

by Kenneth  
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# Threatened

The state is updating its endangered species list, and one bird of prey is among those that may be relieved of the distinction

The sleek, silent birds of prey lurk on signs above roadways and backyard trees, among other places, giving birdwatchers more chances to get a view of them as of late. The peregrine falcon dives from high places to lift up small creatures with its talons, carry them off and feast upon them. This bird is celebrated as one of the world's deadliest animals by *National Geographic*, which clocked its high altitude diving speed at faster than 200 miles per hour, the killer raptor has hapless field mammals utterly at its mercy. But, like any species coexisting with humans, *Falco peregrinus* is at the mercy of humanity's wide-ranging effect on the environment.

Registered on the state's endangered species list, the peregrine falcon may be making a comeback, says avid bird watcher Jim Mountjoy. A professor of biology at Knox College in Galesburg, Mountjoy is one of the experts throughout the state whose collective research, reports and monitoring inform the state's Endangered Species Protection Board as it updates its list of endangered and threatened species. Mountjoy says he has seen proposals to remove the stately bird from the list maintained by the Endangered Species Protection Board, a sign that a number of bird experts throughout the state agree it is more numerous.

The ESPB is a function of the Illinois Department of Natural Resources, formed by the 1972 Endangered Species Protection Act. Since the first endangered and threatened species list was published in 1981, the board has conducted a survey of the state's animal and plant populations, updating a list every five years that shows what creatures may face extirpation — extinction within the borders of Illinois. This year, the board proposed that sad distinction for two insects, *Parathlepsiis lupalus*, the leafhopper, and *Atrytone arogos*, the arogos skipper. *Allegheny barberry*, or bead grass, is also thought to have vanished from within the fields and forests of Illinois.

"We try to change it every time because we try to improve the process with each revision," says ESPB's director Anne Mankowski, the ESPB's sole staff member.

The board itself saw its funding eliminated in July 2002, and its staff laid off. Until 2008, the board was entirely volunteer and any

staff were part-time or unpaid volunteers. The board's operating budget was restored to \$118,000 in 2011. The budget for Fiscal Year 2015 would be \$391,900, under the plan approved by lawmakers in May.

Mankowski is tasked with much of the legwork that goes into updating the list. In years past, the board was afforded more staff members. Bringing it down to one has made it harder to update the list of animals and plants. The 2009 list featured 484 species, with 356 endangered and 128 threatened. This summer, the 2014 list proposal was set to include 480 as of late May, Mankowski says, with 356 endangered and 124 threatened.

"What we do is review every species by taxonomic groups at our quarterly board meetings," Mankowski says, referring to the broad categories that include fish, birds, reptiles or plants. "We go through the 484 currently listed species and review ones people think should be added. That takes about a year and a half to two years, to move through the reviews."

The ESPB defines endangered species as ones that are in danger of "extinction as a breeding species in Illinois," and threatened species as ones that may become endangered in the foreseeable future if something doesn't change. A species may be judged endangered if it has gone from being "formerly widespread" to being nearly extirpated because of habitat destruction or other pressures arising from development, such as if its geographic range is restricted, its population is low or if the Illinois population of the species is far removed from other populations throughout the country or the world.

The law requires the board to hold a public meeting prior to finalizing its updated five-year list, at which time specialists like Mountjoy or senior research biologist Phil Willink with the Shedd Aquarium support or contest individual proposals on the list with new data of their own.

"We have a process where we vet individual researchers for each of the taxonomic groups," Mankowski says. "We put together about 42 individuals across each of the taxonomic groups. We're looking



*Peregrine falcon*

at research publications, peer review journal articles and any of their research that's been published in any way."

Willink's fieldwork takes him around Lake Michigan and the rivers of northern Illinois, where part of his job is to see just how many different fish he can find. It might involve going out into a boat and dragging a net or running a mild electric current through the water to stun his quarry long enough for them to float to the surface so he can get a proper head count — if they are a species that has what you could call a head.

"If you want a whole view of a particular ecosystem, you want to use a broad spectrum of methods," Willink says. "Some species might be susceptible to one form and others might be susceptible to another."

Botanist Elizabeth Longo Shimp, with the U.S. Department of Agriculture Forest Service's Shawnee National Forest, has ranged the grounds of Shawnee for 23 years as a plant specialist, keeping an eye on how the forestry service's projects or equestrian trails are affecting local plants.

"I'm kind of the optimist," Shimp says. "I'm not a total believer that something has been extirpated unless the ground has been completely scoured out. I keep an eye out for those species."

In her nearly three decades of surveying plants at the Morton Arboretum in Lisle and with the Shawnee forest, Shimp has seen the data gathering transformed by access to things like GPS and digital camera technology. When she first began, she says, reports would list the location of a particular rare plant using township coordinates. Now, she can be off-duty and capture a photo of a chance encounter with a plant, including her precise location, with her smartphone. It has greatly benefited the ability of experts like her to provide a more accurate paper trail in the monitoring of rare or endangered species, she says.

"It's made life way more efficient," Shimp says. "However, in order to get that work done, there are the basic needs of a human being

out in the field with their eyes and finding things. That, your computers cannot take care of; your cameras can't take care of."

The funding difficulties at the state level are mirroring those her federal organization has seen, and they're causing staff shortages and unmanned posts, Shimp says.

"When I started working for the Shawnee National Forest, we had 130 employees, and today we have 68," Shimp says. "And we're doing more. I've watched the state dwindle. Now, not all of their stations have been filled. For probably 15 years now, there have been vacancies they haven't filled, and they're just like us. They have no money."

There is a real threat to the wildlife as a result, she says. In certain parts of the forest and prairie area she ranges, trained teams must burn trees for the good of their natural cycles. The sheer workload isn't allowing that to get done, something which is paradoxically harmful to some species.

"I've been getting out to some of [the burn areas] and been able to report back what we need and get our fire staff out there for them to write burn plans, and the other areas have been orphaned," she says. "It's been years since I've been able to get out to them. Areas I vividly remembered [having] an abundance of rare plant species have dwindled, and where I may have seen hundreds of sunflowers, I could only find four or five."

One of the biggest threats for plants in the state, Shimp says, is non-native invasive species. Illinoisans are likely aware of the disastrous impact Asian beetles, emerald ash borers and Asian carp have been having on the environment. But, Shimp says invasive plant species like the Japanese honeysuckle, Nepalese browntop grass, buckthorns or autumn olives are just as vicious in their vandalism of the landscape. As a common example, Europe and Asia are well-suited to the common dandelion, whereas North American yards can quickly become lousy with the things if left unchecked.

"Our threats are encroaching trees and shrubs that choke out the rare plant species and then the exotic plant species that travel fast and play dirty," Shimp says. "They work hard to invade an area."

That in turn could threaten other species. *Antrostomus carolinensis*, commonly called the chuck wills widow (after the distinctive call that sounds like those words), is facing rough conditions in the face of just such an invasive honeysuckle, Mountjoy says. The unwanted shrubbery is providing unnatural cover for the flying insects the 12-inch long, 4 oz. bird feeds upon, frustrating its ability to hunt effectively.

The bird is mostly nocturnal, and so not as easily spotted by amateur birders, Mountjoy says. Birds, he says, may have an advantage when it comes to such reporting, since birdwatching is such a popular pastime.

"A lot of the initial sort of suggestions for proposals [to add to the endangered list] are based just on people's experiences and how frequently they're being seen by the others and seeing whether the data supports it," Mountjoy says. "Unfortunately, they don't work that well for nocturnal species like the chuck wills widow. It's especially hard to get good data for a species like that."

Many other such birds that prey upon flying insects are facing the same difficulties, Mountjoy says, but experts are still trying to find out what the root causes may be. Once a species is placed on the list, it increases interest on the part of conservationists and affects the management decisions of forest preserves or other agencies.

To begin that process, an expert like Shimp will join her fellow



*American brook lamprey*

experts at the Endangered Species Protection Board meetings, bringing news of myriad threats or fragile success stories she sees in the field, digesting the information Mankowski and the board provide, and then consulting with her counterparts throughout the state to see if there's word of a threatened or endangered species in their neck of the woods.

"I can pick up the phone and ask [other specialists], 'Have you seen this in your area?'" Shimp says. "Afterward, we make the recommendation to the board, and we have to have documentation."

Willink also provides his opinion to the ESPB on fish species reports.

"If records come up and there's something questionable about them, I can determine if they're valid," Willink says. "My role is to try to get recent evidence for where these fish are."

Animal and plant experts need to look at the reports with critical eyes. Experts are looking not just to protect endangered species, but also to possibly debunk reports that greatly exaggerate the demise of certain species.

"There are some fish that are quite abundant, but we just don't have good records," Willink says. "That's where people like myself say, 'They probably are more common than we realize, but we aren't looking in the right places.'"

Once the board holds its public meeting and finalizes its five-year list for publication, it gives conservationists goals, and it gives other taxonomists or wildlife specialists a directive to see whether they can find any data on creatures or plants in a fragile situation.

Willink is sure to report whenever he encounters a listed species in his fieldwork, and he'll also make an effort to see if recorded populations of certain species are still where they were reported in years past.

"Sometimes I see [an endangered creature] by accident and then email it to [Mankowski] and the others, and the other aspect is that sometimes I will look at records, and if the species has been recorded in some place but the record is five or 10 years old, I'll go out of my way to see if the species is still there," Willink says.

Willink's work along the shores of Lake Michigan also gives him an opportunity to observe creatures benefiting from conservation efforts targeting one fish on the endangered list. He observes

banded killifish habitats, and produces reports that may help conservationists determine if special restoration sites are providing the necessary protection.

The public may think of conservation as an imperative to protect the pristine beauty of nature, but many of the species on the list are not what Shimp calls "glamour species." Not every bird is as easily romanticized as the merciless, heroic-looking peregrine falcon, and not every plant brings a smile as readily as a sunflower.

"[Glamour species] are the big, pretty ones," Shimp says. "If it's a grass or sedge, they're not glamorous. If people see a big beautiful flower, they're going to 'Ooh!' and 'Aah!'"

In Willink's meetings with the board and his fieldwork, he has heard concerns about the status of a species as important to the ecosystem as it is lowly, *Lampetra appendix*, the American brook lamprey. They are not cuddly creatures, spending their tiny lives buried in mud and subsisting off microorganisms, but they are a part of Illinois' rivers. Their numbers have dwindled in places where they used to be numerous, and the species was proposed for addition to the 2014 threatened list.

"They need connectivity among the streams and rivers, so adults can find the right spawning habitats, and something in that process is breaking down, and we're finding fewer of them," Willink says.

Mankowski says the list is one of the tools that helps the ESPB and the Department of Natural Resources make its management decisions. It's also something the county and national forestry services — groups that have been instrumental to statewide conservation efforts — use in their own work.

"We're looking for how many of those species are on protected properties, and how many of those are permanent," Mankowski says.

Coming off an eight-year period in the 2000s when the board had essentially no funding, Mankowski says much of her work in the past few years has been catch-up. The department's budget for the next fiscal year does include enough to hire some more staff members.

"We hope for transparency in what we're going to do and how we do it," Mankowski says. "It's not a popularity contest. What we really need is documentation and evidence supporting our stuff."

*Ken Lowe, a free-lance writer, accepted the position of communications director for Lt. Gov. Sheila Simon after completing this assignment.*



*Chuck willow widow*