



# FERRETS

in the **Spotlight**

Searching eastern Montana for North America's rarest mammal



DIANE HARGREAVES

BY SAM CURTIS

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alerie Kopcso turns the handle of the roof-mounted spotlight. It squeaks. “That’s going to drive me crazy,” she says.

The Bureau of Land Management (BLM) wildlife biologist pops the hood of the pickup, yanks the dipstick, climbs on the roof, smears oil on the spotlight shaft, hops back in the driver’s seat, and twists the handle again. No squeak. “Good,” she smiles. “We’ll be using that light all night long.”

I’ve just driven 300 miles to meet her on an April night in this wind-swept expanse of shortgrass prairie, about 50 miles south of Malta just north of the UL Bend National Wildlife Refuge on the Missouri River. We’ll be bouncing around a 380-acre prairie dog town until 6 a.m., spotlighting for the bright green eye shine of black-footed ferrets, which will indicate that some of them have made it through the winter. A few years ago, only eight ferrets lived on what the BLM calls its 40-Complex, a 1,200-acre tract encompassing several prairie dog towns. (Ferrets feed on prairie dogs and live in the rodents’ burrows.)

“Two a.m. is the ferret witching hour,” Kopcso tells me. “They’re usually most active about then.”

My watch says 9 p.m. I shine my hand-held spotlight into the black night and wonder what we’ll see over the next five hours.

### ALMOST DISAPPEARED

Black-footed ferrets once likely numbered in the millions across much of the Great Plains. Then, in the first half of the 20th century, a federal prairie dog eradication program eliminated most of the predator’s food supply. Black-footed ferrets are now one of the rarest animals in North America and were actually declared extinct in the United States in 1979. But in 1981, a ranch dog killed a lone black-footed ferret near Meeteetse, Wyoming. That amazing retrieve—the equivalent of a Lab returning from the woods with an ivory-billed woodpecker in its mouth—sent researchers racing for the central Wyoming ranch. By 1984, biologists estimated the area contained roughly 130 ferrets, and the U.S. Fish and Wildlife Service (USFWS), Wyoming Game and Fish Department, and other agencies had begun intensively studying the population.

“We spent several years just trying to figure out more about ferrets—how they behave, what their activity patterns were,” says Dean Biggins, a research wildlife biologist with the U.S. Geological Survey (USGS). “Then we went through a disastrous time from 1985 to 1987 when plague and distemper hit the colony. We were rapidly transformed from studying ferret ecology to just trying to rescue the few animals that remained.”

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Biggins joined a team of biologists working with the state of Wyoming to capture the last 18 black-footed ferrets known to exist in the world. They set up a captive breeding program, and by 1991 the first captive-bred ferrets were reintroduced in the wild at Shirley Basin, Wyoming. In 1994, biologists released pen-reared ferrets in Montana on the UL Bend National Wildlife Refuge. They released more in 1997 on the Fort Belknap Indian Reservation and in 2001 on the BLM land that Kopcso and I have been bumping across for hours.

By 1 a.m., I’m eating chocolate-covered coffee beans to stay awake. We’ve seen two sleeping cows, three mice scampering into prairie dog burrows, and eight antelope with just enough green in their eye shine to momentarily quicken our pulses. But no ferrets.



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**NOT A GOOD CROP** Since 1991, a captive breeding program based in Wyoming has reared black-footed ferrets for release into the wild. The animals are held in cages, vaccinated for distemper, then released in areas of the Great Plains containing large prairie dog populations. So far, survival has been poor. Of the 400 captive-reared ferrets released in Montana and the 300-plus kits they've reared in the wild, only 15 or 16 remain.



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"When we do see one," Kopcsó tells me, "we need to pinpoint which prairie dog burrow it's using. Each of these ferrets has a microchip implanted under the skin in its neck. We'll put a transponder ring over a hole, and when the ferret comes up to see if we've left, the ring will read the code on the chip. It's like a grocery store checkout, allowing us to identify who's who. The chip also lets us track each individual's movements and family history."

### CONSTANTLY SEARCHING

Researchers conduct ferret surveys four times a year. The one we're doing now tells them how many ferrets survived the winter and will be entering the breeding season. In August, they count the number of kits that are born. By September, the kits are old enough for the researchers to catch, anesthetize, inject with microchips, vaccinate for canine distemper, and blood test for genetics and disease. A fourth survey in December, 30 days after any new ferrets are released, counts how many survive their first month in the wild.

I eat an apple and continue to peer into the night, fanning my spotlight over the prairie dog mounds. A ferret is a specialist at maneuvering through these labyrinthine tunnels at night to awaken sleeping prairie dogs and grab them by the throat with a killing bite. "Ferrets are feisty critters, with an 'I'm-going-to-kick-your-butt attitude,'" says Randy Matchett, USFWS wildlife biologist at UL Bend. A ferret is also photogenic, with a lanky, 2-foot-long body that's tawny on the back and creamy underneath, with short, black legs, a black tip to its tail, and a roguish mask across the eyes.

Prairie dogs comprise 90 percent of a ferret's diet. One researcher estimates that a family of four ferrets eats on average 109 prairie dogs a year. Ferrets live and raise their young in prairie dog burrows and spend roughly 80 percent of their lives underground. Without prairie dogs, ferrets cannot survive.

Even in well-established prairie dog towns, however, newly released ferrets had poor survival rates when the reintroduction program first began in the 1990s. Biggins and his associates experimented by preconditioning captive-bred ferrets in walled prairie

*Sam Curtis of Bozeman is a frequent contributor to Montana Outdoors.*

dog towns. The animals got on-the-job training killing prey and living in burrows before being released into the wild.

### THE PLAGUE PROBLEM

That helped, but not much. The road to ferret recovery in the wild remains rocky. In Montana, numbers have dropped to a mere handful. Matchett and other biologists suspect that low levels of plague may be partly to blame. Prairie dogs are host to a wide variety of fleas that can carry sylvatic plague and infect the host. Researchers once thought the primary threat to ferrets came from the disease reducing or eliminating prairie dogs. Now they theorize that some ferrets may be dying directly from plague after eating infected carrion or being bitten by plague-infected fleas. "We're conducting a study in which we apply flea-killing dust to half the prairie dog colonies in our release site," Kopcsó tells me. "We'll compare the survival and productivity of ferrets in the dusted areas with the survival of those in areas not dusted."

Matchett says the study is labor intensive. "When we dust an area, we have to apply the [flea-killing] dust down every single burrow," he says. "Last summer, it took a crew of five nearly 300 hours to treat 26,000 burrows on 1,000 acres at UL Bend." Researchers are also field-testing a new vaccine developed at the National Wildlife Health Center in Reston, Virginia, for use against plague in black-footed ferrets. "Vaccinating the ferrets requires catching every animal twice, at least 30 days apart, because we have to administer a booster to provide adequate immunity," Matchett says.

The clock in the pickup reads 3:47 a.m. Through the night, we've occasionally seen the spotlights of three other survey workers cruising prairie dog towns nearby. Kopcsó calls each one on the two-way radio. Still no ferrets.

Then she stops the truck and swivels her light to a spot 40 feet beyond the right fender.

"What?" I ask, waking with a start from my half-sleep.

"A mountain plover. See it? It's the first one I've seen this season."

The 7-inch, white and tan bird cocks its head and scampers across the rocks and stubble. A migrant, it has come here to mate. Like burrowing owls, swift foxes, ferruginous hawks, and black-footed ferrets, the plover is

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a Montana “species of concern” (those at risk due to rarity, restricted distribution, habitat loss, or other factors). And also like those species, its fate is closely tied to the habitat created by prairie dogs.

Montana’s two prairie dog species, the white-tailed and black-tailed, are both ferret prey. The black-tailed prairie dog is much more common in Montana, but because its population is now far lower than before European settlement, it too is a state species of concern. Until 2004, it was a candidate for federal listing as a threatened species.

Many Montana ranchers—who often feel like a threatened species themselves—have criticized efforts to protect prairie dogs, which they consider a pest

**Ferrets depend on prairie dogs, which comprise 90 percent of their diet. Without prairie dogs, there can be no ferrets.**

that competes with cattle for grass. Wildlife conservation in eastern Montana depends on the cooperation of landowners on whose property so much wildlife lives. The only way to sustain prairie dogs—and thus ferrets—is to make conservation efforts compatible with local economies and culture. That’s why the Montana Black-Footed Ferret Working Group, formed in 1981, includes ranchers along with state and federal biologists, con-

servationists, and representatives of the Fort Belknap Indian Community, Prairie Ecosystems Action Council, Matador Ranch (owned by The Nature Conservancy), and American Prairie Foundation.

### OUNCE OF PREVENTION

Kopcsó stops the truck and turns off the spotlight. Dawn is giving definition to the huge expanse of the Great Plains, and our night search is over. “I’m a wildlife biologist,” she says, “but I believe strongly that ferret recovery is about more than biology. It’s



ELIZABETH A. LEWIS

about good working relationships with everyone who has a stake in these animals. One of my primary goals here is to build relationships and trust with these people.”

On the long drive home, I think about the enormous amount of time, energy, research, and cooperation required to restore an endangered species—especially one like the black-footed ferret, which now has a nationwide population of fewer than 500 in the wild. It seems to make more sense to work, whenever possible, at preventing species from being pushed to the brink of extinction rather than expending so many resources to pull them back from the brink.

For one thing, it’s less expensive. For another, there’s no guarantee you can restore an endangered species. After 13 years of ferret recovery work in Montana—where more than 400 captive-reared animals have been released and more than 300 wild-born kits have been observed—only 15 or 16 ferrets now exist in the state. Matchett says a viable population won’t survive over the long term without at least 100 breeding females. “It’s disappointing,” he says. “I have no expectation of establishing a viable ferret population in Montana any time soon, especially with the present limited size of prairie dog complexes and the plague component. The whole issue of ferret recovery has to do with managing prairie dogs—and the two biggest factors affecting prairie dogs are human tolerance and plague.”

Despite the setbacks, Matchett remains hopeful that black-footed ferrets and cattle ranching can coexist. “Montanans take pride in their wildlife and natural heritage,” he says. “We’ve found room to accommodate growing populations of wolves and grizzly bears in other parts of the state, and I think we can do the same with black-footed ferrets and prairie dogs in eastern Montana. We just need to figure out how.” 🐾

EDITOR’S NOTE: Valerie Kopcsó recently left the BLM and is now working for the U.S. Forest Service in South Dakota.

## MONTANA RECOVERY EFFORTS

The recovery of federally endangered species is a shared responsibility of the federal government and the states. “Montana actually has a state statute mandating ferret recovery,” says Arnie Dood, FWP endangered species coordinator. FWP’s Northwestern Region Prairie Dog Plan calls for increasing the size of prairie dog complexes and establishing at least one large complex of 5,000-plus acres. Pat Gunderson, the department’s regional supervisor in Glasgow, says he hopes to find private landowners willing to work with the department in establishing a big complex. “The Charles M. Russell National Wildlife Refuge and several conservation groups are eager to be a part of it,” says Gunderson. “But we need some private land, too, so we’re looking at incentives that might get willing landowners involved.”



Montana Fish & Wildlife & Parks

Last year, FWP received federal funds to look for ferrets in southern Phillips County in areas beyond the original 1994 and 2001 release sites. “If we could find ferrets outside the release sites, that would indicate that ferrets are dispersing and reproducing,” says Ryan Rauscher, the department’s regional Native Wildlife Species Program coordinator in Glasgow.

Rauscher hired a two-person crew in fall 2006 to find active prairie dog colonies and then conduct night surveys for ferrets. Though the survey turned up no ferrets and found that many prairie dog colonies had been wiped out by plague, Rauscher says he hasn’t give up hope.

“This is a big state, and a lot of it has yet to be surveyed from the ground,” he says. “There could be prairie dog complexes out there large enough to support black-footed ferrets, but we just haven’t found them yet.”