and Common Grackle are predicted to improve under either extreme climate scenario, while others like Brown-headed Cowbird, Dickcissel, Eastern Bluebird, and Eastern Meadowlark are predicted to move into or become more common in the area.

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

Birds will continue to fill the morning with song, but some of the future performers may be new.



What does the future hold? Changing climate means a changing forest and a different community of birds. Northern species (*left*) such as the White-throated Sparrow, Gray Jay, and Common Raven will shift north, following the boreal forest up into Canada, while species common to woodlands and savannas (*right*) such as the Eastern Towhee, Red-headed Woodpecker, and Dickcissel may become more common around Voyageurs.

NPS PHOTOS EXCEPT EASTERN TOWHEE (NCTC/B. THOMPSON) AND DICKCISSEL (USFWS/S. MASLOWSKI).

For More Information, find the full report along with 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>.