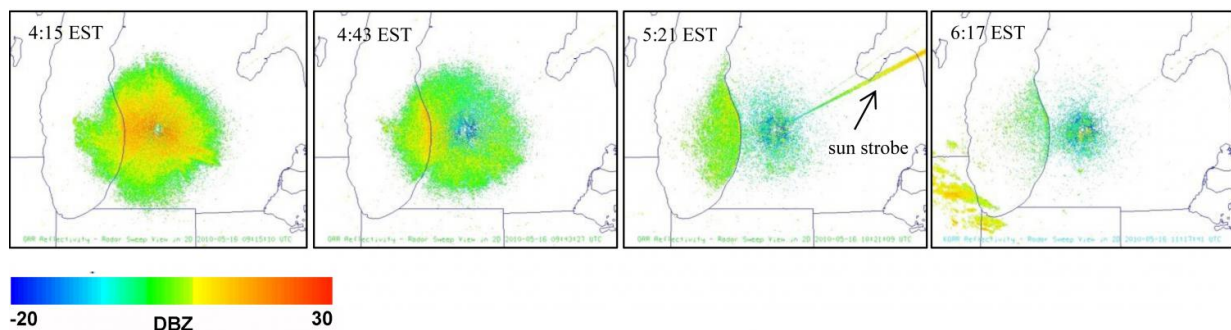


Migrating birds pile up along Great Lakes' shores

December 7 2016



A series of radar images was taken around sunrise show changes in migrating birds' activity. Credit: K. Archibald, with data from NOAA

Birds prefer to migrate at night—so much so that if day breaks while they're over water, they'll turn back toward the nearest shore rather than pressing on. That's the key finding of a new study in *The Auk: Ornithological Advances*, which used weather radar to examine the behavior of birds crossing the Great Lakes.

Kevin Archibald and Jeff Buler of the University of Delaware and their colleagues turned the U.S.'s powerful network of weather surveillance radar stations on [birds](#) heading north across the Great Lakes during their spring migration. As dawn approaches, their data show, birds caught over water increase their elevation and often turn back. This leads to a pileup of birds in near-shore stopover habitat—the density of birds

taking off from the southern shores of the Great Lakes on subsequent spring evenings was 48% higher than on the northern shores.

Birds presumably increase their altitude at dawn to try to see how much farther they have to go; if they decide it's too far, they go back to try again the next night, leading to higher concentrations of migrants on near shores. When birds are migrating south in the fall, these pile-ups would happen on the north side of the lakes rather than the south. "Our study justifies the high value of shoreline habitats for conservation of migratory bird populations in the Great Lakes region," says Buler. "It also emphasizes that the extent of stopover use in shoreline habitats is context-dependent. We hope professionals charged with managing stopover habitats recognize that shoreline areas can receive high migrant use by virtue of the proximity to a lake and how many migrants are aloft at dawn from day to day, rather than [just] by the presence of abundant food sources in these habitats."

The data used in the study came from radar stations in Cleveland, Ohio; Grand Rapids, Michigan; and Green Bay, Wisconsin, collected in spring 2010-2013. Cleveland was the only station that did not observe birds increasing their elevation at dawn, possibly because Lake Erie is narrow enough for them to see across without an increase in altitude.

"Nearshore areas of the Great Lakes are important to migrating landbirds. Archibald, Buler, and their colleagues further investigate this distributional pattern by analyzing the interaction between spring migratory flight behavior and the migrant exodus at nearshore stopover sites using NEXRAD radar," according to The Nature Conservancy's Dave Ewert. "Their research supports earlier work that migrants concentrate near Great Lakes shorelines, but with new perspectives."

More information: "Migrating birds reorient toward land at dawn over the Great Lakes, USA" December 7, 2016,

[americanornithologypubs.org/doi ... 10.1642/AUK-16-123.1](https://americanornithologypubs.org/doi/10.1642/AUK-16-123.1)

Provided by The Auk

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