



WHO IS WOLF 57?

She's a female grey wolf who disappeared in 2003. Eighteen years later, her collar was found, hundreds of kilometres away. She's captured researchers' attention—this is why she deserves yours

BY EVA HOLLAND



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WENDY COLE WAS in her office in Kalispell, Mont., in December 2021 when a colleague told her that a man was at the front desk with an unusual request. He'd found a radio collar in the bush a short drive west of town, and he wanted to get it back to its owner. By its size, he figured it must have once been fitted on a wolf.

It was that hunch that brought him to Cole's office. She is a wolf and carnivore biologist who works for the Montana state government. She made her way out to the front entrance and got her first look at the collar. It was old, she guessed: its pale webbing was frayed and worn, and it was a VHF (very high frequency) radio collar, rather than the GPS collar a researcher might be more likely to use today. Its loop was still closed, the bolts that had sealed it onto an animal's neck still in place. "It didn't look like it had been cut off or taken off," says Cole. "So I made the assumption that it must have been on an animal that died, and then the animal had decayed out from under it." She asked the man if he'd seen any bones or other remains nearby, but he hadn't. He gave her the approximate location near Little Bitterroot Lake where he'd found the collar, and then he left the matter in her hands.

The details on the collar included a small tag that said "Banff," a six-digit number identifying its radio frequency, and a phone number for the device manufacturer. After some back-and-forth with an operator about who she was and whether she knew what she was talking about, Cole was connected to the office line for a Parks Canada biologist. She left a voicemail, and she soon had an eager reply.

The collar, she learned, had last been seen more than 18 years earlier, on a young female grey wolf in one of the Banff-area packs. But after she'd vanished from their range, nobody in Banff had ever been sure what became of her. Now, it seemed that she had traveled hundreds of kilometres before eventually meeting her end.

There's a lot we don't know about what happened to the young female wolf, known to researchers as Wolf 57, after she left the Banff area. What route did she take to Montana? Did she find a new pack there? How long did she live, and how did she die? But, in between the gaps, there are important truths. Wolf 57 can help us to better understand what wolves need, and how, by giving it to them, we stand to benefit too.



We are surprisingly new to the study of animal movements across landscapes. In a recently released book, *Crossings*, about the ways animals collide (too often literally) with our road system, environmental journalist Ben Goldfarb explains that for many decades, scientists were largely unaware of most migrations. "Animals moved under cover of darkness or through rugged terrain where they couldn't be tracked," Goldfarb writes. "Primitive technology made them hard to follow."

The first tracking collars debuted in the 1960s. They used high-frequency radio waves, but the connection between collar and researcher was tenuous. The collars didn't ping their reports automatically—you had to go out into vast, wild areas, on foot or by small plane, and put your antenna within range of each collar. That could mean getting within eight or 10 kilometres of a given animal, or even closer depending on the terrain—needle-in-haystack territory for a creature that ranges nearly 450 square kilometres on average.

The first ever satellite collar, a NASA innovation, was deployed in Wyoming in 1970. It weighed 23 pounds, and a cow elk nicknamed Monique the Space Elk received the honour-slash-burden of carrying it. She "soon died of pneumonia," in Goldfarb's telling, "and the collar's next bearer, Monique II,

PREVIOUS: WOLF COLLAR. HUNTER D'ANTUONO; WOLF PHOTO, SHUTTERSTOCK.COM/JAYSSONGALLANT. THIS PAGE: HUNTER D'ANTUONO



was shot by a hunter.” But the collars caught on despite the misfortunes of their first and second bearers, and the technology has become vastly lighter and more reliable since. Today, researchers can deploy less conspicuous GPS collars with “store-on-board” technology that collects and saves an animal’s data, allowing for a much fuller picture of their movements once the collar is retrieved: instead of a ping here and a ping there, they create a detailed, continuous track that’s closer to something you’d see on Strava.

Wolf 57 was collared not long before satellite technology became the norm. She was born, most likely, sometime in the spring or early summer of 2001. Wolves are pack animals, living and traveling in family units that typically consist of a breeding pair, their pups, and a handful of other non-breeding adults. Her family was the well-established Fairholme pack, a group of wolves that still moves along the eastern side of Banff National Park, ranging between Lake Minnewanka and the Fairholme range, and sometimes beyond.

At the time of her birth, Parks Canada biologists and other researchers were studying, as best they could, the movements of the wolf population in the area. She was likely just a few months old when she was captured, fitted with a VHF radio

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Wolf 57’s collar was discovered in northern Montana, more than 400 kilometres away from Banff National Park.

collar, and released again. For nearly two years, the researchers tracked her, catching occasional pings as they swept the area for her collar and others, along the long arc of Lake Minnewanka, and as far south and east as Kananaskis. If you look at a map of the area, you can see some natural-seeming boundaries to the pack’s territory: the Bow River, curving along the west and south sides; Lake Minnewanka to the north; on the east side, the Rockies flattening out into prairie. You can also see the stark line of the Trans-Canada Highway snaking through their range, shadowing the Bow River valley.

Her last ping came on June 11, 2003. She was near Two Jack Lake, a small, road-access lake that juts off the western end of Lake Minnewanka, just a 15-minute drive from downtown Banff. After that, she disappeared—until her collar was rediscovered, 18 years later and more than 400 kilometres away. »

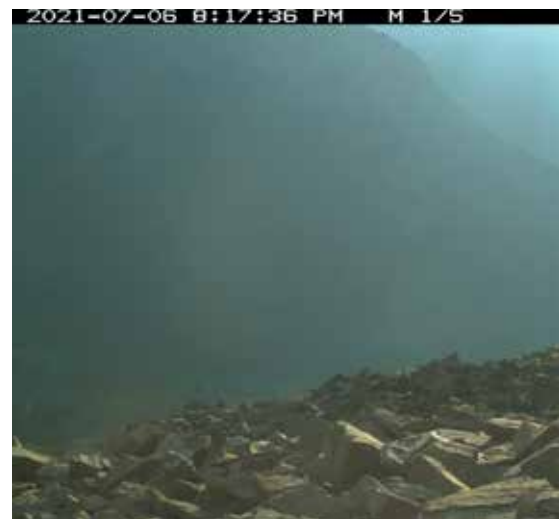
She had undertaken what biologists call a dispersal: when a wolf, generally between one-and-a-half and three years of age, splits from its pack and strikes out on its own. Not all wolves leave the packs they're born into, and not all of them venture far when they do. But, according to Parks Canada, it's not uncommon for wolves in the Banff area, like Wolf 57, to make it to Montana. Just a few months before Wolf 57's collar was discovered, another young wolf (WM2001) from the Banff area, one fitted with a GPS collar, travelled 480 kilometres to the state in just five days before being legally shot when he was only six-and-a-half kilometres past the U.S. border (see p. 85).

Jodi Hilty, the president and the chief scientist of the Yellowstone to Yukon Conservation Initiative, wasn't surprised when she heard about Wolf 57. Instead, she felt relieved. Yellowstone to Yukon, or Y2Y, is dedicated to the promotion of conservation on a grand scale: advocating not just for discrete protected areas, such as parks and preserves, but for measures that enhance connectivity between them. What's only become clearer using the data gathered from tracking collars over the years, is that wild animals require vastly more space than we once realized for their populations to thrive. Large mammals, in particular, need to be able to travel widely to interbreed and to have adequate territory for hunting or feeding. Roads and highways, suburbs, golf courses—all sorts of developments—can chop up those wild passageways if they aren't built with care and forethought. That's why Y2Y focuses on a long corridor that follows the Rocky Mountains, stretching from Wyoming, Montana, and Idaho across B.C. and Alberta and up into the Canadian sub-Arctic. Y2Y was founded in 1993 partly in response to the news of another collared wolf, nicknamed Pluie, who'd roamed across three states, two provinces, and 100,000 square kilometres before also being legally shot by a hunter.

A parallel initiative in the east, the A2A Collaborative, creates room for animals to move up and down the Algonquin-to-Adirondacks corridor. While Pluie inspired Y2Y, the A2A effort was prompted by the journey of Alice, a collared moose who was found to have left New York's Adirondack Park heading north. She swam the St. Lawrence River and crossed the 401 before eventually dying of unknown causes in Algonquin Provincial Park, 570 kilometres north of where she began.

For Hilty, Wolf 57 is "another example, almost a decade [after Pluie], of a wolf still being able to make this phenomenal journey." In the intervening years, she points out, the region that both wolves traveled through has seen human populations grow, housing and industrial development expand, and highways widen. So, as with the young male wolf who only made it six kilometres past the U.S. border, Wolf 57 represents proof that movement across roadways and through increasingly developed areas is still possible. "It's a real relief to see an animal that's still moving through this system."

Y2Y works along two prongs: increasing the overall amount of protected land in the wide, mountainous corridor, from Wyoming to northwestern Canada, that gave them their name; and increasing the ease and safety with which animals can travel between those protected areas.



"In 1993, when Pluie was wandering around, there were no overpasses or underpasses designated for wildlife to use to get across these increasingly busy roads," says Hilty. But today, there are more than 130 dedicated wildlife crossings in the region: structures that are built to entice wild animals safely across highways and other roads. When they're done right—built in the right locations, in ways that make animals inclined to use them, and in combination with fencing that funnels the animals away from the pavement—they can lower collision rates by astonishing amounts. One initiative in Virginia reduced roadkill (including deer) by 90 per cent, which also saved numerous human drivers and passengers from death, injury, and trauma along the way.

"I feel like we're moving, in some of the jurisdictions, towards normalizing planning for wildlife safe passage across these roads as just part of the business of roads," says Hilty. "And that's where we need to get to."

WOLVES IN COTTAGE COUNTRY

There are two main ways that cottagers can help prevent wolf-human conflict and ease the passage of wolves through their area. The first is at the policy level. We need to ensure that any new human infrastructure, and changes to existing infrastructure, softens the edges of development to allow animals to pass through. And, says Y2Y scientist Jodi Hilty, “That’s really best done through careful and thoughtful land-use planning that incorporates science.” Property owners can start by learning about the current state of planning and land management in their region. Then, ask questions, offer feedback, and vote for measures such as wildlife crossings.

There’s lots that cottagers can do too. “Wolves are very territorial,” says biologist Wendy Cole, and they can view other canines, including dogs, as competition. Leaving your dog out unattended for long periods of time can be taken as a provocation that can result in an attack. Then, of course, all the usual rules about managing attractants and avoiding food habituation apply to wolves as well as to bears and other critters. (For more on feeding wildlife, see p. 43.)



Have you ever seen a wolf? Not in pictures or video, but in the furry, muscled flesh? I have, once, years ago.

I was driving on a particularly empty stretch of the Alaska Highway on a dark winter morning. I was already more than three hours northwest of my home in Whitehorse and still at least seven hours from my destination of Fairbanks, Alaska. The land around the highway opened up a little as the road crossed a wide, gravelly river bed, and the wolf was standing on the shoulder at the start of the bridge. It was black, and to my amateur eye it looked huge—western wolves are larger than their eastern cousins. (While the Yukon’s grey wolf, or *Canis lupus*, can weigh in at more than 100 pounds, the eastern wolf, or *Canis lycaon*, also known as the Algonquin wolf, lands somewhere between a coyote and a grey wolf in size.) Suddenly I understood why the wolf prints I’ve sometimes spotted in the snow are so much larger than any dog’s I’ve ever known. »

Top: A wolf from the Red Deer pack, in Shale Pass on July 6, 2021. Left and right: Wolves in Banff National Park captured on trail cams in May and October of 2023.



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We slowed the car, scrambling for cameras, but the wolf was gone before we came to a stop. It was a brief glimpse. I've had much lengthier sightings of grizzly and black bears, of moose and elk and caribou, and even of a few lynx, who paused to let me get an eyeful before vanishing. Even so, I've never forgotten that wolf.

There is surely no animal more storied—a source of fear and fascination, legend and libel, and heated debate. Wolves have been blamed for killing livestock and for causing

the decline in wild game populations; they've been hunted and trapped, and also poisoned and shot from helicopters in our efforts to control them. In Montana, they were extirpated (the biologist's term for the functional elimination of a regional population) by the 1930s, and for much of the twentieth century, wolves vanished from the western United States. However, by the late 1970s and early 1980s, wolves from Canada were trickling down into Glacier National Park, slowly reinhabiting the same corner of Montana where Wolf 57 eventually found herself.

Wolves are a keystone species: a critical building block of any ecosystem they occupy. Their absence can have startlingly broad implications for the wild food webs on which all plants and animals rely. Their predation of grazing animals, such as elk or deer, affects the variety and scale of plant life in a given area, for instance, which in turn impacts the viability of beaver habitat, which in

turn can determine the fate of streams and wetlands. Those complex linkages only became more apparent to scientists as the wolves came back. By 1994, there were 48 wolves living in Glacier National Park. The next year, biologists and park managers relocated more than a dozen wolves from the Jasper area to Yellowstone National Park, in Wyoming, in the famous project to re-seed a wolf population there. (The Yellowstone project is a major basis for a lot of the conclusions that have been drawn about wolf re-introductions, although scientists still debate the scale of their impacts.) A group of Canadian wolves was also planted in central Idaho that year; animals from both the Idaho and Wyoming populations ultimately ended up in northwestern Montana, the packs dispersing and mingling across a huge territory.

All of this—the earlier killings, the more recent relocations—was enormously controversial. People are passionate about wolves: about saving them, or about saving ourselves and our properties and our ways from their interference. In the U.S., the fight has most often been over bringing the wolves back; in Canada, it has more often been about whether to attempt to control the existing population, and by how much. In the Yukon, where I live, public consultations on a new wolf management plan in 1992 led to the so-called “wolf wars.” Tires were slashed, threats were exchanged, and friendships were ended over the territory's aerial wolf-kill program. (Government wolf kills were ended in the Yukon in 2012.)

As fascinated and as haunted as we may be by wolves, for the most part, they just want to steer clear of us. And a healthy wolf population, with adequate room to move around in a healthy ecosystem, doesn't need to bother us in order to thrive.

“We've undergone a huge cultural shift from when we were lacing carcasses with poison and almost considering them to be

demons,” says Hilty. She sees progress in areas where, for instance, ranchers have set up carcass-composting programs, removing their dead cattle from the landscape to reduce the temptation for animals to come scavenging. Human supervision of livestock reduces wolf conflict; other deterrents, such as trained bear dogs, can help too. “Those tools can help everyone feel better about large carnivores and can even get people excited about seeing one,” says Hilty.



By the late aughts, there were roughly 500 wolves in western Montana. For context, that’s about the same number as the total population of eastern wolves in Ontario, where the species is listed as threatened. And it’s just one-tenth of the roughly 5,000 wolves that roam across the Yukon. In and around Banff National Park, there are still a half-dozen local packs, including the group from which Wolf 57 dispersed. As of last summer, the Fairholme pack was made up of at least six wolves, including two pups.

A wild wolf’s life is short—generally, much shorter than that of a wolf in captivity. “In Montana, the average lifespan of an adult wolf is only five years,” says Montana biologist Wendy Cole. “If nothing bad happened to Wolf 57, she could have made it seven or eight years...nine would be probably the maximum you’d expect for a wild wolf.”

Wolf 57 was roughly two years old when she disappeared. Did she head straight down to Montana, like the male wolf who was tracked more recently? Did she survive long enough to find a pack, and a mate? It’s impossible to say. Biologists know that greater genetic intermingling is the end result of dispersal, but documenting the process is challenging. And some of the best-known long-distance dispersals that have been recorded through collars and tracking all end the same way: with a bullet. “I like to picture her coming down and joining a pack and being part of the ecosystem here,” says Cole. “I like to think that she lived here a while before dying.”

I like to think so too. 🐾

Eva Holland is a Yukon-based freelance writer. She is the author of Nerve: A Personal Journey Through the Science of Fear.

THE PATH OF WM2001

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