**Showcasing the DNR: Fifty years of protecting Michigan’s most vulnerable wildlife**

**By CASEY WARNER**

**Michigan Department of Natural Resources**

What if bald eagles or Kirtland’s warblers or lake sturgeon no longer existed?

Fifty years ago, this hypothetical question could have become a reality. Populations of these iconic wildlife species – and many others – were dwindling and in danger of disappearing.

In the mid-1900s, with unregulated overharvest of species like the passenger pigeon, which went extinct earlier that century, and the effects of the pesticide DDT decimating other species like bald eagles and peregrine falcons, concern for the future of wildlife was growing in Michigan and around the county.

Conservation efforts grew from this concern, and a need to protect wildlife species emerged. In 1973, Congress enacted the Endangered Species Act, which provided protection to important and nongame species – those that aren’t hunted for sport, fur or food – like the Kirtland’s warbler, which was known to rely on Michigan’s jack pine for breeding habitat.

On Sept. 1, 1974, Michigan enacted its own endangered species law, Public Act 203. It was later recodified and placed into the Natural Resources and Environmental Protection Act (Act 451 of 1994) as [Part 365, Endangered Species Protection](https://www.legislature.mi.gov/documents/mcl/pdf/mcl-451-1994-iii-1-endangered-species-365.pdf), as it is called today.

The primary difference between the federal and state laws is their geographic scale. For instance, a plant or animal rare in Michigan may be common elsewhere in the United States, so it could be on the state list of threatened and endangered species but not the federal list.

Part 365 was enacted to help protect plants and animals listed as federally endangered and to develop programs to protect and conserve Michigan’s rare species. It provides protections for plants and animals by prohibiting take of [species listed as threatened or endangered](https://www.michigan.gov/dnr/managing-resources/wildlife/wildlife-permits/threatened-endangered-species/threatened-and-endangered-species-list).

To take fish or wildlife means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” To take a plant means “to collect, pick, cut, dig up, or destroy in any manner.”

The state law protects listed species wherever they are found in Michigan, on both public and private lands, to help conserve the diversity of plants and animals across the state. It also allows for conservation, protection, restoration and propagation of endangered and threatened species of fish, wildlife and plants in cooperation with the federal government and for the establishment of programs and acquisition of land or aquatic habitat for managing endangered or threatened species.

Threatened species are those in danger of becoming endangered. Endangered species are those in danger of extinction or extirpation, or disappearance from a specific region like Michigan.

“The law is really about keeping the cool plants and animals that are native to our state here – because it is what makes Michigan unique,” said Amy Derosier, Planning and Adaptation Section supervisor for the Michigan Department of Natural Resources Wildlife Division.

The Kirtland’s warbler was one of the first species to be recognized as being so rare and dependent on Michigan habitats for its survival that conservation efforts for this bird started in the 1950s, years before Michigan’s threatened and endangered species law.

The songbird was listed as endangered on Michigan’s first list and was among the first species to be listed under the federal Endangered Species Act.

Due to significant habitat management efforts and decades-long collaborations, Kirtland’s warbler was federally delisted in 2019. As a conservation-reliant species, it remains on the state list as threatened, but was moved down from endangered in 2023.

Other notable species on the first list included peregrine falcon, lake sturgeon, marbled and small-mouth salamander, Indiana bat and several freshwater mussel species.

There were 78 plants and animals on Michigan’s first threatened and endangered species list.

Today, there are 407 listed plant and animal species - nine mammal, 12 amphibian and reptile, 22 fish, 25 bird, 30 insect, 35 mollusk and 274 plant species that are native to the state. Last updated in 2023, Michigan’s list gets revised approximately every 10 years.

“The list is longer today partially because we know more and have done a lot of work to understand how native fish, wildlife and plants are doing and where they are,” Derosier said.

Another reason the list has grown so much is that Michigan has a lot of unique plants and animals that rely on rare ecosystems, due to the diversity of the state’s natural systems.

There are also more threats to wildlife than there were 50 years ago. Habitat continues to be fragmented, new pollutants continue to be released into the environment and our climate is changing.

More details about threats to the state’s vulnerable species, and work to conserve wildlife and their habitats, can be found in [Michigan's Wildlife Action Plan](https://www.michigan.gov/dnr/managing-resources/wildlife/wap/plan).

“Even with increased threats, we can be successful in recovering species when we focus on them,” Derosier said. “This list helps direct where we need to focus our work.”

These uncommon fish and wildlife also provide valuable information about the health of Michigan's water, land and air.

“Endangered species are great canaries in the coal mine – they tell us the health of our environment might be compromised,” Derosier said.

In that way, this law and the work being done to conserve threatened and endangered wildlife also support the clean air, water and land people rely on.

“When we have healthy places for wildlife, we have healthy places for people,” Derosier said.

### Continuing need

Fifty years after it was first enacted, Michigan’s threatened and endangered species law is still very relevant.

“Michigan has an amazing diversity of wildlife, fish and plants that we want to keep around for future generations,” said Jennifer Kleitch, endangered species specialist for the Michigan Department of Natural Resources. “The species on the state list of threatened and endangered plants and animals need our help to persist.”

Some of the species are on the list because they have very specific habitat requirements and are naturally rare. Others are rare because Michigan is at the edge of their range or because they face serious threats such as disease, climate change and loss of habitat to invasive species or development.

“When a species becomes threatened or endangered, it indicates that the balance of nature is being disrupted. When species rise to the level of being endangered, it is often a sign that an ecosystem may be at risk of collapse or is declining in health,” Kleitch said. “Healthy ecosystems are the foundation for clean air, water, and land, which are essential for human health. Endangered species can also serve as indicators of environmental health.”

For example, declining raptor populations in the mid- to late 1900s indicated that the environment had been contaminated with DDT. As a result, DDT was banned in 1972, and the result over the past five decades has been an increase in species like bald eagles and peregrine falcons. Without those protective measures, those bird species could have disappeared, and human health would have suffered from effects of the pesticide as well.

When a species is recognized as having population declines significant enough to list it as threatened or endangered, conservation efforts are needed to ensure those species do not suffer further declines or, worse, go extinct.

“Once a species is lost to extinction, it is gone forever,” Kleitch said.

Michigan added 58 species to its threatened and endangered list during the most recent update last year, including the northern long-eared bat, little brown bat, tri-colored bat, wood turtle and eastern box turtle.

Conservation efforts for these species are already underway. These efforts include the [Bat Habitat Conservation Plan](https://www.michigan.gov/dnr/education/michigan-species/mammals/bats/bat-hcp) and development of best management practices for wood turtles on state lands.

“Part 365 gives us the legal authority to create management and conservation programs aimed at assisting listed species and helps bring us together as a community to get on-the-ground conservation work done through partnerships,” Kleitch said. “And the work we do for listed species supports other wildlife and creates healthy lands and beautiful natural places.”

### Success stories

Some animals that have recovered after being placed on the Michigan threatened and endangered species list include pine marten, double-crested cormorant, black rat snake and several raptors once affected by DDT – bald eagle, Cooper’s hawk, merlin, osprey and red-shouldered hawk.

The 2023 update saw 36 species removed from Michigan’s threatened and endangered species list because populations have recovered or more locations of hard-to-find rare species were discovered through surveys. The DNR has also worked closely with partners on conservation efforts that have helped increase the quality of key habitats.

Others have moved off the list to being species of special concern – those that, while not protected by law, are plants and animals we want to continue to watch to make sure they stay recovered. These species include smokey shrew, which went from threatened to special concern because new populations were found through dedicated survey efforts, and trumpeter swan, which went from threatened to special concern due to considerable restoration efforts.

Once extremely rare in Michigan due to unregulated harvest, trumpeter swans are now found statewide.

“Michigan doesn’t have huge reintroduction programs right now because we’ve done a really good job of keeping rare species on the landscape. We have been good stewards of some of our rarest plants and animals, and they haven’t been extirpated,” Derosier said. “When we put effort toward recovery and conservation, we can be successful.”

### How to help

How can Michiganders help protect threatened and endangered species?

One thing everyone can do is learn more about Michigan’s rare [plants](https://mnfi.anr.msu.edu/species/plants) and [animals](https://mnfi.anr.msu.edu/species/animals) on the Michigan Natural Features Inventory website – which includes pictures, basic natural history, habitat needs and management recommendations – and share that information with others.

The locations of threatened or endangered species are tracked in the state’s natural heritage database, managed by MNFI. If you observe rare, threatened or endangered species you can [report your observations](https://mnfi.anr.msu.edu/species/report) to help advance conservation for those plants and animals.

Another way to help is by supporting Michigan’s [Nongame Fish and Wildlife Trust Fund](https://www.michigan.gov/dnr/about/get-involved/nongame-fish-and-wildlife-trust-fund) through monetary donations or purchasing a [wildlife habitat license plate](https://www.michigan.gov/dnr/about/get-involved/purchase-a-wildlife-habitat-license-plate) featuring a Kirtland’s warbler. The fund is used solely for the conservation of nongame fish and wildlife and designated endangered animal and plant species.

Planting native vegetation in your yard, working with conservation organizations to remove invasive species or donating to your local land conservancy are other ideas for getting involved.

And local governments and organizations can support rare species by partnering in Michigan’s Wildlife Action Plan.

“Collectively we can recover rare species and conserve Michigan’s natural heritage for generations to come,” Kleitch said.

Conserving rare species not only keeps these unique and interesting plants and animals in Michigan, it also helps ensure healthier air, waters and lands for all of us.

Learn more about DNR wildlife management at [Michigan.gov/Wildlife](https://www.michigan.gov/dnr/managing-resources/wildlife).

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