

High Country News

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A Paper for People who Care about the West

One dollar

A dead end for the grizzly?

—by Rocky Barker and Kevin Richert

The federal government's road map for restoring the grizzly bear may be leading this admired but feared animal into a cul-de-sac of frustrated survival. The question is whether the grizzly can take recovery on paper and turn it into recovery in the wild. The answer, it now appears, is not entirely up to the bear.

The big variable in bear recovery is deaths caused by humans — whether by hunters, freight trains, power lines or other activities such as mining (see story on page 11). And the more the grizzly recovers, the more it encounters the limits of its new existence.

Last year only one grizzly was killed in the greater Yellowstone area. But this year mortality is way up. Eight bears, including four adult females, have been lost so far: Hunters killed four; a car hit one; two died by accidental electrocution, and one was captured and sent to a research lab.

Bear deaths are also a concern beyond the Yellowstone region. In the Cabinet-Yaak mountains of northwest Montana, where the U.S. Fish and Wildlife Service is transplanting bears to bolster a dwindling population, at least three bears have been shot by hunters since 1985. In one case, a hunter said he mistook a grizzly cub for an elk.

"When you're dealing with a small number of bears, any mortality is important," said Wayne Kasworm, the Fish and Wildlife biologist who heads the grizzly recovery work in the Cabinet-Yaak region.

Along the Idaho-British Columbia border, a myriad of logging roads provide hunters and huckleberry pickers easy access to grizzly habitat. Several bears have been shot and killed in the Selkirk ecosystem over the past few years. These deaths could be holding



John E. Burns/U.S. Forest Service

A radio collar is fitted to a drugged cub by a member of the Interagency Grizzly Bear Study Team

back a promising population of 50 to 60 grizzlies.

"I think if you reduced the human-caused mortality, the population would do fine," says Wayne Wakkinen, an Idaho Fish and Game wildlife biologist.

Chris Servheen, the Fish and Wildlife Service's grizzly recovery coordinator, admits that the government is "deeply concerned about what's happening to the grizzly bear." This is despite the births of a record number of cubs in and around

Yellowstone National Park. This year Yellowstone bear trackers have seen 24 mother grizzlies and a record 57 cubs.

"We are heading in the direction of recovery," Servheen said last month at a Jackson, Wyo., meeting held to explain the agency's proposed revisions to its 1981 Grizzly Bear Recovery Plan. "There are a minimum of 200 grizzlies out there, and I know there are more than that." But Servheen acknowledges that bear-hunter conflicts and continued economic development jeopardize grizzly range and could keep the great bear listed as threatened for years to come. The grizzly was first listed under the Endangered Species Act in 1975.

The recovery plan revisions would shift its goal from a simple head count of the elusive bears to a more complex set of criteria based on birth rates, mortality and distribution. The revised plan would seek to:

1. Minimize sources of human-bear conflicts.
2. Limit loss of habitat as a result of human activities like timber harvesting, mining, oil and gas exploration, road construction and recreation.
3. Study the relationship between bear density and habitat value, to better understand limiting factors on grizzly populations.
4. Develop ways to successfully move bears into areas where populations need to be increased.
5. Improve public relations to increase support and understanding of the grizzly.

Interior Secretary Manuel Lujan has said that delisting the grizzly, or any other high-profile endangered species

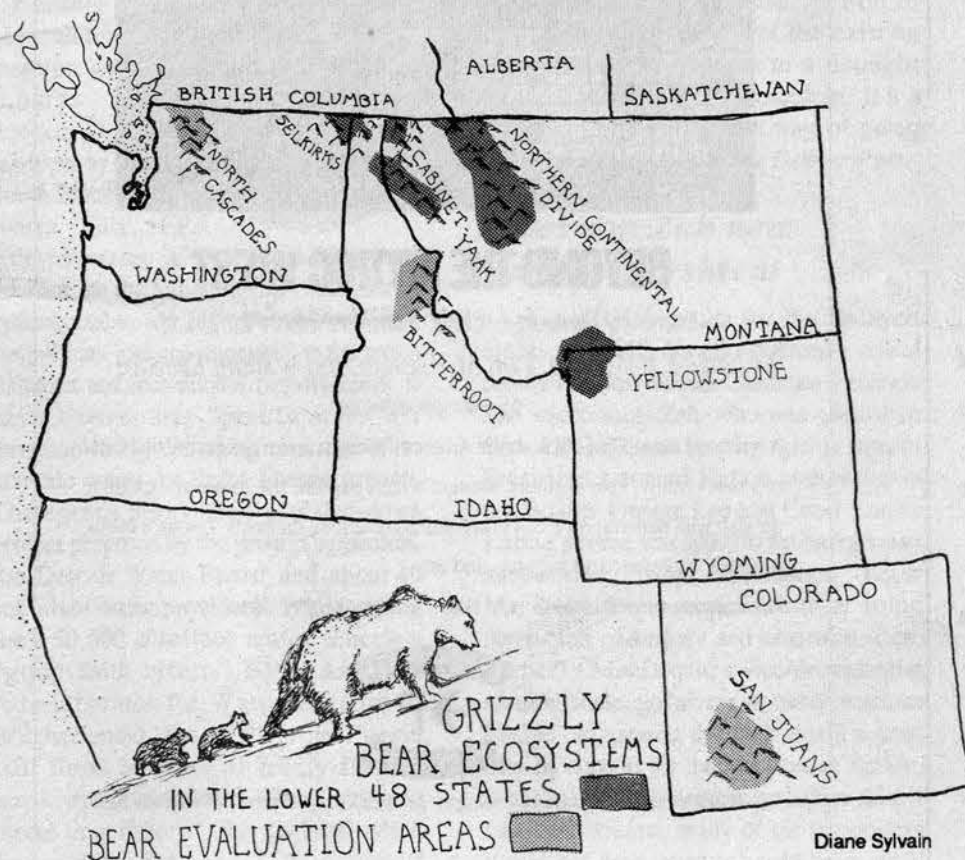
would be a feather in the cap of Interior. It would be a demonstration that the 17-year-old Endangered Species Act works.

With perhaps that in mind, environmentalists are worried about a rush to delist the grizzly, especially in and around Montana's Glacier National Park, where recovery has progressed. Glacier's allowable annual mortality rate of 14 is double that of Yellowstone's, and so far this year Glacier has lost 11, including four wild bears that were shipped to research labs and zoos. Because of this relatively low death rate, Montana game officials initiated a grizzly hunting season this fall. But talk of removing the bear from the threatened species list still stirs strong reaction.

"The notion of delisting suggests that all is OK with the grizzly bear now, and all will be OK in the future," said Fern Sheppard, a lawyer with the Sierra Club in Denver.

On the outskirts of Glacier National Park, where the battle over grizzly delisting is most imminent, Montana environmentalist Keith Hammer says delisting would sign the death warrant for the grizzly in the northern Continental Divide ecosystem. "It would be the demise of the grizzly bear. There's no doubt in my mind," Hammer says. "I term it paper recovery."

In the Yellowstone recovery area, the grizzly has almost met the Fish and Wildlife Service's distribution goal: grizzly sows living in 15 of the 18 bear management units with no two empty



Diane Sylvain

(Continued on page 10)



HIGH COUNTRY NEWS

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Dear friends,

On not being slick

Thunderbear, which covers the National Park Service and describes itself as "the oldest alternative newsletter in the federal government," had this to say about us in its September 1990 issue: "GOOD NEWS FROM THE HIGH COUNTRY. One problem with environmental groups is that they are getting to be as slickly packaged as their opponents.... One thing I personally like about *High Country News* is that they come up with a number of grass-rootsy things you can do, without the bothersome result of going to jail." P. J. Ryan, the editor of *Thunderbear* and a HCN subscriber, was referring to our grazing issue of March 12, 1990, and a story about Arizona State University law professor Joe Feller. Feller has successfully lobbied the Bureau of Land Management to reduce overgrazing on range allotments. His advice is to become adept at creating stress for BLM managers.

Speaking of bears

Our lead story in this issue is about the future of the grizzly in the West and the growing conflict between we humans and the bear. The more the bear succeeds, it appears, the worse the conflict gets, at least in the Yellowstone recovery area. Hunters cause the most grizzly deaths, and the debate over justification is as emotional as the old engraving reproduced at right.

Ancient forest "facts"

Staff mailed a record 19,350 copies of our Nov. 19 special issue on Northwest old growth, including 10,150 samples to various groups such as the Society of American Foresters (2,400). New subscriptions are already rolling in, but not every reaction is positive. "Why should I subscribe to a publication that is 100 percent Fact Free?" asks one sample recipient from Arlington, Wash. Read on.

Errors and omissions

Under the headline, "The world's largest conifers grow in the Northwest," we reported in the ancient forest special issue of Nov. 19, 1990, that the Pacific silver fir reached a diameter of 245 feet. We regret our overzealousness in describing the old growth's size. The sentence should have said the tree reaches 245 feet in height and eight feet in diameter.

We offer our apologies to Montana artist Monte Dolack for misspelling his name in an advertisement on page two of the Nov. 5 issue. The correct spelling appears in a similar ad in this issue, along with the correct address of Defenders of Wildlife: 1244 Nineteenth St., NW, Washington, D.C. 20036.

Arizona's gubernatorial race will not be decided until a runoff is held Feb. 26, 1991. Because of write-in votes for a former aide to Ex-Gov. Evan Mecham, neither Phoenix Democratic Mayor Terry Goddard nor Republican candidate Fife Symington captured a majority of the vote, which Arizona law requires. We are grateful to Eva Patten of the Arizona Nature Conservancy for

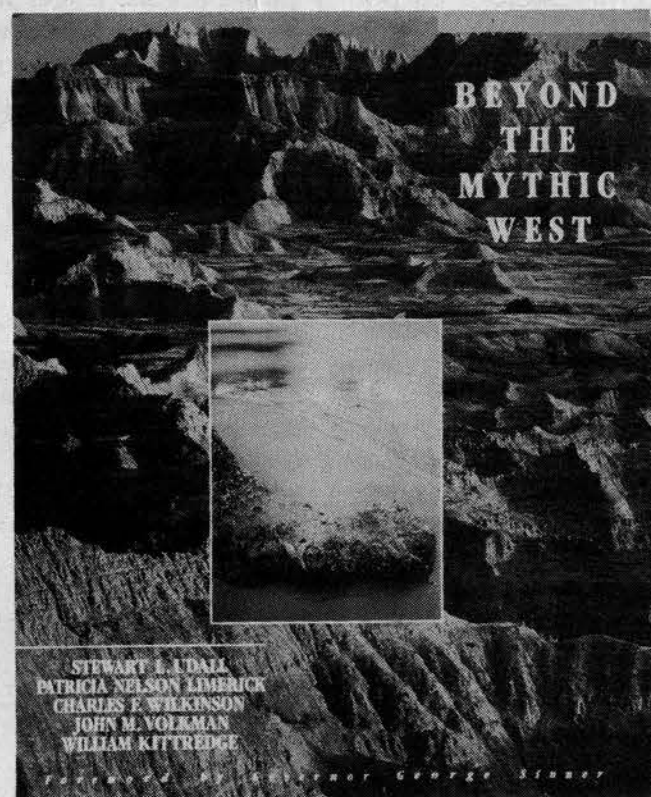


pointing out this error in our Nov. 19 post-election rundown. She also reported that Proposition 200 to establish the Arizona Heritage Fund was approved with a 62 percent majority. The fund will take \$20 million a year from the state lottery to finance programs in the state Parks and Game and Fish departments.

In noting our Nov. 5, 1990, lead article, "The game is changing in the wild West," Eva wrote of Proposition 200's win: "This infusion of funds into Arizona Game and Fish will

dramatically affect the department's ability to manage all wildlife resources. This is truly a landmark victory that demonstrates what can be accomplished when citizens join together in giving voice to their collective concerns about environmentally inconsiderate development, the destruction of invaluable natural areas and the wildlife which depend upon these lands to survive."

—Larry Mosher and Mary Jarrett
for the staff



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WESTERN ROUNDUP

EPA exempts nuclear waste dump from safety proof

The controversial Waste Isolation Pilot Plant nuclear waste dump near Carlsbad, N.M., cleared a major regulatory hurdle Nov. 1 when the Environmental Protection Agency granted WIPP exemption from a federal hazardous-waste law. The decision allows up to 8,500 drums of plutonium-contaminated trash to be stored at the New Mexico site on a five-year experimental basis.

Before the plant can open, the Department of Energy (DOE) must obtain title to the land WIPP occupies, now under the jurisdiction of the Department of the Interior's Bureau of Land Management. Clearance to open the plant in 1991 would free up wastes stockpiled over 40 years of nuclear warhead production. Environmental and safety concerns have continually delayed WIPP's opening, which was originally set for 1985.

During WIPP's five-year experimental phase, the Rocky Flats nuclear weapons plant in Denver, Colo., and the Idaho National Engineering Laboratory near Idaho Falls will transport drums of toxic solvents and plutonium-contaminated sludge, clothes and equipment to the WIPP site for storage in 2,150-foot-deep salt beds.

The EPA's decision exempted WIPP from a law that normally would require the DOE either to treat wastes to reduce toxicity before storage, or to prove that untreated wastes will not migrate into surrounding water tables for as long as the wastes remain hazardous. Opponents of the project fear that seepage could contaminate an aquifer that feeds the Pecos River.

According to Mark Frei, chairman of the DOE's WIPP task force, the DOE is confident that the stored wastes will not migrate into the environment during the five-year experimental period. "If test results are negative, we will retrieve the wastes and send them back to temporary storage," said Frei.

"It's illegal," said Don Hancock of Albuquerque's Southwest Research and Information Center. "There's no such thing as a temporary 'no-migration' variance. The EPA is setting a bad precedent for the handling of hazardous wastes nationwide."

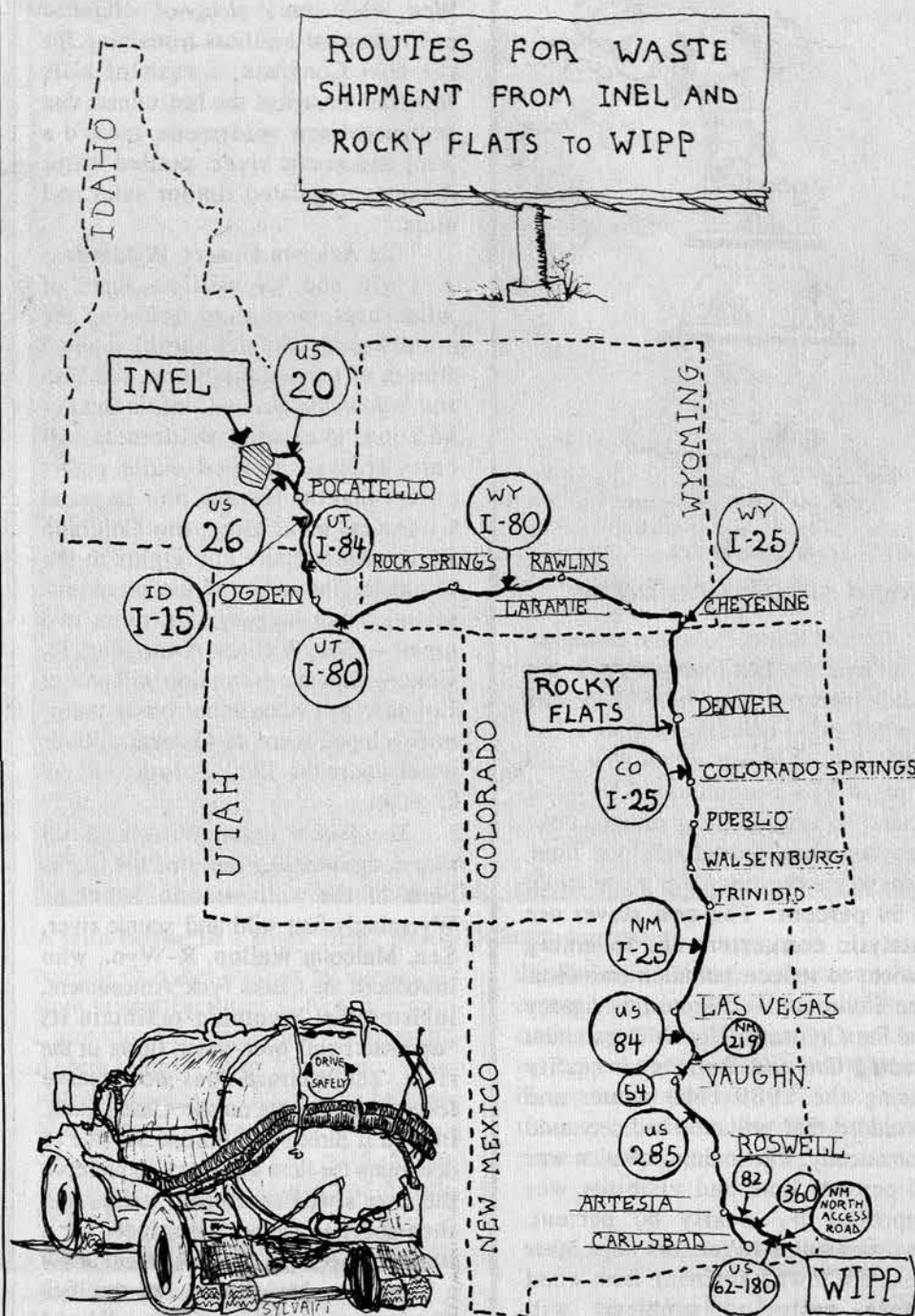
Hancock believes the scientific basis for opening the plant is not yet complete. Plutonium has a half-life of 24,000 years, and the toxic solvents are hazardous forever. "The safety of the site has got to be proven," he insisted. "Once the wastes go in, it is unlikely they will ever come out."

State and national environmental groups are threatening to take legal action against the DOE, although no lawsuits have been filed to date.

If the EPA decision stands, gaining ownership of WIPP's 10,000-acre site is the last hurdle DOE must clear to open the nation's first nuclear waste dump. A land-withdrawal bill that would have transferred ownership from the Interior Department to the Energy Department failed to pass in the 101st Congress, because of widespread feeling that a 1991 opening would be premature. The DOE hopes to bypass Congress with a land withdrawal from the administration that would give the Energy Department temporary control of the land.

An opening next year would unlock a traffic jam of wastes now backed up in temporary storage. Idaho Gov. Cecil Andrus and Colorado Gov. Roy Romer have put pressure on the DOE to open WIPP. In 1988 Andrus banned incoming wastes from Idaho until the DOE obtains ownership of WIPP land and begins shipping stockpiled wastes out of Idaho. Romer has also refused to let the DOE store any more wastes at the Rocky Flats site.

Wastes in cylindrical steel containers will be transported by trucks through parts of Idaho, Wyoming, Colorado, Utah and New Mexico.



According to DOE spokesman Ben McCarty, the "TRUPACT II" waste shipping containers have been certified

for safety by the Nuclear Regulatory Commission.

—Beth Jacobi

HOTLINE

Bell tolls for Two Forks

The Environmental Protection Agency has formally confirmed its veto of the proposed Two Forks Dam on the South Platte River southwest of Denver. The controversial project would have held 1.1 million acre-feet

of water for Denver and its suburbs and flooded 30 miles of riverway in the South Platte and its North Fork. EPA

Administrator William Reilly's final decision on the billion-dollar dam cites its "unacceptable adverse effects," including "significant loss and damage" to the area's fisheries and recreational opportunities. It says Denver has "practicable, less environmentally damaging alternatives" to provide water for Front Range growth. The agency also vetoed a scaled-down project proposed by the project applicants, the Denver Water Board and about 40 suburban water providers. While calling the 450,000 acre-foot water scheme a "good faith effort," EPA Assistant Administrator for Water LaJuana S. Wilcher noted "the small project would still flood 24 miles of freely-flowing scenic stream and almost 11 miles of gold medal trout fishery." The decision, which was preceded by EPA staff



recommendations against the project, brought a collective sigh of relief from the environmental community. "I hope this is another step we can take in the direction of sane water use management and planning here in Colorado," said Dan Luecke of the Environmental Defense Fund. But Denver Water Board Commissioner Monte Pascoe called it "unbelievably shortsighted." "You're saying squeeze more out of the existing system and get right up to a drought before you recognize the problem. It's a typical federal government way of going about business," he told *The Denver Post*.

Peterson Zah new Navajo president

Unofficial results for the delayed election of the Navajo Nation's tribal president show former Chairman Peterson Zah victorious. Zah, who was chairman from 1983-87, was running against interim President Leonard Haskie and write-in candidates George Lee and Cecil Largo. Haskie's name was added to the ballot when suspended tribal Chairman Peter MacDonald was disqualified after being convicted of bribery and extortion. Lee, formerly MacDonald's vice-presidential running mate, got almost as many votes as Haskie did, proving that there is still a great deal of support for the MacDonald faction. Some election observers speculate that if Lee had not run, many of his supporters would not have voted or would have voted

for Haskie to demonstrate their lack of support for Zah. Most of MacDonald's supporters were defeated in tribal council elections early in November, with only 34 of the 57 incumbents re-elected. Tribal officials said this was the biggest turnover of tribal council delegates in recent memory.

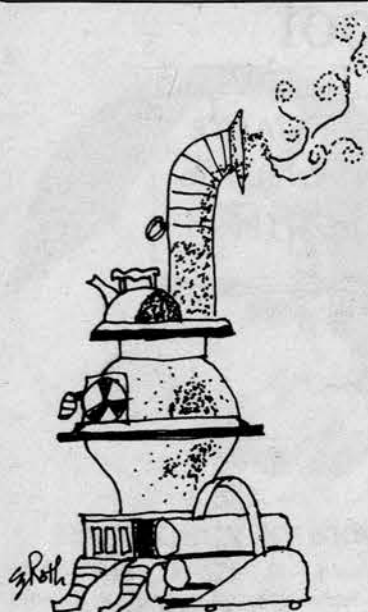
Catamount gets preliminary nod

Colorado's proposed Catamount ski area has received preliminary approval from Routt National Forest Supervisor Jerry Schmidt. The former owners of Steamboat Ski Corp. and Mitchell Energy Corp. plan to build the 10,000-acre, year-round resort on Mount Baldy, seven miles south of Steamboat Springs (HCN, 9/24/90). A Forest Service poll found 52 percent of local residents opposed to the development, which would add 4,500 residents to the Yampa valley and bring in up to 1 million additional visitors annually. Building the resort will destroy 140 acres of wetlands and 3,000 acres of mule deer and black bear habitat, and add 3,000 condominium units and a golf course. Colorado already has 27 ski areas, and skier visits dropped by 2.7 percent last year. Schmidt's preliminary approval may become final in January, but the project could be tied up for years with Forest Service appeals and litigation. Comments may be sent to Jerry Schmidt, Supervisor, 29587 West U.S. 40, Suite 20, Steamboat Springs, CO 80487, or call 303/879-1722.

Coors guilty of polluting Clear Creek

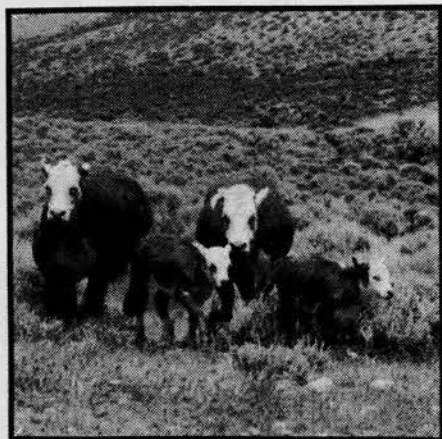
Adolph Coors Co., which brews beer from "pure Rocky Mountain spring water," pleaded guilty Oct. 23 to violating Colorado water-quality laws. The Golden, Colo.-based company accepted criminal and civil fines of \$750,000 for releasing cancer-causing chemicals into Clear Creek from 1976 until 1989. Coors pumped contaminated groundwater from Coors plant property into Clear Creek to protect the brewery's water supply from becoming contaminated. According to Pat Nelson of the Colorado Health Department, a broken Coors sewer line and an upstream dry cleaner or gas station are thought to be the sources of contamination. Clear Creek contributes to the Denver area's water supply. Adrienne Anderson, Western director of the Boston-based National Toxics Campaign, claims the contamination has caused high numbers of low-birth-weight babies and increased rates of childhood cancer downstream. The October settlement closed investigations by Colorado's attorney general and health department, but Coors still faces a \$1 million civil case brought by the Environmental Protection Agency against Coors for letting cleaning solvents drain from the brewery between 1981 and 1984.

HOTLINE



New solution to wood smoke pollution

Crested Butte, Colo., has cleaned up its air over the last four years with new woodburning stoves. In 1986 the city required wood-burning residents to buy more efficient stoves within three years or pay a \$30-a-month tax. The Wood Heating Alliance, a group of wood stove manufacturers, subsidized local stove shops to cut the consumer's cost by up to 50 percent. The new stoves use catalytic converters and reburning devices to reduce pollution emissions. The Environmental Protection Agency and the Colorado Health Department studied Crested Butte's air quality during the 1989-1990 winter and concluded that pollution had decreased dramatically. Particulate pollution was 40 percent less and visibility was improved by nearly 60 percent. Environmental regulators hope other mountain towns suffering from wood smoke pollution problems will implement similar programs.



Take a hike, herefords!

In an effort to reduce natural resource damage, the Sawtooth National Forest has proposed to cut cattle grazing in the Stanley Basin allotment by two-thirds. Cattle in this area are blamed for gathering along streams and destroying fish habitat and riparian vegetation, as well as fouling water supplies and invading campgrounds. According to the draft Environmental Impact Statement, this reduction would take place over a period of five years. The Forest Service plans to relocate the cattle to other public lands nearby, but Mike Medberry, public lands director at the Idaho Conservation League, doubts that the Forest Service will be able to find a suitable area that isn't already being grazed to the limits. He says the Idaho Cattle Association is "laying low, but threatening to sue," because of the losses the eight affected ranchers anticipate. A final decision is expected from the Forest Service by January. Comments should be sent to Carl Pence, Sawtooth National Recreation Area, Star Route, Ketchum, ID 83340.

Congressional roundup on the West

The final days of the 101st Congress brought both good and bad news for the West. While there is plenty of unfinished environmental business remaining for the next Congress, a rash of bills squeaked through at the last minute that designated new wilderness, created a wild and scenic river, settled water disputes, regulated timber sales and more.

The Arizona Desert Wilderness Act will add 2.4 million acres of wilderness, more than doubling the state's total. The act establishes 43 Bureau of Land Management and Fish and Wildlife Service wilderness areas or additions to existing wilderness. All carry federal reserved water rights except that the Havasu and Imperial wilderness areas along the Colorado River cannot claim any rights to the Colorado. The author of the precedent-setting water language on those two areas — Sen. William Armstrong, R-Colo. — says that exemption will protect Colorado and other upper basin states' undeveloped share of Colorado River water under the 1922 Colorado River Compact.

The Arizona Desert Wilderness Act also designated 20.5 miles of the Clarks Fork of the Yellowstone River as Wyoming's first wild and scenic river. Sen. Malcolm Wallop, R-Wyo., who introduced the Clarks Fork Amendment, insisted that Wyoming maintain its "absolute right" over water flows in the river. The measure does not reserve federal water rights on the Clarks Fork. Instead it directs the Forest Service to determine the flow necessary to preserve the river's wild and scenic values and then apply to the state engineer for a state water permit. The bill would allow a future dam downstream, but specifies that it must not inundate the wild and scenic portion of the river.

Congress also approved the Truckee-Carson Pyramid Lake Settlement. The bill, introduced by Sen. Harry Reid, D-Nev., ends an 80-year water war between California and Nevada over water in the Truckee and Carson rivers and the Lake Tahoe Basin with the following agreement. Of the Truckee River's available water, California can develop 10 percent while Nevada may take 90 percent; from the Carson River, California may utilize 20 percent, and Nevada 80 percent of the available water; and from Lake Tahoe, California is allowed two-thirds and Nevada one-third of the water allotted for development.

The settlement requires Secretary of the Interior Manuel Lujan to maintain and protect at least 25,000 acres of wetlands at the Stillwater National Wildlife Refuge, once a 100,000-acre wetland area (HCN, 8/27/90).

The bill also will increase protection for the threatened cutthroat trout and the endangered qui-qui fish in Nevada's Pyramid Lake, by releasing more water into the Truckee River in the spring spawning season. A permanent channel will also be built, allowing the fish access from Pyramid Lake into the Truckee River.

A final provision releases the federal government from water claims by the Paiute Shoshone tribe, providing money instead to improve the tribe's present irrigation system and to purchase non-Indian irrigated land adjacent to the reservation.

As a result of legislation introduced by Sen. James McClure, R-Idaho, the endangered gray wolf will eventually be reintroduced in parts of the West.

McClure's measure gives Interior Secretary Lujan 30 days from the date the appropriations bill is enacted to appoint a 10-member committee, representing different wildlife interests, to develop a wolf reintroduction plan for Yellowstone National Park and the central Idaho wilderness areas. The committee will have until May 15, 1991 to submit its plan.

Congress also approved the 1990 Fort Hall Indian Water Rights Agreement, settling a five-year dispute over water rights in the Snake River Basin. The Shoshone-Bannock tribe, which has the earliest water right in Idaho, will get rights to 581,000 acre feet of water. In addition, they will receive \$22 million over the next three years to develop and implement a water-management plan for the Fort Hall Reservation in the southeastern portion of the state. The agreement also provides for the area's non-Indian water users, whose water supplies would suffer only in dry years.

Because this settlement demonstrates that water users can successfully reach a compromise, avoiding long and costly legal battles, it may become a model for resolving water-rights disputes in the West. However, it does not become law until the Shoshone-Bannock tribe votes on the settlement.

There were two attempts to reform the aged 1872 Mining Law this year, both narrowly defeated. The Bush administration proposed early in 1990 that the mining law's requirement that claimholders do \$100 per year of development work on each claim should be converted to a \$100 holding fee paid directly to the Treasury. Passage of Bush's reform would have resulted in a quick boost to the Treasury, and it was defeated by the narrowest of margins: a tie vote.

In addition, a moratorium on patent issuance was proposed to stop the current rush to get patent claims and gain title to the land at low cost — \$5.00 or less per acre — before the mining law is altered. The measure was defeated in the Senate, 50-48. Despite these defeats, there is increased support for mining law reform, and more progress can be expected in the 102nd Congress.

There were other significant defeats this year, including Rep. Mike Synar's, D-Okla., plan for a five-fold increase in grazing fees from \$1.81 per animal-unit-month to \$8.70 per animal-unit-month by 1994 (HCN, 11/5/90).

Congress also failed to approve the Grand Canyon Protection Act, which would have placed strict limits on water releases for electrical power generation at Glen Canyon Dam. These releases, sending enormous rushes of water into the Grand Canyon, are eroding fragile beaches and harming endangered fish species.

Congress did, however, approve the Clean Air Act, which calls for a national reduction in acid-rain causing pollutants (HCN, 11/19/90). Furthermore, legislation was passed authorizing the Interior Department to reimburse individuals and state agencies for the costs of testing cattle for brucellosis, an infectious organism that is believed to spread from bison and elk to cattle herds and can cause cows to abort their calves. Up to \$50,000 was authorized for areas bordering Yellowstone National Park over the next three years.

Congress defeated three proposals calling for varying degrees of increased

protection of the Northwest's old-growth forests. However, Congress also defeated Sen. Bob Packwood's, R-Ore., amendment to the Endangered Species Act, which would have allowed the Forest Service to obtain an exemption for the spotted owl from the act's safeguards. That would have permitted logging in the Northwest to continue as before.

In response to the Bush administration's listing of the owl as a threatened species, the Interior appropriations bill cut 1991 nationwide timber sales by approximately 1 billion board feet, reducing timber harvesting in the northwestern spotted owl habitat.

Idaho Sen. James McClure, R., mustered enough support to defeat a proposal by Sen. Wyche Fowler, D-Ga., that would have cut the Forest Service's road budget by \$100 million, reducing roadwork in the national forests by 55 percent. Instead, the Senate cut the road budget by only \$16 million.

The 1990 Farm Bill represents some battles won and some lost for environmentalists. The most crucial defeat was that provisions were dropped that would have banned the export of any agricultural chemicals that have never been tested or are banned in the United States. This means that these pesticides can continue to be manufactured and exported for use on crops in other countries and may return to U.S. consumers in the form of residues on imported foods.

On the other hand, stronger penalties will be imposed against draining wetlands for increased production, and the government initiated a long-term program in which it will pay farmers to set aside fragile wetlands from crop production.

Farmers using "restricted use" pesticides will now be required to keep records detailing their use. These records will assist doctors in the case of chemical-related illness among farm workers.

The first forestry provision ever to be included in a Farm Bill details the nationwide purchase of permanent conservation easements designed to protect privately owned forests from development.

— Diane Grauer

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BLM's wild horse management: biased and out-of-date

The Bureau of Land Management is not properly maintaining wild horse herds and rangelands, according to a report by the General Accounting Office. The report, titled "Rangeland Management: Improvements Needed in Federal Wild Horse Program," charges that the BLM bases much of its wild horse removal program on population figures almost 20 years old and on recommendations from advisory groups consisting largely of livestock permittees.

In addition, the report says there is no evidence that horse removals have significantly improved the condition of the range. In many areas, wild horse removals have not been accompanied by reductions in authorized livestock grazing levels; in some cases, the permit levels have actually increased. The domestic livestock that occupy the same rangeland consume 20 times as much forage as the horses, and they graze in highly condensed "camps" that do more damage to the range than the widely dispersed horses.

In June 1989, before the release of the GAO report, the Interior Board of Land Appeals completed a similar investigation into the BLM's wild horse policy and ruled that future removals should be based on more significant and up-to-date data. Since then there have been adjustments in the wild horse program, but the Animal Protection Institute continues to appeal each removal, claiming that the BLM is not removing the appropriate ratio of horses to livestock.

According to Milton Fry, BLM's wild-horse specialist in Reno, Nev.,

decisions to remove horses are made only after it is determined that the range animals' forage needs are not being met. If the BLM concludes that the land cannot support the current number of animals, several adjustments can be made. Either horses or livestock may be removed, depending on which is doing the most trampling and overgrazing. Fencing may be rearranged around water sources, and seasonal grazing patterns may be changed.

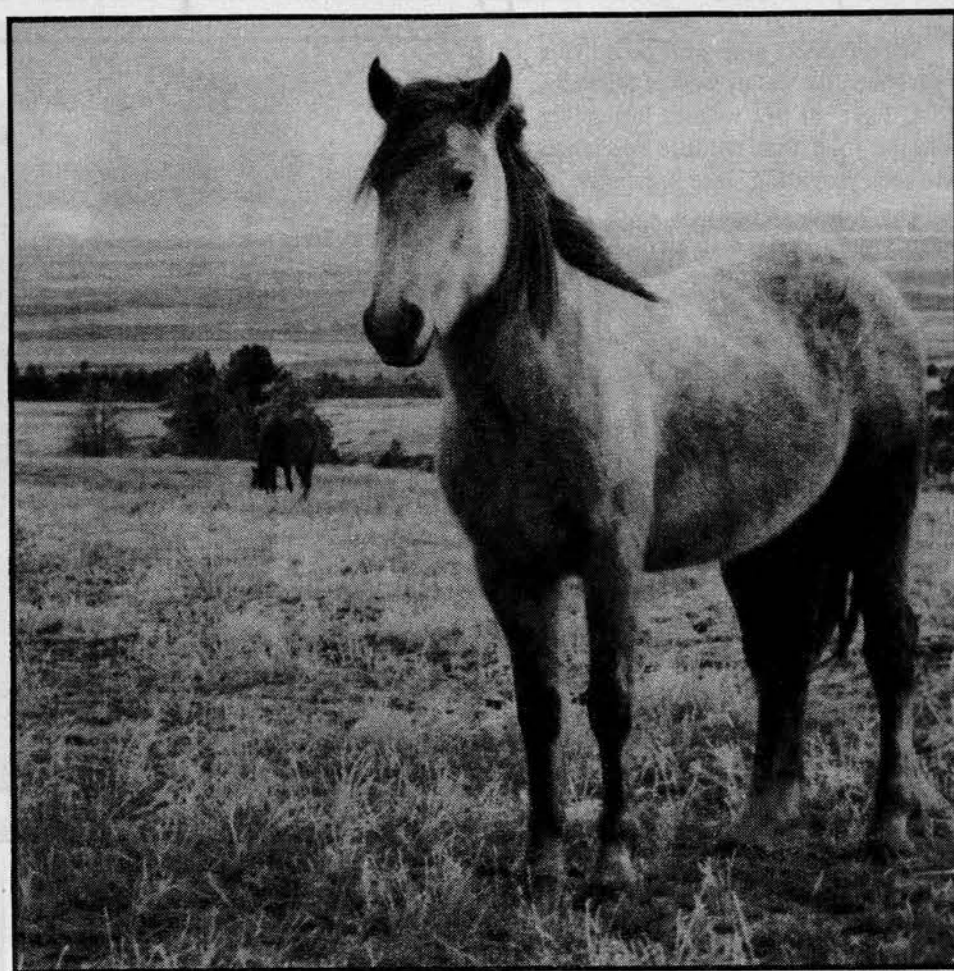
Unfortunately, says Fry, it is difficult to distinguish which has caused the damage, horses or livestock. When it is impossible to tell, the BLM either bases its removal numbers on population data from as far back as 1971 or merely removes an equal percentage of wild horses and cattle.

Nancy Whitaker, the Animal Protection Institute wild horse specialist, says this is unfair. She argues that cattle do a higher percentage of the damage, so a higher percentage of cattle should be removed. While cattle tend to remain together in a riparian area long enough to do a great deal of damage, horses tend to scatter, and they stay near the water only long enough to drink.

Then why aren't more cattle removed? "Wild horses are really a scapegoat in order to avoid reducing livestock permits," she says.

"It's a political thing," Fry explains.

Once a horse is removed from the range, it becomes part of the BLM's Adopt-a-Horse program. If the horse is healthy and young, it can be immediately adopted for \$125. Older horses must first go through an "enhancement" program to increase their adoptability. This



Peter Carrels

A wild horse in a Black Hills, South Dakota, sanctuary

consists of halter training by inmates at state prison facilities in New Mexico, Colorado, Wyoming and California. Approximately 20 to 30 percent of the removed horses are unadoptable because of old age or disease. They are taken to one of the two BLM wild horse sanctuaries in Oklahoma and South Dakota.

According to a BLM spokesman in

the Reno district, these sanctuaries are expensive to run and fill up quickly. In addition, there is little funding available to expand them. As a result, some districts are considering sterilization and other population-control methods to prevent future overcrowding.

—Diane Grauer

Nevada's rural counties debate how to keep their water

Central Nevada's rural "cow counties" are girding for a protracted water war with Las Vegas.

A year ago last October, the Las Vegas Valley Water District filed 146 applications for more than 860,000 acre-feet of water from 20,000 square miles of rural Nevada to the north and east. The move sparked a classic Western water war between rural ranchers and big-city growth (*HCN*, 5/21/90).

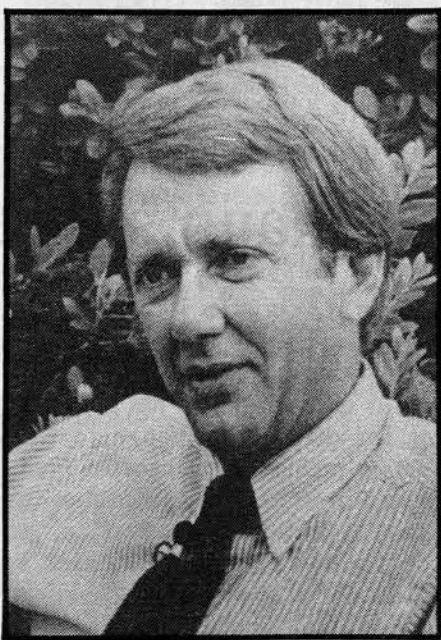
Early next year the state engineer will hold hearings on the applications. To help prepare their case, opposition leaders took their fight on the road in late October, covering more than 670 miles to hold four "town hall meetings" in tiny towns like Alamo and Ely.

Although at times it resembled a classic case of preaching to the choir, the tour did provide those rural Nevadans who stand to be most affected by the proposed water transfer an opportunity to hear advice from veterans of water wars, such as former Arizona Gov. Bruce Babbitt. Babbitt represented rural La Paz County when Phoenix went after its water in the late 1980s.

The water district contends that the project, whose cost it estimates at \$1.5 billion, will benefit the rural counties, giving them a chance to buy some of the water they can't afford to tap now.

But to rural Nevadans, many of whom make their living off the land, the struggle is more than just a fight for their water and their rights. They view Las Vegas, with its casinos, gushing fountains, lush golf courses and artificial lakes, as a monument to greed, arrogance and insatiable thirst. The city attracts 1.8 million tourists each year.

More than 3,600 formal protests



Bruce Babbitt

have been filed against the applications. That's more than 100 times the number of protests filed against any project in the history of the state engineer's office. Clearly, rural Nevadans aren't taking this lying down.

"Compare it to if we were able to put a moratorium on all slot machines in Las Vegas," Connie Simkins, a reporter for *The Lincoln County Record* in Caliente, said at a meeting in Alamo. "We all know gambling is a major portion of their income and jobs, just like water is our lifeblood here. If we were able to move their slot machines up here, think how devastated they would be."

There is some question as to whether Las Vegas will ever need the amount of water the water district asked for. Members of the water district have said that they expect to get half of their

request, at best.

"The tradition in the West is build another project," said Babbitt between meetings. "There's a die-hard group in Arizona and Nevada and everywhere else in the West that says the solution is always more engineering projects to bring more water costing more money over greater distances to create more environmental damage."

John Musick, an attorney and water law expert, has represented those who have proposed water grabs as well as those who have opposed them. He offered a three-pronged offensive complete with the amounts of time, energy and resources the rural counties should expend.

"The best thing that can happen is if you lose up front," he said. "Then you'll really get your dander up. An initial victory and everyone goes to sleep."

The next part of the battle, Musick told his audiences, is for rural counties themselves to define their needs for the water. It's not enough to simply say you want the water, he said.

The last half of the fight is the toughest, Musick said. "You have to create a project for Las Vegas that shows them how they can do it without your water. Do not expect them to design a plan for their needs," he said. "It's easier for them to take water this way."

Babbitt told rural Nevadans they should look for help first from environmentalists. "They are all over the state, all over the West, all over Washington [D.C.]," he said.

Next, they should turn to Indian tribes, Babbitt advised. A couple stand to be affected by the transfer, and he suggested burying any hatchets that may exist between Anglos and Indians. Not

only does it add another ally, he said, but it brings in the federal government.

But most importantly, he said, opponents of the water grab should look for support from the oasis itself. Las Vegas residents doubt the need for all that water, don't want the growth it might bring and dislike the thought of sucking rural Nevada dry, he contends.

"Every time one of these water grabs can be turned back, I think it strengthens rural communities all over the West," Babbitt said. "Don't compromise. If you compromise at the outset, they'll just take more away from you."

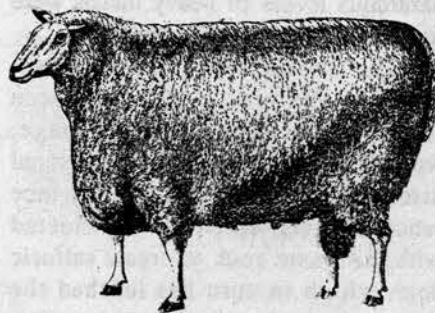
—Bill Goodykoontz

Bill Goodykoontz reports for *The Arizona Republic* from Kingman, Arizona.

BARBS

Livestock pooh-poo gas leaks

According to the Foundation on Economic Trends, flatulent sheep, cattle and buffalo could be responsible for 15 percent of the methane in the atmosphere which is believed to be a contributing factor in global warming.



Why the saving of six orphan wolf pups matters

Six orphaned gray wolf pups living in the Ninemile Valley west of Missoula, Mont., have all but weaned themselves from the food that wildlife specialists have been providing since September.

The pups, orphaned when their parents were killed in two separate incidents earlier this year, were scheduled to be cut off from an artificial feeding program with the onset of Montana's big-game hunting season. But according to Mike Jimenez, a wildlife biologist for the U.S. Fish and Wildlife Service who has been supplying the pups with surplus deer, the feeding program was continued until the pups showed signs of being able to feed on their own.

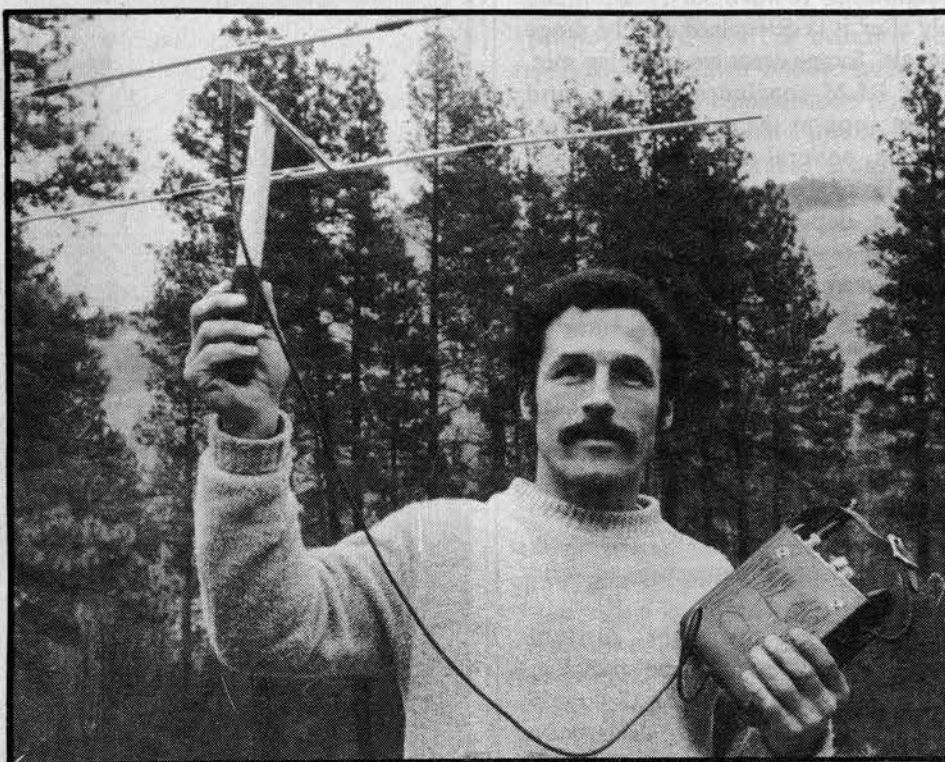
When Jimenez began leaving deer carcasses for the pups, they stayed near the area where the carcasses were left and devoured all three of the carcasses left for them each week. Recently, however, the pups have begun to stray farther and farther from Jimenez's feeding site and have shown signs of independence.

"For the last two or three weeks now, they won't eat more than one or two carcasses that I bring them," Jimenez said. "And they go off for four or five days at a time."

The pups, integral to the Northern Rocky Mountain Wolf Recovery Plan, were too small to hunt for themselves when they became orphans. Had the feeding program been discontinued, they probably would have starved to death, Jimenez said.

The pups' mother became notorious in August 1989 after a rancher complained that she was killing cattle near Pleasant Valley, Mont. At that time, the female wolf was raising another litter of pups and was running with an adult male wolf. Both adult wolves were feeding the cattle to the pups.

In response to the rancher's complaint, the female, the male, and all but one of the pups were captured for relocation by the Fish and Wildlife Service. The male wolf was later shot



Ken Blackbird

Mike Jimenez electronically tracks six orphaned wolf pups

after he developed gangrene in his leg — a condition caused by a leg-hold trap.

Officials released the female and her pups in a remote part of Glacier National Park in September 1989. But after her relocation, the female began to wander and abandoned her pups, which quickly starved to death.

Under the watchful eye of the Fish and Wildlife Service, the female wandered for nearly five months, traversing hundreds of miles before mating with another male wolf — one that officials had not known existed — in early 1990. She dened with her new mate and delivered the six pups in western Montana's Ninemile Valley last April. It is these pups that Jimenez has been feeding.

On July 4, a fisherman found the mother wolf's radio collar floating in a creek. Although her body was never found, officials suspect foul play at the hands of at least one human.

After the female's death, the pups'

father cared for them, bringing them freshly killed white-tailed deer and other big game, Jimenez said. But the pups' father was killed when he was hit by a car on Interstate 90 Labor Day weekend. The Fish and Wildlife Service directed Jimenez to start feeding the pups, since he had been following their status since the death of their mother.

Jimenez said the feeding program is now scheduled to stop at the end of hunting season. "That's a logical cutoff point," he said. "They're showing all the signs that they're doing well."

Although these pups are important to the recovery plan, Jimenez emphasized that wolf recovery is not dependent on any one pack: "We're trying to recover a population, not six pups."

The Northern Rocky Mountain wolf has been extinct in Montana for 50 years. The recovery plan, adopted in 1987 under the Endangered Species Act, calls for 10 breeding pairs of wolves in each of three recovery zones.

In two of the zones, Montana's Glacier National Park and the Frank Church River of No Return Wilderness in Idaho, the breeding pairs are expected to recover naturally as wolves migrate into the United States from Canada.

In the third zone, the greater Yellowstone ecosystem, the recovery plan calls for artificially re-establishing wolves by reintroducing animals from existing packs. This segment of the recovery plan has come under heavy attack in both Wyoming and Montana. Montana Gov. Stan Stephens made it clear that he opposes artificial re-introduction of wolves when he prohibited the Fish and Wildlife Service from relocating the female wolf to the Bob Marshall Wilderness when she was captured. Currently, no viable wolf packs are known to inhabit the Bob Marshall Wilderness.

If recovery of the 10 pairs is successful for three consecutive years in any one of the three zones, the Northern Rocky Mountain wolf could be removed from the endangered and threatened species list for that zone, Jimenez said. If all three areas have 10 breeding pairs for three consecutive years, the species could be removed from the list altogether, he added.

So far, two packs of wolves have established themselves in Montana from wolves migrating south from Canada. One pack, which comprises 23 wolves, including two breeding pairs, lives in Glacier National Park. The other pack roams just west of the park's boundary.

Another breeding pair, which produced a litter of pups last spring, has established itself southwest of Glacier National Park, near Fortine, Mont. Officials are not sure of its exact origin.

—Lilly Tuholske

Lilly Tuholske, a free-lance writer in Missoula, won the University of Montana's 1991 Kim Williams fellowship in environmental reporting.

Toxic mining wastes used on roads haunts Pecos area

PECOS, N.M. — At the time it seemed the most sensible — and cheapest — way to shore up some badly worn dirt roads and campgrounds. Today, it seems like a stupid mistake that has already harmed the environment and could cost taxpayers millions to clean up.

At issue is a U.S. Forest Service decision to use toxic mining waste rock as gravel to resurface roads and harden campgrounds in the scenic Pecos River Canyon north of this tiny village near Santa Fe. Unlike tailings, which have been processed, waste rock is simply the rubble dug up to get at the mineral being mined.

The resurfacing work was done in the mid-1970s, but few people knew of the decision or of the danger it posed until recently, when state and federal officials announced the indefinite closure of two popular campgrounds in the Santa Fe National Forest. The campgrounds were shut down after hazardous levels of heavy metals were found in water and soil samples.

The pollutants included lead, cadmium and zinc, which have been linked to nervous system damage, reproductive dysfunction and intestinal disorders. It is believed that surface runoff and snowmelt have interacted with the waste rock to create sulfuric acid, which in turn has leached the metals into the environment. The

primary danger for humans is that the often dusty roads in the area may be releasing the pollutants into the air.

The waste rock came from the canyon's abandoned Pecos Mine, which itself poses an environmental hazard. Seepage from a massive pile of waste rock on the site of the former zinc and lead mine has contaminated a five-acre wetland near the Pecos River. Slightly elevated levels of heavy metals have been detected in the river downstream from the wetland, but state environmental officials say these levels do not pose a hazard to public health.

According to Forest Service officials, waste rock from the mine was used primarily because it was a free source of road gravel. "The rock was just sitting there," said Pete Patchell, of the Forest Service. "We didn't know it would harm the environment."

Because the Forest Service did not keep records, it is not known how many miles of roads or how many campgrounds were resurfaced with the waste rock. The Forest Service is currently trying to determine the scope of the pollution by taking core soil samples from some 10 to 11 miles' worth of dirt roads in the area.

If additional campgrounds are closed, it could spell disaster for the village of Pecos, whose economy depends on recreation. It would also have an impact

on people in Santa Fe for whom the Pecos River Canyon is a popular spot for fishing, hiking and camping.

It is uncertain why it has taken so long for officials to recognize the pollution problem in the canyon. Fred Coe, a Forest Service spokesman in Santa Fe, said the Forest Service, in conjunction with New Mexico's Environmental Improvement Division and Game and Fish Department, began studying the area after dead vegetation was observed along roadways and in campgrounds earlier this year.

But Bob Salter, a wildlife biologist in the Pecos District of the Santa Fe National Forest, said there has been dead vegetation along roadways and in campgrounds in the canyon for years. "I've been writing memos warning of the danger for the past 10 years," Salter said, "but nobody wanted to listen. I'm just glad that it's finally being given some attention."

Once the extent of the contamination has been determined, the next problem will be how to clean it up. One possibility is to pave the roads. The drawback to that is that, over time, water would work its way under the asphalt and release the heavy metals into the environment again.

Another possibility is to strip away the waste rock from the roads and the campgrounds and cart it to a hazardous

waste dump somewhere. But that would be extremely time-consuming and expensive. "We're talking hundreds of thousands of cubic yards of material," Chris Pease, of the Game and Fish Department, said, "and, I would guess, millions and millions of dollars." A cleanup of that size would probably have to include removal of the source of the poisonous gravel: the huge pile — as much as 300,000 tons — of waste rock at the mine site.

The state may apply for federal Superfund money to cover the cost of such a project. It is also possible that AMAX Inc., of Denver, which owns mineral rights on the mine site, may have to pay reclamation costs. However, AMAX maintains that its liability is limited because it sold surface rights to the mine to the New Mexico Game and Fish Department in 1950, 11 years after the mine shut down.

"Our lawyers have done some research, and it is our position that the waste rock is the property of the Game and Fish Department," Ken Paulsen, director of environmental assessment for the company. "If the waste rock was used to pave roads, we don't see that as our problem."

—Keith Easthouse

Keith Easthouse is a free-lance writer based in Santa Fe.

Utah's Navajos build a political base for the future

Rallying around the slogan "Niha Whol Zhiih" — "It's Our Turn" — six Native Americans in Utah's San Juan County made an unprecedented bid for county office in the Nov. 6 election. "Not yet," countered the balance of voters in this conservative corner of southeastern Utah, which elected white Republicans to five of those positions.

But the race served notice that the Navajos, who account for about half of the county's population of some 12,300, are becoming a political force to contend with.

"This is the beginning," said 34-year-old incumbent County Commissioner Mark Maryboy, the only Navajo elected to office. "They'll remain here and they'll continue to come back out in numbers in every election. Eventually they'll take over."

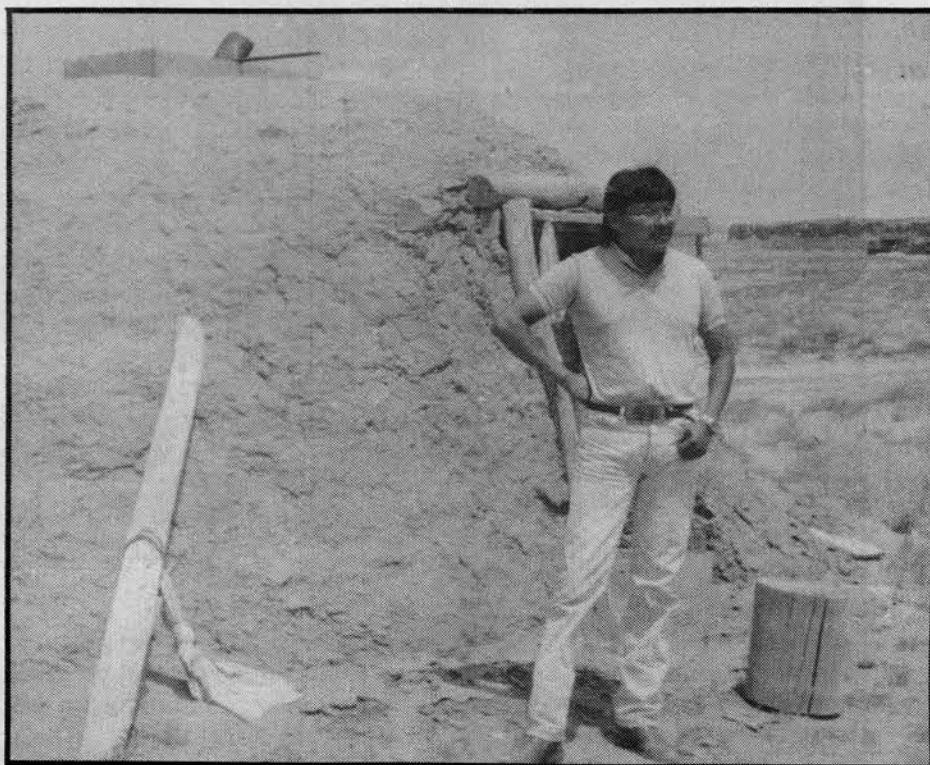
Maryboy, running for his second term in an overwhelmingly Navajo district, won by a 1,271-to-170 margin. (In county commissioner races, voters choose between candidates within their own district.) In countywide races, the Native Americans — all running on the Democratic ticket — trailed by between 10 and 24 percentage points.

The controversial election and the months of political activism that preceded it drew the attention of news media from both coasts to the arid, thinly populated county. While it spurred resentment among some local residents, others gained respect for the Navajos' growing political awareness.

"I think they went through the political process from A to Z," said Craig Halls, a former Mormon bishop who regained his seat as county attorney without opposition. "I think they were better organized than the Republicans were; I think they were ahead of what the Republicans were doing in terms of campaigning and rousing people out and picking people up and taking them to the polls."

Last spring, local activists teamed with students from the University of Utah in Salt Lake City to register voters on Utah's 1.6-million acre portion of the Navajo reservation, a barren sweep of sagebrush flats and sandstone canyons that is as rich in oil reserves as it is poor in cash. Only an estimated one-quarter of the Navajos on the reservation have electricity and running water.

Maryboy, who focused his campaign in part on creating service districts to provide



Florence Williams

Mark Maryboy beside the hogan of a constituent

basic services on the reservation, maintains that the oil-rich Navajo lands are subsidizing the rest of the county (HCN, 7/30/90).

Some local white residents, although they are in favor of more Navajos voting, think things are fine the way they are. Others laid the blame for unrest among the Navajos at the feet of political activists like Jean Melton, a University of Utah law student who managed the Native American campaign.

"They've got that one woman up there that's got them people all stirred up," said Gary Halls, a rancher pausing for coffee at Hoagie's Restaurant in the predominantly white town of Monticello. "Without these people from up there stirring things up I think Mark Maryboy could probably do a good job. But he gets other people telling him he's being picked on, and then he starts saying, 'We're being picked on.'"

Former county firefighter and police officer George Kensley disagreed, offering a string of anecdotes of racial discrimination in the county.

"Changes have been needed for a long time," he said. He recalled an incident when he was preparing to respond to a fire on the tiny White Mesa Ute Reservation outside Blanding. A county commissioner asked him why he was going, adding, "It's been my

experience that you can't hurt a Ute."

This year San Juan County was under federal court order to ensure equal voting rights for non-English speakers, and an enormous influx of new voters was expected. The polls were monitored by officials from both the state Department of Justice and the Attorney General's office.

"We were very happy with the lack of problems," said John Clark, counsel to the Utah Attorney General. "We allowed 50 to 100 people to vote who technically weren't qualified to. No one had a question that wasn't answered... so there was no potential for anyone to escalate disagreements into violence."

The contention that surrounded the election continued into the interpretation of its results, with some officials reporting no significant increase in Navajo voter participation and other observers saying it has at least doubled.

Figures from the county clerk's office show that 2,086 voters cast ballots at eight precincts in or near the Navajo

reservation, 410 more than in the 1988 election. Maryboy received 652 more votes than he did four years ago. One precinct doubled its turnout; another increased it 77 percent. In contrast, the towns of Monticello and Blanding on what one Navajo called "the white side of the county" sent only 17 more people to the polls than it did in 1988, with a total of 2,121. Overall, 65 percent of the county's registered voters cast ballots, compared to 67 percent last time.

Political activists said that voting turnout on the reservation could have been dampened by snowy weather, confusion about the ever-changing date of the Navajo tribal election, and first-time voting jitters.

Election day was a busy one for local organizer Norman Begay, a Ute married to a Navajo. He and his wife, Shirley, took turns picking up residents of the White Mesa Ute Reservation and driving them to the polls.

"They didn't know what to do," he said after emerging from the polling place with his elderly mother, father and aunt.

"I told them, 'It isn't a big deal. All you do is go in there and sign your name and go vote,' and they said, 'What is between the elephant and the burro?' [referring to the mascots of the two political parties]. I said, 'What have you been hearing?' and my father said, 'We're hearing we need to help the Indian people,' so I said, 'Go do it.'"

Maryboy hopes to increase coordination between the county and the tribe from his newly won seats on both the county commission and the Navajo Tribal Council, for the Utah Navajos have long felt overlooked by the tribal government seat hundreds of miles away in Window Rock, Ariz.

Explained defeated County Clerk candidate Ruby Nakai: "Window Rock is out of reach. State and county have been out of reach. We've just been bounced back and forth. We had to start somewhere, so we started with the county."

— Lisa Jones

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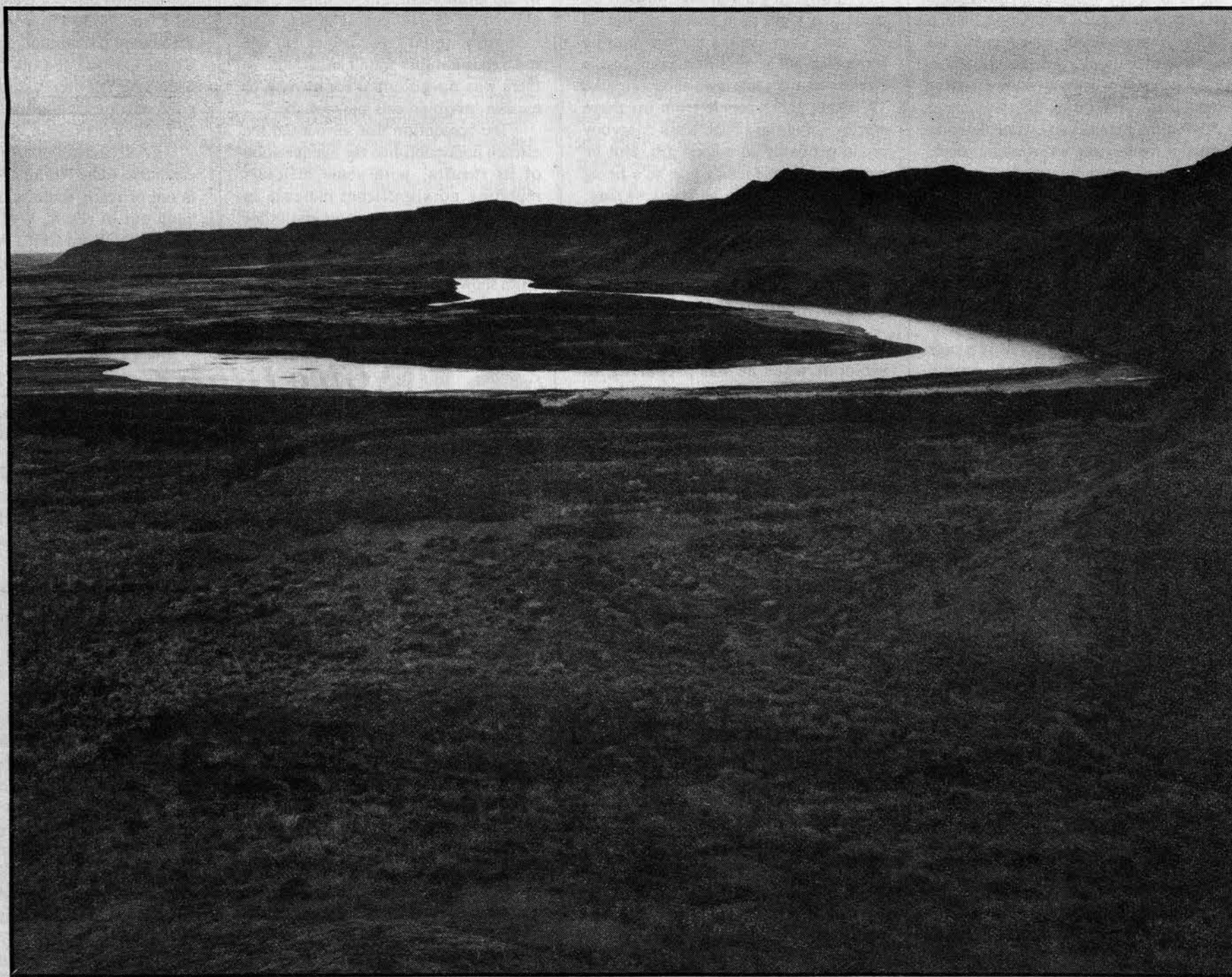
"The shots in this book have an odd quality that at first is not apparent. They have annihilated time. Marc Gaede has removed fences, powerlines, towns, all the trash and clutter we've littered in the past century. Like Guthrie's books he has taken us back to the beginning, back to the living heart of the thing we label The West. You almost expect some mountain man to stumble into one of the frames The desire to return to some point called Before the Destruction Began, well, that is a common if underreported malady in the West."

*— from the Foreword
by Charles Bowden*



Bear Lake, Utah-Idaho

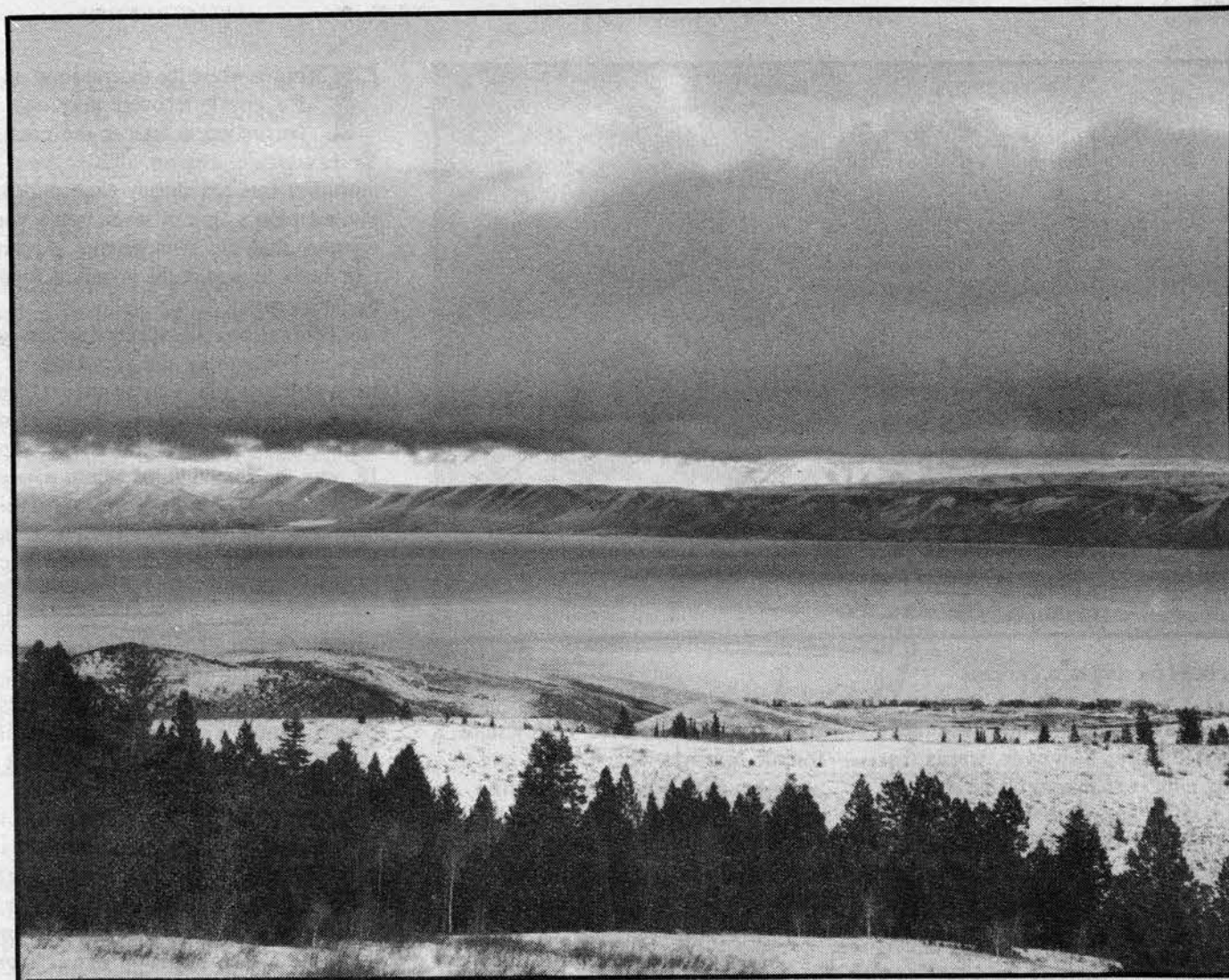
IMAGES FROM THE Photographs by



Marias Massacre Site, Montana

"This is the spot, known to the Indians as the 'Big Bend,' where on January twenty-third, 1870, the U.S. Cavalry under the command of Major E.M. Baker attacked the friendly Blackfoot Piegan camp of Chief Heavy Runner. Baker intended to make war on the hostile Blackfeet under Mountain Chief but mistakenly found Heavy Runner's group. Scout Joe Kipp is said to have yelled at the last minute just before the guns opened up on the sleeping Indians, 'Wrong camp, wrong camp,' but it was too late and the slaughter lasted several hours. The temperature was thirty below zero, causing many of the wounded to later freeze to death, and the toll was close to two hundred."

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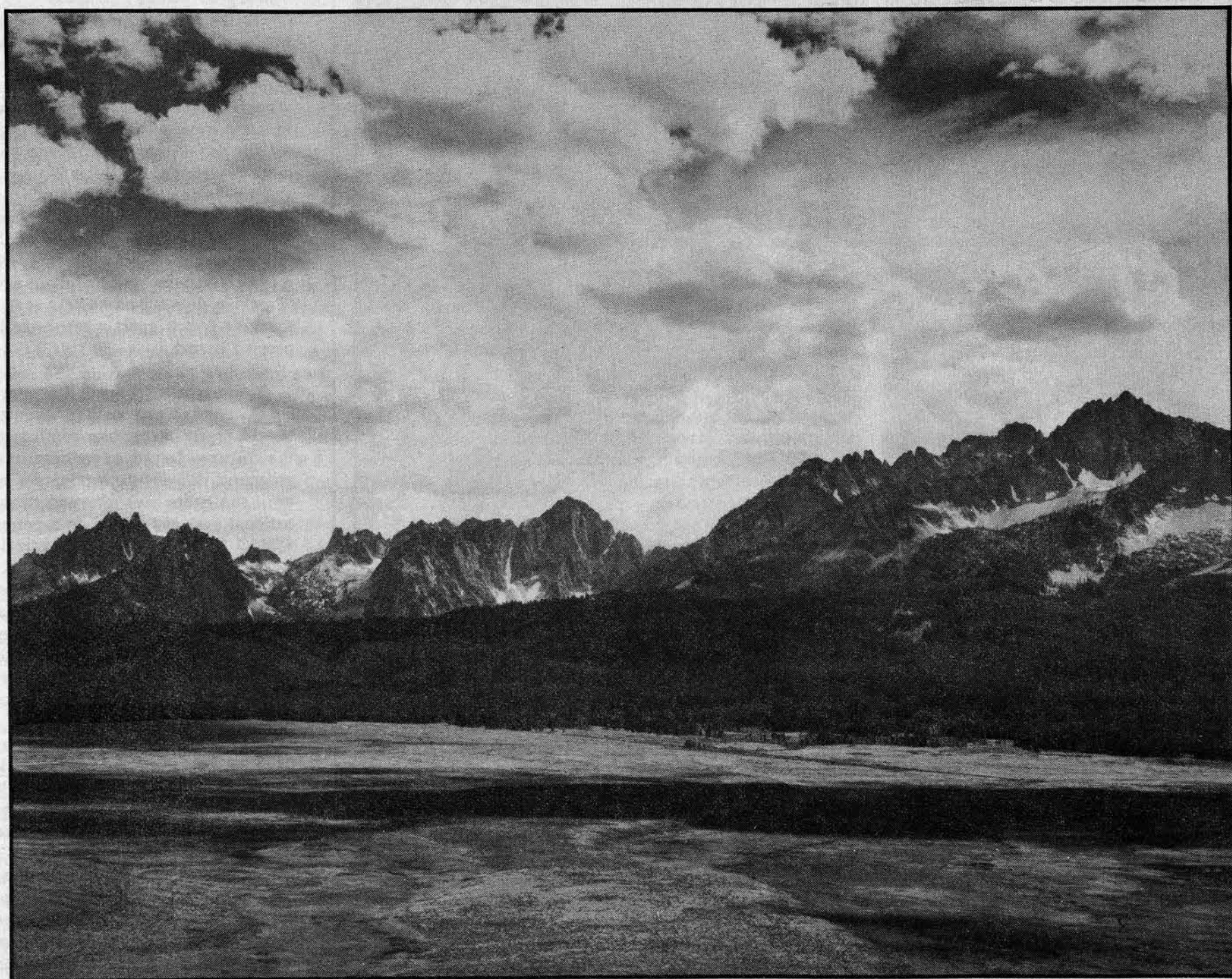


Bear Lake, Utah-Wyoming

Images from the Great West is an eccentric volume. In addition to Gaede's sweeping, often brooding landscapes and Bowden's foreword, it contains portraits of Western writers; a relaxed, personal essay by A.B. Guthrie, accompanied by excerpts from his works; a tribute to Guthrie by Edward Abbey; and an anecdote by Gaede about visiting the almost inaccessible site of the Marias massacre with Guthrie hooked up to his oxygen tank. The book costs \$35 clothbound, \$24.95 paperbound (postage \$2) and can be ordered from Chaco Press, 5218 Donna Maria Lane, La Cañada, CA 91011; 818/952-0108.

THE GREAT WEST

s by Marc Gaede



Sawtooth Mountains, Idaho

"He went on, letting the air and the sky and the earth sink into him. It was more than the lungs that this country filled. It was the eye and the spirit and the whole of the body from top-knot down. How many times had he just sat and looked? How many times, seeing, had he felt part and partner of what he saw? Never enough times. Each time was a new time, born fresh from the old, close kin to it, showing likeness, but still new."

— A.B. Guthrie Jr.

A dead end ...

(Continued from page 1)

units adjacent to each other. But while bears are apparently expanding their range south and east of the park, they seem to be avoiding the fringes outside Yellowstone's western border, including the heavily logged Island Park area in Idaho, and Montana's Madison Range to the north.

Some biologists question whether the recovery area is large enough to support enough grizzlies for full recovery. While some experts say Yellowstone has about all the grizzlies it can hold, Fish and Wildlife is talking about importing bears into the ecosystem.

The reason is genetics. Fish and Wildlife plans to introduce one breeding grizzly into the ecosystem every 10 years to head off inbreeding problems such as lower body weights, fertility and birth rates. These symptoms aren't showing up yet, but Yellowstone's grizzly community has been isolated from other grizzlies for 60 years, or over six generations.

The transplant plan has prompted some environmentalists to criticize the recovery area — and the population goals — for the Yellowstone grizzly. If the recovery area and the population target cannot support a genetically viable grizzly community, they say, both should be made larger.



A grizzly feeds on a carcass

Tom Warren

Yellowstone Superintendent Robert Barbee, however, warns that "willy nilly" expansion of the recovery zone will damage the agencies' credibility with ranchers and others living near the park. Many groups are more afraid of the land restrictions that would follow grizzlies than of the bears themselves.

"There's enough habitat for recovery," says Dick Knight, head of the Interagency Grizzly Bear Study Team. "It's development that's the problem."

Developments inside the park continue to remove prime feeding areas

from the bears. At Lake Yellowstone, a female bear was removed and sent to a zoo because she was feeding on spawning cutthroat in a stream next to Lake Hotel. A young grizzly male was moved when he was feeding along the Dunraven Pass road and causing a traffic jam three miles long.

Outside the park, oil and gas leasing, logging, mining and private land development continue to eat away at bear country. More gold mines have been proposed on the northeast border of the park; they could become a major threat to bear recovery.



A mother grizzly and her cubs

Great Bear Foundation photo

Should the grizzly be reintroduced?

The North Cascades in Washington, the Bitterroot Mountains in Idaho and the San Juan Mountains in Colorado are being proposed as possible areas for the reintroduction of the grizzly bear. These are regions grizzlies once roamed, too, when they numbered from 50,000 to 100,000 in Western North America. Now fewer than 1,000 remain in Wyoming, Montana, Idaho and Washington.

The U.S. Fish and Wildlife Service named the three regions for study in the proposed revision of its 1981 Grizzly Bear Recovery Plan. Fish and Wildlife has been holding hearings on the revision around the West this fall.

Once the revised plan is adopted next spring, the studies would take at least five years. Then, even if the areas were found to be suitable for reintroduction, repopulation with grizzlies would take a long time, according to Chris Servheen, Fish and Wildlife's coordinator for grizzly bear recovery, who is based in Missoula, Mont.

"It is a tremendously time-consuming task to try to restore populations of those bears, even in the zones where they still exist," Servheen said. "They breed very slowly. A female does not have young until she is five years old. Then she has young only once every three years. She has only two cubs per litter, and in most

cases they both die before they reach breeding age. The mother lives only about 18 years."

Some state game officials and local ranchers are not happy over the prospect of grizzly reintroduction. In Colorado's San Juan Mountains, the last documented grizzly was shot in 1979 near Wolf Creek Pass after attacking an outfitter, according to Galen Buterbaugh, Fish and Wildlife's regional director. A Colorado Division of Wildlife spokesman said the San Juan Mountains are not remote enough for grizzlies. Defenders of Wildlife, on the other hand, praised the Fish and Wildlife Service for adding the San Juan Mountains to the study list.

This is where the federal road map for grizzly recovery may end in frustration, at least in the greater Yellowstone region. This year's mortality rate has already exceeded the revised plan's limit of seven bears with no more than two adult females. And no one dares to predict the grizzly's future mortality rate.

Federal and state game wardens are now investigating the shooting of a radio-collared grizzly by an unidentified hunter. The bear, discovered in the Teton Wilderness south of Yellowstone Sept. 18, was the second killed within a week by hunters. The other bear, a grizzly sow, was killed after it mauled a hunter in the Shoshone National Forest back country east of the park.

The mauling has changed the attitude of many hunters entering prime grizzly habitat to hunt elk, said John Talbott of the Wyoming Game and Fish Department. "We have a lot of people entering the woods prepared to shoot a grizzly on sight."

While hikers have been taught to make noise, hunters move quietly to avoid scaring off game. Therefore, hunters are more likely to surprise a grizzly, said Jim Klett, a Fish and Wildlife Service special agent from Jackson, Wyo. And with the rising number of bears in the greater Yellowstone recovery area, conflicts are bound to increase.

After spending years at close range to grizzlies, Knight says hunters who shoot grizzlies are "wood wimps." "If they are afraid of bears they shouldn't hunt in grizzly country."

In the mauling incident, the bear was apparently surprised by the hunter and, trapped by rimrock, had no other way out than through the hunter. The other bear shooting is still under investigation to determine if it was actually self defense. The bear was shot in the shoulder and from behind.

"It was a close encounter, not a direct attack," Klett said. "I don't blame the bears." But he said hunters might feel threatened in such a situation and may be given the benefit of the doubt. "Proximity to a 600-pound bear at four to eight feet triggers a response in people," he said.

A special committee has been formed to consider ways to prevent hunter-bear conflicts in the future. Improved educational programs, delaying the hunting season until the bears have returned to the national park and instituting a permit system for hunters in prime grizzly habitat were among the ideas discussed.

Despite the hunter problems, managers are considering a special nuisance grizzly hunt in the Yellowstone region aimed specifically at problem bears. This would allow hunters to bag grizzlies that would have to be trapped or removed from the wild anyway.

"If it did happen it would be very rarely implemented," said Servheen. He added that a similar nuisance grizzly hunt is on the books in Montana, and that in four years only two grizzlies had been killed.

As bear numbers increase, conflicts outside of Yellowstone are bound to increase. Dominant bears push out those lower in the pecking order, forcing these bears to roam widely throughout the ecosystem. In fact, grizzlies have ranged as far south as Spencer Mountain just north of Swan Valley, Idaho, and are recolonizing the Wind River Range in Wyoming, more than 100 miles southeast of the park.

The grizzly recovery area includes portions of the five national forests that

surround Yellowstone. Inside this line on a map, grizzlies are afforded special protection. Outside the line grizzlies still cannot be legally killed, but their human neighbors don't have to make room for them, either.

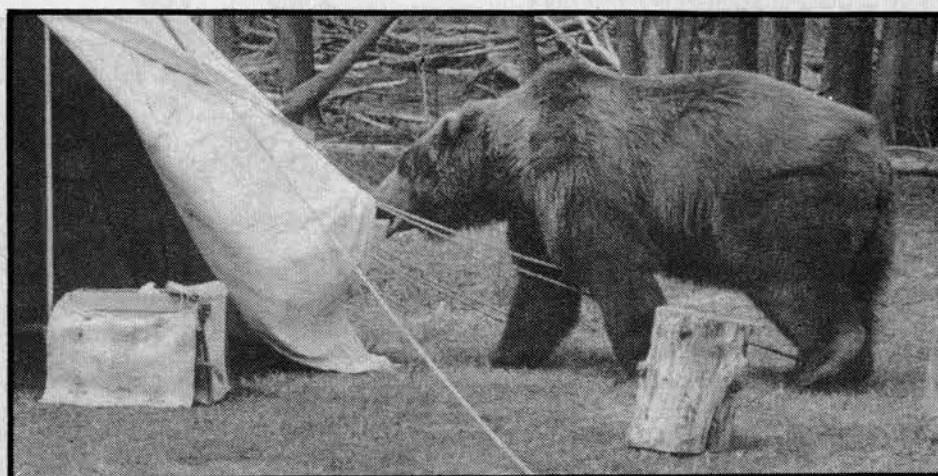
The growing number of bears is causing conflicts with more than just hunters. In August, a young grizzly bear was trapped and moved away from sheep northeast of Teton. "We're going to see more of this as the population recovers," says Bryant Christensen, a Targhee National Forest range manager.

Federal and state managers keep trying to balance the different uses and

mitigate their effects on the grizzly. But there is a limit. Says Fish and Wildlife's Servheen: "You can't high-tech every use and protect the bear."

The federal road map, it seems, can take the grizzly only so far. It is no guarantee.

(Copies of the draft revised Grizzly Bear Recovery Plan can be obtained from the Grizzly Bear Recovery Coordinator, USFWS, NS 312, University of Montana, Missoula, MT 59812; or call 406/329-3223. The public comment deadline is Feb. 4, 1991.)



Wyoming Game and Fish Department

A grizzly raids a Wyoming camp site

GUEST OPINION

Gold and grizzlies: a bad combination

by Diana F. Tomback

In the mountains north of Cooke City and in other national forests surrounding Montana's Absaroka-Beartooth Wilderness, important grizzly bear habitat is being threatened by a "neo-gold rush" — the recent explosion of hard rock mining on public lands. The boom is a result of the 1872 Mining Law and new mining technology, and coupled with other disturbances, it is setting the stage for a confrontation between the mining law and the Endangered Species Act.

Grizzly bears have been known to inhabit the mountains around Cooke City since the community was founded. The area may represent the highest-quality grizzly bear habitat in the greater Yellowstone area. During the late 1800s, hunters and trappers killed numerous grizzly bears; sportsmen bagged the species annually until 1974, when hunting grizzlies became illegal.

The best habitat for grizzly bears in the Cooke City area is in the upper subalpine forest. The whitebark pine there produces large, highly nutritious seeds that grizzlies eat both before and after hibernation. The high fat content of the seeds enables bears to accumulate enough body fat to sustain them through winter. During the summer, red squirrels industriously cut down hundreds of conifer cones and store them for winter food. The grizzlies raid these cone stockpiles.

Whitebark pine forest communities are found on the higher mountains and plateaus all over the greater Yellowstone area; they are widespread throughout the Absaroka and Beartooth ranges. At timberline elevations and on windswept sites, whitebark pine may form nearly pure stands. In northern Yellowstone National Park, the popular Mt. Washburn area has both mixed subalpine forest and pure stands of whitebark pine that are frequented by grizzly bears. As a consequence, the northern slopes of Mt. Washburn are closed to park visitors in the late summer and fall.

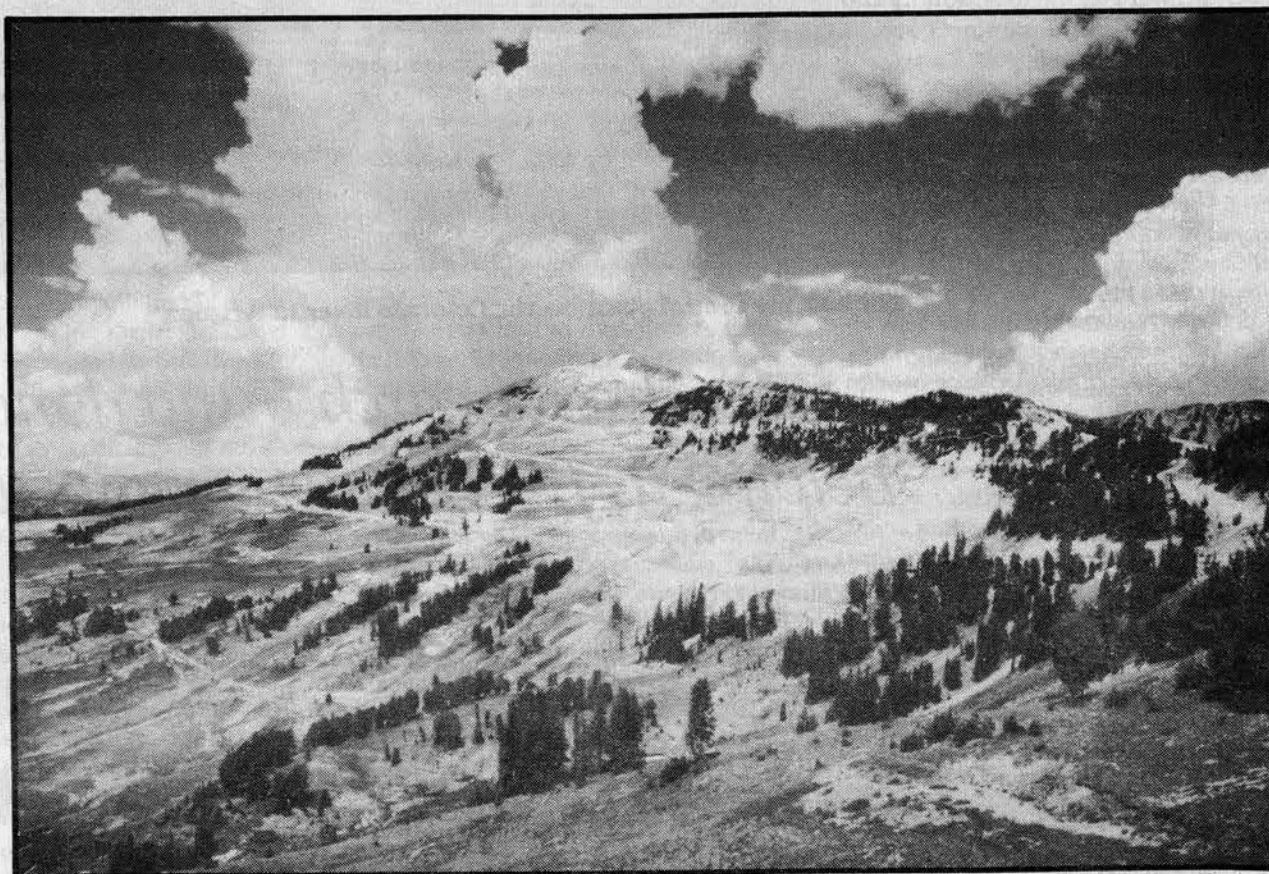
Whitebark pine is abundant as well in the vicinity of most of the mining activities around Cooke City. These include open-pit and shaft mining, tailing ponds, mill sites and housing encampments.

Grizzly bears also forage for other foods in the Cooke City area. These include huckleberries and whortleberries in timber stands and avalanche chutes, leafy vegetation in riparian bottoms and mature timber stands, ants in logs and old-growth stumps, and moose, deer and elk in their seasonal range.

The 1872 Mining Law allows virtually unrestricted exploration and mining for hard rock minerals on public lands with no federal environmental regulations (HCN, 6/4/90). Between open-pit and heap-leach mining technologies and soaring gold prices, old claims now can turn a profit and new claims are being filed in record numbers.

Cooke City was founded in 1886 as a mining town. Gold and silver were mined north of Cooke City, in the Miller Creek, Fisher Creek and Stillwater River drainages in the late 1800s and early 1900s. Today, these drainages are a mosaic of mining claims, capped by the rich ore deposits of the New World Mining District at the headwaters.

At Daisy Pass, above the Miller Creek drainage at 10,000 feet elevation, the view to the distant north and east of the Beartooth Mountains and the Absaroka-Beartooth Wilderness is breathtaking; to the immediate north, the huge McLarens open-pit mine at timberline dominates Fisher Mountain. South below Daisy Pass, exploration by Crown Butte Mines Inc., has made serious inroads on the landscape on the east side of the Miller Creek drainage.



Diana Tomback

The McLarens open-pit mine north of Daisy Pass, Montana

Activities in the New World Mining District are expected to escalate in 1991, when more than 100 additional workers will be hired.

The mining operation extends around Fisher Mountain to the Fisher Creek side. South in the same drainage, Noranda Minerals Corp. is exploring and drilling on and around Henderson Mountain, sometimes making aerial surveys by helicopter. The forests and meadows below the mountain are decorated with orange flagging, survey stakes and monuments, a myriad of patented and unpatented claims.

Local conservationists, including the recently formed Beartooth Alliance, are concerned about the mining activities because of their impact on the land and water quality. High-elevation sites are notoriously difficult to revegetate because of poor soils and a short growing season. Also, the mines operate near the headwaters of three major stream drainages that are expected to be contaminated when operations are speeded up.

Miller Creek empties into Soda Butte Creek, which enters Yellowstone National Park a few miles west of Cooke City. The Stillwater River flows through the Absaroka-Beartooth Wilderness to the north, and Fisher Creek feeds the Clarks Fork of the Yellowstone River, a blue-ribbon cutthroat trout stream that is now listed as a wild and scenic river. Last year the Environmental Protection Agency began cleaning up a tailings pond above Cooke City that had leached heavy metals into Soda Butte Creek.

Not yet addressed, however, is the widespread disturbance to critical grizzly bear habitat from mining and other activities. This includes not only the loss of whitebark pine communities, but also the noise of operations and vehicular traffic. The grizzlies avoid these areas, thus losing a large area of suitable habitat.

Several other large-scale mining operations have begun in other grizzly bear habitat in the greater Yellowstone area. A gold mine at Jardine, just outside the Absaroka-Beartooth Wilderness, opened in 1989 and employs about 100 workers. A large-scale

platinum-palladium mine now operates on the Stillwater and Boulder rivers north of Cooke City.

The cumulative impacts of these and other human activities have yet to be considered. The consequences are serious: an increase in bear-human conflicts and a further decline in the grizzly bear population.

The population size of a species is related to the extent of the geographic range of the species and the quality of habitat available within the geographic range. The quality of grizzly bear habitat is dependent upon the abundance and availability of seasonal bear foods and security from humans. Spread over three drainages, the mining activities north of Cooke City effectively decrease the critical habitat available for grizzly bear use. Because each kind of disturbance in these drainages cannot be viewed in isolation, the cumulative disturbance virtually insures that grizzly bears will avoid the area.

If mining operations are permitted in other areas near or in forests designated as critical habitat, then we will see additional erosion of the greater Yellowstone area grizzly bear range and may expect a continuing decline in the grizzly bear population size.

The Endangered Species Act of 1973 was written to protect critical habitat from human activities that threaten its quality. Section 7(a) of the act states that each federal agency must give priority to the preservation of endangered and threatened species and critical habitat over other activities "authorized, funded, or carried out" by the agency. The power of this section lies in its interpretation and implementation. This legislation could insure the preservation of critical grizzly bear habitat in the face of these new pressures from mining companies. In other words, the federal government *can* say no.

Diana F. Tomback is an associate professor in the University of Colorado at Denver's Department of Biology and Center for Environmental Sciences.

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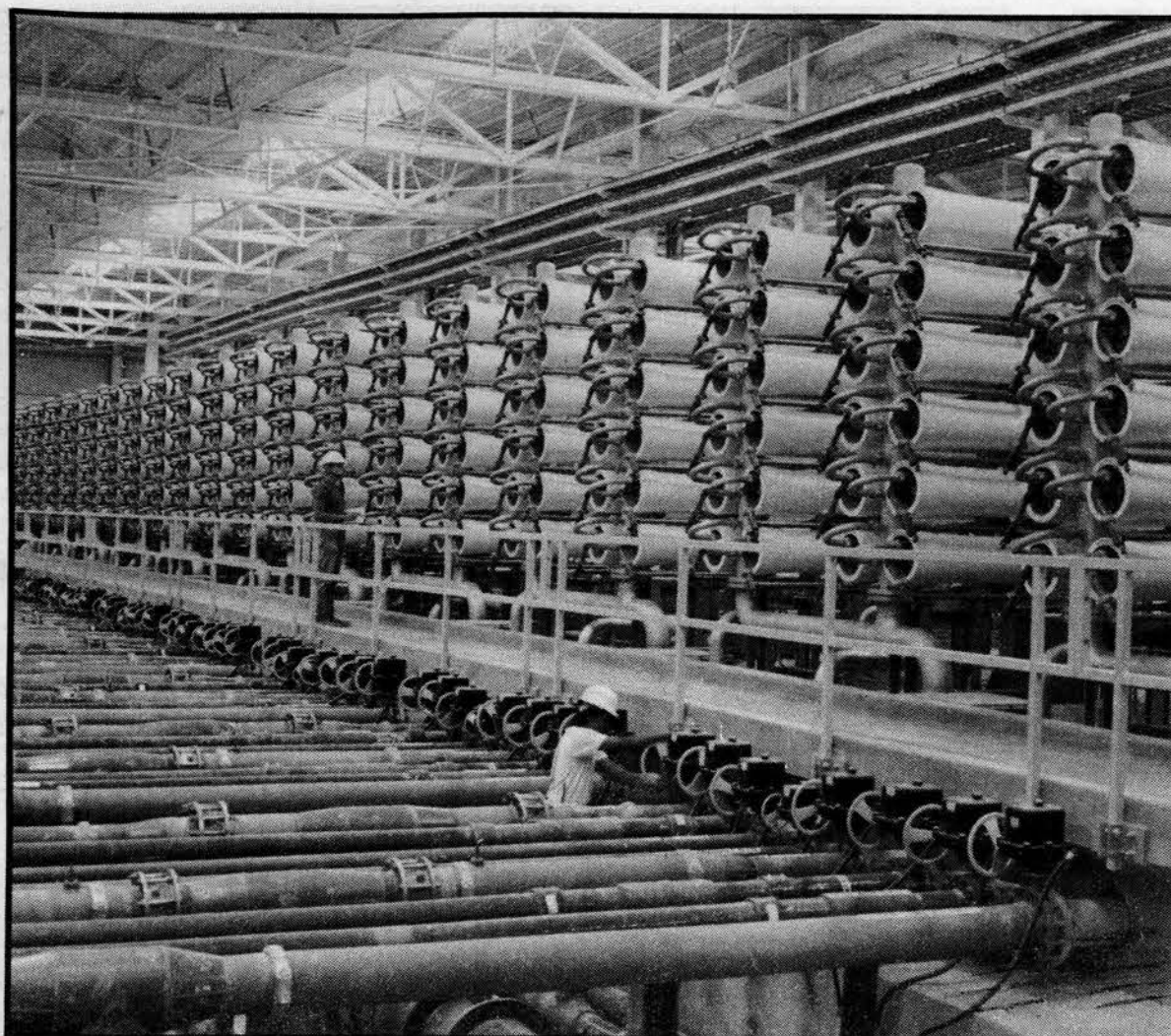
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The salinity control plant on the Colorado River in Arizona

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BULLETIN BOARD

CHANGES PROPOSED FOR RAINBOW BRIDGE

Because natural wonder, sacred site and tourist attraction all define Rainbow Bridge National Monument, its management is controversial. Visitation has greatly increased since the flooding of Glen Canyon in 1964 made the sandstone arch accessible by motorboat. Now the national park system has released a draft General Management Plan that proposes to pave the Rainbow Bridge trail and a 1,600-square-foot "congregating area" that could accommodate 390 visitors at one time. It also calls for expansion of the boat dock and installation of multiple signs and exhibits. The National Parks and Conservation Association opposes these plans, claiming that the crowds and development create a carnival atmosphere that degrades the site. The proposed plan does call for a shuttle system to Rainbow Bridge from a boat station a mile and a half downstream, to reduce noise and congestion. The plan is open to public comment until December 20, 1990. Write Superintendent, Glen Canyon National Recreation Area, P.O. Box 1507, Page, AZ 86040.

NEW BOOK FROM BEST OF RADIO SHOW

Earthwatching III: An Environmental Reader with Teacher's Guide is a new book based on the radio program *Earthwatch*, a series of two-minute features heard on more than 100 stations in 10 states. *Earthwatching III* includes 200 short, readable stories about the workings of nature, scientific inquiry and discoveries, and environmental concerns of the past, present and future. Topics range from ocean pollution to energy conservation, climate change to endangered species, hazardous waste to outdoor recreation. The teacher's guide suggests how teachers of grades K-12 can integrate the book into their curricula for teaching science and other subjects, including social studies, math, English, health and art.

Earthwatching III, Institute for Environmental Studies, University of Wisconsin-Madison, 550 N. Park St., 15 Science Hall, Madison, WI 53706. 159 pages. Paper: \$3.50. Illustrated with black-and-white photographs.

A NATURE CONSERVANCY CALENDAR

The low-key Nature Conservancy has joined the ranks of major environmental groups such as the Sierra Club, Audubon Society and Wilderness Society by publishing its own calendar. Not only will the 1991 Nature Conservancy Calendar help in tracking the days, but it will also raise awareness of the organization's single goal: "to protect rare plants and animals by protecting the places they need to survive." To meet this end, the Conservancy currently manages 1,100 preserves that shelter over 1,000 threatened species. The calendar features 36 of these sites and species in full color. Proceeds from the sale of the calendar will benefit the Conservancy. The calendar, which costs \$9.95, is available from Falcon Press, P.O. Box 1718, Helena, MT 59624 (1/800-582-BOOK).

STORIES FROM THE DESERT

Author Gary Paul Nabhan reads seven stories from his books about the desert in a new cassette collection, *The Desert Smells Like Rain*. A mixture of Sonoran desert profiles, folklore, and agricultural and culinary history, the stories are rich in details that bring the desert to life and refute those who would call it a wasteland. Stories explain how indigenous people stretched agriculture to its limits in areas scientists say are too hot and dry for dry-land farming, producing crops with higher nutritive value than farmers of irrigated land. One story explains how some native people view the Central Arizona Project, a water project that has altered their time-tested farming techniques and, while it's been talked about since the 1930s, has still failed to deliver water to these desert people. Another details the importance of the creosote bush; another, "Plants Which Coyote Steals, Spoils, and Shits On," tells the story of the part-real, part-mythical coyote. Common throughout is the feeling of reverence that the native people, and the author, have for the land.

The tapes are \$15.95 from The Audio Press, P.O. Box 935, Louisville, CO 80027.



ENVIRONMENTAL VIDEOS NEEDED

Network Earth, Turner Broadcasting System's weekly half-hour program on the environment, has put out a call to viewers to send in videos showing both environmental outrages and achievements. Anyone with a video camera is qualified. These videos may be used in the two-minute "Truth or Trash" portion of the show that focuses on environmental events of the previous week. Longer videos highlighting people taking a stand for the environment in their community may be used in a "local hero" segment. Videos that expose momentous environmental happenings will be considered for the program's lead story. Send videotapes to Network Earth, One CNN Center, Box 105366, Atlanta, GA 30306, or call 404/827-4040.

TOXIC COLORADO

Colorado manufacturers produced 21 million pounds of toxic pollution in 1988. Of that, 11 million pounds entered the air, and the rest was hauled away, reports *The Denver Post*. Known or suspected cancer-causing chemicals accounted for 3.5 million pounds of the waste, and another 5.3 million pounds could lead to birth defects. CF&I Steel Corp. of Pueblo generated the most waste — 4.6 million pounds — followed by Excel Corp., a beef slaughter-house in Sterling, with 1.3 million pounds. Zinc, the solvent TCE and freon are the most common toxics. Citizen Action, an environmental group, compiled the information in its report, "Poisons in Our Neighborhoods: Toxic Pollution in Colorado," from data supplied to the Environmental Protection Agency. Copies of the two-volume report are available for \$5 from Citizen Action, 1905 Sherman, Suite 745, Denver, CO 80203, or by calling 303/839-5232.

A HANDFUL OF DUST

Even people who have never left New York City can probably recognize the New Mexico landscape, thanks to Hollywood. Now the College of Agriculture and Home Economics, New Mexico State University, has made a brief video to tell viewers what that landscape means, and it is not good news. According to the video, livestock grazing and fire suppression have changed the biological makeup of the land. Forbs and grasses have been diminished and brush and noxious weeds, reinforced by the desert-making pinion-juniper trees, have taken over the land. Not only has the land become unfit for many kinds of birds and small animals, but it has also become a place that sheds, rather than absorbs, water. Combine the waterproofing of the land with the growing demands New Mexico cities and agriculture are putting on ground water, and you have a difficult situation. The video, titled "A Handful of Dust," tells the story well. It can be purchased for \$12.50 from Agricultural Information Video Studio, Box 30003, Dept. 3AI, NMSU, Las Cruces, NM 88003 (505/646-5368). It can also be borrowed. Ask for video 751.

MONTANA HIKER'S GUIDE

The Continental Divide National Scenic Trail is a 3,100-mile trail that follows the Rocky Mountains from Canada to Mexico. Falcon Press has released *The Hiker's Guide to Montana's Continental Divide Trail*, a guidebook covering the Montana and Idaho section of the Continental Divide Trail, including Glacier and Yellowstone national parks. Authors Tad Brooks and Sherry Jones, who hiked the entire trail in 1989, provide detailed trail descriptions and helpful hints about trailhead locations, camping sites, habitat, scenery, water availability, supply points, precautions to take, and special interest spots such as alpine lakes and wildlife areas. The guide is designed so the hiker can either explore the entire Montana-Idaho trail at once or take one section at a time. It includes a map and elevation chart for the complete trail as well as maps and charts for each section.

Falcon Press Publishing Co., P.O. Box 279, Billings, MT 59103. Paper: \$9.95. 220 pages. Illustrated with maps, charts and black-and-white photographs.

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HIGH COUNTRY NEWS classified ads cost 30 cents per word, \$5 minimum. Display ads 4 column inches or less are \$10/col inch if camera-ready; \$15/col. inch if we make up. Larger display ads are \$30 or \$35/col. inch. We reserve the right to screen all ads. Send your ad with payment to: HCN, Box 1090, Paonia, CO 81428 or call 303/527-4898 for more information.

STRING BAGS — Large string bags knit in USA using seine twine. Cotton webbing handles — long enough to fit over your shoulder. Take shopping, on boat cruises, or use to separate things in your pack. Lightweight enough to be shoved in your pocket. Very strong when filled. \$12 includes shipping. Send orders to: 117 E. Louisa Street #140, Seattle, WA 98102. (4x21p)

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MEET OUTDOOR SINGLES, ages 19 to 90, bi-monthly newsletter lists active outdoor-oriented singles nationwide, 1-year subscription \$15, trial issue \$3, place ad \$15, no hidden charges, free information and ad form for self-addressed stamped envelope, **OUTDOOR SINGLES NETWORK-HCN**, 1611 Cooper #7, Glenwood Springs, CO 81601. (6x20p)

JOB SEARCH; Two Ph.D toxicologists with pilot's licenses interested in environmental jobs in the West, where we can combine our interest in toxicology, flying and the environment. Contact: Robin E. Neft, Ph.D, 501/541-4329 (work), 501/221-3749 (home); John S. Wheeler, Ph.D, 501/541-4943 (work), 501/562-8423 (home). (1x23p)

DIRECTOR WANTED FOR YELLOWSTONE INSTITUTE, Yellowstone National Park, Wyoming. Well-established, highly respected outdoor education program currently offers over 70 classes and attracts approximately 700 participants per year from throughout the U.S. Classes range from geology and wildflower photography to interpretive writing. Background in similar environmental education program, and/or natural or earth science education with administrative experience preferred. Minimum educational requirement — bachelor's degree; additional consideration given to applicants with advanced degrees. Full-time position, salary \$24,000 per year. To request a detailed job description, write: Yellowstone Association, Department YI, P.O. Box 117, Yellowstone National Park, WY 82190 or call 307-344-7381, ext. 2384. (2x22p)

ALTERNATIVES TO THE PILL AND DISPOSABLE TAMPONS AND PADS! Nonprofit mail order service for condoms, spermicides, recyclable menstrual pads and sponges, books, lubricants. Safe. Effective. Up to 50% below standard retail! Send SASE for FREE mail order brochure to ZPG-Seattle, Dept. HC, 4426 Burke North, Seattle, WA 98103. 206/633-4750. (21, 23, 25p)

"OUTDOOR PEOPLE" lists 50-word descriptions of active, outdoor-oriented Singles and Trip companions nationwide. \$2/copy, \$10/ad. **OUTDOOR PEOPLE-HCN**, PO Box 600, Gaston, SC 29053. (6x15pd)

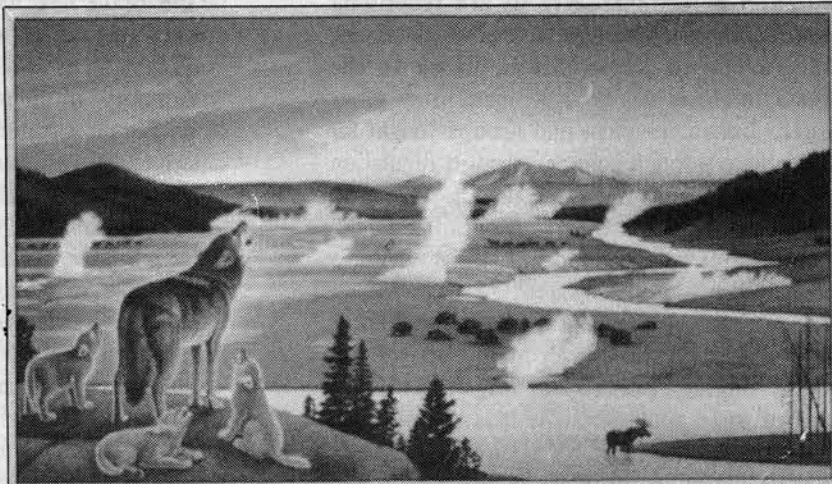
INTERESTED IN CROSS-CULTURAL FRIENDSHIPS? Skipping Stones is a multilingual, ecologically-aware, educational and entertaining, quarterly magazine for \$15/year. Contact: Skipping Stones, 80574 Hazelton, Cottagegrove, Oregon 97424. (1x23pd)

ANY PERSON WILLING to help the traditional Navajo people resisting relocation at Big Mountain, Ariz., please write John Benally, P.O. Box 733, Hooterville, AZ 86030. (1x23f)

FINANCIALLY INDEPENDENT family of five, with no small children, is seeking a secluded mountain house to caretake or rent. Need not be easily accessible. References. Call collect 303/527-3465. (1x23b)

THINK GREEN THIS CHRISTMAS

Buy a poster and bring the wolf back to Yellowstone



Brilliantly colored on museum-quality paper, this 23"x32" poster by nationally recognized Montana artist Monte Dolack, featured on the cover of Patagonia's summer catalog, is a real collector's item. Banned in Yellowstone National Park for advocating the cause of the wolf, the poster helps fund our efforts to restore the wolf in that area. A perfect gift for those who are concerned about wildlife!

Cost is \$25 each. Send order and payment to: Defenders of Wildlife, 1244 Nineteenth St., NW, Washington, DC 20036. Or call 202/659-9510 (10 a.m. to 4 p.m. EST, M-F). Orders received by December 10th are guaranteed for Christmas. Two-day delivery available for \$5 extra.

HCN

BOOKS

The western soul has a watery grave

Overtapped Oasis: Reform or Revolution for Western Water by Marc Reisner and Sarah Bates. Island Press, 1990. Cloth: \$31.95, Paper: \$17.95.

A Story That Stands Like A Dam: Glen Canyon and the Struggle for the Soul of the West by Russell Martin. Henry Holt, 1989. Cloth: \$24.95.

A Life of Its Own: The Politics and Power of Water by Robert Gottlieb. Harbrace, 1988. Cloth: \$20.95.

Markets for Federal Water: Subsidies, Property Rights, and the Bureau of Reclamation by Richard Wahl. Resources for the Future, 1989. Cloth: \$30.00.

—review by Tom Wolf

If anything will level with you, water will. Follow water through the tragic history of the West, and water will lead you to the soul of the West. Follow the last decade or so of Western water politics, and you will see a major shift in values, a realignment of players and rules — even as environmental quality continues to decline, even as more and more people scramble for water.

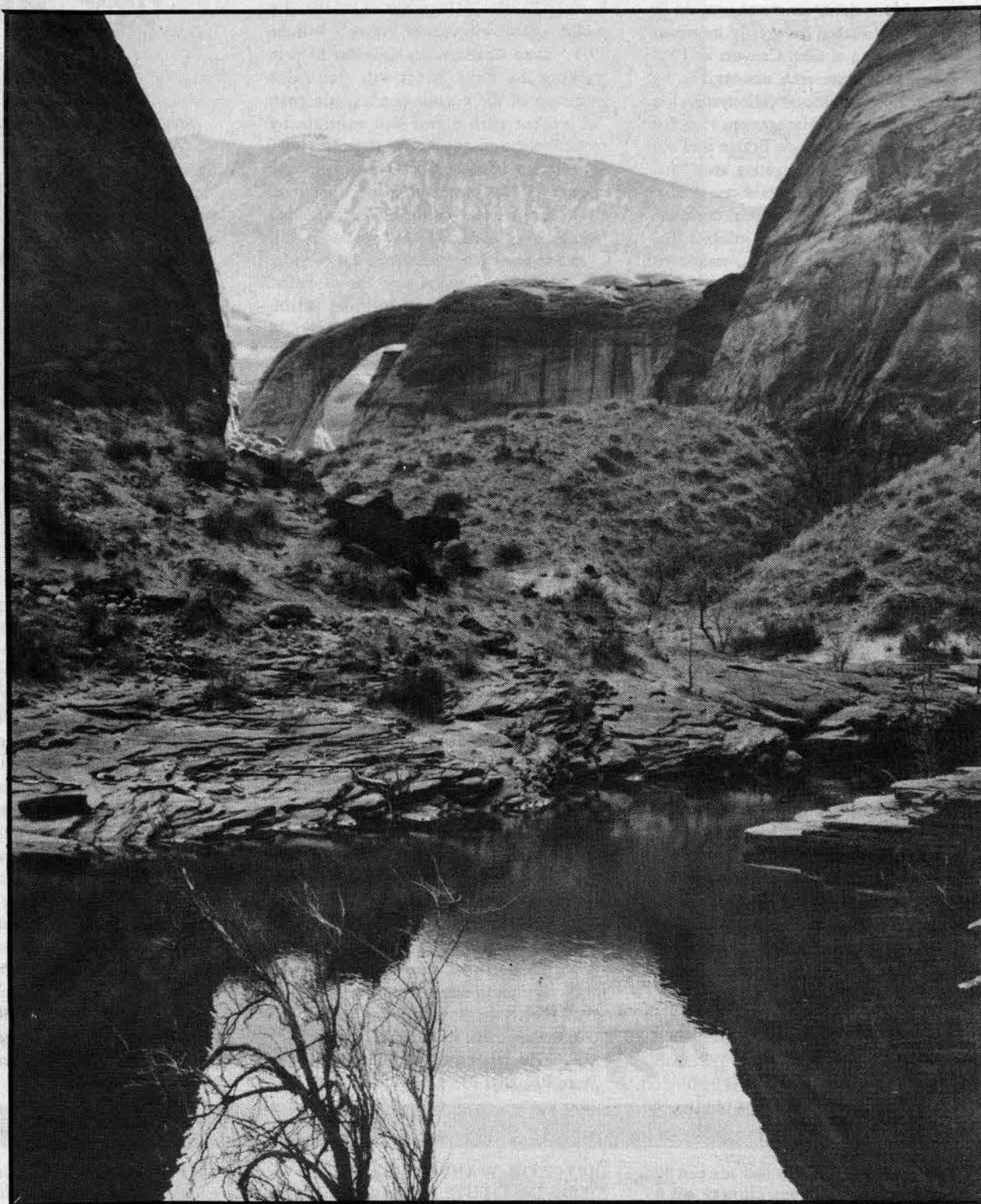
The books reviewed here don't retell the tragic tale of water in the West already recounted so powerfully in Donald Worster's *Rivers of Empire*. But these new water books could change your ideas about how to come to terms with our regional tragedy, with the environmental disaster we have made of Western water. The tough-minded Worster has already described the top-down, feudal system that is Western water. Nevertheless, you must also slog through Reisman's and Bates' sentimentality about "the rural, essential West," about the old Jeffersonian dream of a nation of yeoman farmers. Wade on with them, however, and you will learn how Western water law made environmental destruction possible, if not inevitable, all in the service of federally subsidized, irrigated agriculture. Such history will make you thirst for vengeance.

One way to come to terms with what we have wrought is to float along with these writers as they run the rocky rapids of value and equity, and then as they enter the reservoir-dead slackwater where they ask why most of the West's federally developed water still flows first to low-value, subsidized agriculture, then to industry and finally to urban areas. "What's left for the wild things?" you might ask. "Don't they count? Aren't they also along for the ride?"

All these authors can and do count — they recognize that the West is primarily urban, with California's hordes leading the demand for redistribution of the "old" water and development of the "new." As we urbanites press for more and better-quality water, some of the public agencies and environmental groups that serve us are redefining their agendas and seeking new allies, while others, like the Bureau of Reclamation, cling to the agricultural interests that brought them their glory days. Where before environmental groups fought for equity and value through politics, through regulation of the agencies, today they are just as likely to approach "value" as a conservative economist would, by treating water as a commodity, by entering a developing market for federal water.

These realignments prompt a re-examination of the West's watery soul. In contrast to what a biologically inclined philosopher might say about "soul," all of these authors assume it is the pinched, puckered-up thing defined by economists. They assume that water in the West is scarce — and therefore valuable. But water is not scarce unless we make it so, unless we murder natural systems. They fail to understand that local spirits of place guard "the essential West," a state of mind where we half perceive and half create, where we value water for its place in nature, not for what we make of it with our relentless structuring.

In contrast to this old-fashioned sense of value, the assumption of scarcity confers a kind of value shared by all these authors: the notion that everything in nature can be reduced to a quantifiable commodity, valuable for its further reduction to dollars. Other than greed and lust for power, there is precious little human feeling in such a "world," where the only gains and losses are monetary, or abstract, and nothing is lost that cannot be regained.



Department of the Interior

One of many side canyons flooded by the Glen Canyon Dam

The subtitle of *Overtapped Oasis* calls for either "reform" or "revolution" in Western water politics, but the authors' choice is never in doubt. They are reformists, just as Robert Gottlieb is. In the brave new world of Western water politics, conservationists make common cause with conservatives like Richard Wahl to bring the "rationality" of the marketplace to bear on the world of corporate socialism and government subsidies we inherited from our parents and grandparents.

If you think Ronald Reagan was a revolutionary, then you might think these writers are revolutionaries, too. But the transvaluation of all narrowly human values that you might expect of environmental revolutionaries will not be found in any of these books, all of which accept the "new" hierarchy of values in Western water circles, best summarized by Richard Wahl: Federally subsidized water supplies have become property rights, and therefore the most effective way to confront inefficient usage is to recognize those rights and to facilitate voluntary transfers of water. Where possible, these transfers should protect third parties and serve instream values such as environmental quality. The best role for the "new" Bureau of Reclamation is to facilitate these trades.

If you accept such values, you may also accept the superiority of the free-market system as a way of solving environmental problems while enhancing political freedom. It is not popular to say so in these heady days for capitalism in central Europe, but I still fail to see necessary links between the free-market system and environmental quality. Yet there is no denying that we can and should reform the "Soviet-like" system that presently controls Western water, since it is this system that has given us environmental destruction, inequity and inefficiency all at once.

The solution Reisman and Bates present is as

characteristically progressive as it is charmingly naive: Get involved, join in the great struggle that is democratic decision-making. And this is precisely what Robert Gottlieb did when he became a director of one of southern California's most powerful water agencies. His tale of hands-on involvement in California water politics makes fascinating reading of the "new journalism" variety, where the judge and analyst is also a participant.

Like most of those who try to change Western water politics, Gottlieb finds himself pitted against an agricultural water establishment that vigorously defends its special subsidies in ways that mock the values of the free market and of democracy. As an historian of the last 10 years in water politics, he is superb in recounting the Reagan-era confusion at the Bureau of Reclamation. You are there when water developers learn the difference between the Reagan-Watt pro-big-dam rhetoric and the ideology of fiscal conservatives like Richard Wahl at the Department of the Interior's Office of Policy Analysis.

Gottlieb also is a good guide to the response of the bureau's environmental antagonists to the Reagan Revolution. If you want to know where Wahl, Reisner, Bates and other environmentalists fit into the new power politics of water, Gottlieb can tell you. He is very good at showing how Wahl's sponsor, Resources for the Future, shifted its traditional approach during the 1980s from advocacy of government regulation to the new pro-market thinking. And he is on top of the truth-is-stranger-than-fiction alliances between the Environmental Defense Fund, the Libertarian Political Economy Research Center and major California irrigated agribusinesses like J.G. Roswell, recently rumored to be a potential purchaser of The Nature Conservancy's largest acquisition, the Gray Ranch.

Because the federal agencies negotiated and still administer favorable long-term contracts for their agricultural keepers, there are still hundreds of irrigation-related dams that may have changed the West beyond recognition, and perhaps beyond restoration and recovery. It may be possible to force or bribe agriculture into sharing water, though that will be an empty victory if all it means is more urban development. It may also be that it is too late. Perhaps the inexorable laws of economics are killing irrigated agriculture, but in the meantime its bloating corpse fouls everyone's water and obscures our view of a much more fundamental passing: the demise of the essential wild West Edward Abbey loved. This is the death of what is unique and valuable about the "other West": the perception that there is plenty, that there is (or was) an abundance of some things scarce elsewhere, such as space, water flowing free through wilderness and the kinds of political freedom increasingly rare in our regimented, highly urban society.

A market for federal water may seem like a clean solution to the problem of defining the soul of the West. "Simple ain't easy," however. Because one can imagine water markets does not mean that one can get people to sell, buy or trade in a "rational" fashion. The Nature Conservancy is discovering this in the Upper Colorado River Basin, where it controls large amounts of marketable water "donated," for a huge federal tax break, by a big company that got too deep into the oil shale business.

In contrast to Wahl, Reisner and Bates do not express full faith in the market system. In a burst of sentiment for their "rural, essential West," they still insist on some government control to continue the flow to communities subsidized for agricultural purposes. In this they continue a basic and perhaps fatal flaw in the mainline environmental community's approach to Western water: people first, and then nature. This matches the political base of the major environmental groups in California, where most of the West's people and money are. Gottlieb shows how the major national environmental groups' fundraising needs dictate their water policy choices, often setting them against the work of constituency-based local groups.

Given the obvious frauds associated with the heavily subsidized agricultural community, it is curious that Reisner and Bates fall into the time-worn trap laid for people who want to believe in the myth of the Old West. In the world of the attorney and the economist, one gathers, nobody faces a sense of permanent loss or a sense of tragedy. Like so many bright and progressive conservationists today, they also have a naive sense of the dark side of life represented in our literary tradition.

Reisner and Bates call their reformism "A Modest Proposal," alluding to Jonathan Swift's 1729 work of the same name. But this would appear to be a book they have not cracked, since Swift's black humor slashes at the reader in the manner of classic satire. His persona is a numbers-crunching socioeconomic planner who would be quite at home in today's Western water politics. He advances the same proposal for children as these authors advance for the West: Reduce them to commodities. Since there are too many children in Ireland, the rational approach is to eat them at age one, when they are ripe and before they become a burden on the state.

Such shortcomings aside, you will not find a (thankfully!) shorter or better book about Western water law. It has become a cottage industry recently in environmental circles to try to explain Western water law in an interesting way. As tedious as this subject can be, Reisman and Bates do a superb job of leading a reluctant reader once more into the labyrinth. Their state-by-state comparisons of local water law, together with recommendations for reform on the state and federal level, also are excellent.

Here is the end of their "Modest Proposal":

The main point is that the Bureau of Reclamation, the Interior Department and the Congress, by authorizing and building hundreds of federal water projects, are collectively responsible for a staggering loss of aesthetic beauty and wildlife and fish habitat over the years. To earlier generations of Americans, enjoyment of these wild resources was almost a birthright. Are we simply going to declare this habitat, and the wild creatures that depended on it, forever lost? Or are we going to try to create an opportunity for tax-payer subsidized Western agriculture to make amends for the damage it has caused?

None of this highfalutin talk for Richard Wahl; he is all business as he examines the markets for federal water. In contrast to the acute California-consciousness of Gottlieb, Reisner and Bates, his is a Beltway book. Within the philosophical

limitations of a free marketer, Wahl writes and reasons clearly and illustrates his text with excellent tables and charts, most of which are devoted to exposing the continuing outrage and folly of Washington water politics. In 1986, for example, the Central Arizona Project's interest rate of 3.342 percent was still being used to calculate repayment to the government.

As Wahl shows, irrigation subsidies take two forms: 1) interest-free repayment, and 2) the basing of irrigators' repayment on the Bureau of Reclamation's estimate of their "ability to repay." When Congressman George Miller, D-Calif., finally forced the numbers out of the Bureau of Reclamation in the late 1980s, we discovered that 86 percent of its total construction costs has been subsidized. Put in terms of the value of today's dollar, that means we taxpayers have been soaked for an average of \$2,000 an acre in the effort to make the desert bloom.

Scandals like this seem a long way from the Jeffersonian intentions of the Reclamation Act of 1902. Wahl's sober solution is that it is cheaper to switch than fight. He would urge all of us to forget past crimes against the environment and against justice; make it worthwhile for agriculture to change, and make the Bureau of Reclamation the agent of that change. People prematurely announcing the demise of the Bureau of Reclamation simply ignore its real and continuing power to administer and renew fabulously lucrative contracts with its clients. In spite of all the attempted reforms of the 1980s, Wahl shows that the bureau's own repayment terms are more favorable for water users today than at any time in history. The era of big dams may be over for now, but Wahl's case studies show that federal financial assistance will continue forever unless we make some kind of radical change.

While other writers are attracted to California and Washington, D.C., the centers of human political power, Russell Martin takes you to where it's really at, where rivers die and turbines hum, where one of America's greatest environmental tragedies occurred at the behest of the big dam boys.

When I was a boy, summers meant long expeditions with my engineer father, back and forth between the Bureau of Reclamation's headquarters in Denver and Glen Canyon, where "we" were building a dam. During those long drives there was time to discuss things, such as the Sierra Club's deceptive fundraising defense of Glen Canyon as "the place no one knew." We bureau people knew that was typical Sierra Club maneuvering to justify its own retreat.

When I knew Glen Canyon, it was teeming with geologists, archaeologists and biologists, all charged with the special energy generated by an impending death. It was on one of our trips to the canyon floor that I learned about the dangers of valuing nature for its own sake. Glen Canyon did take on human life. Twenty-year-old poet, artist and desert mystic Everett Ruess wrote, before he disappeared forever into the abyss of Glen Canyon, "I have known too much of the depths of life already, and I would prefer anything to an anticlimax." His last message to the world was "Nemo 1934," scratched into the rock at a small Anasazi ruin perched above the canyon floor, now obliterated forever under Lake Powell. That petroglyph remains incised in my memory.

Russell Martin does his research well enough to give you these kinds of details, but he does not ask the sorts of hard questions of "history" posed by Donald Worster, and so he cannot tell you what "facts" mean, and he is mute when faced with the problem of how you might resign yourself to the tragic soul of the West, as exemplified in the irretrievable loss of Glen Canyon. In his determination to be fair to the "decent people" on both sides of this controversy, he lacks the emotional commitment of a Ruess.

Martin does follow out the lives of his characters to their very ordinary ends. Consider the notorious Bureau of Reclamation Commissioner Floyd Dominy, who was notified of the end of his reign by an obscure Department of the Interior underling and fellow Wyomingite named James Watt. Rather than return to Wyoming, Dominy was last seen raising bulls with no regrets in Virginia. Lacking a fierce determination to find meaning in history, Martin misses the point of the banality of evil in our time, the point of the period around and after World War II, when our fathers and grandfathers ran the world, and when the great forces of history seemed to grind down individuals and ideas in a relentless slouch toward a world uniformitized and sanitized, a world safe for a "democracy" that

was primarily white and male.

As a New Western historian would say, the primacy of the white male dictated the unholy marriage between the Sierra Club and the Bureau of Reclamation, Brower and Dominy, almost as if one could not exist without the other. That ultimate chronicler of the white male world at play, John McPhee, shows this symbiosis in *Encounters with the Archdruid*. Glen Canyon Dam would never have been built if the Sierra Club had not accepted it in lieu of the proposed dam at Echo Park in the Dinosaur National Monument. As David Brower never tires of pointing out, these were the sorts of "balanced" deals the white patricians of those days were accustomed to cutting in their backroom bargaining. Just as they were the sorts of "balanced" deals Stewart Udall sought when he was Secretary of the Interior.

This human-centered approach has resulted in progressive disaster for the West, because this approach never addresses the question of who else has standing in disputes — the question of who speaks for nature. As all these authors show, consciously or not, what "the soul of the West" means to major environmental groups is often really what it means to California. For example, the Glen Canyon deal also paved the way for the Navajo Power Plant near Page, which the Sierra Club traded off against dams in the Grand Canyon. The result is that the Grand Canyon is still there for us to "see," but only on that rare clear day when particulates from the plant blow elsewhere, and when auto emissions from California do not add to the growing gloom.

Martin is very good at showing what it was like to be part of a great project rising in the desert, and he is also good at detailing the mindsets of people like Dominy, who told anyone who would listen: "The unregulated Colorado was a son of a bitch. It was either in flood or in trickle. It was no good." That was the way I felt about the Colorado, too, until I met Richard Bradley, a professor who wrote about Glen Canyon for *Audubon* magazine, and who helped me see the value of being closer in temperament to the poetic Edward Ruess than to Floyd Dominy, the quintessential Wyoming cowboy.

Martin's "fair" version of the Glen Canyon story seems to accept at face value the banality of the evil done there. Whether or not he was murdered, Everett Ruess was the only human to die at Glen Canyon. But something else did die there. No, it was murdered by the strange combination of the Sierra Club and the Bureau of Reclamation, unfailingly selling out the non-human as they cut their political deals, keeping their piece of the American pork-and-power pie.

Because he cannot lead his reader to such a stark conclusion, Martin betrays the moral value of his story in other ways. One of these is in his "gee whiz" approach to the numbers and statistics fed him by the bureau. He sometimes loses his reader in these mountains of data, and in such situations his normally workmanlike writing fails him, and he falls into clichés about "inscrutable Indians," dinosaurs as "those great, fated creatures," or factoids like the wisdom that the cooling system necessary for the curing of concrete at the damsite would have provided "a snowcone an hour for every kid on earth."

Martin is best when he sticks to following out leads on people, such as Everett Ruess, whose brief life and writings may provide us with the epitaph we need for Glen Canyon. Ruess said, "You experience things more profoundly when you know they won't last."

Many people, myself included, regret the day — Jan. 21, 1963 — when Glen Canyon shut its diversion tunnels to begin the process of backing water up toward Rainbow Bridge. These days, everyone wants to climb aboard the boat of opposition to big dams. But that boat left long ago, and it took the wild and well-known Glen Canyon with it. We may be beyond ideology, but there is still tragedy in American history, and the story of the watery soul of the West is a tragic story.

You would never guess that from reading Mr. Martin, although you would get a fine sense of what life was like during the Depression, and why our parents and grandparents cultivated the banality of evil with such passion and dedication. Great public work projects, some historians feel, may have saved our democracy during its darkest hour, when it seemed that capitalism and the free-market system had failed. If that is true, then perhaps we can learn to live with Glen Canyon Dam, the last and worst of the big-dam foolishness. We must somehow enfranchise what is left of our wild, free-flowing water, the true soul of the West.

Tom Wolf writes about the West from Santa Fe.

Profile

Mules dance a backwoods ballet

by Dean Miller

Despite attempts to replace them with trucks and helicopters, the U.S. Forest Service mule teams stubbornly refuse to disappear. West of the Mississippi, there are three mule trains operating: one on the Lolo National Forest, one on the Targhee out of Dubois, Idaho, and a third on the Shoshone National Forest out of Cody, Wyoming.

Based at the Forest Service's former remount station in Huson, Montana, the Lolo team is the agency's show team, splitting its time between work in the woods and appearances at parades. Veteran packer Cal Samsel is the boss.

The nine-mule team's job is to deliver supplies to places in the national forests of Idaho, Montana and the Dakotas where trucks can't drive and helicopters can't land. But to listen to him talk, you'd think Samsel's job was to wage a one-man war on ignorance. "There were a lot of people that felt we were going to be totally replaced with helicopters," he said recently, puffing out misty dawn air while cinching pack saddles onto mules. "Aircraft I champion, but the helicopter doesn't do it all."

In the 1950s, desk-jockeys decreed that the agency could get by without mules and horses. That theory ran head-on into forest-fire smoke too thick for helicopters,

and terrain that's inaccessible or off-limits to trucks. Now the decision makers at the Forest Service appear to have caught on to the idea that if you're going to manage primitive country, you need a few people with primitive skills.

"One of every six national-forest acres is designated as wilderness. With that comes an obligation to use primitive tools and techniques," said Larry Timchak, assistant ranger for the Ninemile Ranger District in the Lolo National Forest. The forest winters 225 head of horses and mules at Huson, Mont., for use in a number of ranger districts. The Forest Service also runs a wildlands training center there where tenderfoot staffers learn to pack gear, restore log buildings and shelters and sharpen axes — the old way.

Samsel never stops teaching, whether he's showing off the mule team at a Paul Bunyan Days parade in St. Maries, Idaho, or moving freight for a trail crew. In mid-September, he was on loan to the Avery Ranger District, packing heavy timbers onto the Elbow Ridge trail above the St. Joe River. There, trail crew forewoman Jackie Boyd and her troops would set the chemically treated lumber in place to divert water off the trail. But not before Samsel taught them a thing or two about mule packing.

He talked as he worked, teaching theory and practice at once. For starters, he observed that the mules' pack saddles were of Idaho design, developed by the Decker freight outfit in Riggins that serviced Hells Canyon miners before the turn of the century. Closely fitted to the animal, it is a humane pack saddle, he said. "Load your lunch or load your freight," he quipped, explaining how the pack-of-all-trades can be altered to carry a variety of loads.

In this case, Samsel fastened lumber bunks onto the bow atop the back of each saddle and taught Boyd and her trail crew how to cinch them into place. Next he started teaching them to load the lumber, balancing the left side with the right and keeping two-thirds of the 300-pound load slung low on the animal, so as to ease its footing.

Packing a mule is an imperfect art, depending on an interplay of wood, rope, leather, steel and canvas lashed to the back of an animal with a mind of its own. It's also a backwoods ballet of sorts. With a load of timbers sitting in the lumber bunk and braced against his leg, Samsel danced a pas de deux with his mule, keeping close while his thick fingers threw quick half-hitches and slipknots into the swing rope that carries most of the weight of the load.

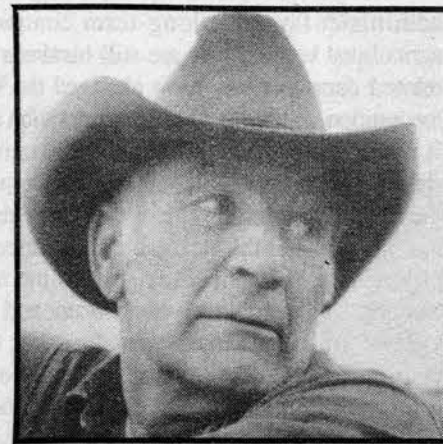
Backwoods rangers are fighting time, hoping old hands like Samsel will be able to teach the art of packing to the next generation of rangers.

"To be able to pack heavy equipment — we don't have a lot of people in this outfit with the ability to do that," said Bob Hoverson, the manager of the training center at Huson. "We're trying to pass those skills on so they won't be lost."

Anyone who has tried to learn to tie knots from a book knows some skills are best handed down from generation to generation. "I have worked with some of the most intelligent people," Samsel said, "but I have had a hard time teachin' 'em to throw knots."

At 58, the weather-beaten, mule-savvy Samsel is an elder in a bureaucracy staffed by computer-literate youngsters. There's been a Samsel in the Forest Service for 72 years, ever since his father, W.K. Samsel, hired on at the Whitebird Ranger Station in central Idaho.

Growing up as a Forest Service brat, Cal learned to use the hand tools with which early firefighting trails, lookout towers and remote ranger stations were built. "It was a working time, when everything was done by hand and people worked damn hard," Samsel said. "Now, the old skills are being recognized and



Jesse Tinsley

Teamster Cal Samsel

brought back into play."

Much of what Samsel teaches is common sense, also a lost art in some places. "I guess I can stand to carry one more load to a mule," he said, looking at an unloaded animal tied 20 yards away from the lumber pile. "But it's against my policy," he added loudly as his students made a mental note always to lead their stock to the load and not vice versa.

And although he sternly counsels against tethering horses to trees (they kill the tree by pawing up the roots), he told trail crew members not to worry about tying up to a sapling for five minutes. "There's the rule; then there's the rule of thumb," he said with a widening smile. "Then there's the exceptions."

Patience marks Samsel as a man who's worked with balky stock all his life. During loading last week, one mule got its lead rope caught on its saddle and commenced to buck and heave. "That's enough of that, you!" Samsel yelled, adding under his breath, "It's all right. Maybe he'll get it out of his system now instead of later when it would cause trouble."

Loading twice as fast as Boyd and her crew, Samsel kept an eye on their technique, checking their slipknots and half-hitches.

"You develop sore ribs, a long reach, and toes that curl back in your boots," he said with a chuckle as Boyd stretched her arms over a load to throw another cinch around the saddle bow while trying to keep her boot toe dug into the ground.

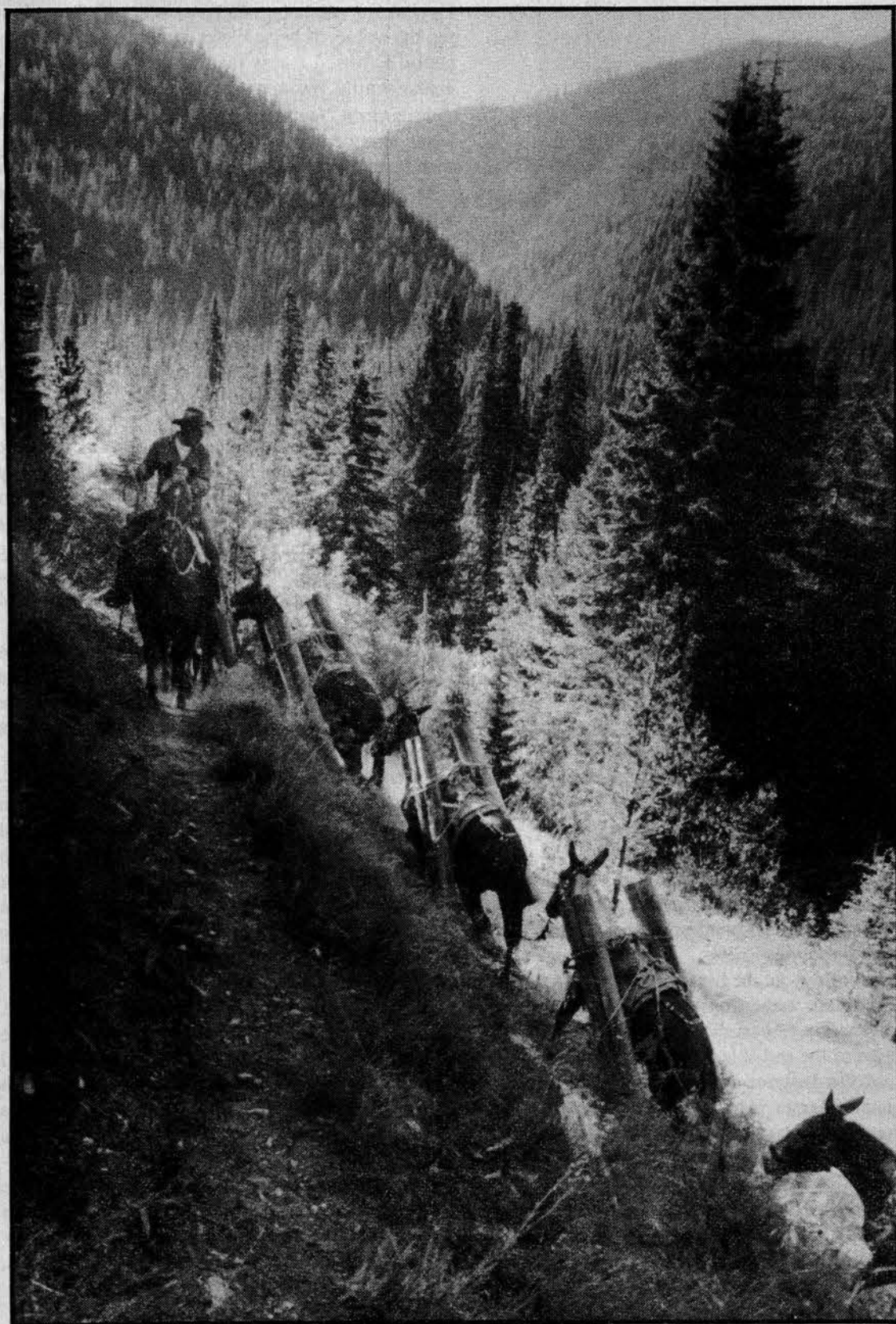
Once the mules were loaded and the trail crew had mounted their horses, more than a ton of freight moved up the trail, accompanied by the ancient chorus of saddle squeaks, hoofbeats on rock and jets of animal breath through nostrils big as silver dollars.

"Okay, everybody — heads up!" he called out to the mules at steep and narrow spots on the trail. "You're gonna be all right now," he told one mule as it negotiated a sharp switchback.

What makes the mule a superior pack animal? "He has a fear of pain, a fear of trouble, and he's lazy," Samsel said, explaining that mules are so lazy they will work hard to make their job easier. Mules, he noted, will sidestep an obstacle alongside the trail, while horses will run into it and then burn strength shoving against it.

Even though he is an advocate and teacher of the old ways, Samsel is perfectly comfortable with machinery and doesn't hesitate to use it when the situation demands it. For instance, he hauls the Forest Service show team of mules around the country in a well-equipped Kenworth tractor with a ventilated trailer in tow.

But there's a clear reason he never became a ranger like his father. He would have had to give up something too important. "My father couldn't pack mules," Samsel said. "I never knew when I couldn't reach out and touch a mule."



Jesse Tinsley

Cal Samsel leads a mule team packed with supplies in the Lolo National Forest