


WHAT GOOD IS A TIDEPOOL? ~ BY DOUGLAS H. CHADWICK

May-June 1997

AUDUBON



The Bison Massacre

A Report From Yellowstone

By Doug Peacock

**A Blizzard of
Snow Geese**

Vanishing Frogs

By Jon R. Luoma



The bison of Yellowstone National Park were devastated this winter by brutal weather and government-sanctioned slaughter. As the National Park Service and the state of Montana bickered, bison leaving the park were shipped to slaughterhouses or gunned down by state agents. By late March more than 2,000 bison—nearly two-thirds of the park herd—had died, caught in the political crossfire of a dispute about a disease called brucellosis and about who should decide the fate of America's last wild bison herd. Here is a first-hand report on **The Yellowstone Massacre**

A BISON AT YELLOWSTONE'S
LOWER GEYSER BASIN, IN
THE MIDST OF THE PARK'S
WORST WINTER SINCE 1943.

BY DOUG PEACOCK

AS EARLY AS LATE FALL OF 1996, it was clear that the winter was going to be a hard one for the wildlife of Yellowstone National Park. By the winter solstice, snowfall measured twice the annual average. Worse for the bison who winter here, a rare thaw and freezing rain had swept across the high plateau, laying down an impenetrable layer of ice that made grazing impossible. In an effort to stave off starvation, many of the bison headed down to lower elevations and better winter habitat outside the park.

Either way—stay or leave—the bison were marching to their death. Faced with the most severe winter since 1943, the starving bison remaining within the park died by the hundreds during the winter of 1996–97. But the brutal weather was not the only killer of America's last wild bison herd, which had numbered about 3,500 animals. For the Yellowstone bison were no longer free to roam: Those that appeared to be leaving the park were shot on sight or shipped to slaughterhouses; those that attempted to move onto private lands were also gunned down. By mid-March the human-inflicted death count had surpassed 1,000 animals. On March 20, long before the spring thaw (which was not expected until April) park officials were confirming that the government-sanctioned slaughter, combined with the winterkill, had already wiped out more than 2,000 bison—nearly two-thirds of the Yellowstone herd.

The stated reason for the slaughter was a disease called brucellosis, which is caused by a contagious bacterium present in both domestic animals and wildlife, including bison;

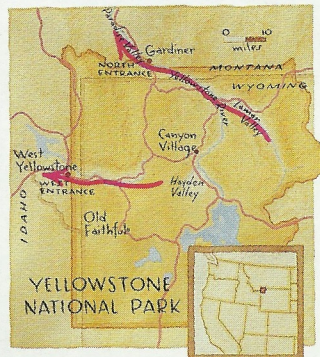
cattle infected with the disease often miscarry their first calf. Montana livestock interests were concerned that if infected bison spread the disease to cattle, the state could lose its brucellosis-free status—a threat first made in 1985 by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). It was a threat the Montana Department of Livestock has taken very seriously, despite the fact that there has never been a documented case of bison infecting cattle with brucellosis in the wild.

The APHIS threat eventually led to an acrimonious debate between National Park Service officials and the entire cast of Montana politicians and bureaucrats. National conservation organizations and pro-wildlife groups became involved, but their protests proved ineffective. The InterTribal Bison Cooperative, a group of 41 Native American tribes, proposed several solutions, including quarantining bison that tested negative for brucellosis and shipping them to tribal lands; but the Indians' proposals fell on deaf ears. For the underlying power struggle was between agricultural and wildlife agencies; at issue was who determines the appropriate use of our public lands and who decides the fate of the nation's wildlife.

Around Yellowstone, this issue had been simmering for more than a decade. In 1985 the state of Montana, concerned about the unproven transmission of brucellosis to livestock, authorized a winter hunt of bison leaving Yellowstone Park. Nightly newscasts of buffalo being gunned down in firing line fashion and the resultant public outcry caused Montana to suspend the hunt in 1991 and authorize state wildlife officials to shoot bison leaving the park. Over the next five years, as many as 400 bison were killed annually by state agents. Then, in January 1995, the state filed a lawsuit against the National Park Service and APHIS, charging that the Yellowstone herd was being mismanaged and that the alleged brucellosis threat to livestock was being ignored. In August 1996 the three parties reached an agreement known as the Interim Bison Management Plan, which committed the Park Service to cooperating in the slaughter of bison that leave Yellowstone. Under the plan, Park Service officials now say, they expected that a maximum of 569

bison would be killed this winter. But as it turned out, nearly double that number were gunned down or sent to slaughterhouses.

What Park Service officials apparently did not anticipate was that the deadly combination of bitter winter weather and the hard-nosed attitude of APHIS and Montana officials would kill so many bison that some feared the future of the Yellowstone herd was in jeopardy. "No one foresaw what has happened," park



TRYING TO SURVIVE THE BITTER YELLOWSTONE WINTER, A BISON (LEFT) FORAGES IN DEEP SNOW IN SEARCH OF FOOD. OPPOSITE: PARK RANGERS (TOP) ROUND UP BISON NEAR GARDINER, MONTANA, BEFORE SHIPPING THEM TO SLAUGHTER; SNOWMOBILERS (BOTTOM) BRAKE FOR BISON ON THE PARK ROAD TO WEST YELLOWSTONE.



spokesperson Cheryl Matthews said on March 11. "They're still shooting bison outside the park. We won't know how high the total count, with winterkill, will climb until May."

The interim plan for managing Yellowstone's bison made no one happy. Park officials later said they had reluctantly agreed to it because of pressure from the Interior Department to be a "good neighbor" to the state of Montana. But

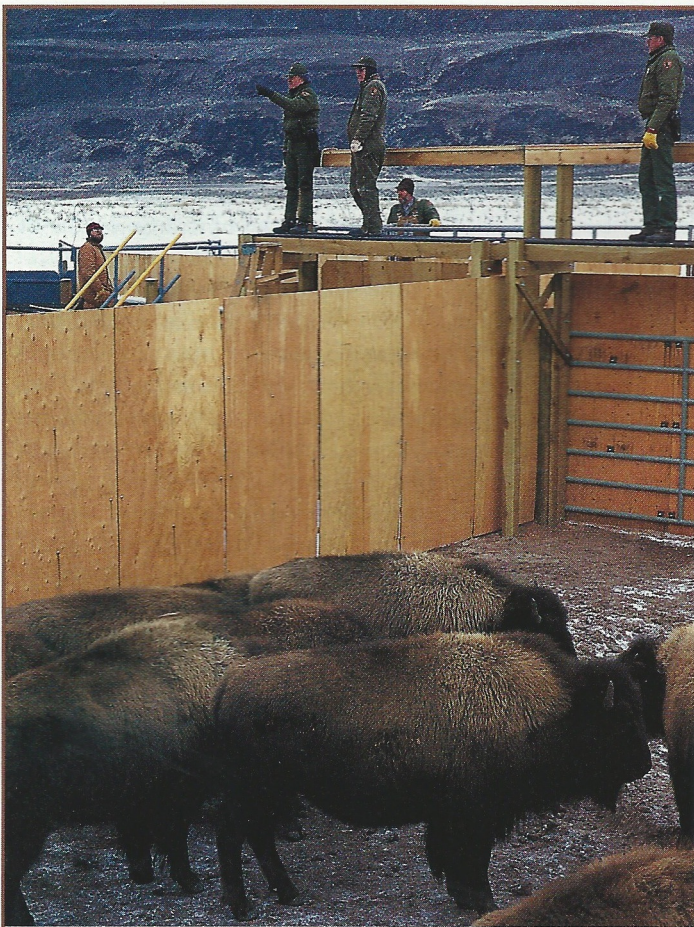
the interagency squabbling bred animosity, especially among park biologists and the state Department of Livestock. Early on, John Varley, Yellowstone's chief scientist, characterized the controversy as "a struggle between the park and agribusiness, and we're losing badly." Montana's chief veterinarian, Clarence Siroky, responded: "It's horrible; I detest it, but it has to be done, even though the risk [of transmission of brucellosis from bison to cattle] may be small."

As the bison body count mounted, Yellowstone Park superintendent Mike Finley became increasingly blunt. "When people describe what's happening here as a national tragedy, I don't disagree with them," he said in January. "We are participating in something that is totally unpalatable to the American people, and it's something we are not convinced that science justifies....If we managed AIDS the way brucellosis is being managed here, you'd be shot when you left your house."

The exodus of bison from Yellowstone was facilitated by the grooming of park roads, which are closed to automobiles in winter, for snowmobile trails. Rather than trudging through deep snow and ice, the bison were able to move

Rather than trudging through snow and ice, the bison were able to move down the hard-packed snowmobile roads. But when they approached the park boundaries, they faced death on two fronts.





easily down the hard-packed roads. But when they approached the park boundaries, the buffalo faced death on two fronts. On the western border, near West Yellowstone, Montana, bison were to be baited with hay into pens and trapped by the Montana Department of Livestock. Under the terms of the interim management plan, the trapped bison were to be tested for brucellosis. Animals that tested positive, along with all pregnant females, were to be hauled to slaughterhouses and butchered; the bison that tested negative, which was expected to be about 40 percent of them, were to be ear-tagged, marked with a peroxide dye, and released on nearby public lands. But because of early heavy snows, the West Yellowstone trapping facility could no longer be used, and so bison that left the park at West Yellowstone were simply executed on sight by Department of Livestock agents armed with high-powered rifles.

On the northern boundary, all bison were to be killed as part of the management plan. The Park Service had agreed to capture all buffalo headed north out of the park and ship them to slaughter. Many of these animals were actually trapped within Yellowstone by park personnel. Park officials said they had originally expected that the state of Montana would construct a quarantine facility north of the park to hold bison testing negative for brucellosis,

OPPOSITE: MONTANA DEPARTMENT OF LIVESTOCK RIFLEMEN (TOP) SHOOTING BISON THAT ROAMED OUTSIDE THE PARK'S NORTHERN BOUNDARY; A DEAD BISON (BOTTOM) KILLED BY STATE AGENTS NEAR WEST YELLOWSTONE ON FEBRUARY 19. ABOVE: BISON HEADED FOR SLAUGHTER, AT A NATIONAL PARK SERVICE FACILITY IN YELLOWSTONE.

with the idea that these animals might be sent to Indian reservations or released back into Yellowstone in the spring. But APHIS and Montana livestock officials vetoed that idea, claiming the disease might not always show up in testing. So even the seronegative bison were sent to slaughter.

The pens, chutes, and cattle trucks used to move these wild buffalo caused numerous injuries to the bison—gorings, fatal trappings, broken-off horns—and blood was splattered everywhere. The Park Service employees clearly hated what they were doing, with one official saying that if “we had a different solution, we would be using it.” But they were doing it nonetheless. The animals escaping the trap were shot by agents of the state of Montana. The starving bison’s only crime was looking north across the boundary, down the Yellowstone River—where I also lived.

FROM MY HOME, SOME 40 MILES down the valley they call Paradise, I watched anxiously as one of the worst wildlife tragedies of the decade unfolded in my backyard. Yellowstone’s bison had been important in my own life. I had camped with them in the backcountry of Yellowstone Park for months each year for more than a decade when I was filming grizzly bears. Sometimes I didn’t see grizzlies for weeks, but the bison were there every day, offering me companionship, frolicking, rolling in the dirt and shaking off great clouds of dust, bellowing and grunting as the spring green-up proceeded.

Once numbering some 60 million, wild bison in the United States were nearly exterminated by hide hunters in the 19th century. By 1902 only two dozen American bison remained in the wild, having survived by finding refuge in Yellowstone Park. At that low point in U.S. wildlife history, the greatest herd of animals ever to roam the face of the earth had been cut down to near extinction—in less than half a century. In 1902, in Yellowstone, 23 wild bison eluded park rangers’ efforts to capture them to protect them from poaching; those buffalo provided the core for today’s Yellowstone herd.

The modest recovery of the bison in Yellowstone is one of the great conservation stories of the century; indeed, the origins of the U.S. conservation movement are connected to the bison’s return. The Lacey Act of 1900 provided some protection for buffalo. In 1905 President Theodore Roosevelt helped found the American Bison Society, an influential conservation group that campaigned successfully for additional protective measures. Today more than 150,000 bison live in private and public herds. But only in Yellowstone have these animals always been free to roam.

This historic connection was what first drew me to Yellowstone’s wild bison. Their kinship lent me abiding pleasure, a gift of wild companionship. I owed these animals. During the killer winter of 1996–97, I visited the bison every week, recording their plight in my notebooks. What follows are some of my notes, along with a few comments, as I watched this staggering wildlife disaster.

DECEMBER 24, 1996: Brutally cold—30 below zero without the windchill figured in. I come home to find my barn cat frozen to death in the hayloft. The ground is frozen, so I



Because of heavy snows, the trapping facility could no longer be used, so bison leaving the park at West Yellowstone were executed by Montana Department of Livestock shooters with high-powered rifles.

draped a Seri Indian shell necklace around his small, stiff body and drop him off the Pine Creek bridge into the Yellowstone River.

An article appears in *The New York Times*: "Slaughter of Errant Bison to Begin Near Yellowstone." Jim Angell, a lawyer for the Sierra Club Legal Defense Fund, has filed suit in federal court against the Park Service. "For them to trap and slaughter these animals is a fundamental distortion of their mission," says Angell.

Marsha Karle, the park's chief of public affairs, replies: "Our preference is to allow nature to take its course. But we're responding to the concerns of the state of Montana."

Next week the park will implement its "interim plan," and the killing will start.

JANUARY 2, 1997: Almost every day, another 30-or so bison are shipped to slaughterhouses from a Park Service trapping and holding facility near Gardiner, Montana. The buffalo they can't catch are shot, along with all but a few of those crossing the park boundary near West Yellowstone. The slaughter of America's last wild bison herd has just

begun. Three months of winter remain.

Today I am aiming my skis into the immaculate whiteness of Yellowstone's Hayden Valley, the sagebrush hills transformed into a feminine landscape of soft ivory curves and hollows. The snow is good; a stiff wind sweeps across the cornices. Several bison herds occupy the valley. The black bison dominate the scene, punctuating the white land as the



HOW REAL IS THE BRUCELLOSIS THREAT?

The decision to slaughter bison leaving Yellowstone National Park was based on fears that the animals could transmit the bacterium that causes brucellosis, a disease that was originally brought to this country by European livestock and that causes cows to abort fetuses. But how real is the threat?

The Montana Department of Livestock, prompted by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), considered the threat serious enough to warrant killing all bison leaving the park. But many veterinarians and wildlife biologists strongly disagree, noting that there has never been a documented case of bison's transmitting brucellosis to cattle in a natural setting. The University of Florida's Paul Nicoletti, a leading authority on brucellosis, says livestock officials are using "scare tactics" that have no firm foundation in science. Since the infecting agent, *Brucella abortus*, cannot be transmitted through the air, cattle must come in contact with infected fluids, by having direct contact with either a contagious female bison or her aborted fetus. That would be a highly unlikely occurrence, many wildlife biologists say; on public lands outside Yellowstone's western boundary, for instance, cattle are not even brought to graze until June, when any bison would be long gone. D.J. Schubert, a biologist with the Fund for Animals, says a rancher has a better chance of winning the lottery than of owning a cow that catches brucellosis from a bison on the open range.

But Montana's chief veterinarian, Clarence Siroky, likens the risk to that of getting struck by lightning—although remote, he says, it would have such economically disastrous consequences for the state's cattle producers that any risk is unacceptable. The case that APHIS cites as evidence that bison can pass brucellosis to cattle is a 1990 study at Texas A&M University in which bison and cattle were corralled together for several weeks; eventually, the cattle developed the disease. But some scientists have condemned that experiment as being unnatural and highly manipulative. And Nicoletti compares Montana's Siroky to Chicken Little: "How many times can he keep screaming that the sky is falling before someone says, 'Okay, Clarence, prove it.'"

Under the agreement reached by the National Park Service and the state of Montana, only "high-risk" bison (i.e., pregnant females capable of aborting fetuses on the range) were supposed to be targeted this winter. Yet at least two-thirds of the Yellowstone bison shot or shipped to slaughter were bulls, nonpregnant females, or calves, which biologists say pose virtually no risk to cattle.

A more definitive word in the debate may come this fall. On March 17 Interior Secretary Bruce Babbitt asked the National Academy of Sciences to study the issue of bison's transmitting brucellosis to cattle; the academy's report is due in October.

—Todd Wilkinson



disk of the winter sun pierces the squall-filled sky. I enter a white defile between an island of live timber and the standing snags from the great fires of 1988. Buffalo graze the bottom, attempting to push away four feet of snow with sideways swipes of their massive heads. Few of these dish-shaped depressions are deep enough to reach the underlying grass, for the snow is layered with ice.

My friend Steve Fuller, winterkeeper at Yellowstone's Canyon Village, reports that the snow he removes from the roof of the Canyon Hotel contains two blue-ice layers toward the bottom as well as an ice layer representing the thaw and freezing rain that came just before New Year's. Another foot of fresh snow lies atop the ice. Bison are only able to graze next to springs and open water. At Canyon Village, bull bison have fed only on pine needles for days. One bull feeding near the lodge ate all the brooms and welcome mats at the tourist cabins.

JANUARY 19: Mary Meagher, a National Biological Survey scientist who has studied Yellowstone's bison for 38 years, reports that the brutal weather combined with the sanctioned killing will lead to a "major population crash" for the bison. Bison have been eating bark and pine needles, Meagher notes, which she calls "starvation food."

At the center of the problem are the park's interior roads, which are groomed and packed hard for snowmobiles. This

THE SKINNING OF A BISON (ABOVE) SHOT BY MONTANA DEPARTMENT OF LIVESTOCK AGENTS, IN THE GALLATIN NATIONAL FOREST ABOUT TWO MILES WEST OF YELLOWSTONE PARK. THE HEADS OF BUTCHERED BISON (OPPOSITE) PILED OUTSIDE THE STILLWATER PACKING COMPANY IN COLUMBUS, MONTANA.

allows the bison to conserve energy and travel more freely in and out of the park, and in recent winters they have increasingly migrated down these roads to lower-elevation habitats outside the park. Meagher and others have been talking about this problem for years, but snowmobiling is a big winter business in these parts, and the local chambers of commerce are a powerful lobby.

Despite the mild and sunny weather today, the bison continue to die, most shot by Montana state officials near West Yellowstone or shipped to slaughter from Gardiner by the Park Service. The record for Yellowstone bison deaths in a single winter, set in 1988–89, was 569, and that was due to

ing the Clinton administration to drop a threat of eliminating Wyoming's brucellosis-free status; they consider the premise that brucellosis poses a real danger to livestock unfounded. "The ranchers of this area view the possibility of brucellosis transmission from wildlife to cattle to be so insignificant that it poses no real threat to their interests," the group states in a letter to President Clinton.

Everyone agrees that the risk of transmission is extremely low. (See "How Real Is the Brucellosis Threat?" page 46.) Most scientists believe the elimination of brucellosis from wild animals, such as bison or elk, to be impossible, short of eradicating the herds. And cattle can be vaccinated.

The Department of Livestock has conducted six auctions for butchered bison parts. The first five grossed \$102,566, with the highest prices going for bull bison heads—as much as \$260 each.

winterkill and an authorized hunt. We will surpass that number in the next few days.

JANUARY 21: Upper Yellowstone River, cold today, the freezing river steaming as if on fire, pine trees glistening with ice crystals, unimaginably lovely and eerie. The temperature is in the single digits and dropping, with more snow coming. The bison are listless, their eyes flat. They look as they do in April after a particularly hard winter, utterly exhausted—yet winter isn't even half over.

There was a demonstration earlier today at the Federal Building in Bozeman, Montana, by activists who called for an end to the killing. State gunners shot 20 bison near Gardiner last Tuesday, so the new body count record is now official. *The New York Times* reports that 40 tribes want the bison to be captured and relocated to Indian reservations. The Park Service now says it will finally begin testing for brucellosis at its holding facility near Gardiner.

JANUARY 22: The snow keeps falling. There's talk of building a fence near the park's northern entrance to keep the bison off the nearby ranch owned by the Church Universal and Triumphant, a New Age group that wants the state to shoot all bison entering its rangelands.

Tension is heating up between Yellowstone Park and the state of Montana. Superintendent Finley publicly reminds Governor Marc Racicot that some months before, "we collectively made a promise to the public that we would treat Yellowstone's bison with the respect, dignity, and humaneness this wildlife species deserves."

South of the park, in Jackson, Wyoming, a coalition of conservationists and ranchers is urg-



Yet the Montana Department of Livestock continues to shoot away.

JANUARY 26: It's -2 degrees Fahrenheit here. The local news reports that at least 15 percent of the bison have been injured during transport to slaughterhouses. One cow was dead on arrival; another slaughtered there was found to have "massive bruising and broken bones."

In response to the alarmingly high death toll, now approaching 700 bison, Yellowstone Park suspends trapping and starts using the facility near Gardiner to hold bison that have tested seronegative. Superintendent Finley and Governor Racicot argue through the newspapers about who's responsible for the bison once they leave the park.

Finley to Racicot: "You cannot simply disavow responsibility for them." Racicot, bypassing Finley in the federal chain of buffalo responsibility, replies: "These are America's bison, Mr. President. Get involved."

A LONE BISON, ITS FACE
FLECKED WITH SNOW FROM
ITS ATTEMPTS AT GRAZING,
STANDS ALONG SODA BUTTE
CREEK NEAR YELLOW-
STONE'S LAMAR VALLEY IN
FEBRUARY, WITH MOUNT
NORRIS RISING IN THE
BACKGROUND.

The governor, I think, has a point here; the power of the Park Service and the Department of the Interior has been radically curtailed, as control of our wildlife has been relegated to agricultural officials—especially the Montana Department of Livestock, whose preferred tool of management seems to be the bullet.

JANUARY 29: The Department of Livestock has conducted six auctions for butchered-bison parts; the first five grossed \$102,566. Proceeds go to the state of Montana.

One auction, held in Sheridan, Wyoming, netted \$36,000, with the highest prices being paid for bull bison heads—as much as \$260 each—usually for mounting by taxidermists. Hides sold for slightly less. Mac Carelli, owner of one of the slaughterhouses, C&C Meats, says that in reviewing the lab results he discovered that only 2 of the more than 200 bison he's killed tested positive for brucellosis. That's a 1 percent



NATIONAL PARK SERVICE PHOTOGRAPH BY JIM PEACO

infection rate—far less than the 50 percent rate assumed by the state of Montana. State veterinarian Siroky disputes Carelli's numbers. "There's no way that's true," he says.

As of yesterday, the death toll on bison was 709.

JANUARY 30: The *Bozeman Daily Chronicle* carries an eyewitness account of the killing of bison by Montana officials near West Yellowstone. An older couple and their friend had stopped to photograph elk. What they saw "horrified" them, they told the reporter. "We were looking at how pretty they [the bison] were," one of the group said, when the

Since 1967 Yellowstone has been committed to a policy of "natural regulation" of wildlife, allowing nature to take its course. But this is no ordinary winter, and this is not natural death.



livestock agents raised their rifles and opened fire. "I was so upset I started shaking and damn near cried," William Hill said. "We're avid sportsmen and hunters. But that was the saddest thing I've ever seen."

These native Montanans have pierced the deadly reality behind the political rhetoric. Even my children, ages 13 and 15, perceive without sentimentality the emotional power and nobility of a bison. Something is very wrong here.

USA Today runs an ad, paid for by the Fund for Animals, calling for a tourist boycott of Montana: "The state of Montana has zero tolerance for buffalo, so we need you to have zero tolerance for Montana." Yellowstone biologist Meagher is also quoted: "Bison are wildlife, not livestock, and therefore should not be managed like cattle herds."

FEBRUARY 1: Tensions keep rising. APHIS decides to back off a bit and allow some bison to roam outside the park north of West Yellowstone. But the state won't agree to it, so the killing continues.

Montana state senator Tom Keating wants the state to have authority to call an "emergency" bison hunt. Keating is concerned about overworking the Department of Livestock. "The invasion is growing and the personnel at Livestock are being overrun," he says. Montana wildlife officials are leery because of the outcry in 1991 that led to the end of sanctioned bison hunts; bison conditioned to tourists' cameras had run 10 feet in front of the hunters, who often missed the killing zone. Wounded, bleeding, kicking, gut-shot buffalo were recorded by national TV cameras.

The winter's bison body count now stands at 765.

FEBRUARY 3: The Church Universal and Triumphant is whining about gutpiles of slaughtered bison left on its property just north of Yellowstone Park. These buffalo have been shot by the Department of Livestock at the church's request. In recent years, hundreds of bison have been killed on the 12,000-acre ranch now owned by this apocalyptic group, which teaches a conglomeration of New Age and traditional religions, liberally dosed with doomsday proclamations.

At my home, farther down the Paradise Valley, it doesn't seem that cold at 25 to 30 degrees Fahrenheit. Snowfall in the park is more than twice the season average, and now there's a foot of fresh powder. At the Mud Volcano area of Yellowstone's Hayden Valley, 28 bison are hanging around the shallow lake, their ribs already showing. "I've never seen anything like it," Fuller, the park winterkeeper, tells me. He reports seeing three solo calves that will certainly die. The bison are occupying a tiny thermal area, where the snow does not accumulate but little grass grows. Fuller wonders if the bison can "bail out" of the park. Of course, there are always the roads, well groomed for snowmobiles.

FEBRUARY 6: Governor Racicot hedges on approving any quarantine facility for seronegative bison until a decision is made on relocating them; the governor says he must be assured that "keeping bison there will not threaten Montana's cattle with disease."

The human-inflicted bison death tally is now 791. Too much death; every time I look closely into the face of one of these animals, I think I'm going to lose it.

I travel to Yellowstone's Lamar Valley. As the sun sets, cold and muted, four wolves emerge south of Soda Butte. They howl and 10 minutes later are joined by a fifth wolf, a black one with a white chest patch. The wolves ignore the bison. They are waiting, for the bison and elk will make easier prey as winter wears them down. Thousands of feeding marks are rubbed into the snow by bison, but only a tiny fraction show any grass at the bottom for forage. These buffalo are the walking dead.

And yet we keep killing them. All [Continued on page 102]

NEW GITZO MOUNTAINEER TRIPOD

CARBON FIBER TECHNOLOGY

The ultimate in tripod technology, Gitzo's Mountaineer Tripod offers ultra light weight with amazing strength and durability.

Using space-age carbon fiber, the Mountaineer Tripod weighs only 3 lbs., yet it incorporates the rigid standards which have made Gitzo famous. Whether you're a nature photographer, backpacker or every day shooter, you must take a look at this tripod. You'll love it.

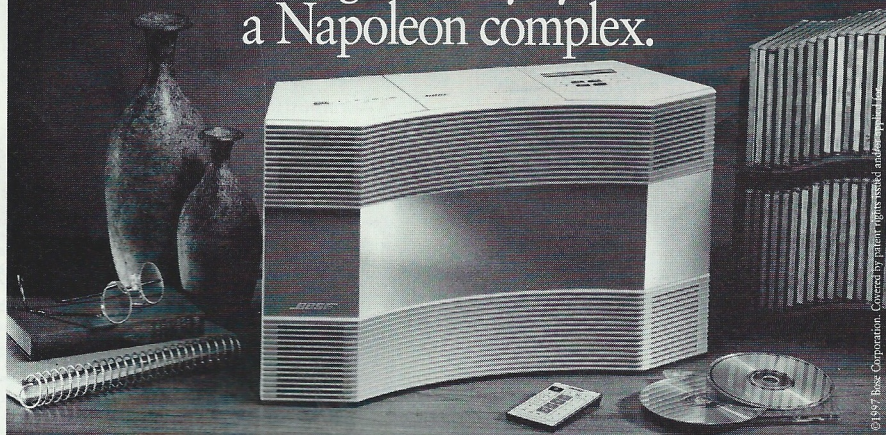
And for sports and outdoor photographers, there's the Carbon Fiber Mountaineer Monopod weighing less than one pound. Another MUST SEE.

For complete information on the Mountaineer Tripod or Monopod, see your Authorized Gitzo Dealer or contact Gitzo Division, Bogen Photo Corp., 565 E. Crescent Ave., Ramsey, NJ 07446 (201) 818-9500



The difference is in the image.

The first high-fidelity system with a Napoleon complex.



It may be small. But the Bose® Acoustic Wave® music system is definitely an overachiever. The unit features a compact disc player, an AM/FM radio, a handy remote control, and our patented acoustic waveguide speaker technology. And it produces a rich, natural sound quality comparable to audio systems costing thousands of dollars. We know that's hard to believe. So we're ready to prove it. Call or write now for our complimentary guide to this award-winning system. Because, like the system itself, it's available directly from Bose.

Call today. 1-800-898-BOSE, ext. A555.

Mr./Mrs./Ms.

Name (Please Print)

Daytime Telephone

Evening Telephone

Address

City

State

Zip

Or mail to: Bose Corporation, Dept. CDD-A555, The Mountain, Framingham, MA 01701-9168.

BOSE
Better sound through research®

BISON [Continued from page 49]

involved say they have no choice but to kill them. The agencies, they say, don't really want to, but they must, for reasons they blame on the other side. All the players—the National Park Service, the governor of Montana and his livestock and wildlife departments; APHIS and its parent agency, the Department of Agriculture—all claim to be “caught in the middle,” a most improbable and cowardly axiom of ethical geometry.

The Park Service had announced a moratorium on killing bison along the park's northern boundary in late January; but now Superintendent Finley says the shooting will resume.

Yellowstone Park spokesperson Matthews reports that the Park Service had no choice but to return to its policy of killing bison, because hazing the animals back into the park was only leading to more starvation. “We’re between a rock and a hard place,” she says. “The most effective and humane way to go was to resume shipping the animals to slaughter.”

Something deep, dark, and oddly agricultural belies this easy talk of humane ways to kill wild animals. The Native Americans of the InterTribal Bison Cooperative say the killings show inexcusable disrespect. Watching the death of a single bull bison at a slaughterhouse in January tells me all I need to know of what the Indians are talking about. Shot twice in his holding pen, the bull struggles to keep his feet, then beats the earth with his forepaws while the shooter moves on to the next victim. Forty seconds later the bull emerges from death to kick wildly for the last time.

FEBRUARY 9: Field report from the Firehole River, Old Faithful area: A full third of the bison are showing signs of starvation, ribs prominent, pelvis bones showing. Their demeanor is lethargic; they seem resigned to dying, though it is only midwinter. In the Firehole Lake area, there are two fresh bison carcasses; grazing activity is confined to the thermal areas, which are grazed bare. Because of the deep snow, there are no bison trails into the meadows, where most of the grass—

normally available in February but not this year—lies. It is 25 to 29 degrees below zero and very beautiful. Lovely and deadly.

FEBRUARY 13: Snow is coming, three to four inches here in Paradise Valley, much more in Yellowstone. The total number of bison dead now stands at 964. The Department of Livestock shot 17 last Wednesday near West Yellowstone, bringing the total there to 476 shot, with just 30 captured and shipped to slaughter.

I can't help wondering whether the department's policy—unstated and perhaps even unconscious—is to kill off as many bison as possible, to prevent the "bison problem" from recurring during the next decade. It is, as the *Missoula Independent* headline states, "Slaughtering the American Buffalo...again."

The notion of the second slaughter of the bison is a common image in the press, but somehow it doesn't break through our national consciousness.

FEBRUARY 14: Valentine's Day at Old Faithful. The snow at Gibbon Hill and Sylvan Hot Springs is slushy. Slow going on skis. The bison are not quite as emaciated as in the Firehole. It is chinook weather, the temperature just above freezing with a stiff wind blowing through the lodgepoles, the moon half full, blood orange.

Today seven conservation groups finally presented their long-term plan for handling bison migrating out of Yellowstone Park. The plan, outlined in a letter to President Clinton and the governor of Montana, calls for the park to stop grooming the snowmobile trails that have facilitated the bison exodus. The letter suggests that the U.S. Forest Service allow bison to use public lands outside the park for grazing and that APHIS guarantee its coveted brucellosis-free status if the bison are in a quarantine facility or on national forestland. Other suggestions include the acquisition of easements or leases from private landowners that would allow bison to use and migrate through their lands. These sound recommendations have come a bit late.

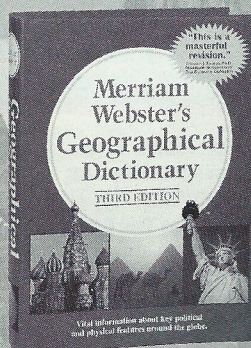
Also today, the *Bozeman Daily Chronicle* carries a story with [Continued on page 106]

Sierra Nevada • Nanjing • Gobi Desert • Jamaica • Hells Canyon

Key West • Kanha National Park • Puget Sound • Luray Caverns

Beringia • Devil's Tower • Black Hills • Madagascar • Amazonia

Where is Timbuktu?*



\$29.95

Visit your local bookseller

**Usually spelled Tombouctou. Town in Mali, western Africa, near the Niger River. Trades in salt; extensive ruins.*



Merriam-Webster Inc.

Telephone: 800-201-5029

<http://www.m-w.com>

AOL keyword: MERRIAM



"This is a masterful revision."

—DONALD J. ZEIGLER, PH.D.
PROFESSOR OF GEOGRAPHY
OLD DOMINION UNIVERSITY

- 48,000 entries covering political and physical features.
- Population, size, economic activities, historical notes.
- Mountains, oceans, and human geography (such as the Great Wall of China).
- 252 maps created by Encyclopædia Britannica.

Galápagos Is. • Lima • Appalachian Trail • Alaska • Java

Fujinon's new SUPER 80s are brighter and lighter.

With 80mm objective lenses, Fujinon's SUPER 80s inherently gather more light and provide higher resolution. Normally, these advantages are offset by greater weight. But at 1.2kg, the SUPER 80s weigh less than many scopes with smaller objective lenses. Other advantages include waterproof scope construction, Fujinon's patented EBC coatings for maximum light transmission,



convenient center focusing control, and standard

20~60X zoom eyepiece. Optional eyepieces include the wide angle (2.1° FOV), distortion-free, flat-field 25X with the world's

longest eye relief—31mm! And, for the ultimate in color accuracy, clarity and resolution, choose the SUPER ED 80 with extra low dispersion glass. Naturally, a lifetime warranty against

manufacturing or material defects comes with every SUPER 80.

For more information, please contact:

FUJINON INC.

10 High Point Drive
Wayne, N.J. 07470
(201) 633-5600

In Hawaii:

Fuji Photo Film Hawaii, Inc.
(808) 942-9400

In Canada:

Fuji Photo Film Canada, Inc.
(416) 890-6611



Ranked 4th in the world for
WHALE WATCHING!

CAPE COD MASSACHUSETTS

You will experience some of the world's finest whale watching on the waters surrounding Cape Cod. On shore, nature's beauty abounds: tranquil harbors and coves, magnificent salt-marshes, tidal flats, wildlife sanctuaries and so much more.

For complete information on where to stay, write or call for our free Accommodations Directory.

CAPE COD CHAMBER OF COMMERCE

P.O. Box 16, Hyannis 86, MA 02601-0016
(508)362-3225 ~ <http://www.capecod.com>

We'd love to show you around.

MASSACHUSETTS

GOLDEN GUIDES® from Golden Books®



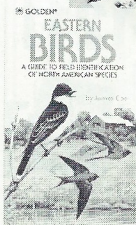
BIRDS OF NORTH AMERICA

Softcover
ISBN: 0-307-33656-5
Sugg. Retail \$13.95
Hardcover
ISBN: 0-307-37002-X
Sugg. Retail \$14.50



BIRDS

ISBN: 0-307-24053-3
Sugg. Retail \$5.95



EASTERN BIRDS

ISBN: 0-307-13671-X
Sugg. Retail \$13.95

Look for these Golden Guides®
wherever fine books are sold or
call 1-888-READ-2-ME



GOLDEN BOOKS

Golden Books Publishing Company, Inc.
850 Third Avenue, New York, New York 10022

©1997 Golden Books Publishing Company, Inc.
Golden Books® and G design™ and associated trademarks and
service marks are the property of
Golden Books Publishing Company, Inc.

that we've got running Yellowstone," Burns says, "He's the typical bureaucrat who thinks we can't get to him." Burns also blasts Finley for proposing closing the road to West Yellowstone to snowmobiles in order to stop the bison exodus, saying, "This is the kind of action you would expect from a dictator, not from a park superintendent."

FEBRUARY 26: The chinook weather is being pushed out by a blast of arctic air from the north. More snow is on the way. I had to buy two cords of firewood because I can't do the chopping—I have broken my leg, a minor, ignominious fracture.

Park winterkeeper Fuller keeps me up to date: The younger animals are dying with regularity. Yesterday he found a calf at Mud Volcano, dead but not yet frozen. Another young buffalo nearby would not make it through the night. A third bison lay dead in the parking lot. A starving bull over on the Firehole River browsed a fallen lodgepole pine, eating the bark like a giant corn on the cob. The emaciation of bison is the most extreme he has witnessed in his 23 years in Yellowstone.

I talk to Mark Heckert, executive director of the InterTribal Bison Cooperative, who has been proposing testing and quarantining bison leaving the park, then releasing them onto tribal lands. The Native American cooperative finds the shipping of bison to slaughterhouses "abhorrent," says Heckert. "The government needs to recognize that there are irrevocable ties and a strong cultural connection [between Native Americans and bison], which continues to this day."

"Brucellosis is a political disease," he says. "This high level of politicization distracts most of the players from the fact that for generations, bison were part of tribal subsistence, both spiritually and physically. It's not the state livestock and animal-control people's job to care about wildlife. It's their job to care about cattle."

Then Heckert adds, "I don't know how else to say it: It's tremendously bad karma to kill these buffalo."

MARCH 6: The bison death toll climbs past 1,000, plus the estimated 800 that have died of winterkill. About 100

Recorded Books™



Snow Falling on Cedars by David Guterson

Unabridged on audiocassette. Over 1,700 titles to choose from—histories, mysteries, classics, sci-fi, best-sellers and more. Professionally performed by Broadway actors! Ask about easy rentals by mail.

Call now for a free brochure:

1-(800)-638-1304

270 Skipjack Road • Prince Frederick, MD 20678-3410

BOTSWANA • CHILE • COSTA RICA • EASTER ISLAND • INDIA



WILDLIFE • CULTURE • NATURAL HISTORY • CRUISING

Where in the World?

Explore the planet with expert leaders in a small group setting ~ the ideal combination for learning and discovery.

NATURE EXPEDITIONS INTERNATIONAL

Leader in Educational Travel Since 1973

1-800-869-0639

6400 E. El Dorado Circle #210 • Tucson, AZ 85715

ALASKA • AMAZON • ANTARCTICA • AUSTRALIA • BELIZE • BORNEO • ECUADOR • GALAPAGOS • KENYA • NEPAL • NEW ZEALAND • PERU • TRINIDAD • TANZANIA • SW INDIAN COUNTRY

KEEP THE BUGS AWAY!

With Bug Baffler® Protective Clothing. Shirt with attached headnet gives complete upper body & head protection. Lightweight durable screening material lets air in, keeps bugs OUT! Pants, too. Colors: olive green, black (for crystal clear vision), and camouflage.

FREE BROCHURE

Order
Code 19

1-800-662-8411

<http://www.bugbaffler.com>



brigger furniture made to fit the body



Free Catalog
800-451-7247

Explore the Endless Possibilities to
find Comfort in Beautiful Designs

klein design, inc.

99 sadler street, gloucester, ma 01930

It's not the state livestock and animal-control people's job to care about wildlife. It's their job to care about cattle. . . . I don't know how else to say it: It's tremendously bad karma to kill these buffalo."

Native Americans, along with a few National Park Service rangers and conservationists, come to the killing fields near Gardiner to hold a prayer vigil. Arvol Looking Horse, a Lakota Sioux medicine man who has journeyed here from South Dakota, says that the animals should be distributed to Indian tribes. He notes that the Yellowstone bison are special because they, like native people, are "survivors of an apocalypse."

At nearby Stephens Creek, Yellowstone rangers are still holding the 147 bison in corrals. Superintendent Finley refuses to surrender them to the gunners or to slaughterhouses because he says he hopes that, if APHIS softens its stance, they can be sent to Indian reservations. Then again, he notes, these bison might be needed come

spring to help repopulate the park.

MARCH 17: Chinook weather, warm down here in the Paradise Valley; but in the upper Yellowstone winter prevails. Twenty-five dead bison were counted along eight miles of the park road, from Mud Volcano to Yellowstone Lake.

Secretary of the Interior Bruce Babbitt holds a press conference today in Washington, D.C. His major announcement is that he is asking the National Academy of Sciences to undertake a study of brucellosis and the risks of transmitting the disease from wildlife to livestock. The first imperative, he says, is to get the state of Montana to "stop the shooting and the slaughter."

This is all too little, too late. The federal government has no power to

compel the state of Montana to stop shooting bison. Montana should be ashamed of itself.

MARCH 19: We're now steeling ourselves for the grim specter of more than 2,500 bison dead by late April.

How can anyone bear this brutality? And I speak as a former combat medic who still fishes and hunts, who cooks, eats, and celebrates the objects of that hunt. Bison are sentient beasts, and knowing them activates spiritual obligations, moral responsibilities, such as the contracts that the best hunters have always had with their prey and the mutual habitats we occupy. We Americans have never contracted with the bison, a creature we butchered into near-extinction in record time.

Conservationists and bureaucrats

Something to Hoot About!

Now Audubon is paying new, higher annuity rates!

The benefits of Audubon gift annuities are more attractive than ever. When you give cash or appreciated stocks for an Audubon annuity, you really will have something to hoot about:

- Earn a guaranteed high rate of return for the rest of your life
- Save taxes with a substantial income tax deduction
- Avoid capital gains tax
- Enjoy partially tax-free income
- Make an eventual gift to Audubon that will support birds, other wildlife, and habitat for generations to come

Explore a gift annuity that can meet your financial and philanthropic objectives. If you are at least 50 years old and considering a gift of \$10,000 or more, please write or call for more information. All inquiries are kept confidential, and there is no obligation to proceed any further.

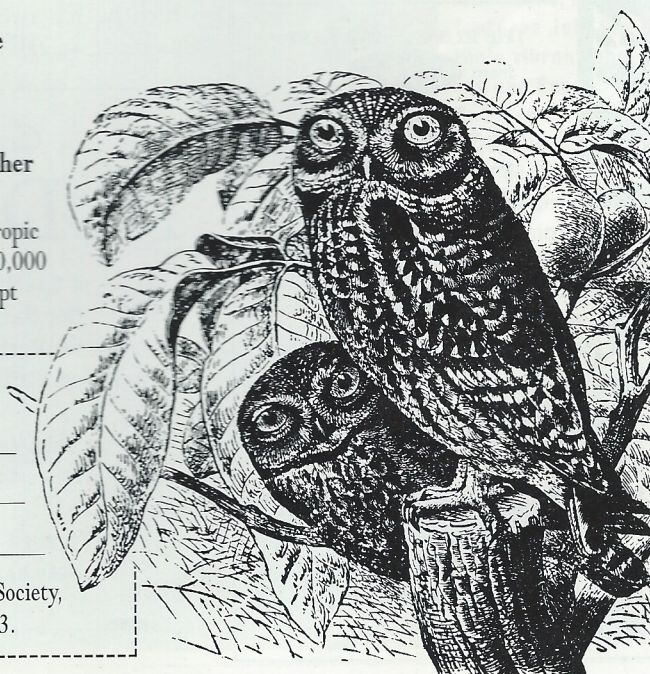
Name: _____

Address: _____

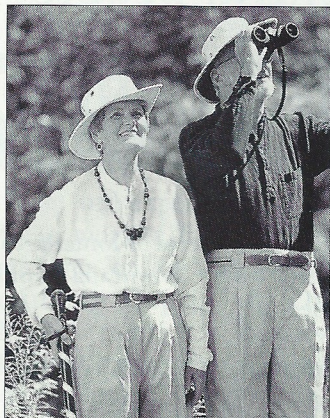
City: _____ State: _____ Zip: _____

Telephone: (____) _____ Best Time To Call: _____

Send to: Wayne Mones, Director of Planned Giving, National Audubon Society,
700 Broadway, New York, NY 10003. Or, call (212) 979-3033.



Attention Birders



"The best travel clothing in the world"

Tilley Endurables

FOR MEN & WOMEN:

Long-lasting, smart-looking, easy-care; pickpocket-proof travel clothing.

Fast-drying, comfortable travel underwear; Tilley Hats...

To order, or for a free catalogue
1-800-746-0411

VISIT OUR WEB SITE www.tilley.com

seem to have particular problems with bison. If these were elk, who are infected with brucellosis in numbers far exceeding those for bison, this slaughter would bring on cries of outrage and genocide. Elk have a constituency—hunters, outfitters, the tourist industry, the Rocky Mountain Elk Foundation. Bison have none of these. We activists put ourselves on the line in defense of wolves or grizzly bears on a regular basis. But not for the 1,074 bison we have allowed to be killed this winter.

The few people I know who have spent a great deal of time with bison know them to be animals with power. Bison carry ceremonies beyond our science; they have a ceremony of the dead, like that of elephants, in which members of the herd come over and rub or lick hair off the deceased.

In this numbing winter, the talk of treating animals humanely by putting them out of their misery with a bullet has been ubiquitous in these parts. Yet if I were confronted with a starving winter deep in the backcountry of Yellowstone Park, with another major storm blowing in, I could see myself wrapped in what clothing I had, sitting in the lee of a great lodgepole pine, watching the terrifying but beautiful snow accumulate on the branches and on me, until I let myself go gently into that last, long sleep. I think about the last bed of a great bull bison lying in the snow or perhaps on thermal ground, in this magnificent land in which he has lived his entire, full life, this place we call his habitat. ♀

Coming in

AUDUBON

**A Special Report on
Our National Parks:
Can We Restore the Balance
Between Visitors and the Land?**

**Cats Versus Birds:
A Nature Lover's Dilemma**

**The Strange Tale of the Land
Between the Lakes**

Experience Alaska

Unique Adventure Vacations

Since 1977

- **Natural History Safaris**
- **Backcountry Lodges**
- **Denali National Park**



Free 28 page catalog

800-334-8730

www.alaskawildland.com
Box 389 Girdwood, AK 99587

THE POKE BOAT®

IT'S EVERYTHING A CANOE ISN'T.

A canoe is tippy. A Poke Boat isn't. It's remarkably stable.

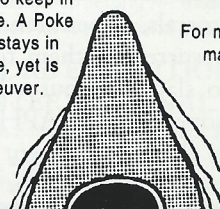
It weighs only 22 pounds - built with aircraft strength.

A canoe is hard to turn and difficult to keep in a straight line. A Poke Boat isn't. It stays in a straight line, yet is easy to maneuver.

You can buy more than a canoe.

For more information, give us a call.

A canoe is heavy. A Poke Boat isn't.



606-986-2336

GALÁPAGOS

You, 9 other adventurers and our naturalist will explore by yacht more islands than any other Galápagos expedition. From simple adventures to splendid yacht charters, from scuba diving to serious hiking, no one else offers as many ways to experience the Galápagos because no one else specializes exclusively in the Galápagos. 60 trip dates. Machu Picchu option.

FREE BROCHURE.

Inca Floats

1311-A 63rd St., Emeryville CA 94608
510-420-1550

BIRDWATCHING IN TURKEY

TURKEY, LOCATED IN THE MEETING POINT OF THREE CONTINENTS, IS A HISTORICAL BRIDGE FOR CIVILIZATIONS, AS WELL AS A PHYSICAL ONE FOR BIRDS.

JUST THE RIGHT PLACE TO GO FOR THE OBSERVATION OF BIRD MIGRATION. YOU CAN VISIT THE BREEDING HABITATS OF ABOUT 300 SPECIES AND SUBSPECIES WITH EXPERT GUIDES.

WHAT IS MORE
VISIT MAGNIFICENT ISTANBUL AND ANCIENT SITES ALONG THE AEGEAN COAST
GROUP TOURS AND CUSTOM PROGRAMS

BY **TOURCOM™**
Call Toll Free
1-888-TOURCOM

RUSSIA'S FAR EAST

**Expedition cruising
with expert naturalists
and Zodiac landings**



E X P L O R E

THE RUSSIAN FAR EAST
from **\$3795**

THE ALEUTIAN ISLANDS
from **\$4795**

KAMCHATKA &
THE KURIL ISLANDS
from **\$4795**

For more information or a brochure call

(800)263-9147

or see your travel agent



30 Hazelton Ave. Toronto, ON M5R 2E2