

WOLVES AT THE DOOR: CAN WE LEARN TO DANCE WITH WILD THINGS AGAIN?

By Marguerite Holloway



It was in November, after the cool weather had stolen in, after the firs and cedars had let loose their cones and the aspens had flashed and let fall their fiery yellow leaves. She left her home outside the town of Salmon, Idaho, headed west through the Frank Church River of no return wilderness, alone, making her way through Salmon River country, and on through the Payette National Forest. She climbed the 5,000-foot walls of Hell's Canyon, in view of the towering Seven Devils Range,

crossed the wide Snake River and kept on into the sagebrush and pine country of eastern Oregon. Some 300 miles she went, easing her pace only once she reached the North Fork John Day Wilderness Area.

There, in February, she found the spot. It was rugged terrain in the Blue Mountains, steep and thickly forested, with few roads and fewer people. And just below stretched the broad plains of the middle fork of the John Day River, where herds of elk and deer were wintering. She settled in.

It was not far from there that Frank Steinbeck of Baker City, Oregon, saw her one late, dark afternoon when he was plowing snow on a deserted highway. She was just below the timberline, and she watched him for a while before she moved off down the road. She was extremely beautiful: silver, with long legs, thin and sleek. "She had the prettiest hair coat on her that I had ever seen on an animal," says Steinbeck. "And I said to myself, 'That animal has wolf written all over it.'"

B-45—or Freedom, as she was dubbed by an Oregon eighth-grader—is perhaps the most famous wolf in the West. The daughter of a pair of gray wolves reintroduced to Idaho in 1996 from British Columbia, B45 is said to be the first wild wolf seen in Oregon in over 50 years. Following her arrival in 1999, she was reviled and revered in equal measure in articles and editorials, town meetings, and a string of political speeches. Among many ranchers, B4 has rekindled a profound fear for their often tenuous livelihood. At the turn of the century, that fear led to the sanctioned trapping and killing of every last wolf in the West. It is a fear cloaked in hatred and sometimes accompanied by myths of man-eating. It is the fear underlying the sentiment "The only good wolf is a dead wolf."

And so, although many Oregonians were delighted to see her wild and wandering in their backcountry, there was no middle ground for B45, no quiet place for her in the North Fork John Day Wilderness. "Oregon was pretty concerned about the prospect of having wild wolves in the state, particularly because people were caught off guard," says Curt Mack, leader of the Nez Perce tribe's Gray Wolf Recovery Project in Idaho. "But B45 is just a precursor of things to come."

That is because B45 is what biologists call a “disperser.” When 66 wolves were airlifted from British Columbia and Alberta into Idaho and Yellowstone National Park in the mid-1990s, scientists hoped nascent populations would become big enough to move out of areas where they had been introduced. Ideally, wolves from Idaho and Yellowstone would intermingle with one another and with wolves that, in the early 1980s, had come down from Canada of their own accord and settled in Glacier National Park in northern Montana. The hope was that such interbreeding would produce a genetic makeup diverse enough to help ensure the return of this important predator. Then, ultimately, the gray wolf would come off the endangered species list.

Not only is all of that no longer wishful thinking, it is progressing much faster than anyone anticipated. And while B45 may be famous, she is not unique. Wolves are reproducing—there are now more than 300 wolves in Idaho, Montana, and Wyoming—forming packs, and dispersing hither and yon, doing what wolves do, which is ignoring political boundaries and showing up where they are not expected. There are so many wolves now that Yellowstone has no room for more. All the prime areas in the 3,600 square miles of park have become the marked territory of seven packs. A pack of wolves, typically five-fifteen in number, needs about 200 square miles of open parkland to support itself. So some wolves in Yellowstone must move on. Two years ago one male made it from the park—moving mostly through private land—into Idaho, and he may now be the alpha male of the Snow Peak Pack in the northernmost reaches of the state.

“Dispersing wolves are very important to population stability on the whole,” says Mack. “They tell us that the recovery process is entering a new level of success.”



But success has brought angst—at least among people who make their living off livestock—and a sudden casting about for solutions. So far, wolves have killed very little livestock, “but it is going to be a big problem,” says Edward E. Bangs, the U.S. Fish and Wildlife Service biologist who heads the program to bring wolves back to the northern Rockies. So scientists are starting to experiment with different approaches to keep wolves away from domestic animals: from low-tech strategies involving guard dogs, burros, and wolf urine, to higher-tech devices involving radio collars that can inject nausea-inducing chemicals. Technology is increasingly seen as a way to help manage large predators. “It’s the new millennium; the thinking is evolving,” says Michael Phillips, former head of the Yellowstone Wolf Project. “Now that we have brought them back, we need to think about coexistence.”

Bringing B45 back from Oregon was not easy. After Steinbeck’s spotting near Baker City, biologist Tara Wertz of the Oregon Department of Fish and Wildlife tracked B45 for a month while the rancorous debate raged about whether she should stay or be sent home. Wertz checked on B45 twice a week or so during regular overflights for black bears and elk, until it was resolved that Oregon really was not ready for wolves. Then, for two days in late March, a plane and helicopter worked in tandem, following B45’s radio-collar signal, trying to flush her out of the woods and into an open patch where they could shoot a net gun at her. It is a process that typically takes 15 to 45 minutes. But a snowstorm closed in on the first day, and by the second, B45 had moved off the river plain, away from the wintering elk, and high up into the mountains

and thick tall pines. Around midday, after a morning of loping at 25 miles an hour and twice eluding her captors' nets, B45 finally dashed across a small clearing and was quickly trapped, trussed, and taken back to Idaho.

A month after her release that evening, B45 settled in north of McCall in the Payette Forest, about 100 miles from where biologists had set her free. She seems to have found a mate and is thought to be expecting the members of a future pack. "It is exciting for wolf recovery and it is exciting for B45," says Mack. "It is probably not too exciting for the folks who run sheep up there."

Margaret Soulen Hinson would have to agree. "She is pretty close to one of our summer allotments," says the rancher, whose family has been raising sheep for the last 75 years. "She never got into the sheep, but I am worried about this next summer." Over the last 4 years, Soulen Hinson has lost 98 animals to wolves. "I have very mixed emotions. I don't want—nobody wants—to see any species eliminated from an area. I was comfortable [with the idea of] the wolves staying in the wilderness and not eating domestic livestock. I was really comfortable with that. But I didn't think that was going to be a reality."

This spring and summer, Soulen Hinson will collaborate with biologists from the University of Montana at Missoula and Defenders of Wildlife, a conservation group that has created a well-known fund to reimburse ranchers for wolf-related losses. (Since 1987, Defenders has paid 113 ranchers \$112,106 for 149 cattle, 319 sheep, and 14 other domestic animals.) The plan is to place varying numbers of guard dogs around Soulen Hinson's seven bands of sheep (there are about 2,200 ewes and lambs to a band). Soulen Hinson has 27 Great Pyrenees, of which the Defenders paid for . The scientists will study how to assemble the most effective team of guard dogs.

Improving the use of guard dogs is the grassroots end of wolf management—along with guard burros, another possibility that Defenders of Wildlife is considering. Since the late 1980s, the Bureau of Land Management has been promoting the use of burros in the Dakotas, Texas, and other states to keep sheep safe from coyotes and feral dogs—an idea borrowed from the Zuni and Ute Indians. "Burros have an absolute bad attitude toward canines. They go nuts," says Suzanne Laverty of Defenders. "They go running at them, they start flailing their hooves, gnashing their teeth. It is great. They are very, very protective." And, she adds, they are cheap. She estimates the cost of one burro—raised with the animals it is supposed to protect so it can bond with them—to be \$300. The burro would then graze with the wandering herd and need hardly any other upkeep.

Confidence about burros or dogs is not universally high, although researchers and ranchers agree the strategies are worth testing. Burros might do well protecting sheep from coyotes, they say, but wolves are fiercer—they can go after elk, burros, or for that matter, large guard dogs. "The thing about these wolves is that they just look at those big guard dogs as wieners-on-a-stick," says Tom Ruffatto, a cattle rancher in the Bitterroot Valley, Montana, near the Idaho border.

Ruffatto himself has tried a technological solution. In the spring of 1999, biologists trapped and collared a male wolf near his property. Later they informed him that there were eight pups as well. Having lost calves to wolves before, Ruffatto and his neighbor, Edward Cummings, came up with the idea of tuning a hazing device to the wolf's radio-collar frequency. "If the wolves are collared, use it to your benefit," says Ruffatto.

The device—designed by the U.S. Department of Agriculture’s Wildlife Services division and paid for, in part, by Defenders—consisted of a radio receiver hooked up to sirens and strobe lights in the trees on Ruffatto’s calving grounds. When the wolf came by, his collar triggered two sirens and strobe lights that ran for 30 seconds. “It looks like UFOs landing,” says John Shivik, who built the device in the service’s National Wildlife Research Center in Fort Collins, Colorado. “You have to warn the neighbors.”

The wolf, apparently, didn’t want to stick around and see if dinner would have been out of this world. “Every couple of days, you could hear the sirens,” says Ruffatto. “Like I say, he had so many kids, he was just hustling to find something to eat. They have to eat too. I can get along with the wolves as long as they don’t chomp on my livestock.” Last spring, he adds, while the herd was on the calving grounds, the wolves didn’t kill any cattle. The device “did a wonderful job for the area it was in.”

The problem with this kind of alarm is habituation—and cost. (Not to mention the alarm will be triggered only by local wolves that have been radio-collared.) Hazing techniques, including sirens, strobes, and alarms, have been tested on coyotes, and although they deter effectively for a while, the coyotes get used to them and go right back after the sheep. Shivik thinks habituation can be delayed by changing the pitch, duration, and location of the alarms. And some of his preliminary tests suggest he is right—at least for coyotes. Only two of 14 coyotes habituated when the system was rigged so that the coyotes activated the alarm by coming close to food rather than simply trespassing onto the test site. Shivik is working with a company that may manufacture the device, reducing the cost from \$10,000—the prototype’s price—to between \$2,000 and \$3,000.

Sound-and-light shows are just one of the strategies Shivik and others are pursuing. Borrowing again from work on coyotes, researchers are looking into shock collars for wolves. Using an electric dog-training collar, William F. Andelt of Colorado State University and his colleagues from the National Wildlife Research Center shocked five coyotes that approached or started to chase sheep. As his team reported in the spring 1999 issue of the *Wildlife Society Bulletin*, the collars prevented every one of 13 attacks on the livestock. The researchers also found that over four months later the coyotes were still sheep-shy. In the study, the biologists triggered the shock, but researchers maintain that livestock can be fitted with collars or cowbells that will activate the shock collar if the predator approaches or attacks.

Shock collars will most likely be tested on wolves at a newly constructed facility on Ted Turner’s Flying D Ranch outside Bozeman, Montana. Phillips, former head of Yellowstone wolf recovery, is now executive director of the Turner Endangered Species Fund, and he agrees that aversive technology can play a role in wolf management. “There hasn’t really been a concerted effort to develop aversive conditioning for gray wolves,” says Phillips. “We need a suite of tools.”

Another of those tools would also involve collars, but this time they would contain a nausea-inducing chemical that could be injected into the wolf’s neck. Triggered by observers or by a device on the cow or sheep, the injection would cause the wolf to become violently ill whenever it approached the object of its desire. The strategy would be to collar and train wolves in captivity, remove the collar before they’re released into the wild, and then see if the aversive conditioning lasts. This idea builds on some 1970s experiments that used taste-aversion chemicals sprinkled on carcasses to induce predators to avoid the live version. But the results were unclear, and some biologists say the evidence suggests the laced bait proved little deterrent when the predator was presented with a live sheep. Studies involving noxious chemicals

slathered onto the sheep themselves seem to have better results, but there is the slight problem of the chemicals ending up in people. “Anything that you are going to put on would involve the EPA and registration, and you are talking \$1 million to \$3 million in three years to just talk about the thing,” says Shivik.

Back at the low-cost end of the spectrum is another, common chemical that may prove potent: urine. Phillips says he is intrigued by the possibility of exploiting the wolves’ own social ecology. Wolves are known to scent-mark the boundaries of their territory. What is, Phillips wonders, biologists get some of the wolf-dog hybrids that are running all over the West and periodically walk them around a ranch? “They pee on the bush, leave little bits of hair here and there,” says Phillips, “and create the impression that there is a resident pack. Exploit the ecology of the wolves themselves.”

Although no one has tested the scent-marking approach on wolves, an informal experiment with tiger urine in the Southwest seems to have deterred another large predator, the cougar. Workers on Turner’s Ladder Ranch visited the Albuquerque Zoo, procured some Bengal tiger urine, and spread it around the ranch. Cougar-no-more, according to the ranch hands. “But that is just anecdotal,” Phillips cautions. The final word won’t come until researchers complete a more rigorous study of the same strategy. That study will closely monitor any change in cougar behavior by tracking movements with radio collars.

The pursuit of new ways to keep wolves at bay has a desperate feel to it—as if time is running out. B45 and the Idaho wolves and their counterparts in and around Yellowstone are classified as endangered for now, but they can be killed under section 10(j) of the Endangered Species Act, which describes these particular reintroduced wolves as “experimental” and “nonessential.” This language means that the animals can be killed if they prey on livestock. (In contrast, the wolves in Glacier National Park and those throughout northwestern Montana are fully protected because they came down from Canada naturally. They cannot be legally shot for killing sheep or cattle.) As the wolves start to spread far and wide, loping through ranching land, livestock will become more vulnerable—and, in turn, so will the wolves.

When plans were being drawn up for the wolf reintroduction, recovery was defined as having 10 breeding pairs in each of the three recovery areas for three years. By the end of 1999, only Idaho had reached that number. Yellowstone has eight pairs, and the Glacier wolves have five breeding pairs. At this stage, explains Bangs of the Fish and Wildlife Service, each state involved should create a management plan for when recovery targets are met. If those plans prove acceptable, the federal government will move to take wolves off the endangered species list in a few years. Although the plans will have to ensure that the species would not suddenly careen toward being relisted, delisting would mean that wolves could be legally killed, and each state must decide under what circumstances. Some may institute a legal hunt; others may permit only ranchers to kill encroaching wolves.

Many biologists and wildlife managers see the freedom to control the wolf population through limited hunting or other methods as essential to the long-term success of the animals. “People have got to be able to respond to problem,” says Mark Henjum, Wildlife Program Supervisor for northeastern Oregon. “Otherwise the wolf will become demonized and that is not a good thing. That is going to take us right back to where the whole thing started.” Phillips agrees: “Private landowners should have the same rights as they do to manage cougars. They have to report the incident, but there is more liberal management.”

And this is why he and so many others are considering deterrents and aversive technology. The hope is that some balance can be reached between killing the wolves that prove to be a real menace to livestock, and hazing the rest so that they don't bite the beef in the first place. "You are not going to recover gray wolves if all you have is lethal control," says Phillips. "We can be more artful, more sophisticated."

The argument against this approach is that managing the wild so thoroughly hardly lets it be wild. Despite the B45 provoked, she clearly elicited in many people some great joy about keeping the West untamed. There seemed to be something enchanting about B45's odyssey and her wild disregard that impressed everyone she came in contact with. "She was a very interesting wolf because of her beauty and her speed, and the fact that she learned so quickly," says Gary Brennan, the wildlife capture specialist whose crew finally, but just barely, caught B45 and returned her to Idaho. "She used almost every tactic I have ever seen a wolf use. Usually a wolf has one or two, but she had a whole bag of tricks." When she entered a clearing, for example, she would turn and stay close to the trees. Even the handler who subdued and muzzled B45 was not immune to her charms. "He has cattle and is not too fond of wolves," says Brennan. "But he fell in love with that wolf."a

