

Reducing climate change seen as key to saving this Michigan marsh bird

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They can soar gracefully with a long wingspan made for great distances. But when black terns are on the hunt for food, their movement is frenetic as they swoop and turn with great agility.

The way they fly, dive and eat has earned them the moniker — bestowed by sailors — "swallows of the sea."

Black terns, a marsh-breeding, migratory bird most have never seen or heard of, have been on a steep decline for more than half a century. Their numbers have declined an estimated 98% in Michigan since 1966, wildlife experts said, resulting in the state's black terns accounting for only 1.4% of the nationwide population.

Black Terns migrate to and breed in the Wigwam Bay State Wildlife Area in Standish. The other area where they nest in Michigan is St. Clair Flats State Wildlife Area in Clay Township.



But the marsh birds, which congregate near freshwater and breed between May and August, could have a chance to rebound if Michigan's carbon footprint is reduced, according to environmentalists. Michigan Gov. Gretchen Whitmer is seeking to do so with a climate plan that is set to be officially released later this month on Earth Day.

It is a bird among many other species that have been losing numbers that is worth saving, experts said. In Michigan, black terns are listed as a "species of concern."

Climate change has already impacted lake levels, habitat conditions and caused more wicked storms that could endanger black terns, experts said.

"When it comes to climate change, we've seen that they are very sensitive to fluctuating water levels as well as storm events caused by climate change," said Erin Rowan, a senior conservation associate with the Audubon Great Lakes, a conservation organization that seeks to protect birds in the lakes. "The birds we have left, it's extremely important for us to do what we can to try to conserve them and stabilize the population."

Sea birds like black terns are sensitive to changes in water conditions, including how much water is in a wetland, said Don Lyons, director of conservation science at Seabird Institute for National Audubon Society. And climate change is among those factors, he said.

"These wetlands are favored by them for nesting because it gives them opportunities to avoid predators," Lyons said. "It's hard for things like raccoons or mink to get to them. That's why they use wetlands."

The terns are a cross in size between a robin and a crow, usually nine to 14 inches long with a wingspan between 22 and 25 inches — wide for a bird that size. They weigh 40 to 50 grams — or less than a pound.

Black terns will be making their way north in the coming weeks from their winter habitat off the coasts of Mexico and South and Central America. When in Michigan, the black terns nest in the St. Clair Flats State Wildlife Area in Clay Township and Wigwam Bay State Wildlife Area in Standish.

The terns ideally like to build nests in bulrush and cattail that can float in the marsh vegetation. But those nests can't shift up upland with the rising lake levels because "our coastlines are either developed or have been invaded by phragmites, which is an invasive common reed, a plant they don't like nesting in," Rowan said.

The black tern population at St. Clair Flats dropped to just over 100 adults nesting in 2020 from 600 to 800 birds in 2013, when there were record low water levels, Rowan said, citing estimates.

Black tern observers saw that with the lack of floating vegetation mats, chicks weren't able to successfully fledge or develop wings for flight during the breeding season. With nesting material limited, the chicks were often found in open, deeper, water where predatory fish roam.

"That's because with those rising lake levels, they didn't have a lot of available nesting habitat," Rowan added. "It just kept disappearing and getting smaller, so fewer and fewer of them were able to breed there and breed successfully."

Studying how to save birds

The Breeding Bird Survey, a citizen-led science study that has volunteers track and record all the birds along their local routes, has found fewer and fewer birds in standard birding locations that include black terns.

Because of curiosity and the mindset to help save black terns, Mark Harder of Novi accepted a volunteer assignment last summer to survey the fledging process. Studying why black terns are disappearing could also answer questions about how the ecosystem affects them and other species.

"You look back at things like the passenger pigeon (now extinct), and here there were so many of them and now there isn't a single one to be found," Harder said. "Look at the work that was put into bald eagles in trying to bring them back. All lives are sacred, and if there's things we can do or stop doing to help animals thrive, then I think that's a good thing to do."

Last summer, Harder spent two days in June and July trying to find black tern nests and fledged ones in the Dingman marsh just south of Cheboygan. He counted five birds in total and could not find any nests.

"I never did see any immature birds that whole summer," Harder said. "They are constantly on the move. And beautiful birds. I never got to see them well because they move so quickly."

The long wingspan of black terns enables them to make their long migratory flights between Michigan and the Southern Hemisphere, wildlife experts said.

The colors of the black terns are unique: The breeding adults have black heads and long, thin bills with striking gray wings and black underbelly. The non-breeding ones are gray on top and have a white tint on the bottom.

Their prey includes small fish and large insects that are common in wetlands. While robins tend to live five to 10 years, black terns can live twice that long — 10 to 20 years, with some going far beyond that.

At the close of summer, the birds migrate back to the warmer climates and cross from Panama into the Pacific basin and down the west coast of South America.

Sensitivity to water conditions

There could be challenges on the terns' sojourn to and from the South and Central American regions that have prompted its decline, the National Audubon Society's Lyons said.

"They don't nest down there. They just spent part of their year down there," he said.

Lyons said if they stayed in the tropical region of the world year-round, "they would face a lot more competition" for food. It's a "long migration for a bird that size," but their wingspan helps with those flights to and from the Southern Hemisphere, he said.

Black terns, he said, only lay two or three eggs all year long. "If one of those eggs survives to a fledged chick and flies off with a parent south in the fall, that's a good year," Lyons said.

Robins will have four or five eggs, and they might have two or three families per year, he said.

"There's a trade-off in nature: If you invest a lot in reproducing young every year, you don't live as long," Lyons said, "whereas sea birds like these black terns have a lifestyle much like our own in humans, where we don't raise that many kids and we live a long time."

The answer to help them survive? Lyons said "carefully manage wetlands" so the wetland species like black terns are not lost.

Meanwhile, by pursuing the goals in Whitmer's climate plan, Rowan said she thinks there's hope to save the black terns.

"We're trying to create more stability for them here in Michigan in the summers," she said. "We really want to ensure that we're protecting the breeding population while they are here to the point that they can successfully produce and fledge young to sustain the population."