



# The Eagles Have Landed

Ten years after delisting under the Endangered Species Act, Montana's bald eagles are putting up numbers worth celebrating.

By Julie Lue. Photos by Kate Davis



“A skiff of snow, and everything starts to look like an eagle,” says Kristi DuBois, a nongame wildlife biologist with Montana Fish, Wildlife & Parks. Fortunately, snow squalls are still holding off as she parks her truck along the Blackfoot River not far from Ovando. There’s no mistaking the white-feathered head we spot on the other side, looking out from a massive construction of sticks and branches lodged high in a larch tree.

An adult bald eagle sitting on her nest, calmly studying the river below. That’s all we need to see for now. This nest is active and occupied, one more bit of good news for Montana’s resident bald eagles.

On this unsettled spring day, I am riding along with DuBois as she monitors bald eagle nests. It has been ten years since the species was declared “recovered” and delisted under the Endangered Species Act (ESA). Since then, Montana’s nesting bald eagle population has continued to grow, far exceeding the original recovery goal. But while DuBois has shifted her work priorities to other species with greater needs, she and others are still, as she puts it, “keeping tabs on our national symbol.”

Bald eagles have made a remarkable comeback. But DuBois knows that vigilance is still necessary. “We monitor to make sure they don’t need to go back on the Endangered Species List,” she says.

Just a few decades ago, prospects were grim for bald eagles in the lower 48 states. Montana was no exception. In 1978, the year bald eagles were listed as a federally endangered species, only 12 known nesting pairs

*Julie Lue is a writer in Florence. Photographer Kate Davis is executive director of Raptors of the Rockies in Florence.*

remained in Montana.

Think about that for a moment—just a dozen pairs in a state covering 94 million acres, with thousands of miles of rivers and lakeshore. Bald eagles were on the brink of local extinction.

#### HEADING FOR TROUBLE

By the time it was federally listed, the bald eagle had been the United States’ national emblem for almost 200 years. In 1782, the bird came to roost on the Great Seal, an image that today adorns passport covers, presidential podiums, and one-dollar bills. But before this iconic eagle clutched its first olive branch or bundle of arrows, the species was already an important symbol with spiritual and cultural significance for many Native American tribes. Some have long viewed the high-flying bald eagle as a “messenger to the creator.”

Scientists estimate that, before 1776, as many as 250,000 bald eagles lived in what today is known as the Lower 48. (Alaska has always been home to more of the raptors than all other states combined, and eagles were never endangered there.) Montana likely held its fair share. In 1805, as the Corps of Discovery crossed what is now Montana’s eastern border, Meriwether Lewis wrote: “The bald Eagle are more

abundant here than I ever observed them in any part of the country.”

As the human population grew, the bald eagle population shrank. Habitat disappeared as open land along waterways gave way to settlements and farms. Nesting trees were cut down to make space or provide fuel or lumber. At the same time, bald eagles were intentionally killed. As predators, the birds were seen as a nuisance, or even a danger. Though bald eagles eat mostly fish and carrion, people worried the large raptors would prey on livestock or even carry off small children. America’s national bird was often shot on sight. No one, it seems, worried about running out of bald eagles. One 19th-century ornithologist even declared them “good eating, the flesh resembling veal in taste and tenderness.”

Bald eagle populations responded with a steady downward slide in the late 1800s and early 1900s. In 1940, Congress attempted to slow the decline with the Bald Eagle Protection Act (later amended to include golden eagles), which made it illegal to hunt, sell, or possess eagles or their parts.

The large raptors soon faced an even worse threat than indiscriminate shooting and habitat loss: DDT, a popular pesticide sprayed on fields, forests, and towns after World War II. Because DDT’s toxic effects



**STILL LEARNING** While its siblings watch, a young eagle struggles to land on a dead tree in the Bitterroot Valley.



**HOME IMPROVEMENT** An eagle carries material to its nest. Bald eagle nests are massive structures that can weigh more than 1,000 pounds.

accumulated as it traveled up the food chain, raptors such as ospreys, peregrine falcons, and bald eagles were especially vulnerable. A byproduct of DDT caused the birds to produce eggshells too thin to support the weight of an incubating parent. Eggs were crushed, embryos died, and nests failed, year after year. By 1963, a year after publication of Rachel Carson’s exposé on the environmental damage caused by pesticides, *Silent Spring*, only 417 nesting pairs remained in all of the Lower 48.

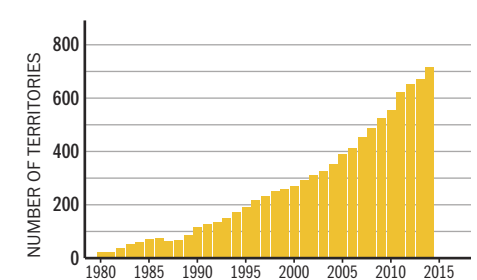
In 1972, DDT was banned in the United States for nearly all uses. But for bald eagles, a ban alone could not reverse the population decline. Numbers were too low to recover without federal intervention. In 1978, bald eagles were listed under the ESA, with a “threatened” designation for Michigan, Minnesota, Oregon, and Washington, and an “endangered” designation for the rest of the Lower 48.

#### SLOW RECOVERY

Even though the species was listed as endangered, Montanans still saw a fair

number of bald eagles in winter, when migrating birds from Canada congregated here in search of milder weather or open water. Summer was a different story. “In terms of just driving around and seeing one,

Montana Bald Eagle Nesting Population, 1980-2014



**SOARING NUMBERS** Over the past 35 years, bald eagle numbers have risen dramatically. According to Kristi DuBois, FWP nongame wildlife biologist, the population will soon level off as the raptors fill all available habitat. Montana lacks population figures for the past several years because biologists now spend time monitoring higher-priority species that aren’t doing as well, DuBois says.

chances were about zero,” says retired FWP biologist Dennis Flath, whose long career spanned both the low point for bald eagles and much of their recovery.

Biologists themselves took to the sky when FWP began surveying nests in 1980. Neither bald eagles nor their huge nests (known as aeries) are designed for camouflage. During spring aerial surveys, biologists can easily spot a nest in a cottonwood stand before the trees leaf out.

“I have no idea how much time I spent in the air,” Flath says, referring to the countless hours he flew in helicopters and planes over drainages. As in other states, Montana wildlife agencies felt federal pressure to locate nests and nesting territories, both to protect them from disturbance and to track bald eagles’ success or failure at producing fledglings.

Bald eagles didn’t rebound quickly. Like other long-lived species—eagles can live 20 to 30 years—the big birds reproduce slowly. They don’t nest until at least age five, and even then, a mating pair usually raises just one or two fledglings with each attempt.

To make recovery more challenging, bald

eagles found themselves crowded out by development. In eastern Montana, a long stretch of riparian habitat along the Missouri River had been swallowed up by the creation of Fort Peck Reservoir. Elsewhere, housing along the Bitterroot, Gallatin, Yellowstone, and other rivers replaced cottonwoods where eagles historically nested.

Yet bald eagles still made steady progress, helped by lower levels of toxins in the environment and stiffer penalties for harming the birds or their nests. As numbers crept up, monitoring became a joint effort involving state and federal agencies, tribes, conservation groups, private landowners, and others.

By 1990, Montana had passed its population goal of 99 nesting pairs. The species was downlisted to “threatened” in 1995, and delisted entirely in 2007. “The ESA did what it was supposed to do, which was to bring back our national symbol,” DuBois says.

At the time of delisting, Montana was home to roughly 400 pairs. The population continued to grow. In 2014, biologists counted 700 nesting pairs, a number Flath finds “incredible.”

Because bald eagles eat mainly fish and nest near water, Montana’s population will never be as high as those in states with abundant lakes such as Minnesota (9,800 nesting pairs) and Florida (1,500 pairs). Even so, bald eagles are no longer uncommon in Montana. Anyone who spends an hour or two along any river or reservoir has a good chance of seeing one.

### SPREADING THEIR WINGS

DuBois now sees signs that Montana may be reaching carrying capacity for nesting bald eagles. “In major river systems, most if not all of the best eagle habitat is already filled



**ROOM SERVICE** An eagle delivers a mountain whitefish to its nearly fledged offspring. Because fish are an essential food for these raptors, pollution and other damage to aquatic ecosystems harmed eagle populations and contributed to their endangered species designation.

with eagles,” she says. Some pairs are moving into territories that haven’t held nesting eagles in 40 years, or are attempting to nest along smaller streams.

About a third of the nesting territories are monitored each year to see if they are occupied or eagles are incubating. Biologists

check some of those later for fledglings. Allison Begley, FWP avian conservation biologist, says, “With so many nesting territories, it’s been hard to keep up with how well nesting eagles are doing.” Citizen scientists can help by submitting sightings of nestlings or fledglings to ebird.org or the Montana

Natural Heritage Program, Begley says.

FWP still places a high priority on documenting new nests and ensuring the peaceful coexistence of humans and eagles. Just like people, eagles need a little “elbow room,” DuBois says. Human activity can scare adults off their nests, leaving eggs or small nestlings vulnerable to bad weather or predators like ravens. How well eagles tolerate disturbance varies greatly from pair to pair. Many don’t seem bothered by the comings and goings of anglers, ranchers, and others nearby. Usually landowners who find themselves hosting a bald eagle nest can just “keep doing what they’re doing, making sure to protect the habitat,” DuBois says.

But landowners need a permit to remove a nest, even if there are no eggs or it appears unoccupied. Bald eagles and their nests are still protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, which also governs a process by which Native Americans can obtain eagle feathers or parts for religious purposes.

### WHAT EAGLES NEED

DuBois says bald eagles will continue to thrive in Montana as long as they have “habitat for nest trees, healthy fisheries, a little bit of room, and a toxin-free, clean environment.”

Despite strong population numbers, a problem in any one of these categories can spell trouble. Suitable habitats are squeezed out by development too close to rivers and lakeshores. Pollution and aquatic invasive species threaten healthy, diverse fisheries. Bald eagles are unintentionally poisoned by contaminants in their environment.

Lead exposure, which can sicken and even kill eagles, appears widespread. According to Rob Domenech, executive director of Missoula-based Raptor View Research Institute, over 90 percent of bald and golden eagles tested in collaboration with the nearby MPG Ranch in Florence showed elevated levels of lead. Bozeman-based Montana Raptor Conservation Center, which tests every eagle it receives, similarly finds that “about 90 percent” show evidence of lead exposure, says rehabilitation director Becky Kean. Eagles with high lead levels receive a treatment called chelation therapy. Of those brought to the center strictly because of lead poisoning (as



**ESA SUCCESS STORY** Bald eagle numbers today are higher than they’ve been in decades. The remarkable population growth shows how the Endangered Species Act was designed to work: Recover species to where they no longer need full federal protection.

opposed to fractures or other injuries), only about 20 percent survive. “It’s extremely debilitating,” says Kean.

Bald eagles pick up lead from their food, says Representative Janet Ellis, senior director of policy for Montana Audubon. The birds consume fragments of lead bullets when they scavenge elk and deer gut piles or ground squirrels and other rodents that have been shot. If lead levels are high enough, Ellis says, “sometimes it kills birds outright. At a minimum, it reduces their life.” She adds that increasing numbers of hunters are aware of the problem and switching to non-toxic copper bullets, which are becoming more comparable in price to lead.

Another threat to eagles is the loss of mature cottonwoods. In the years ahead, Ellis says, bald eagles may find fewer large nesting trees—especially in eastern Montana, where cottonwoods often provide the only option. Montana still has many big cottonwoods, but along stretches of river below dams, these trees are failing to regenerate. The understory beneath cottonwood stands is usually open, lacking saplings that represent eagle habitat down

the road. “We predict that Montana will lose one-fourth of all cottonwood sites in the next 50 years,” Ellis says.

Cottonwoods need a “big sloppy river system,” with spring flooding and gradually declining water levels through the summer, Ellis explains. These naturally occurring conditions allow seeds to germinate and seedlings to grow. But dams control floods and keep floodplains from being inundated. As they struggle to regenerate, cottonwoods can be crowded out by exotic species like Russian olive and tamarisk (salt cedar)—shrubby trees too small to support eagle nests.

Fortunately, agencies and groups like FWP and Montana Audubon are working to help protect cottonwoods and other habitat, prevent the spread of invasive species, and reduce environmental contaminants.

Meanwhile, bald eagles continue to do their part. A snow squall has come and gone by the time DuBois and I head back from the Blackfoot River toward Missoula. She makes one last stop along a dirt road, next to an old farmhouse. Just outside a picket fence, high in a cottonwood, a bald eagle sits in her nest, quietly incubating the future. 🦅

## TIMELINE: BALD EAGLE

**Pre-1776:** Roughly 250,000 bald eagles are thought to inhabit today’s lower 48 states, occupying nearly every large river or lake.

**1850-1900:** Pioneers and loggers cut down nesting trees for timber and fuel. The bald eagle population begins to decline.



**1940:** Congress passes the Bald Eagle Protection Act, which prohibits the killing of bald eagles.

**1963:** A National Audubon survey reports only 417 eagle nesting pairs, marking the low point for the species.



**1978:** The eagle is declared endangered, becoming one of the first species protected under the Endangered Species Act in 1973.

**2007:** The U.S. Department of the Interior declares the bald eagle recovered and removes Endangered Species Act protection.



**1782:** Charles Thomson sketches a design featuring a bald eagle. The Continental Congress ratifies this as the Great Seal of the United States, making the raptor the country’s official symbol.



**1900-1940:** While technically protected in 1918 by the Migratory Bird Treaty Act, tens of thousands of bald eagles are shot or poisoned by people who view the raptors as threats to livestock or want to collect feathers.

**1950s:** DDT becomes widely available as an insecticide and contaminates fish. Populations of piscivores like bald eagles begin to rapidly decline.



**1972:** DDT is banned for outdoor use. Bald eagles soon begin recovering.



**1995:** The eagle is reclassified from “endangered” to “threatened.”

**2014:** Montana biologists estimate the state bald eagle population at more than 700 nesting pairs, a 60-fold increase from the population’s nadir in 1978.