

# The perilous migratory journey of the eastern whip-poor-will

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Whip-poor-wills are not often seen, but their chant-like calls are easy to recognize in eastern forests. Credit: Ian Souza-Cole

Using GPS tags attached to the birds, researchers discovered some surprising facts about the long migrations that eastern whip-poor-wills make from their Midwest breeding grounds to where they winter in Mexico and Central America.

The results showed that [birds](#) from across the Midwest all traveled a similar migratory path and moved at nearly the same time in the fall, concentrating the [population](#) in a small area of parts of Oklahoma, Arkansas and east Texas on a single day in early October.

That highlights a critical danger to the whip-poor-will population, which has already declined by nearly 70% in recent decades, said Christopher Tonra, co-author of the study and associate professor of avian wildlife ecology at The Ohio State University.

"About half of the entire population of whip-poor-wills breed in the Midwest, and our findings indicate their migration south is very synchronized," he said.

"That suggests we have to protect the forested habitat in that small area of Oklahoma, Arkansas and east Texas, which is a vital migratory stopover. And we must find ways to protect the birds as they all move through the highly urbanized areas of east Texas," he said.

The study, led by Aaron Skinner, a graduate student at Ohio State, was published recently in the journal *Diversity and Distributions*.

Whip-poor-wills are cryptic, seldom-seen nocturnal birds named after the sound of the calls that they make, often for hours at a time, during summer nights in the forests where they breed (Listen to the whip-poor-will call [here](#).) Due mostly to this call, whip-poor-wills are a common cultural reference in country songs, poems, stories and legends.

"I associate whip-poor-wills with camping in eastern forests and hearing them call through the night," Tonra said.

"The idea of them disappearing is very alarming, and we're trying to learn more about what may be causing their decline."

The researchers captured and tagged whip-poor-wills in five breeding areas across four midwestern states: Wisconsin, Illinois, Missouri and Ohio.

The birds were fitted with archival GPS tags, which meant that the researchers had to recapture them the following year to collect the GPS data. (Most whip-poor-wills return to the same breeding site year after year.)

The researchers got usable data from 52 of the 115 birds they tagged in the summers of 2017 and 2019. The study focuses on fall migration because complete data on all 52 birds was only available for the journey south.

Findings showed that, unlike some other species of birds, breeding populations of whip-poor-wills from across the Midwest all share a similar migratory path and travel at about the same time, Tonra said.

The path is so similar that on one date in early October in one year of the study, all the GPS-tagged birds were within about 300 miles of each other in Arkansas, Oklahoma and Texas.

"These birds started their journey in four different states, from northern Wisconsin to southern Ohio," Tonra said.



Whip-poor-will in hand. Credit: Jay Wright

"To have them all end up so near each other on the same day of migration is remarkable."

One reason that their paths were so similar is that whip-poor-wills,

unlike other species of birds, avoided flying over the Gulf of Mexico to reach Mexico and Central America, the study found. As a result, the birds were concentrated in a small area of Arkansas, Oklahoma and Texas as they made their way around the Gulf.

This finding shows the importance of forest management efforts in that area of those states, Tonra said.

Another issue is that the migratory path takes many whip-poor-wills through four major urban areas in Texas: Dallas, Austin, San Antonio and Houston.

Like many bird species, whip-poor-wills migrate at night and can be disoriented by the bright lights of cities, Tonra said. They often are attracted to the light and end up dying in building collisions.

"Studies show that whip-poor-wills are at particularly high risk for high-rise building collisions and so that could be a significant source of mortality for them, especially in early October," Tonra said.

Some cities in the United States have instituted "lights out" programs during migration to protect birds that are passing through, he said. Such programs could be particularly helpful in Texas.

The findings showed that nearly all the birds from the Midwest breeding sites wintered in the same general area in southern Mexico and Guatemala.

In contrast, some species of birds that breed in different areas of the United States and Canada also winter in different areas in Mexico, and Central and South America, Tonra said.

These findings have implications for possible causes of the rapid

population decline of the species.

Tonra noted that while the overall population of whip-poor-wills is in decline, populations in some breeding areas in the United States are relatively stable, while other populations have disappeared or are in decline.

This fact, coupled with the finding that nearly all the birds wintered in the same area, suggest that whip-poor-wills may face their greatest challenges here in their U.S. breeding grounds, Tonra said.

"If the wintering grounds were the major problem, we should see similar population declines in all their different breeding areas, which is not what is happening," he said.

One issue may be the decline in insect populations on some of their breeding grounds. Whip-poor-wills are insectivores, eating mostly moths on the wing.

Tonra said the researchers are planning a project to trap moths on current breeding grounds, as well as in areas where whip-poor-wills have disappeared, to see if declines in moth populations may have played a role.

**More information:** Aaron A. Skinner et al, High spatiotemporal overlap in the non-breeding season despite geographically dispersed breeding locations in the eastern whip-poor-will ( *Antrostomus vociferus* ), *Diversity and Distributions* (2022). [DOI: 10.1111/ddi.13477](https://doi.org/10.1111/ddi.13477)

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