

## Wolf Wars



By Douglas Chadwick

Wolves, when you get down to it, are a lot like us.

They are powerful, aggressive, territorial, and predatory.

They are smart, curious, cooperative, loyal, and adaptable.

They exert a profound influence on the ecosystems they inhabit.

Nevertheless, we have problems with wolves, no doubt about it. Maybe we can't wrap our minds around both the big bad wolf and the close relative with the adoring gaze that follows us around the house. Or maybe it's because gray wolves are the planet's most widespread large land mammals after humans and their livestock and—in the Northern Hemisphere—have long been our most direct competitors for meat.

Whatever the reasons, humans are at war with wolves. It is an ancient dispute over territory and food between their clans and ours, and its battleground spreads across the northern Rocky Mountain states and right up to the door of my remote cabin near Montana's Glacier National Park. A young female named Diane marked the place by peeing on the front-porch mat.

There is a den not too far away atop a timbered knoll sheltered by overhanging boughs. Dug between tree roots, the opening gapes like a maw and extends underground for 18 feet—a manor by wolf standards. The ground around it is worn bare by generations of pawed feet. Paths lead to an open hillside overlooking a mile-long meadow fringed by autumn-colored aspen and willow, hushed except for the occasional call of a raven. The snowy peaks of the Continental Divide rise in the distance, and a wild river flows close by. Wolf tracks intersect with the prints of elk, deer, moose, and grizzly bears. Though the pups reared here are running with the adults now, the pack isn't far away, according to the radio signals of the alpha female.

Many had thought the war was over. Relentlessly shot, trapped, and poisoned, even in nature reserves, gray wolves were gone from the West by the 1930s. In 1974, when *Canis lupus* was declared endangered in the lower 48 states, the gray wolf population was confined to a corner of northern Minnesota and Michigan's Isle Royale National Park out in Lake Superior.

Then, during the mid-1980s, a handful trotted down the Continental Divide from Canada. Two settled in the hidden meadow in Glacier and in 1986 reared five pups. Footsore biologists trying to keep track of the newcomers dubbed them the Magic pack for the way they seemed to vanish and reappear like wisps of ground fog.

The pack grew and soon split into two, then three, keeping mostly within the park. Some animals broke away and dispersed to neighboring national forests. Then all at once, a pair was denning on private ranchland 90 miles southwest of Glacier and less than 30 miles from the Idaho border.

People began to report wolves in both Idaho and northern Wyoming. Still, there was no proof those wolves were anything but passing wanderers. Not yet.

In 1995 and 1996, the U.S. Fish and Wildlife Service captured wolves in Canada and released them into 2.2-million-acre Yellowstone National Park and central Idaho's wilderness areas. The unprecedented federal action triggered such an eruption of hope, fear, resentment, lawsuits, and headline news that most people assume the whole return of the wolf to the West began that way. It didn't, but those reintroductions worked like a rocket booster. Populations grew, and the war escalated.

During 2008, wildlife agents confirmed 569 cattle and sheep deaths from wolves throughout the West. That amounted to less than one percent of livestock deaths in the region, but the damage is never distributed equally. The same year 264 wolves were killed for attacking livestock in Montana, Idaho, and Wyoming. That's a big number, but it was taken from a wolf population now grown to around 1,600, roaming the region in more than 200 packs. Today there are two new packs in northeastern Washington and, some whisper, a small enclave in Colorado as well. The West is getting wilder by the hour.

Wildlife enthusiasts and tourists couldn't be happier. In Yellowstone alone, tens of thousands come to watch wolves each year, adding an estimated \$35 million to the area's economy. Scientists are documenting ecological changes tied to this top predator's return that may hold the potential to repair out-of-balance wildlands, making them more stable and biologically diverse.

On the other hand, some folks say they no longer feel as safe taking their families into the woods. Sportsmen complain too—bitterly. To many out West, where interior decorating tends to involve antlers and come fall, "Howdy" is replaced by "Get your elk yet?" wolves are depicted as four-legged killing machines—land piranhas—ravaging game populations. Guys mutter about taking matters into their own hands and to hell with the Feds. Bumper stickers show a crossed-out wolf and the slogan "Smoke a Pack a Day."

In May 2009, the wildlife service declared the species recovered in the northern Rocky Mountains and handed over responsibility for them to Montana and Idaho. Both instantly labeled them game animals and set quotas for the first legal wolf hunts in either state's memory—75 in Montana, 220 in Idaho. "It's amazing—from a single, endangered pack to a huntable surplus across a whole region," says Jim Williams, the Montana Department of Fish, Wildlife & Parks wildlife program manager for northwest Montana. "This is the most striking Endangered Species Act success story I can think of." Maybe. In November 2009, Idaho extended its season to last until the quota is met, or until March 31, whichever is sooner. The change could open the door to hunters traveling by snowmobile and to the killing of pregnant females.

After an earlier federal decision to de-list Western wolves in 2008, Wyoming essentially defined the animals as varmints, or pests, allowing virtually unlimited shooting and trapping year-round. A resulting lawsuit forced the wildlife service to temporarily put wolves back on the endangered list. (Since then, the service has refused to take them off in Wyoming until that state comes up with a different plan.) Meanwhile, a coalition of 14 environmental and animal protection organizations led by Earthjustice is suing the federal government to relist all wolves until the Western states develop a regional conservation strategy that includes core protected areas and buffer zones where wolves can live in normal packs that won't get shot to pieces.

John and Rae Herman run 800 head of Angus cattle in western Montana's Hot Springs area. They grew up in America's golden age for pastoralists, in rolling valleys of bunchgrass and sage with forested mountainsides—with virtually all large native predators wiped off the landscape.

"We'd usually be missing three to five calves at roundup," John says. "Now it's closer to 25. This spring our calving grounds down near the house got hit. Seven calves were confirmed wolf kills, so we were reimbursed for them."

The trouble is if ranchers don't come across a carcass right away, scavengers may drag off or shred all the evidence. Many say in some areas the actual kills by wolves may average as high as seven for every one that can be proved, but no confirmation, no compensation. And dead and missing animals are only part of the toll. Cattle harassed by wolves over one season can lose 30 to 50 pounds each. On top of that, hormonal effects from stress kick in. "We had 85 pregnant heifers this spring, and 60 aborted," John says.

"The worst part," Rae says, "is that 23 of the cows that aborted were in our son's starter herd of 25. He's stuck with a \$7,500 bank note and two calves to pay it off with. We'll end up selling some mother cows to offset our losses, so we'll be going backwards."

Stock with leg injuries from chases or infections from wounds become unmarketable. And after brushes with wolves, mother cows stay ornery and extra protective of calves. The Hermans aren't the only ranchers to say it is harder to wrangle such cattle in pens; who don't even think about using their dogs; who consider the fact that if you drive those cows onto prime range the next summer, they may not stay because the upland forests are where the wolves hang around.

The Blackfoot Challenge ranchers—a cooperative established in 1993 to conserve the rural setting in west-central Montana's Blackfoot River watershed—are trying a range rider program. I'm patrolling with the lone rider himself, Peter Brown, who travels by pickup truck, motorcycle, or foot. He monitors the whereabouts of wolf packs in relation to cattle and reports daily to ranchers so they can move herds to safer grazing spots or keep a closer eye on them. Electric fencing now surrounds calving lots in many risky areas. To visually warn wolves away from other pastures, Brown sometimes turns to the old European technique called fladry, stringing wire with bright flags along its length.

As we scan some bottomlands amid October snow flurries, Brown's gaze is drawn by ravens, among his surest guides, to a carcass. In this case the birds are merely scavenging elk guts left by a human hunter. So is a raven-black wolf from the Elevation Mountain pack. Yet four deer are grazing peacefully across a fence line, and scores of cattle are doing the same 200 yards beyond.

"A herd's behavior is our early warning system," Brown notes. "What I look for is cattle bunched up or running, or just looking around alertly and calling. I also keep an eye out for unhealthy stock, which can attract predators. I think that just by moving around the area, my presence deters wolves from killing livestock. The wolves are learning and adapting at least as fast as we are. Besides that, we have good populations of natural prey here. I've seen wolves walk right through cattle herds to stalk deer."

Ranchers used to leave stock that died of disease, birthing problems, and accidents lying on the range or collected in heaps called bone piles. But "as predators began to recover, the carcasses kept luring them into trouble," explains Seth Wilson, a conservation biologist who coordinates the range rider program. "Now we collect carcasses right away and compost them at a distant site. It's one of the simplest and most effective ways to reduce conflicts with both bears and wolves. It just requires changing old habits."

The question is no longer how to get rid of wolves but how to coexist with them. Family rancher David Mannix says, "We have to realize that the general U.S. population wants wolves. That population is also our customers for beef. It's not a good idea to tell your customers they don't know what they're doing. So instead of taking a hard line and fighting to get everything back to where it was 50 years ago, we're trying things like the range rider."

"But if ranchers can't make a living," stockman and veterinarian Ron Skinner says, "the alternative these days is usually subdivision for real estate, and there goes an awful lot of the open space and prime wildlife habitat in the West."

When the new wolves in Yellowstone first came calling, the area's elk and moose stood their ground as though they were still dealing with coyotes. Bad plan. Today Yellowstone holds half the elk it did 15 years ago. Yet by most measures the population had swelled too high, and their range was

deteriorating. Shortly after killing the last Yellowstone wolves in 1926, park officials were culling elk by the thousands. The elk kept rebounding and overgrazing key habitats, creating a perpetually unnatural situation for a park intended to preserve nature.

With a near-unlimited meat supply, Yellowstone's new wolves rapidly multiplied. But the count abruptly fell in 2005. It increased again, reaching 171 in 2007, then sank to 124 by the end of 2008, a 27 percent drop this time. Doug Smith, leader of the Yellowstone Wolf Project, recorded the fewest breeding pairs since 2000. "We have a declining wolf population," he says. "Numbers never got as high as we expected based on the availability of prey. This suggests that once wolves reach a certain density, you start to get social regulation of their numbers."

Clashes with humans are by no means the only wolf wars under way.

Yellowstone's Druid Peak pack established its territory in 1996 and has held it ever since. In all probability they have been the most watched group of wolves in the world: The wide-open country they claim on both sides of Wyoming's Lamar River Valley is bisected by one of the park's main roads. On a late October morning the temperature is reading 4°F. Hoarfrost coats the noses of bison below one of the Druids' favor-ite rendezvous sites. Scattered elk graze the same slope, and two coyotes are picking over the remains of an elk calf on the river's shore. I spy no wolves, but Laurie Lyman, a former teacher who moved from California to be near Yellowstone's wolves and has watched them almost daily for several years, lowers her binoculars to tell me about the ones she saw yesterday.

Two Druids—a female labeled Number 571 and her younger brother, called Triangle Blaze, for his white chest patch—were traveling by the river when three invaders from the new Hurri-cane Mesa pack appeared. The groups exchanged howls and then ran at each other. Outnumbered, the Druid pair gave way first, but the Hurricanes caught up to 571. Four times they pulled her down onto her back. The final time two held her on either end while the third—and largest—bit into her chest, shaking and tearing with its teeth. "That's when Triangle Blaze jumped in," Lyman recalls. "He came to her rescue, fighting off the Hurricanes. They started chasing him, but not before 571 got in a bite on one's rear. She escaped across the river. When her brother finally rejoined her, he was limping, and she was bleeding from her wounds."

During 2008, Yellowstone saw twice as many wolves killed by other wolves as in any previous year. Distemper claimed a record share too, after hitting the population in 1999, 2000, and 2005 as well. Parvovirus, another deadly canine disease, has been detected in the area. And like many packs, the Druids are suffering serious hair loss from an epidemic of mange.

Loss of superabundant prey is another issue, Smith says. There are still close to 10,000 elk wintering in Yellowstone and perhaps double that number summering in the park. "But wolves are very selective hunters," Smith says. "What counts for them is the amount of vulnerable prey."

Much as experience with wolves can transform cattle into not-so-domestic animals, pack-hunted elk turn into less vulnerable quarry. They become more vigilant and keep on the move more. In the wolfless era, herds practically camped at favorite winter dining spots, foraging on young aspen, willow, and cottonwood until the stems grew clubbed and stunted like bonsai plants. Released from such grazing pressure, saplings now shoot up to form lush young groves. More songbirds find nesting habitat within their leafy shade. Along waterways, vigorous willow and cottonwood growth helps stabilize stream banks. More insects fall from overhanging stems to feed fish and amphibians. Beavers find enough nutritious twigs and branches to support new colonies.

Surveying the huge northern range, where most of the park's elk winter, Doug Smith turned up just one beaver colony in 1996—the lowest tally in decades. By 2009, he recorded 12. Along Crystal Creek I find another recent beaver dam storing water, releasing a more constant flow for riparian species downstream through the dry months. Ponds and marshes that form behind the dams create habitat for moose, muskrat, mink, waterfowl, wading birds, and an array of other wildlife. After wolves moved in, cougars that had begun hunting the valleys retreated to the steep, rocky terrain they normally inhabit. The big canines killed nearly half the coyote population. They may have rebounded a bit, but the coyotes now live in groups with shrunk territories or as vagabond "floaters." With less competition from elk for grasses, bison may be doing better than ever.

From a single new predatory force on the land-scape, a rebalancing effect ripples all the way to microbes in the soil. Biologists define the series of top-down changes as a trophic cascade. In a nod to the behavioral factors at play, others speak of the "ecology of fear."

Cristina Eisenberg is a five-foot-two-inch, hundred-pound answer to the question of how dangerous wolves are to people. Over the past four years she has studied wolves, elk, and aspen in Glacier Park, often on its west side among two large wolf packs, one with 20-plus members. They sometimes watch as she and an assistant measure habitat features. Then the wolves pull out her marker stakes. During a blinding snowstorm, they silently took down an elk a stone's throw from Eisenberg.

Our afternoon survey leads to a trampled-down rendezvous site. The Dutch pack has dragged in ceramic shards, cans, pots, pieces of iron tools from abandoned homesteads in the park. Canine junk collectors. Who knew?

But what Eisenberg wants to show me is an aspen stand. Its upper tier consists of towering trees that arose between 1840 and the 1920s, before wolves were eliminated. The bottom row, 15 feet high, is of saplings that shot up after wolves returned. There are no aspens in between. None got past the elk's mouths. By contrast with Yellowstone, elk numbers haven't changed much here. As far as Eisenberg can tell, the recent aspen growth is almost all due to wolf-inspired changes in elk behavior.

The wolves' diet here is mostly white-tailed deer. Northwestern Montana has at least twice as many cougars as wolves and twice as many grizzly bears. Together they kill more adult deer and fawns than wolves do. Coyotes and black bears take a share as well. On top of that, the area has had two tough winters in a row. Deer totals dropped even where few predators prowl. Yet overall deer numbers remain within the historical average. For that matter, both elk and deer are doing well across the West. As game manager Jim Williams puts it, "With wolves back in the picture along with cougars and bears, we'll have places where elk and deer may never be as abundant again as people remember, and we'll have other places where they'll do fine. There are bigger drivers than wolves in these systems." Studies have shown that winter weather and the quality of wintering habitat are really what control deer and elk populations over time. That and human hunting.

Craig Jourdonnais is the state game department's wildlife biologist for Montana's Bitterroot Valley, near the Idaho border. Until recently, he says, most gripes about wildlife concerned elk raiding haystacks and deer damaging crops and gardens and being a danger on highways.



"Now we have 10 to 12 wolf packs for a minimum of 45 to 60 wolves. We also have 14,000 hunters coming through the Bitterroot check station in a given year." The main complaints he hears these days are about wolves overrunning the place and wiping out elk and deer. "I've been on the job 30 years, and I've never worked with any critter that raised so much emotion."

Somehow, Jourdonnais is supposed to make a place for wolves where recreation and livelihood intermingle. He understands that big-game hunting in Ravalli County is worth \$11.2 million annually. He also sees game losing critical winter range to subdivisions up and down the valley but knows that the one topic as hot as wolves out West is planning and zoning.

Bottom line? Survival rates for young game animals are lower the past couple years. Wolves may be partly responsible, but winter may be too. Overall, Bitterroot deer numbers are still fairly good. Whereas the elk total stood below 3,000 in the 1970s because sportsmen were allowed a generous take of females, it's currently above 6,000. A thousand of those animals have learned to retreat before the hunting season to a private ranch where only limited shooting is allowed.

Large mammals are learning and changing their behavior all the time: deer, elk, bears, wolves, and yes, humans too. For our part it seems we need to formulate better answers to the questions posed by the return of wolves—not the wolves in our minds but the real wolves watching from the mountainsides. When we say we want to conserve wildlife communities in America, does that mean including the wolf, or not?

## Before & After Wolves

Restoring wolves to Yellowstone after a 70-year absence as a top predator—especially of elk—set off a cascade of changes that is restoring the park's habitat as well.

**YELLOWSTONE WITHOUT WOLVES 1926-1995**

**ELK** overbrowsed the stream side willows, cottonwoods, and shrubs that prevent erosion. Birds lost nesting space. Habitat for fish and other aquatic species declined as waters became broader and shallower and, without shade from streamside vegetation, warmer.

**ASPEN** trees in Yellowstone's northern valleys, where elk winter, were seldom able to reach full height. Elk ate nearly all the new sprouts.

**COYOTE** numbers climbed. Though they often kill elk calves, they prey mainly on small mammals like ground squirrels and voles, reducing the food available for foxes, badgers, and raptors.

ART BY FERNANDO G. BAPTISTA, NO STAFF; AMANDA HOBSIE, NO STAFF  
SOURCES: ROBERT L. BESCHTA AND WILLIAM J. RIFFLE, OREGON STATE UNIVERSITY; DOUGLAS W. SMITH, YELLOWSTONE NATIONAL PARK

**YELLOWSTONE WITH WOLVES 1995-PRESENT**

**ELK** population has been halved. Severe winters early in the reintroduction and drought contributed to the decline. A healthy fear of wolves also keeps elk from lingering at stream sides, where it can be harder to escape attack.

**ASPENS** The number of new sprouts eaten by elk has dropped dramatically. New groves in some areas now reach 10 to 15 feet tall.

**COYOTES** Wolf predation has reduced their numbers. Fewer coyote attacks may be a factor in the resurgence of the park's pronghorn.

**WILLOWS, cottonwoods,** and other riparian vegetation have begun to stabilize stream banks, helping restore natural water flow. Overhanging branches again shade the water and welcome birds.

**BEAVER** colonies in north Yellowstone have risen from one to 12, now that some stream banks are lush with vegetation, especially willows (a key beaver food). Beaver dams create ponds and marshes, supporting fish, amphibians, birds, small mammals, and a rich insect population to feed them.

**CARRION** Wolves don't cover their kill, so they've boosted the food supply for scavengers, notably bald and golden eagles, coyotes, ravens, magpies, and bears.

Aspens

Elk

Coyote

Willow

Raven

Young aspens

Pronghorn

Grizzly bear

Willow flycatcher

Willow

Beaver

Green-winged teal

Yellowstone cutthroat trout

Wolves

Boreal chorus frog