Researchers get ready for bird banding season in Chicago: 'It gives you a wonderful look into our surroundings'

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With spring migration picking up and warmer days ahead, researchers are preparing for another season of bird banding—an effort to

understand how local birds are faring and future challenges they may face.

Bird banding generally involves attaching a numbered, lightweight aluminum band to a bird's leg. The process, which requires a federal permit, allows researchers to track birds as they're subsequently spotted. It can lead to data that would otherwise be difficult to come by: how long birds are living, where they're coming from or returning to, and even how they're responding to climate change.

"I've never seen a person in a picture holding a bird at a banding station not smiling," said Antonio Celis-Murillo, chief of the U.S. Geological Survey's Bird Banding Laboratory.

In addition to the joy that accompanies having a bird in hand, researchers can collect valuable data through banding. Birds are fragile, and they're everywhere, making them trusty subjects and biological indicators, Celis-Murillo said.

"If the birds are doing well," he said, "that means the environment is doing well."

Banding in the Chicago area focuses on a range of species, from songbirds to raptors. Some endangered birds are also banded, including the Great Lakes piping plovers Monty and Rose, who've been tracked over the last few years as they've touched down south for winter and flown back to Chicago.

There are a few banding efforts in the Chicago area, including a program from the Cook County forest preserves, which has banded birds as small as sparrows and employed lifts to reach ospreys nesting high in platforms, and a project from the Chicago Ornithological Society focused on Big Marsh Park, a former site of pollution that today

provides bird-friendly habitat.

The forest preserves recently used decades of data to map where some banded birds have landed—along with their sometimes grisly fates.

"It's not always a happy story at the end, but at least there's a story," said Chris Anchor, senior wildlife biologist for the forest preserves. "Otherwise, you have no information."

Today, district biologists band a few hundred birds a year. Lately, banding has focused on raptors, Anchor said, and shorebirds will be next as they pass through Chicago during migration.

During banding, researchers can also carry out bird checkups—taking measurements, drawing blood samples and identifying disease—which can assist in tracking illnesses, including those passed between animals and humans. The collected information sets a baseline, sometimes reaching back decades, so researchers can identify trends and sudden changes, Anchor said.

Researchers are currently on alert for bird flu, Anchor said, after three Canada geese in Will County tested positive earlier this month, and the virus was also found in a backyard flock in McLean County.

The collected health information can also be used to spot environmental red flags, such as pollution, as well as signs of healthy habitats.

"Birds are very, very sensitive in general to environmental and pathogenic processes," Anchor said. "It gives you a wonderful look into our surroundings."

The district shares banding data with the U.S. Geological Survey's banding lab, now more than a century old. The data set has about 80

million records of banding and about 5 million records of encounters with banded birds, said Celis-Murillo, chief of the lab. The records have helped tip off researchers to threats, including the pesticide DDT, and assisted in establishing hunting regulations.

Celis-Murillo said the long-term data set is especially important in the age of ecological crises and climate change, as researchers look to the past to understand what's happening now—and develop conservation strategies for warming ahead.

The lab's data has led to some surprising findings, including the first confirmed hybrid golden-crowned sparrow and white-throated sparrow, an Arctic tern spotted in Africa that flew about 4,800 miles from its original banding location in Maine, and updates on the oldest banded bird—Wisdom, an albatross who is at least 70 years old.

"Every day we are open to surprises," Celis-Murillo said. "We have a myriad of stories of things we never knew, we didn't expect."

There's been a growing interest in community science efforts, a trend that's extended to reports of banded birds. The public has become more engaged in reporting banded birds, Celis-Murillo said, which he credits to the swelling popularity of bird watching coupled with access to cameras and scopes. He expects records of encounters with banded birds to increase.

Locally, some volunteers from the Chicago Ornithological Society operate a banding station at Big Marsh Park on the Southeast Side. The group has banded nearly 400 birds in its first two seasons.

They follow a protocol coordinated by the Institute for Bird Populations, which includes stations across the country collecting data to study birds during summer nesting. Studies using the data have tracked birds'

response to the effects of climate change, including earlier springs in Yosemite National Park and drought conditions in northern Mexico.

This will be the third season of banding at Big Marsh, where researchers will use fine mesh nets throughout breeding season to catch songbirds. Clues to breeding success can come in the form of the number of birds caught or the proportion of juveniles to adults, said Stephanie Beilke, a Chicago Ornithological Society board member who helps run the station.

With only two years of data, it's not clear how long local birds in the once industrial dumping ground might be living, but researchers hope to eventually find out. The longer researchers band, the more likely they'll be to recapture, Beilke said.

"It seems like the birds are doing really well here," Beilke said. "We're catching a lot of birds. We're seeing a lot of young birds. We're seeing birds returning."

But it's difficult to know how the birds are doing after just two years, Beilke said.

"There's only so much information you can tell about breeding populations through standardized observation," she said. "Having a bird in the hand tells you a lot more that you can't determine otherwise."

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