

The Buffalo Wars

by

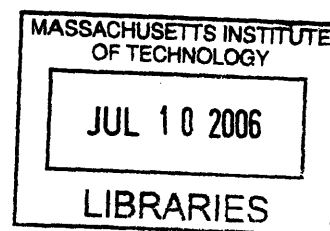
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Submitted to the Program in Writing and Humanistic Studies in Partial Fulfillment of the  
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Submitted to the Program in Writing and Humanistic Studies on May 28, 2006 in partial fulfillment of the requirements for the Degree of Master of Science in Science Writing

## **Abstract**

The wandering buffalo of Yellowstone National Park are the subject of a heated debate in the western United States. The animals carry a disease called brucellosis, which infects both buffalo and cattle and has economic consequences for ranchers. Some ranchers fear that buffalo, as they migrate out of Yellowstone in search of forage, will transmit the disease to cattle around the park and jeopardize their financial well-being. The Park Service and other government agencies have tried to control the situation by exercising a lethal form of boundary control for buffalo, though other wildlife species are unregulated. Animal advocates dispute the agencies' tactics. Native Americans wonder why the buffalo are entirely under agency control. The park has become somewhat of a war zone, where the groups quarrel throughout the migratory season. Their disagreement is about much more than the animals themselves, taking root in even older and deeper conflicts. Yet despite the tangled nature of the problem, there may be room for negotiation and eventual resolution.

Thesis Advisor: Marcia Bartusiak

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## The Buffalo Wars

Most everyone knows Yellowstone National Park, the idyllic preserve at the juncture of Wyoming, Idaho, and Montana, where the coyotes howl and the buffalo roam. But many don't know Yellowstone in winter, when thousands of hoofed animals leave the park in search of food.

The town of Gardiner, Montana, is often host to these wintertime tourists. As vehicles leave Gardiner to enter Yellowstone through the historic Roosevelt Arch, they are met by buffalo headed toward town. The buffalo amble through the arch, down a shallow hill, and stop to graze among the picnic tables of a park. Casually, they move to a high school football field to browse between goalposts. One female buffalo pauses outside the colorful window of a second grade classroom, disrupting bus traffic.

The town is used to the influx. In fact, the incoming wildlife is a source of pride and a bit of a town joke. On the edge of town, the Yellowstone Village Inn has posted a sign on its lawn that reads "Elk Stay Free." Every winter, the elk bed down under it. "Yeah, they like it a lot," says the hotel clerk. "We get lots of critters."

Down the street, a mule deer tears needles from the shrubbery in the parking lot of a local restaurant. Once discovered, she picks up her head, rotates her ears like satellite dishes, then trots off to a backyard.

Some forty miles southwest, near the town of West Yellowstone, the story is similar. Lines of buffalo lumber across route 191, headed for a peninsula called Horse Butte. So many cross the road each year that a highway sign warns tractor trailers of "wildlife migration in progress."

Buffalo migrate because of snowfall. They begin the winter on high plateaus deep within the park, where snow accumulates during harsh winters. If snow piles up and crusts over the grass, the buffalo move downward in search of forage. They follow rivers and streams out of the park to historic wintering areas. Groups in the north travel

along the Lamar and Yellowstone rivers toward the northern border. As they journey downslope, dry winter grasses and sedges begin to poke slender tassels through the snow; grassy hillsides open; then the snow cover is gone. Gardiner is a gateway to wide, flat, grassland—a buffalo’s promised land. In the west, buffalo follow the Firehole and Madison Rivers, Cougar Creek, and Duck Creek. That path leads them slowly down to Horse Butte and the Madison River Valley, where the snow is fluffy and easily pushed aside.

But the buffalo do not stop at the towns just over park lines; they also enter the patchwork of lands beyond. They wander out of Wyoming, through national forests, and onto private ranches in Montana and Idaho.

For some, just one buffalo outside of Yellowstone is too many. The animals carry a disease called brucellosis, caused by the bacterium *Brucella abortus*. The disease infects wildlife and cattle, and some ranchers fear that Yellowstone’s wandering buffalo will pass it to their herds. Brucellosis does little to buffalo, causing occasional abortions. But in cattle, the results are more serious—at least from a rancher’s point of view. Cows abort and produce less milk, and bulls can become infertile. In one rancher’s words, an infection in his herd would simply “break me.”

For decades the Park has struggled with how to manage the problem. In 2000, it and four other government agencies released the newest strategy for keeping diseased buffalo inside Yellowstone. It is a unique set of rules that applies to no other wild animal in the park. Inside park boundaries, the buffalo belong to the National Park Service. The current population of about 4,000 are free to wander, graze, and rub the pine trees. But those that step over the park lines become the state’s responsibility.

Should the buffalo set foot in Montana, Montana’s Department of Livestock (DOL) and other agencies round up the strays, shuttle them into corrals near park borders, test them, vaccinate them, and send suspected *Brucella* carriers to slaughter. Montana recently added a buffalo hunt, suspending the roundups at times to offer fifty residents (chosen by lottery) the opportunity to shoot buffalo outside park lines.

According to the agencies, it is all for disease control. Brucellosis must not reach Montana's cows, say both the Animal and Plant Health Inspection Service (APHIS), the disease-control arm of the U.S. Department of Agriculture, and many state veterinarians, because if it does, the disease may spread to cattle herds in other states, as the beef network extends far.

But the buffalo know of no boundaries and no plan: they simply know that to survive the winter, they must find good grass, wherever it may be.

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Yellowstone's buffalo are icons—horns, humps, and the sound of thunder on the American prairie. They are also at the center of one of the ugliest modern wildlife disputes in the West. Ranchers, environmentalists, the government, and many others are using longstanding conflicts, some centuries old, to feed the fight over this symbolic creature. One biologist called it “one of the most complex issues on the continent...I've never seen anything like this.”

In Montana coffee shops, amidst orders of decaf and short stacks, you can hear residents discussing the issue. Early in January 2006, the wandering buffalo made the front page of *The Bozeman Daily Chronicle*, with world news and sports pushed to the back. The headline read: “Hazing Catastrophe: 12 bison go through Hebgen Lake ice, two die.” The photo said it all. Several shivering buffalo, wide-eyed, fur crusted with ice, bobbed in Hebgen Lake. They were among the first wanderers of the season, crossing the western boundary and making a break for Horse Butte. As livestock agents on snowmobiles moved, or “hazed,” them back towards Yellowstone, the animals fell through the ice. Most were rescued, but two didn't make it.

“That's a shame,” says Jim Hagenbarth over lunch as he recalls the article. Hagenbarth is a cattle rancher, white hair tucked under a flannel cap, dressed in worn jeans and hiking boots. Along with his brother, he runs ranches in Montana and Idaho that have been in his family since the 1880s. The Idaho property is forty miles west of the park's western border, along a path that buffalo occasionally travel. What he fears

more than a buffalo drowning in Hebgen Lake is one transmitting brucellosis to his cattle. “This is a very serious issue,” he says. “If we get brucellosis in our herds, we’re broke.”

Hagenbarth calculates his business decisions to the last strand of hay. In winter, he runs his cattle on dusty ground in Montana, and in summer trucks them to more fertile land in Idaho to give birth. “When it’s all said and done...we’re raising an animal that when we sell it...is the ideal weight to go into the feedlot,” Hagenbarth says.

Ranching expenses are already high. “First off, you have seed...Second, is labor. Then you have taxes... then paperwork... Then insurance, of course, because of the liability, is very costly. And equipment... And gas, and power, and propane...and electricity.” Protecting his cattle from brucellosis has been an added burden. Hagenbarth says he has spent \$300,000 since 1970 vaccinating and testing his cattle for “a disease that’s out there, but we’ve never had.” The tests and vaccinations cost money, and so do their effects on cattle. The vaccine can make cows sick and prevent them from putting on enough weight to go to the feedlot. “If that animal is not eating, sleeping, [or] drinking water...it costs you money,” he says.

An actual infection in his herd would break the budget. APHIS veterinarians would likely detect his diseased cows on the feedlot. They would kill those cows and then show up at his ranch. If tests turned up a widespread infection, “they’re most likely going to come in and kill every cow I have...I would be out of business,” he says, too old to start over from scratch, even with compensation money from the government.

Hagenbarth thinks his herd could become infected. Over the years, several Yellowstone bulls have wandered onto his Idaho land, a few during summer when his cattle were grazing there. Hagenbarth takes no chances. The last time two bulls got too close, “I shot them,” he says.

A handful of ranchers live closer to Yellowstone—about twenty within ten miles of the park. They own just over 2,000 cattle, most grazing on private ranches in the summer, except for one herd present year-round. Around 600 more cattle graze public lands in the warmer months. The agencies say only a fraction of these animals occupy

areas that Yellowstone's buffalo regularly try to use. But brucellosis is a state and national issue. One infected herd can cause a chain of exposed herds to be quarantined by APHIS. If a state has two infected herds in the same year, ranchers must test their cattle for the disease before shipping them interstate. State veterinarians can block imports from infected states at any time, and foreign countries can restrict beef imports from nations whose cattle carry the disease.

Hagenbarth supports the government's effort to manage brucellosis, but wishes Yellowstone would go even further—by killing every diseased buffalo within its bounds, thus eliminating any chance of a sick wanderer ever reaching a ranch. “There's no other way to do it,” he insists. “It's not very digestible. And it's very difficult...Publicly, killing is not fun...[but] it's part of the solution sometimes.”

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Others think differently. Buffalo Field Campaign workers have watched, sometimes blinking back tears, as thousands of buffalo have died in the name of disease management. The group is a motley collection of nonprofit employees and volunteers who call themselves “buffalo advocates.” They live in a log cabin near Hebgen Lake, where the buffalo fell in. Visitors can rap on the door using a knocker shaped like a buffalo's head, and inside, can pause in contemplation in front of the buffalo altar.

The group crystallized in 1997 during an especially snowy winter, when the deaths of many wayward buffalo drove a Native American and a disgruntled park visitor to form an organization to protect the animals. Long-timers, like Dan Brister, a carpenter from Montana, and Stephany Seay, from the east coast, have been members since the beginning. Others are vacation crusaders, like Jean Michaud from Quebec, who came south for a few weeks to fight on the buffalos' side. The group has been as short-staffed as six and as strong as sixty, sometimes too poor to pay for groceries, sometimes supported by wealthy donors, including country singer Bonnie Raitt, outfitting company Patagonia, and Subaru. All unite behind a common vision—that buffalo are sentient creatures with inherent rights—and a common cause—to oppose any plan that blocks



buffalo migration. “Might as well dam the ocean as keep wild buffalo from migrating,” Seay once remarked.

The Campaign says park visitors would be appalled by how the managing agencies treat buffalo. “The American bison is treated worse than any other form of wildlife in the national park system,” they claim. The Park has built pens near its borders, both inside and outside, to trap wandering buffalo. Though visitors rarely see it, buffalo that cross the lines are chased into the pens, clamped into stalls, and jabbed with testing needles. This wrangling, the Campaign fears, teaches buffalo to act like domesticated animals, not wild ones. Those buffalo marked for slaughter fare no better, as they are trucked live to slaughterhouses, sometimes growing so nervous in the trucks that there are gorings en route. The agencies’ hazing vehicles have sent buffalo into barbed wire fences, and most recently, into frozen lakes. Other migrating wildlife suffer with the buffalo—elk, moose, and deer get caught up in the buffalo haze.

Brister provided the *Chronicle* with its front-page photo of buffalo floundering in the lake, hoping to attract some negative attention to the agencies during this year’s migratory season. “I think they realized that they really messed up and that the public wasn’t with them on that,” he says.

Scientists from the managing agencies view the same events quite differently. Marion Cherry, a wildlife biologist with the U.S. Forest Service, says that penning buffalo doesn’t domesticate them, as it doesn’t change their behavior permanently. She says the animals get “habituated,” used to pens or humans, but stresses that the familiarity can be unlearned over time. Furthermore, she says the number of buffalo that “suffer” after crossing park lines is low compared to the number that stay in the park. Rick Wallen, a bison biologist with the Park Service, agrees. He says that only a small fraction of the population is chased, captured, or penned each season. “And the whole rest of the population doesn’t know that that’s even going on,” he says.

Overall, the agencies stand behind their plan, considering it the best way to protect ranchers from disease while allowing buffalo to be “wild” inside the park. It

“may not be the plan that every single person in the world would like to see, but it’s...defensible and credible,” says Wallen. Cherry agrees. “We don’t have any brucellosis in Montana. There are still a bunch of bison...And they’re free-roaming in the park...I don’t know what we could have done differently,” she says.

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Just ninety miles north of Hebgen Lake, in Bozeman, Montana, Scott Frazier, a member of Montana’s Crow Nation, wonders why the government is trapping buffalo at all. “Native Americans, we don’t think like that. We believe in freedom,” he says. Long before the time of Lewis and Clark, Frazier’s tribe hunted enormous free-ranging herds in the region. Slowly, though, that changed. Settlers arrived, renaming the animals “buffalo,” though the scientific name was *bison*, and the Crow had long called them *Tatonka*.

Wars reshuffled territories. The Crow were confined to a reservation and eventually ceded all of their land in the Yellowstone area to the government. Shortly after the Park was created in 1872, all the buffalo were inside Yellowstone, and Frazier’s tribe had none.

In the early 1930s, the Crow bought new buffalo from both the Park and Montana’s National Bison Range. “It was a big deal when my clan grandpa Robbie Yellowtail made the deal,” Frazier says. “He was the tribal chairman, and he made the deal with Yellowstone. They came up in these big trucks...and let [the buffalo] go right in Crow Agency, and it made the front page of the *Billings Gazette*.” Indeed, the animals’ release into the reservation’s capital city made *The New York Times*. But in the early 1960s, the herd tested positive for brucellosis. The government returned to exterminate the animals, and by 1966 Frazier’s tribe was without buffalo again. “They just shot every one of them,” he remembers. Five years later, the tribe reintroduced buffalo for a second time, this time from a disease-free herd from North Dakota’s Theodore Roosevelt National Park. Today, these animals populate the Crow Reservation.

The Crow still receive buffalo from Yellowstone, but none alive. When wandering buffalo are sent to slaughter, the agencies distribute the heads, hides, and meat to Native American tribes that will accept them. Frazier's tribe does, but for reasons he says are less than ideal: "People are hungry. We take the meat. We tend to not waste things." He likens the situation to starving people eating out of a trash dump.

For the Crow, buffalo are sacred creatures to be used in religious ceremony, not gunned down by officials. Frazier sees the policy as yet another insult—to his tribe and to the animals they revere. "You have an item that's contaminated...you execute it, and then you give it to a group of people to pray with," he says. "Who gave *them* the authority to distribute sacred items to native people?" he wonders. "That's not what we want."

Frazier says the killing tramples upon his tribe's future, which is tied to the birth of a rare, albino buffalo calf. If and when the calf is born, "we feel that our religion will start to go again, and pick up the momentum we need to get out of poverty, to get out of drugs and gangs, and all the things that are complicating our tribal life." The way he sees it, the government is dashing his tribe's hopes. "We go into these seasons, and all these women buffalo get killed, and each one has the opportunity to give us the white calf. So we're like, 'why are you doing that?'"

As for the disease problem, he thinks the government should remove the ranchers from the land outside the park. "They won't sell," he says. "You have to go in and condemn it—take it from them, like they did the Indians."

Here is the crux of the problem, the reason it is like few others. Frazier's comment highlights how the conflict runs deeper than the plan; it is a dislike and distrust felt to the bones. It is shared by all—ranchers, government agency employees, and buffalo advocates alike.

"They are ignorant," says Michaud, simply, of ranchers.

Hagenbarth in turn has an equally low opinion of the environmentalists, at least those that interfere with his business. “They don’t give a damn. They don’t. And you know what? They’re just insane when you talk to them,” he says.

The Campaign suggests the agencies are incompetent wildlife managers. “Livestock managers...don’t seem to know anything about bison,” says one member. Although buffalo are a symbol of the park, they’d like to see the Park Service stripped of the buffalo badges on their uniforms. “False advertising,” they say.

Agency scientists in response complain of environmentalists who know too little about the ecology of buffalo or disease. “They haven’t read the recent literature,” one scientist said. “They don’t know what we know now....And I just say, oh, man. Let me find some old tape recording and educate you.”

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The conflict rolls on each day of the migratory season. As Hagenbarth drives to his ranch office in Dillon, Montana, the Campaign volunteers, at quarter to six in the morning, begin the day’s rove. “Rove” is simply a code word for mechanized snooping.

The volunteers follow the same routes every day—in blizzards if need be—driving the roads, skiing the forests, and monitoring the neighborhoods outside the park’s boundaries to film the “plight” of the migrating buffalo.

They tally the abuses on their cabin whiteboard:

Total Yellowstone Buffalo Killed 2005-2006: 903  
Shot by Montana Department of Livestock (DOL): 3  
Drowned During DOL Hazing Operation: 2  
Shot by Hunters: 45  
Slaughtered by Yellowstone National Park: 849  
Died in Confinement in Yellowstone National Park: 3  
Shot by Yellowstone National Park: 1

Like a police force, they patrol in old station wagons outfitted like squad cars, with wireless radios, camcorders, still cameras, and binoculars on hand.

In late January, Jean Michaud and Ryan Kurtz patrol Montana state route 287, stopping at the doorstep of Dale Koelzer. His house is located at a critical spot—exactly

on the park's western border with Montana. The Campaign finds Koelzer suspicious, and they claim, a buffalo-hater. They say that in the past he has baited his backyard with hay so that licensed hunters could shoot buffalo as the animals ate. It is this type of questionable hunting the volunteers are worried about today. But there are no buffalo in Koelzer's backyard.

Well after sunrise, Kurtz spots three bulls in another backyard. They are foraging, knee-deep in snow, heads moving like plows to uncover grass below.

Kurtz doesn't think buffalo should be kept from the backyards of Montana. "Who needs to stop them?" he asks. "Buffalo are an asset in every way." And he means that from a practical standpoint. More buffalo in Montana could mean more hunters buying licenses and more visitors to the park. At a gas station, Michaud pulls a handful of brochures from a rack near the front door. One shows tourists on a snowmobile, smiling and watching a line of buffalo cross a trail. "Three million people in two months come here to see the buffalo. That's a lot of money," he says.

Just before eleven, Kurtz spots a Montana game warden on a snowmobile traveling alongside the road. "Oh, look who it is!" he exclaims. "Let's follow him and see where he goes." Kurtz knows this man's name—Jim Smolczynski. The warden crosses the road and speeds onto Hebgen Lake. Kurtz pulls out the binoculars. "He's going to check out the buffalo they hazed onto the ice. Jean, slow down! I wonder if they're thinking about finishing their botched job last week." As it turns out, Smolczynski is merely collecting safety cones from the lake, used to divert snowmobilers from weak spots in the ice. He loads the cones onto his snowmobile and speeds away again.

By mid-afternoon, the volunteers have made their tenth pass along route 287 and turn right, heading toward Yellowstone Village.

"HOBNOB central," says Kurtz, as Michaud pulls into the small tract of houses. The residents of Yellowstone Village have named themselves HOBNOB, standing for Horse Butte Neighbors of the Buffalo. "Buffalo like to graze in the yards," Kurtz says.

Every spring, just before the local ranchers bring their cows to the area for the season's green-up, the buffalo are chased out. Livestock agents sweep through the village, flying helicopters over rooftops and running snowmobiles through yards, to remove buffalo from public land and the vicinity of the private ranches. Last spring, the HOBNOBs decided to override this policy and unofficially re-zoned their properties. In every window and driveway in Yellowstone Village, a bright yellow sign announces a "bison safe zone" where "no shooting or harassing of bison [is] allowed." HOBNOBs tend to sympathize with the Campaign, who kindly printed their signs.

In retaliation, Koelzer and a local rancher posted signs in their yards that said, "Buffalo hunters welcome."

The neighborhood-by-neighborhood allegiances near the park border have started to resemble gang territories. "We're welcome here," Kurtz says of Yellowstone Village. "DOL is not." Yet the safe zone signs have not stopped the livestock agents from making the spring sweep anyway, herding buffalo back into the park and shooting those that don't comply.

The buffalo conflict has already erupted into episodes of maliciousness. This past spring, Campaign patrols fell victim to a drive-by paintball shooting. "We were shot at on four or five different occasions," says Kurtz. At least three times, volunteers returned to their cars to notice loosened lugnuts. "Everyone knows what our cars are. They're old Subarus. And they know where we park," he says. Once the loose wheel came off while a volunteer was driving, sending the car sliding off the road. And there have been brute, face-to-face scraps. One pasture-owner near the western border reportedly punched a volunteer in the stomach during a disagreement. "He was in real good with the DOL," Kurtz says. One of the agents personally jammed a camera into a volunteer's face, Kurtz says.

Of course, gang wars can end in arrests, and the Campaign has had its share. In years past, volunteers who ventured too close to hazing operations were charged with interference and sent to the Bozeman jail.

And as in a gang war, each offense further entrenches each side and begets deeper resentments. Kurtz says the loosened lugnuts satisfy him in a dark way, “because it shows we’re being effective.”

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How the exact boundaries of Yellowstone Park came to be established was somewhat arbitrary. They were drawn by an unassuming geologist named Ferdinand Hayden. While conducting a survey in 1871, Hayden, who was working for the U.S. Geological Survey, explored the area and saw “a great natural curiosity, great geysers...water-spouts, and hot springs.” The region was otherwise barren and mountainous, unfit for farming.

Though Hayden did not know it, congressmen were already discussing a national park in the region. While the exact history of the legislation is cloudy, one Kansas senator reportedly drew up a bill to set up a public park on the land that Hayden “platted.” Hayden’s map showed that all the geologic wonders resided within a box, forty by forty-four miles square. Thus the bill called for a national park “substantially forty miles square.”

In hindsight, the boundaries simply placed a box around a river. They included “all the basin where the Yellowstone [River] has its source.” These borders, framing the natural wonders most people thought were important, made perfect sense to the geologist at the time.

And to Congress. The bill passed and was signed in 1872 by President Ulysses S. Grant, making Yellowstone the world’s first national park, a nearly perfect square.

Before the time of Columbus, tens of millions of buffalo roamed the grasslands between the Rocky Mountains and Mississippi River known as the Great Plains. By the time of Hayden’s survey, however, a slew of forces, including native and European hunters, fur traders, and livestock grazing on the Plains, had reduced the plains buffalo to a few scattered herds, including a few hundred animals inside of Yellowstone. Hayden’s

square excluded vast amounts of former buffalo habitat, but neither the geologist nor Congress knew it at the time.

The job of managing Yellowstone's buffalo fell on the U.S. Army in 1886. Park historian Mary Ann Franke reports that in the 1890s a concerned Gardiner resident wrote to army officials: "I will drop you a few lines as a favor for the buffaloes, as they are about extinct." Cavalry guarded park borders, but poachers broke through, and by 1902 the animals were nearly extinguished; only 23 wild plains buffalo remained, not just in Yellowstone, but in the world. The Army began restoration the next year, transplanting domesticated buffalo from ranches in Texas and Nebraska into the park, where they lived in a corral that came to be known as the Buffalo Ranch, next to the dwindling wild herd.

The Park Service took charge in 1916, eventually dismantling the Buffalo Ranch, but continuing some curious practices, including selling buffalo to meat dealers, killing "undesirable" species, and stampeding buffalo for distinguished visitors. Managers at the time worried that without visitors and funding, the park itself would go extinct, so they followed what Rick Wallen calls "a ranching zoo kind of philosophy." For the next four decades, the Park culled buffalo to limit their numbers.

In 1967 the Park Service adopted a new, ecologically minded philosophy called natural regulation. It reflected a changed view of the park, one in which all the organisms inside were connected by an ecological web that excluded humans. Under that policy, the park stopped controlling animal numbers and let nature take its course. Park biologists were not sure what would happen to buffalo under this policy, but they soon found out. The population grew.

Fewer than 500 buffalo inhabited the park in the late 1960s. "In 1980 or 1981, the population reached 2,000 animals. Everyone threw up their arms and said, 'oh, my gosh, we've got a huge population. Now what are we going to do?'...And then in the early 1990s, the population hit about 3,000. Alarm!...Now what are we going to do?... Well, since the spring of 1997, the population has done nothing but grow rapidly," Rick Wallen



says. The winter of 2006 began with nearly 5,000 animals (though towards the end of this year's harsh migratory season, the population was down to around 4,000).

Buffalo conservation, while solving the problem of extinction, has introduced the new problem of population growth. Natural regulation provides an engine—it preserves, at least inside the park, the buffalo's ability to breed without hunters or major predators to check their numbers. That's why the population is growing, and during heavy winters entering surrounding states. Ecologists predict that the population will continue to grow until a devastating winter causes starvation; at which point, the population would dip, then climb again. One scientific review concluded that the growth allowed by natural regulation is the “fundamental force pushing bison out of [Yellowstone], contributing both to increased risk of transmission of *B. abortus* to livestock and the need to take action to deal with bison in unwanted places.”

Wallen thinks that if buffalo were allowed to stay in the surrounding states, they would recolonize the Great Plains. The explanation is simple. Patches of open grassland remain around Yellowstone and hopscotch up to Canada, and down to Texas. Buffalo are prolific breeders and explorers. If given the chance, their dense population centers would relocate outside the park. The centers would expand, then move north. The same push would happen southward. If the borders were dropped, migrations would become emigrations—all the way to Canada and Texas. “The bison just want to go home,” one Gardiner ecologist told a western newspaper. Another biologist who created a computer model of the expansion titled it, “The Great Plains Bison ‘Repatriation’ Scenario.”

Wallen acknowledges that buffalo expansion puts pressure on surrounding states but still stands by the current park policy. He wishes the states luck in dealing with the animals that spill into their territories. “We have no jurisdiction beyond the park boundary,” he says—a boundary that was arbitrary to begin with.

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Accompanying the problem of buffalo expansion has been that of disease. Yellowstone managers first detected brucellosis in 1917, after noticing stillbirths at the

Buffalo Ranch. No one knows when the buffalo became infected, though historians believe it happened some time after the turn of the century. To *Brucella abortus*, buffalo have always been an ideal target, an enormous mass of flesh to colonize. But the bacteria could not have planned their entry into buffalo. Something must have carried them there.

Cattle living inside the park were the likely source, and several possibilities for transmission have been considered. In 1904, a scout on a government mission plucked a female buffalo calf from Yellowstone's wild herd, nursed her on a milk cow, and deposited her at the Buffalo Ranch. If that cow was infected, the slurping calf might have swallowed live bacteria, but historian and biologist Mary Meagher finds this unlikely. There are other cows, however, that could have been the transmitters. For many years, hotels and outposts throughout the park kept cattle on premises in order to feed guests. An infected cow could have dropped a stillborn fetus while grazing, and a buffalo out to pasture could have licked it and gotten the disease. Meagher thinks this happened around 1915, when buffalo from the Ranch were pastured near some grazing cattle.

Regardless of the cow responsible, Yellowstone at first did little to manage the disease. They focused on feeding and culling buffalo to keep them in the park. In 1934 APHIS began to pay ranchers to slaughter infected cows, but still no action was taken for buffalo.

At this time Yellowstone managers testing buffalo found that the infection was spreading. By the 1940s, the park established a brucellosis testing facility. Park Service rangers tried a questionable buffalo vaccine and continued winter feeding but did little else. They thought it impossible eradicate the disease, and even unwise to do so, as a "clean" herd might suffer a massive outbreak later.

The Park ran trials in the 1960s, testing, slaughtering, and vaccinating small groups of buffalo, but concluded that the "never-ending" process would leave few buffalo for visitors to see. They instituted a new strategy of chasing and shooting wanderers at park borders.

Throughout the 1970s, the livestock industry came after Yellowstone like a stampede, calling on the Park to rid its buffalo of brucellosis. The Livestock Conservation Association, U.S. Animal Health Association, Wyoming Livestock and Sanitary Board, Wyoming Stockgrowers Association, and Montana Board of Livestock all made public statements asking the Park Service to reinstate testing, vaccination, and slaughter to eradicate the disease. The Park Service deflected them with polite letters, continuing its single solution—chasing and gunning down those that breached Hayden’s square.

In the late 1970s, the Park relaxed even further. On Department of Interior orders, rangers stopped killing buffalo that stepped over park lines, leaving states to deal with the wanderers. Montana issued hunting licenses. The hunts drew so many protestors and news cameras that they had to be discontinued. Meanwhile, Yellowstone’s buffalo herds were swelling, and large groups were leaving on park roads.

As buffalo marched into Montana, state veterinarians and APHIS watched nervously. In 1994 the veterinarians issued a threat: Montana must shoot the incoming buffalo or else test marketable cattle for brucellosis according to their interpretation of APHIS rules. In response, Montana sued the federal government. The way they saw it, government policies were crippling ranchers. The government allowed diseased buffalo out of Yellowstone, but at the same time punished ranchers when diseased animals entered the surrounding states.

The judge ruled that all parties should stop their squabbling. The state of Montana, the Park, and APHIS needed to work together, divvy up responsibility, and fashion a joint agreement. The result was an interim plan that began in 1996. In the west, state livestock agents would capture and test migrating buffalo, killing those pegged as carriers and releasing the disease-free. In the north, rangers would capture and slaughter all wanderers. In a terrible coincidence, the winter of 1996 was a brutal one, dropping ice on Yellowstone’s plateaus and sending the buffalo out in droves. Following convenient adaptations of the plan, livestock agents shot buffalo like a firing squad, and park rangers tested buffalo and let the negative ones go. More than 1,000 buffalo died—

some were shot; some were trucked to slaughter; others dropped while on the run, the whole ordeal broadcast on televisions throughout the country.

Critics watched and responded. Wildlife advocates, including the Defenders of Wildlife and the Sierra Club had already sued, claiming the Park Service could not trap buffalo in a wildlife preserve. Some sympathetic Park Service rangers wore black tape over their badges in support of the advocates' sentiment. Making a more blatant statement, an activist burst into a policymakers' meeting in Gardiner and dumped buffalo guts on the Montana governor.

By 1998 it was time for the agencies to release their final plan for public comment. They stuck with the one drafted after the court case, with a few exceptions. All wandering buffalo would now be tested, negative animals would be vaccinated, and when the herd grew larger than 3,000, all wanderers would be killed.

Historian Franke terms that plan the “disagreeable agreement,” as many from the public mailed in comments to say they disagreed. The Fund for Animals demanded a ban on buffalo capture, killing, and vaccination. Too risky, responded the agencies. A group of state veterinarians and livestock producers asked to ramp up test and slaughter and slash the herd to 1,800. Too aggressive, said the agencies. A diverse group of citizens proposed a more moderate plan—if buffalo would not be confined to park land, why not acquire more land? The Forest Service or public groups could buy ranchers' pastures and turn them over to the buffalo. Too expensive, countered the agencies. The Fort Belknap Indian Community, a conglomerate of two Montana-based tribes, suggested that tribes could help to manage the park's buffalo, taking all wanderers to tribal land and managing the disease in a way that fit their religious beliefs. The agencies replied that the Indian community had been consulted and did not grant the tribes' request.

In the end, the agencies read the public's criticisms, weighed the evidence, printed all the comments in voluminous books, and then put the books aside. In 2000, they adopted their plan. The plan still applies today—largely because state and federal agencies cannot agree on anything else.

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At the Veterinary Diagnostics Laboratory in Bozeman, Montana, a display case exhibits several animal diseases—carried by worms, bugs, and insects—that are safely under control. *Brucella abortus* is not on the shelf. That's because the disease is an epidemiological scourge—easy to transmit, hard to detect, and even harder to treat.

Transmission usually begins with birth. A cow's aborted calf drops onto the grass, and the carcass is “steaming” with bacteria. If it's dropped in a cool, shady spot, the bacteria can survive for up to three months. Anytime in that window, another host can pick up the disease. Female cows flock to the site, drawn by a maternal hormone that compels them to lick the dead fetus. Female elk and buffalo are also attracted. They lick. They eat the grass. They swallow bacteria. The bacteria travel to the lymph nodes, where they remain—undetectable—until the host becomes pregnant. Then the germs travel to the uterus, where they multiply into the billions and cause another abortion, which releases another contaminated fetus into the environment.

Jack Rhyan, an APHIS veterinarian, has researched the disease for more than a decade. He is still looking for an effective treatment, but because the bacteria live inside cells, they are expert evaders—of host defenses, of disease tests, and of antibiotic treatments. Thus there's no effective treatment for cattle or wildlife. Though Rhyan usually speaks scientifically about the disease, he can at times get exasperated by the germ's wily nature: “I think the devil made it, and I think he made it really smart.”

Like other wildlife diseases in the state, brucellosis is “a zoonotic disease, which means animals can [also] pass it to humans,” says Ryan Clarke, a regional epidemiologist with APHIS. The bacteria cause flu-like symptoms in humans, which can last for life if treatment isn't successful.

Before the 1930s, *B. abortus* caused widespread illness in the United States, as it passed to consumers through unpasteurized cow's milk. With commercial pasteurization, “most of the human cases have gone away,” says Tom Linfield, the state veterinarian of Montana, but he adds that some people are still at risk. Hunters around Yellowstone must be careful when gutting kills, because bacteria from an infected reproductive tract

can enter their hands through an open wound. Veterinarians, ranchers, and slaughterhouse workers can contract the disease in the same way.

Yet Montana reports fewer than two cases annually. Nationwide, only 100 to 200 cases of brucellosis occur per year, most in travelers who consume unpasteurized milk products abroad. The primary fear these days, Linfield says, is not the human health risk but the economic one—that in transmitting the disease to cattle, Yellowstone’s wildlife will lead ranchers and states to economic ruin.

But the risk of this happening is debatable. It correlates with how many of Yellowstone’s buffalo are infected. Yet pinning down this number is nearly impossible, since there’s no reliable brucellosis test. One can try testing the buffalo’s blood for antibodies against the bacteria—a test called serology. This test implies that about 50 percent of buffalo carry *Brucella* antibodies. But that number overestimates actual infection. The antibodies are an aftereffect of infection. Buffalo retain them when they have the bacteria; after they’ve expelled the bacteria; and when they’ve been exposed to, but resisted, the bacteria. The next best test is to remove tissue from the buffalo and test it for the actual organisms. That test suggests only 10 to 20 percent of Yellowstone’s buffalo carry the disease. Yet this test inevitably *underestimates* infection, for several reasons: because the bacteria jump around the body; infected females harbor few bacteria until they become pregnant; and the bacteria don’t grow well in the lab. In the end, no one knows how many buffalo in Yellowstone carry the disease.

Others argue that the number of infected animals does not matter unless it is zero. Hagenbarth and Clarke are of that opinion. Clarke says that if just one buffalo aborts a calf outside Yellowstone, and one cow comes to “lick and nudge and investigate,” many cows can wind up contracting the disease, and that is bad enough.

But the chances of this happening are also uncertain. Canadian bison expert Cormack Gates has tried to settle it: “This is an epidemiological problem,” he says. For...transmission...to occur, you need an infected host. You need it to...disseminate

the organism from its body. And you need the availability of a susceptible host. These were the conditions worked out by...Louis Pasteur many, many years ago.”

Female buffalo are definitely known to disseminate bacteria: they drip vaginal discharges onto the grass for cattle to eat, and as early as February and lasting into June, they also abort, both inside and outside the park, and scavengers can drag the carcasses far. Cattle are susceptible. Barnyard studies show that cows penned with infected buffalo lick the aborted fetuses and become infected. Combine the results, and it would seem that Yellowstone’s female buffalo pose a risk to nearby ranchers. Most scientists, state vets, and agencies agree on this.

Male buffalo are more difficult to assess. Infected bulls carry bacteria in their semen. Linfield says bulls might mount female cows and drip semen in the grass, which cattle might eat. From observation, Hagenbarth adds that mating is not necessary; cattle bulls ejaculate spontaneously, so buffalo may, too. But Gates says he has never seen a buffalo spontaneously ejaculate, and in his opinion the chance of a cow finding such a small patch of grass is about the same as “space aliens” landing there. “There’s improbability all the way along,” he says. The assured risk of allowing bulls outside the park, he says, is that where bulls go, females and their fetuses follow.

A favorite statement of the Campaign is that no one has ever documented a Yellowstone buffalo transmitting brucellosis to cattle in the wild. And it is true. Cattle in every state bordering the park have become infected, but no one has ever traced an infection back to the park’s buffalo.

People give various explanations for this. The Campaign argues that buffalo cannot transmit to cattle in the wild. Ranchers and the agencies, on the other hand, say that they’ve worked since 1917—through vaccinating cattle, confining buffalo to the park, and shooting wanderers—to prevent it from happening.

The true study needed—the field test in which Yellowstone’s borders are opened, local ranchers stop vaccinating cows, and everyone waits for results—cannot be done. As a result, there is no direct way to assess the risk in nature.

The agencies' plan assumes the worst risk for buffalo, leaving everyone else to argue. The rancher Hagenbarth sees a severe threat; a risk he's not willing to take. The Campaign sees a risk "so low it is almost incalculable."

To complicate matters, *Brucella abortus* is not limited to buffalo, nor to Yellowstone. Elk inside Yellowstone National Park, as well as in Idaho and Wyoming, carry the disease. Yellowstone's elk are not a concern, say Linfield, Cherry, and Clarke, because their infection rate is low. Moreover, in natural settings, elk give birth in secluded woods and meticulously devour the afterbirth, before other animals can venture near.

But in Wyoming, the settings are not natural. The state has elk feedgrounds, large fields where elk are fed hay in the winter. The grounds exist because farms and houses block the elk's paths to natural foraging grounds. Without them, elk would starve. But feedgrounds create a reservoir of disease by clustering elk together and forcing births in a community setting, which makes transmission common. On the Wyoming grounds, brucellosis thrives, and transmissions to cattle have occurred. In 2003, a rancher grazing cattle next to a Wyoming feedground acquired brucellosis in his herd, and as a result, ranchers statewide had to test for disease. More elk-related infections have since occurred in the state.

Scientists from Iowa State University concluded that closing the feedgrounds would likely end infection in elk. Wyoming has haltingly begun a test-and-slaughter program for its feedground elk, but as far as closing the grounds, Clarke doesn't think it will happen any time soon. First, they are a state tradition. "They've allowed the feedgrounds for almost a century," he says. Second, the grounds keep elk away from ranchers' hay bales. They also keep elk populations large, which supports "hunting, outfitting, and wildlife viewing—they're all big businesses in that part of the state," Clarke says. In keeping with Clarke's prediction, the Wyoming governor has refused requests to close the grounds.



The Campaign seethes on this point—if elk run free because hunters desire it, the organization contends, then buffalo should run free because wildlife advocates demand it. Hagenbarth agrees there's a double-standard but argues that the Park and feedgrounds need to rid *both* buffalo and elk of the disease. “You’ve got a gangrene leg, you cut it off,” he says.

Instead of doing that, managers have medicated. They’ve vaccinated buffalo, elk, and cattle in the Yellowstone area. The vaccine helps by stemming the number of aborted fetuses. In cattle, the vaccine stops 65 to 80 percent of abortions, but in buffalo and elk less. Ranchers nonetheless find it useful because fewer abortions mean slower disease spread.

Vaccinated cattle, though, can still become infected, and if the infection is detected by APHIS, the rancher pays. Wyoming learned this in 2003 with the feedground elk case, as the herd that became infected was vaccinated. The vaccine is no cure, but “it’s the only tool we’ve got,” says veterinarian Rhyan.

Future tools for animals in and around Yellowstone might include better brucellosis tests, more effective vaccines, contraceptives, and a rapid vaccine delivery system. A Park Service-based group called the “Ballistics Consortium” is testing rifles for firing vaccine bullets at Yellowstone’s buffalo herds. But these tools aren’t in practice yet, and in spite of them, the battle rages on.

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For nine years, the Campaign’s media cabin, the center of its operation, has been manned. There volunteers package what they see in the field and send it on to the public. “We document every single action against the buffalo by state and federal agencies,” explains one member. “We get it to every media source we can and to the world.” Inside, a real buffalo skull hangs on the wall with a rifle shell lodged above its eye. It’s there, members say, to remind them of the buffalo that have paid the ultimate price for crossing Yellowstone’s lines.

The channels they use to send information are numerous, including press releases, newsletter updates from the field, and videos posted on-line. They speak out in Montana newspapers and occasionally on local television news.

The lines of communication extend beyond the cabin like a spider's web to the forty-eight contiguous states, Alaska, Hawaii, and even abroad. If the Campaign's goal is to forge an extended network of people attuned to the wandering buffalo, they've been successful. "This November, I was in New Zealand," remarked a Montana resident, and was surprised when a New Zealander asked him, "how come the farmers are killing the buffalo?"

But the Campaign does not merely communicate to the public what is happening in Yellowstone—they want action. On its website, the Campaign lists phone numbers—of the Montana governor and park superintendent, to name a few—and asks supporters to pick up and dial. "Please call Yellowstone National Park," one e-mail prodded, "and urge them to abandon plans to slaughter our wild buffalo... They must hear from you today! Do not let them ignore you as they are trying to do." The Campaign rallies around National Call-In Days, when it pressures state officials to let buffalo freely roam outside of park lines. The idea is to wear down the policymakers until they cave in: "Help keep the pressure on the powers-that-be and don't let up until the wild buffalo are set free!"

The most recent call-in day was early in February, and the targets were Suzanne Lewis, Yellowstone's Superintendent, and Kate Gordon, President of the Church Universal and Triumphant, a Gardiner-based religious organization. Lewis has obvious influence, and the Church runs the largest livestock operation on buffalo range north of the park. By morning, the public was responding, and calls were rolling in to Yellowstone. "YNP received 500 calls and 2,000 e-mails..." a government memo reported. The Church allegedly stopped answering the phone.

This method has begun to work on certain officials. At the beginning of his term in 2004, Montana governor Brian Schweitzer supported the state-federal management

plan, even filing for a buffalo-hunting license. But that was then. Two years (and many call-in days) later, his statements in the newspapers asked for more tolerance of buffalo in Montana. When some buffalo were captured outside the park in early February, he asked the agencies to set them free. They did.

Some agencies question the integrity of the Campaign's information-and-action campaign, as its "facts" come mostly from its own members. Moreover, the Campaign considers ridicule and mud-slinging as perfectly acceptable tactics. The result is what some might call an anti-agency propaganda campaign. One winter update began:

On Friday in Gardiner, the National Park Service (NPS) was busy harassing wild buffalo, protecting livestock interests instead of the flora and fauna they are mandated by the American people to protect. Park Rangers came out on horseback, dressed in cowboy finery...and forced wild buffalo off of their winter range.

For those not moved by written accounts, videos and photos provide additional fodder. One web video pans over a flock of white birds as the sound of a helicopter rumbles in the background. Agitated, the birds flap, honk, and fly off. The Campaign tells viewers that they have just witnessed a disturbance of trumpeter swans by the agencies' buffalo-hazing helicopters. The agencies, they say, have committed yet another crime against nature.

Marion Cherry from the Forest Service was disturbed when she first saw the video. She knew Yellowstone hosted the swans, which her agency classifies as a "sensitive" species, and that disturbing them was "a very bad thing," since it wore down the birds' winter energy reserves. But something was odd about this scene. Yellowstone's flock of trumpeters is small, and there were hundreds of birds in the video. "I asked my friend to come over and look at this video," Cherry recalls. "She did her master's thesis on trumpeter swans." As soon as Cherry pushed 'play,' the friend said: "Those are snow geese." Cherry was annoyed. The Campaign had set off a false alarm. Agency helicopters hadn't scattered sensitive birds but a flock of snow geese, which are overly abundant. "Frankly, we can stand to lose a few snow geese in the world," she said.

She asserts that the Campaign's website is riddled with other inaccuracies—mixing up locations, misinterpreting events, and sometimes reporting so ambiguously as to lead readers to assume the worst. “I don't want to be critical because I think their hearts are in the right place,” Cherry says, “but I'd like people to be factual.”

This point is significant because the Campaign's version of events in Yellowstone is often the only “news” some people read. A recent battle in this news war was brought up for discussion at a public meeting with Montana Fish, Wildlife, and Parks in January. The Campaign had just made local game warden Jim Smolczynski the star of their latest e-mail update, announcing that he had ignored an evening distress call from a snowmobiler who hit a buffalo. The release said that the buffalo lay bloodied on the road all night because Smolczynski did not want to “go out to deal with the situation.”

No sooner did the Campaign's story reach e-mail inboxes than the phone at Fish, Wildlife, and Parks began to ring. “I got a call from a woman in Seattle who asked why our warden waited twelve hours to put a bison down in the field when he knew it was wounded,” said Melissa Frost from public affairs at the meeting. But the story wasn't true; Smolczynski hadn't gotten the message until morning.

Another game warden stood up and chided the Campaign: “We are sensitive to wounded animals. I'm not going to say...that we don't make mistakes. Because we do. ...[But] Jim didn't do anything wrong. So I would appreciate if we could keep trying to figure out what really happened before either of us go to the next step. That's all I have to say.”

The Campaign seemed indifferent to the scolding. “I guess we made them mad,” said Brister after the meeting, with a shrug.

Some wars are waged on battlefields; this one takes place in the media.

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If the Campaign had its way, the war would escalate to the courtroom. Various groups have gone to court over this issue at least twelve times since 1985. Josh Osher, the Campaign's policy coordinator, says that his group desires a petition to put

Yellowstone's buffalo on the U.S. Fish and Wildlife Service's Threatened and Endangered Species List. Such a listing would wrap layers of red tape around any agency wanting to write a restrictive buffalo policy, as every action would have to be approved by the Fish and Wildlife Service.

To get the animals listed, Osher would tell judges that Yellowstone's buffalo are a distinct population of the larger North American Plains bison subspecies. The 19<sup>th</sup> century slaughter left just a few plains bison in the country—some on ranches, plus the twenty-three wild ones in Yellowstone. The descendants of those scattered survivors went on to various fates, most kept behind fences or bred with cattle. But Osher would argue that Yellowstone's bison were never fenced or mixed with cattle. To him, they are the only descendants that have remained truly wild. "I think the argument is strong," he says. "But you'd be in court a lot. And it costs a lot of money to do that." The group's funds barely cover rent and are too sparse to support a lawsuit. Consequently, the media war is its low-budget alternative.

Hagenbarth is disgusted by environmentalists who "abuse" and "misuse" protective wildlife laws to get what they want. "It's tyranny by the minority," he says. The rancher instead chose the political arena to advance his policies. In the summer of 1995, he traveled to the Montana state capital to hand his testimony to senator Conrad Burns. Burns was about to go to Washington to address a senate subcommittee dealing with the buffalo issue. To exert influence, Hagenbarth deliberately maneuvered himself into the leadership of a powerful Montana interest group. "My name is Jim Hagenbarth," his statement began, "and I am the chairman of the Montana Board of Livestock." His well-crafted words told the committee that it was time for Yellowstone to change its buffalo policy.

According to Hagenbarth, the Park's policy was too lax. By sheltering diseased buffalo, he said, the Park Service was making Yellowstone a haven for disease. As long as its buffalo and elk were infected, Montana ranchers would have to vaccinate their cows. "We can't afford to have a zoonotic disease in wildlife. It's not reasonable," he testified.

Hagenbarth implored the Park Service to try something different—go *inside* its borders and kill buffalo until no disease remained. The land was mountainous, but the Park had helicopters. Buffalo ran, but portable corrals would contain them. The expense and difficulty, he asserted, were not prohibitive. He gave the committee logic. APHIS and ranchers managed brucellosis in cattle in exactly this manner. Since 1934, they had spent more than \$3 billion on testing and slaughtering “millions of cattle in thousands of herds that occupied millions upon millions of acres.” Surely, he argued, the park could handle about 3,000 buffalo on two million acres. “If we can clean the brucellosis up out of the herds of cattle, you can clean it up out of wildlife.”

Then he turned on the guilt: “We have not forgotten all the sacrifices made and we do not want to ride that trail again. I cannot imagine how those ranchers felt that had infected herds and cleaned up their herds via test and slaughter or whole herd condemnation. The cure for brucellosis is a tough pill to swallow, but our industry has taken its medicine, and we don’t want to repeat the treatment.”

“For thirty years, the park has refused to address this disease, and the liability to the park’s neighbors caused by brucellosis is becoming a burden too heavy to bear. We need relief,” he concluded. “Support Senate Bill 745 to force the park to accept their responsibilities and cooperate in cleansing the nation of this disease,” he urged the committee. The bill died in subcommittee, never reaching the Senate floor.

Before the 2000 plan was finalized, the rancher made a final plea. This time, he traveled personally to Washington, D.C., to address the Council on Environmental Quality, which had the ear of President Clinton. Some heads nodded as he made his case for disease eradication, but in the end no one took action. Hagenbarth returned to his ranch to stew.

The government’s indifference angers Hagenbarth to this day. When he met with the Council, the cattle industry was nearly free of the disease. Ranchers and APHIS had reduced the number of infected herds in the United States from a booming 124,000 in the 1950s to just six in the summer of 2000, to zero known infections that winter. “The battle is nearly won,” *Beef Magazine* announced in April of 2001. But in May, an

infection popped up—and then four more did. The following year, a group of infected elk wandered out of Yellowstone onto an Idaho ranch, where a cattle rancher had been imprudently feeding them over several winters. His cattle became infected and were slaughtered. Soon after, more infections appeared in other states. The disease was on its way up again.

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Many things in Yellowstone present a false face. The buffalo look docile, but during breeding season, they charge one another like battering rams. The geysers seem quiet enough, but wait around, and they'll spray scalding water into the air. Likewise, poke around the buffalo issue, and you will uncover something unexpected—a conflict that has nothing to do with buffalo.

For instance, ask about cows. Where do cows belong? “Asia,” says Kurtz. “Wisconsin,” says Michaud, “where there’s lots of water.” Cows, many Campaign members believe, destroy the western landscape. They forage on land that belongs to wild grazers. They drain too much water from the dry ground, require expansive feedlots, overgraze the native grasses, and muck up streams. The phrase “boycott beef” is often tossed out in Campaign meetings and e-mails, and they follow suit—no hamburgers are served at their cabin. Ranchers, some of the less moderate members believe, have no place in Montana. “Less than two percent of the United States’ livestock are produced in Montana,” notes Kurtz. “Let’s get them out of here.”

Hagenbarth feels threatened by such ideas. “It’s very, very serious,” he says. Certain individuals in the “environmental community...are flat-ass trying to move [us]. They don’t like livestock and they don’t like these ranchers that have all this ground...even though we are the ones that are generally most friendly to them...They don’t want us out there. They’re doing everything they can to destroy us. And most of the other people who donate their money don’t have any idea what’s going on.”

“They have most of the continent,” argues Kurtz. “I would like to see cows away from the few places that are pristine.” But Hagenbarth disagrees with these members’

vision of a rancher-less state. He thinks ranchers fill an important role in the west, maintaining the open-space vistas that he values. If he is forced to move off his land, he says it will be sold to the highest bidder. And rich bidders are not conservation groups, but developers. If ranchers are forced to leave, he warns, the West will become a continuous spread of tract houses and Wal-Marts.

But the conflict runs even deeper than that. Ask about wild animals, and you will uncover another tussle. The Campaign covets wild animals. Michaud describes his first visit to the Costa Rican rainforest, where he first observed monkeys in the wild. “We cried for about one hour,” he admits. “Seeing the look of the animals...when they look at you...You can feel a connection. You don’t connect that much in a town...It only happens in nature.”

Kurtz is sure of one thing about wilderness: it does not belong in boxes called parks. “We have this view,” he says. “We like wild places and wild species, but we only give it a little box.” We want “biological islands... We’ll just have our little boxes of wildness.” Kurtz would like to restore buffalo to the entire Great Plains but would settle for an expansion beyond park boundaries.

Hagenbarth, on the other hand, believes that wild animals belong in boxes. “They’ve got four to seven million acres...whatever it is,” he says about Yellowstone. “That’s a grand experiment. But you cannot manage the [surrounding] area...that way. It’s just not reasonable.”

The groups differ as well in their views on land use. Hagenbarth believes land should be owned and managed by people. Good managers add value to land by making it able to sustain human use. Land that is managed well is stable, with a diverse mix of plants and animals. The longer a manager can maintain this mix, says the rancher, the better he has done his job, and the more he is worth.

Frazier, in keeping with Crow traditions, believes that land shouldn’t be owned at all. “Who would have thought that you could measure out a little piece and you could own a part of the universe?” he wonders.



Tunnel deeper, and the rift grows. The groups differ so fundamentally as to clash on their very views of life and death. Hagenbarth, who grew up watching farm animals go to slaughter, understands death as part of a cycle. “Life is a privilege. It’s a privilege to be born. Along with that comes with the obligation to die...That’s just how it is.” He thinks wildlife advocates’ opposition to buffalo slaughter is at its root an inability to accept death. “They’re not taught that death is part of the system,” he says.

The buffalo are one blip of a much larger picture, a snapshot of neighbors who have evolved entirely different views of the world. Their true problem is the inability to reconcile.

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Every so often, someone suggests that Yellowstone could solve its buffalo problem with a big fence. But a fence would trap not only buffalo, but thousands of other migratory animals inside the park.

Others, mostly scientists, look to medical solutions. Jack Rhyan thinks that in the future park rangers might use a fast delivery system—say, rifles or animal feed—to administer vaccines, antibiotics, and contraceptives to the park’s diseased buffalo. This would stop the buffalo from shedding bacteria. If at the same time Wyoming cleaned up its elk feedgrounds, animals in the Yellowstone area would no longer transmit the disease. With no new hosts, the bacteria would perish with the last infected animals and vanish within a few generations of wildlife. Then the buffalo could run free. But this is a distant projection considering the current state of technology. There is no animal feed laced with antibiotics. The vaccines are still not very effective. And the contraceptives must be injected and “boosted” annually, or else surgically implanted into the buffalo. Rhyan also wonders whether ridding Yellowstone of disease would quell the fight at all, since the debate runs deeper than that. He says, with a laugh, that with the disease around, “everybody’s opinion is valid,” with it gone, “everybody *still* thinks their opinion is valid.” Something more may be needed.

Montana governor Schweitzer is pursuing land deals. He estimates that the hazing and slaughtering of buffalo in 2006 cost taxpayers \$950,000. Less than that amount could be spent paying ranchers not to graze cattle near the park. This idea closely follows a widely-supported plan proposed by Montana citizens in 1998. Moreover, the Forest Service, along with conservation groups, has already bargained with ranchers to close all but one of the public grazing allotments near park borders. They've done this using land "swaps": finding ranchers better allotments elsewhere and paying them to move their cattle. Schweitzer is going one step further—offering money to ranchers in the Gardiner and Horse Butte areas to give up their cattle. The ranchers could stay, but their private land would be turned over to buffalo (and other wildlife). If everyone in Gardiner and Horse Butte agreed, the deals would draw new lines around the park, attaching wings to the north and west borders of the square. Buffalo could roam the wings, but the state would hunt them aggressively to stop them from going any farther. Schweitzer's plan would untie a few knots: buffalo would have winter habitat, the slaughter would end, and ranchers, both near and far, would be protected from brucellosis.

But his idea has met some resistance from ranchers. One reluctant rancher told the governor that his cows were "part of the family, too." Another was concerned about the conversion of his front yard into buffalo "killing fields." But Seay from the Campaign told the *Chronicle* the deals were a "positive step," at least allowing the buffalo more room to roam.

Cormack Gates suggests that a more permanent solution will require healing social wounds. In 2004, the Park Service had called on him to referee yet another buffalo dispute that had gone to court—whether buffalo used winter roads to migrate to their deaths. Gates visited Yellowstone to assess buffalo movements. As part of his assessment, he interviewed 3,000 people in the Yellowstone area, including agency scientists, HOBNOB residents, members of the Campaign and other wildlife advocacy groups, and rancher representatives.

Gates made his ruling on the roads (they did not lead more buffalo to their deaths) and then put aside the science. In his report, he frankly concluded that the groups have simply lost the ability to be civil. They weren't looking for common solutions, but instead wielding laws and lawsuits like weapons. Gates blames this on poor governance. No avenue has ever existed for ranchers, agency scientists, environmentalists, Native Americans, and other groups to negotiate—not through charged public meetings, accusations thrown across courtrooms, or stale form letters. Rather than being engaged in dialogue, all the groups fell back on adversarial relationships. That led to pigeonholing, a disenfranchised public, and people of moderation becoming extreme in their beliefs. In short, it created the same volatile conditions that spark real wars.

His recommendation: group therapy. Find the people with the most in common; set rules of respectful engagement and start them talking; repeat the process until all groups are talking. Such techniques can often lead to a give-and-take, even among people with the most entrenched values. Gates says this is the path toward consensus—a solution for which all, from public to government, can say, “*well, I can truly live with that, as opposed to I guess I have to agree.*”

Nedra Chandler is a Montana-based mediator who has worked in public dispute resolution for seventeen years. She cautions against the wishful belief that most conflicts can be solved through negotiation as long as the right people are brought together, in the right way, at the right time. “There’s a tendency among us to romanticize it,” she says. But some conflicts are permanently stuck at an impasse. Sometimes groups prefer to be adversaries, decision makers will not negotiate, or there are no funds to sponsor discussions. Even worse, sometimes hard-won agreements are squashed by people outside of the discussion process; for example, by the President. Chandler speaks of conflicts being both “appropriate” and “ripe” for negotiation. “Cormack Gates started to see some promise,” she says. “I think that’s fascinating.” The next step would be a systematic assessment of the groups involved. Would someone fund discussions? Do groups think they’ll gain more from negotiating than litigating? Are the managing

agencies willing to participate? A “no” to any of these would kill the process before it began.

“Always, the question is, have things simply gone too far?” Cormack Gates asks. “Are people so polarized at this point that they cannot possibly come together?” He says that such a deadlock is rare. And even in the buffalo wars, there are signs of hope.

One hangs on the wall of Jim Hagenbarth’s office. It’s a poster of an odd-looking bird, about the size of a chicken, with a spiky tail that stands tall. “That’s a grouse,” Hagenbarth says. “He’s struttin’.” The sage grouse, a candidate for the Threatened and Endangered Species List, nests under the sagebrush bushes that dot Hagenbarth’s land and much of a “sagebrush sea” that covers the western plains. In 2003 Hagenbarth joined a small group of community members in Idaho to write a local plan for conserving sage grouse habitat.

Other efforts toward conservation appear on his land. An irrigation system, powered by gravity, that uses snowmelt from the mountains to water the fields. A barn made out of recycled telephone poles. A fence that bars his cattle from the Big Hole River, where they might disturb wildlife. A grazing rotation system that protects native plant species. Indeed, he is far from the archetypal cowboy the Campaign thinks him to be. “We don’t just ravage the land,” he insists of ranchers. “I love the land...That’s where the value is. It’s not in the livestock.”

He still supports disease eradication and says other ranchers value cattle more than he does, but he thinks the ranching community is tired of fighting and is willing to negotiate. “We’re worn out,” he says. “You don’t take a bat and beat someone up if you want something...You solve problems by sitting down and rationally talking about things, and [by] understanding their feelings and your feelings... you...find solutions—common solutions—and common ground.”

That’s what happened with the sage grouse. The ranchers, biologists, and environmentalists deliberated and reached an agreement on how to manage the birds. It took them five years and the help of a professional mediator to do it. Hagenbarth

describes the early stages of the process as a struggle to “openly listen to people...and not jump on them every time they ma[de] a mistake,” but diverse groups, from environmentalist to state game warden, still support their plan today.

At a January public meeting, Sam Sheppard of Montana Fish, Wildlife, and Parks, offered another inkling of hope. While in the spotlight of the Campaign’s video cameras and in the midst of the argument about Jim Smolczynski, he said: “This is an honest appeal to you guys to be fair in how you treat our employees...We’re committed to being fair, and responsive, and honest with you...This is all about building trust between our...groups and agencies.” Seay, who had sniggered and scoffed throughout the meeting, softened, and her tone changed. She uttered an apology: “I know I come across as hostile, but that’s because I very much care about the buffalo,” she said. “These are healthy discussions, you know....It always seems we’re fighting each other...I appreciate us being able to sit face-to-face and talk about these things.” A kind gesture directed the relationship away from antagonism, at least on that day.

“We can talk about deep values...connected to bison, and public lands, and animal rights, even if we don’t solve the problems right away,” says mediator Chandler. A laying down of armor, a display of genuine engagement, and a shift in give-and-take is a start. “That’s as good as it gets sometimes,” says Chandler, “and that’s pretty good.”

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