

High Country News

March 26, 1990

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A Paper for People who Care about the West

One dollar

YELLOWSTONE IN WINTER



Steve Fuller

Cross country skier meets an elk in Yellowstone National Park

Is there room for everyone?

by Todd Wilkinson

Although it would seem an unlikely place to wage an environmental battle, the tranquil snowscape of Yellowstone has become a symbol of efforts to expand commercial development in the national parks.

Rapid acceleration of winter tourism and the push by political forces to build additional commercial lodging facilities have placed the National Park Service in a delicate position. It is a place that one Yellowstone biologist calls "the major ecological conundrum of the 1990s."

In July, Yellowstone and Grand Teton national parks will release a draft copy of their joint winter use plan to set the course of sustainable development for the next 10-15 years. The plan could have ripple effects throughout the system, said National Park Service regional planner Ric Alesch in Denver.

Conservationists fear that unless the federal government takes a firm stand in limiting development, the precedent established in Yellowstone could doom attempts to protect natural resources in

other national parks facing similar threats.

For the first time in its 108-year history, the country's oldest national park will consider such revolutionary concepts as "carrying capacities" to control visits. Park officials also are flirting with conflicting proposals, one that would expand winter development, the other that would eliminate all existing winter hotels.

The issues are not clearly defined. Rather than arguing over identified examples of wildlands degradation, conservationists and Yellowstone officials are now confronting traditional philosophical questions that are rooted in the transcendental movement of the 19th century.

Can a national park promote economic growth through tourism and recreation without damaging the aesthetics of the natural resource? Is Yellowstone merely a vassal of the park gateway communities?

Statistics tell the story of a dramatic surge in winter visitation:

- In 1964, six private snowmobilers entered the park. Nearly 65,000 toured Yellowstone in 1989-90;

- Overall, winter visitation has increased from 68,385 in 1971 to almost 105,000 this year;

- The number of overnight winter stays at the Old Faithful Snow Lodge and the Mammoth Hotel rose sharply from 648 in 1971, to 34,000 this winter.

The impacts on aesthetics and wildlife remain largely uncounted. But Park Service analysts predict that more tourists will visit Yellowstone in winter over the next decade.

Yellowstone recently estimated that \$17 million was needed to upgrade existing winter facilities. Meanwhile, the park in early March learned it will have to reduce its summer ranger staff as a result of budget reductions in areas of visitor services.

Just who is holding the purse strings for winter development remains unclear, though critics claim that Yellowstone is capriciously trying to turn the pristine interior into a winter recreation theme park. More people, they insist, does not mean a better visitor enjoyment.

"If people go away from their winter

vacation remembering snowmobiles and snowcoaches rather than the wildlife, geysers and solitude, then the park is not fulfilling its mandate," said Don Bachman, spokesman for the environmental group, the Greater Yellowstone Coalition.

"For example, is the wildlife worse off or better off now than it was 20 years ago?" he asks. "The park should be managed so that the resource is absolutely paramount in considering management options. I'm not so sure that is being done."

Citing safety hazards associated with increased snowmobile traffic, conservationists have asked for implementation of a carrying capacity and reductions in the speed limit in sensitive wildlife areas. Last year, a snowmobiler was killed when he drove into a bison.

Park Superintendent Bob Barbee says he understands the concerns but he claims natural resource protection must be balanced with humans benefitting from the environment.

"We can't go back and change what has happened," he said. "The winter use of Yellowstone is here to stay."

(Continued on page 8)

Dear friends,



HIGH COUNTRY NEWS

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Steve Ryder

When truckers complained they could never find the turnoff to his onion farm, HCN subscriber Mo Bond put up this sign to his place just east of Delta, Colorado.

Mainstream green

If you don't believe environmentalism is becoming mainstream, watch the all-sports channel, ESPN. Its steady high-fat diet of tractor pulls, dirt-bike races and bowl-offs is about to get some fiber — a series of documentaries about wolf reintroduction, the comeback of eagles and the more confrontational environmental groups.

The producer of the series, to start in May, Tim Brockman, called recently to say he would like help in general, but is most interested in contacting environmentalists who sit in trees, chain themselves to boulders and steer clear of the Washington Beltway. He can be reached at 1812 B Thomas Place, Fort Worth, TX 76107; 817/737-8649.

Grazing issue was grueling

Special issues, with their long runs and extra pages, are hard on staff and on the press crew at the Glenwood Post. The recent 28-page special issue on grazing is almost double our normal size. In times past, such special issues have blunted the knives that cut the paper, leaving the press to tear apart the issues as they flow off continuous roles of newsprint.

But this grazing issue was our worst experience, in terms of results. Sharp, clear photos came out muddy and lacking in tones that should have been there. Even worse, a large map on page 8 showing the West's ecosystems lost its sagebrush country. The print pattern meant to distinguish sage from grasslands, shrubs and pinon-juniper turned white, making it appear that almost all of the West was sage.

Press problems are part of putting out a newspaper, with good times and bad tending to run in cycles. Our hope is that the present cycle proves short.

Surprisingly, no readers have yet commented on the print quality. But we have gotten lots of other comments. Critics divide neatly into two categories: those who thought we bent over backward to trash ranching and ranchers, and those who thought we were far too kind to the four-legged ungulates and their keepers.

One reader, who would rather not be

identified, thought it was time that *High Country News* made up its mind about Allan Savory and Holistic Resource Management. He saw the issue as being "objective" journalism at its worst: giving a quote praising Savory and then a quote blasting him, with the paper remaining royally above the battle.

On the other hand, Marv Hoyt of Boise thought Jon Christensen's piece on ecotage on the range simply repeated unsubstantiated assertions by ranchers, and had no place in the issue.

Huey Johnson of the Resource Renewal Institute, an organization concerned with western water, thought the treatment of the Busterback Ranch in Idaho did not fairly treat what he sees as very constructive efforts by the Forest Service to restore a fishery.

Andrew Melnykovych honored

Congratulations to Andrew Melnykovych of the *Casper Star-Tribune* for receiving the George M. Polk award for political reporting. Melnykovych, who also contributes articles regularly to this paper from Washington, D.C., uncovered a back-room deal between the federal government and 12 major oil companies. The deal would have limited auditing of federal oil and gas royalties, and would have cost Wyoming and other western states millions of dollars.

His work proved important later on, when Cason, initially in the Department of Interior, was nominated to be the political head of the Forest Service in the Department of Agriculture. The nomination was defeated this winter, in part because of the scandal Melnykovych uncovered.

Other recipients this year are *The New York Times*, the *Washington Post*, the *Chicago Tribune*, CBS News, WCSC-TV in Charleston, and Undercurrents, a syndicated investigative radio news program.

Also on the subject of awards, Bill Hornby, an editor at the *Denver Post*, and Ed Marston, HCN's publisher, received the first annual Wallace Stegner awards at a symposium March 8 held at the University of Colorado, Boulder. The

symposium, "Inhabiting the Last Best Place," included as speakers writer Bill Kittredge, Missoula mayor Dan Kemmis, economist and futurist Phil Burgess and former Arizona Gov. Bruce Babbitt. The event was put on by the CU's Center of the American West under the direction of law professor Charles Wilkinson, history professor Patricia Limerick and coordinator Dodie Udall.

In other news...

We apologize to Peggy Berryhill for having jumped the gun in our Feb. 12 issue and announcing that she would join the board of the High Country Foundation. Peggy had initially expressed interest in being on the board, but by the time a vote was taken, her circumstances had changed and she could no longer serve.

And Pat Ford, who covers the Northwest for HCN, apologizes to Jeff DeBonis and readers for his Feb. 26 cover story. Pat misnamed the congressional directive under which old-growth timber harvesting is occurring on Northwest Forest Service lands. It is the Hatfield-Adams bill, not Hatfield-Evans.

Readers planning to head to southern Utah this spring, and those who hope to go there someday, may wish to get a beautiful booklet titled "Utah Wilderness." The 18 pages of text, photos and maps produced by T.H. Watkins of The Wilderness Society are available from the Utah Wilderness Coalition, P.O. Box 11466, Salt Lake City, UT 84147. The booklet is part of the campaign for wilderness areas in southern Utah.

Visitors were scarce this fortnight. A notable exception was Kevin Haley, the founder and publisher of the *San Juan Horseshoe*, which covers western Colorado with its tongue firmly in its cheek. We also saw the first of the professional river rafters who call Paonia home, with subscriber Bo Gates returning to his spring and summer haunts. He has already scouted Blue Mesa Reservoir and says that, if the Bureau of Reclamation is willing, the Gunnison River through the Black Canyon should have sufficient flows for fish, fishermen and rafters.

— Ed Marston for the staff

WESTERN ROUNDUP

Arizona also has a spotted owl fight

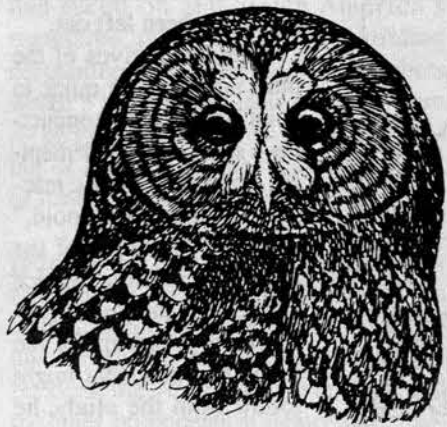
Supervisor John Bedell of the Carson National Forest in northern New Mexico will be taking over the supervisor's job on the Apache-Sitgreaves National Forest in northeastern Arizona.

Bedell has been given high marks by conservationists for a number of environmental initiatives. His 1986 plan for the Carson forest prohibited timber harvesting on slopes over 40 percent. This was the first time a southwest forest banned the controversial practice of cable-logging on steep slopes, a practice imported from the Pacific Northwest.

Cable-logging, which has been on the rise in the Southwest, was particularly alarming to conservationists. Most of the remaining old-growth forests in Arizona and New Mexico exist in steep canyons that were previously inaccessible to logging.

Last year, the Carson forest also hosted an Ancient Forest symposium, the first of its kind in the Southwest. In a pamphlet that came out of the symposium, Bedell said "ancient forests are a dwindling remnant of the past without which we cannot sustain our future." Once the Carson identifies timber as "old-growth," it cannot be cut, Bedell said.

Bedell's replacement has not been announced, and conservationists fear the progressive movement on the Carson may come to an abrupt end with Bedell's departure. Carveth Kramer, information



officer with the Carson forest, sought to downplay that possibility. "I don't think the regional office will put an old-guard type in and turn us around," he said.

Bedell replaces Nick McDonough, who is retiring. He will have his work cut out for him at the Apache-Sitgreaves, which is the largest producer of wood products in Region 3.

Recently, several environmental groups, along with the Arizona Game and Fish Department, announced they may file suit against the Apache-Sitgreaves. They say its excessive timber harvest is irreparably damaging to forests and wildlife. In addition, they say the Apache-Sitgreaves, Cocino and Kaibab forests are harvesting timber at a 40-50 percent higher rate than the timber is growing.

However, growing concern over the

plight of the Mexican spotted owl, a subspecies of the spotted owl, whose survival is linked to old-growth forests of the Southwest, has led to substantial areas of forestland being withdrawn, at least temporarily, from the timber harvest base. Timber companies are threatening to shut down their mills unless the harvest schedule can be met. Stone Timber Co. spokesman Bill Stewart says that the Arizona Game and Fish Department and the environmental groups are wrong about the overharvesting of Arizona's forests.

"Our research indicates that timber harvesting is enhancing spotted owl populations and habitat," he said. "Timber harvesting is the best thing that's ever happened to Arizona's wildlife."

As the debate continues, cartoons are appearing in local papers depicting spotted owls being roasted and "Eat an Owl Save a Logger" bumper stickers are becoming more common. But conservationists gained an influential ally in the *Arizona Republic*, a newspaper not generally known for its environmental stance. Recently, the daily published an editorial calling for an end to the "Arizona chainsaw massacre."

— Peter Galvin

The writer is director of Friends of The Owls, a Prescott, Arizona-based owl and habitat preservation group.

Old-growth forests fight global warming

Three Northwest forest researchers conclude that converting old-growth to young forests won't slow down global warming. Their results may help settle one question in the Northwest's intense debate over its remaining ancient forests.

At issue is carbon. Its release into the atmosphere from fossil-fuel burning and deforestation is what most climatologists believe will cause — and some believe is already causing — global warming. Trees capture and store carbon as they grow; trees release carbon as they disintegrate at the hand of man or nature.

Since young trees grow and store carbon faster than old trees, one school has held that harvesting old-growth and establishing young forests in its place will help reduce global warming.

Many in the timber industry have made this point, including the Caterpillar company in its TV show and video, *The Continuing Forest*. So have independent foresters. American Forestry Association head Neil Sampson said in his group's July 1989 magazine: "That argument (ceasing the logging of old-growth) simply won't stand up to the facts ... from a strictly greenhouse effect, the world would be better off if those old trees were made into a bridge or a bungalow, and replaced by a new, fast-growing forest."

The new research, published in the Feb. 9 issue of *Science*, disagrees. "Such reasoning," say authors Mark Harmon, William Ferrell and Jerry Franklin, "disregards the critical factor, which is the amount of C (carbon) stored within a forest, not the annual rate of C uptake."

They calculate that old forests store so much carbon in their centuries-old mass that the amount released after harvest is much more than the managed forest replacing it can store in its much

shorter lifetime. And that this deficit persists as the new forest is repeatedly harvested.

Using both actual data and modeling, the authors worked through the many pathways and timings of storage and release in old-growth and managed forests. For instance, 42 percent of carbon harvested in typical old-growth ends up still stored in long-lived wood products, for many years.

The rest, in bark, slash, sawdust, scrap, pulp wastes, etc., reaches the atmosphere fairly quickly. When young forest is cut, the proportion stored long-term is probably lower, since less board or plywood is recovered from smaller trees. The study also accounted for carbon left behind in various forms after logging.

Using a 60-year rotation — old-growth harvest, growth of new forest, new forest harvest — the authors conclude that "conversion of old-growth to younger forests reduces storage by 305 Mg (million grams) of C per hectare ..." Unless both the percentage and life expectancy of board and plywood made from trees greatly increase, repeated harvests will not offset the original losses. Their model suggests that, under typical intensive management, the managed forest will oscillate over each rotation between 30 and 50 percent of the carbon storage in the original old-growth forest.

One of the study's calculations is astounding. If the pre-logging Pacific Northwest forest had the same ratio of old-growth forest to total forest as is found today in Olympia and Rainier national parks (7:10), then Northwest old-growth conversion could account for 2 percent of total carbon released worldwide in the last 100 years — from seventeen-thousands of the earth's land surface.

Although reforestation currently deforested areas will increase carbon storage, the study concludes, "conversion of old-growth forests to younger forests under current harvesting and use conditions has added and will continue to add C to the atmosphere." This will hold not just in the Northwest, but in most forests where the age of harvest under management is less than the age where old-growth characteristics emerge.

Mark Harmon and William Ferrell are with Oregon State University's Department of Forest Science. Jerry Franklin, the dean of Northwest forest researchers, is with the Forest Service's Pacific Northwest Experiment Station and the University of Washington.

— Pat Ford

HOTLINE

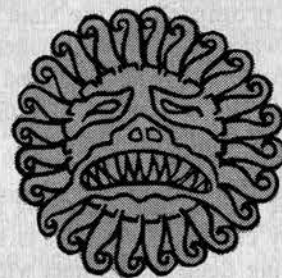
INEL charged with waste violations

The Environmental Protection Agency has charged the Idaho National Engineering Laboratory with 28 hazardous waste violations, the Idaho Falls *Post Register* reports. Officials from the Energy Department complex west of Idaho Falls contested 11 of the charges but conceded the others. Energy Department officials agreed with EPA that the violations don't pose an immediate danger, but EPA said corrective actions were necessary to avoid risk to human health and the environment. Violations include improper storage and shipment of hazardous materials. The same violations at a private site could result in \$400,000 in fines.

HOTLINE

Fallout shelters boom rural economy

Fallout shelters built for members of the Church Universal and Triumphant in Montana's Paradise Valley have been a boon to the local economy. "Everywhere you turn, there's construction," electrical contractor Scott Richter told AP. Contractor Richard Davoust said a group shelter he built — one of at least 20 nearing completion at the expensive church development called Glastonbury — cost about \$400,000. Glastonbury, just north of Yellowstone National Park, also includes about 25 single-family shelters, according to permits filed with the state electrical inspector's office. Church members from all over the world have purchased shares in the shelters, and many are now moving there in advance of possible disasters prophesied by church leader Elizabeth Clare Prophet.



Sunplex is a bust

A Phoenix couple won't build the world's largest theme park on 10,000 acres in Eloy, Ariz. The desert center called Sunplex, located 60 miles southeast of Phoenix, was slated to have a football stadium, ice rink, bullet trains and the "world's largest sundial." But the plan was a scam, says Arizona state official Katrina Rogers. According to *The Arizona Republic*, 16 people swallowed the promise of a billion-dollar profit in three years. But developers James and Denise Tiberio now admit they made "untrue statements" about the project and have agreed to pay a \$45,000 fine and \$349,013 in restitution to investors. Unfortunately, victims won't get their money back soon. The Tiberios say they gulped a dose of their own medicine: In an apology to investors, the husband-and-wife team wrote that they lost most of their money after being taken in by Swiss currency bankers.

Blunt message from timber spokesman

A representative of the timber industry says environmentalists are "two-faced." Frank Gladics, head of the Washington, D.C.-based National Timber Products Association, told a western Colorado group that environmental groups don't practice what they preach and don't fight fairly, reports the *Telluride Times-Journal*. National environmental groups have evolved into big bureaucracies that use emotional arguments to convince people to send money for a cause, says Gladics. And the timber industry doesn't have the cash to fight green "propaganda," he adds. But he says that the Forest Service has lost credibility and made major mistakes by cutting lodgepole pine forests in Utah and Wyoming, granting Louisiana Pacific aspen-cutting rights in western Colorado without considering public opinion, and logging 96 percent of the nation's redwood forests. What is the remedy for environmental "over-dramatization" and the Forest Service's poor judgment? The "clearest, most scientific explanation" of timber issues, says Gladics.

Can cutting trees squeeze more water out of Arizona?

A new water battle may be brewing in Arizona, and the battleground is half the state's landscape.

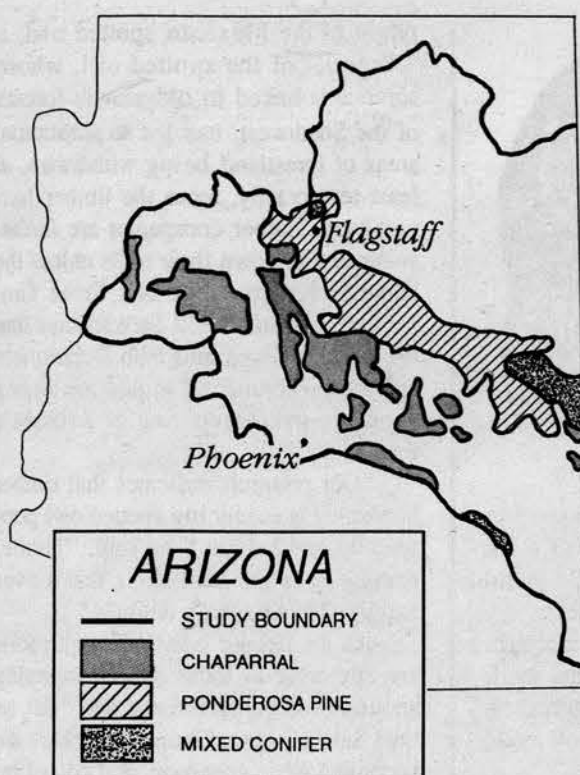
A nearly completed study is looking into making more water available for Arizona's thirsty cities by thinning the state's vast pine forest and converting adjacent chaparral to grassland.

The idea has outraged some Arizonans who live near the targeted areas. At an information meeting in Flagstaff, Sierra Club member Dan Dagget asked water agency representatives if they had looked at alternative plans to "rip out palm trees and golf courses in southern Arizona."

The three-year cooperative study by the state Water Resources Department, the Forest Service, Soil Conservation Service, the Northern Arizona Council of Governments, and the Salt River Project is scheduled for completion this summer. It was prompted by the state's 1980 groundwater code, which required urban areas to use less groundwater and to look for other water sources. One of those sources is what researchers call "vegetation management."

The idea behind increasing stream-flow by cutting down trees is simple: Replacing deep-rooted trees with shallow-rooted grasses reduces the amount of water lost to the atmosphere through the leaves of plants. More water then flows underground into stream channels. In Arizona, some say, that extra water would contribute to water supplies for the sprawling, downstream Phoenix area.

According to the Water Resources Study, three vegetation types could be managed to yield more water. Management of those types (see map) includes thinning a Ponderosa pine forest and a much smaller fir and spruce forest. It also includes converting to grassland what is now chaparral, a brushy ecotype characterized by shrub oak, mountain mahogany and manzanita. The lands are managed by five national forests, the Bureau of Land Management and the state.



The Department of Water Resources' Dennis Sundie says northern Arizonans misunderstand the water study. They mistakenly think the water agency wants to "cut down all the trees" to increase growth in Phoenix, he says. Sundie says the agencies just want to know if better forest management could provide the entire state with more water.

The low profile the agencies have given the study has not quelled longstanding mistrust of water agencies among rural Arizonans. In fact, a December 1989 information meeting in Flagstaff was the first formal notice that a study had been under way for over two years. The meeting was scheduled only because a coalition of environmental groups requested it.

One agency involved in the study has urged more public participation. The Northern Arizona Council of Governments says it joined the study because of its concern about the northern part of the state; planner Christine Nelson now says

it's frustrated because the public has been left out.

Representatives of the other agencies are quick to point out they're conducting a study, not implementing a plan. The public reaction has been "paranoid," says Bart Ambrose of the Soil Conservation Service and head of the public participation subgroup for the study. Any plan that might follow from the study, he says, will have to contend with existing land management plans and guidelines. No trees will fall without an environmental impact statement, he adds.

Northern Arizonans still worry that if the state's urban centers want to level their landscape to get more water, they will. Three-quarters of the state's resi-

dents live in the metropolitan areas of Phoenix and Tucson. Almost 60 percent of the state lives in the Phoenix area alone, now the nation's fastest-growing metropolitan area of a million or more persons. But unlike the urban population, water supplies are not growing.

Environmental critics say water developers should work harder at conserving water instead of looking for more. They say rural Arizonans should not have to sacrifice their forests so cities can continue to waste water.

Bill Mee, water conservation coordinator for Phoenix, says northern Arizonans have the wrong idea about his city. Mee says television ads showing fountains and lush lawns at new housing developments are partly to blame. What viewers aren't told is that the fountains and lawns are supplied by effluent from treatment plants, not city water.

The city takes conservation seriously, he says, and hopes to limit residential consumption, which accounts for 70 percent of use, by an existing education program. Also on tap is a new plumbing efficiency code and a controversial proposal to limit lawn size. Mee says programs to reduce non-residential water consumption have helped bring about a 6 percent per capita decrease in water use since 1980. The city targets an additional 10 percent decrease by the year 2000.

Dagget and other angry activists in northern Arizona call the measures stopgaps. They say the real issue is limiting growth. They also say if more water is to be had from Arizona's forests and scrublands, it will come at the expense of wildlife, recreation and the timber industry.

Small-scale vegetation management schemes have successfully increased water yields in various vegetation zones, but large-scale projects such as contemplated by Arizona have never been attempted. To augment runoff from Arizona's pine forest, the tree cover must be thinned to half that of unmanaged stands, says Malchus Baker, a research hydrologist with the Forest Service in Tempe. Baker, who has conducted field research for 20 years on managing water yield from Arizona's forests, says such a radically thinned forest can't sustain a timber program.

Arizona has a history of aggressive logging. For seven decades, the state has cut a higher percentage of its harvestable trees than any other Western state (HCN, 11/11/85). But critics are surfacing. The state Fish and Game Department says

overcutting in the Coconino National Forest, which surrounds Flagstaff, is threatening wildlife. The state agency is considering suing the Forest Service, reports the *Arizona Republic*. Conservationists say they may join the suit because overcutting in the Coconino and two other national forests targeted by the water plan is destroying the state's timber industry.

But Sundie, of the Water Resources Department, says that before land managers began to routinely suppress fires, pine forests were only one-fourth to one-fifth their modern densities. Thinning to a lower density would merely restore the forest to a more typical condition and also decrease fire hazard, he says.

A radically thinned forest would mean major changes for all wildlife and plants, says John Phelps, a state Fish and Game Department wildlife specialist. Recreationists would also be affected, says Rich Martin, hydrologist at the Tonto National Forest. The Tonto Forest, which provides respite from the summer heat in nearby Phoenix and a warm winter destination for touring retirees, has the most recreational use of any national forest, says forest recreation officer Lee Redding.

Baker says burning chaparral and replacing it with grass is a more promising way to increase runoff. The deep roots of chaparral shrubs tap as far as 40 feet into the fractured granite bedrock typical of Arizona. The Tonto Forest now burns 20,000 acres of chaparral every year to benefit wildlife and grazing, and to reduce fire hazard. Martin says runoff increases after burning, then declines to pre-burn rates after three to five years because the fire-adapted shrubs grow back.

Because it takes 15 to 20 years for chaparral to produce enough fuel to sustain a fire, herbicides are the only feasible way to keep the shrubs at bay permanently, Martin says. Most of Arizona's brushlands are too steep to suppress the shrubs using mechanized equipment, he adds.

One researcher says whatever method is chosen, much of the chaparral may be too dry to give up more water. Robert Ziemer, hydrologist at the Forest Service Experiment Station in Arcata, Calif., has reviewed 80 years of research on managing vegetation to increase water yield. He concludes that only marginal success can be expected in areas having 15 to 20 inches of precipitation, and rainfall in Arizona's chaparral is 16 to 25 inches a year.

Ziemer cites other problems. Erosion may increase by 900 percent when chaparral is permanently converted to grassland, and much of the water gained on hillsides would be lost in the many miles of stream channels leading to water storage facilities. Large-scale programs to increase water yield just won't work, Ziemer says.

He writes: "Programs to increase water yield on an operational scale have consistently failed. There is every indication that management of vegetation for increased water yield will continue to be impractical."

What the state's study shows to be feasible is scheduled to be released to the public by mid-summer, 1990. For more information, contact the State Conservationist, Soil Conservation Service, 201 E. Indianola, Suite 200, Phoenix AZ 85012 (602/241-2558).

—Brian Collins

HOTLINE

Poacher fined \$3,525

A federal judge slapped a \$3,525 fine on a Rangely, Colo., man for killing a radio-collared grizzly bear in Idaho. Lance Comstock was also placed on supervised probation for three years, and lost his hunting privileges throughout the United States and Canada. Comstock pleaded guilty in U.S. District Court in Grand Junction, Colo., to charges of taking a threatened species of wildlife without authorization. In October 1988, he killed a three-year-old female grizzly in Idaho's Selkirk Mountains. The grizzly, one of several radio-collared bears, was being studied by a team of university, state and federal scientists from the United States and Canada. The U.S. Fish and Wildlife Service says evidence gathered at the site and interviews with hunters from as far away as Massachusetts led to the conviction.

BARBS

The more things change, the more they stay the same.

The Department of Energy continues to test nuclear bombs underground in Nevada. The latest atomic blast, called "Metropolis," yielded between 20 and 150 kilotons.

MacDonald faces three tribal trials

Suspended Navajo Chairman Peter MacDonald must face three trials in connection with 161 charges, a tribal judge has ruled. Window Rock District Judge Robert Yazzie also ordered the consolidation of MacDonald's trials, to begin May 1, with those of his son Rocky and suspended tribal vice chairman Johnny R. Thompson. MacDonald, now on paid administrative leave, is accused of fraud, conspiracy and abuse of funds. Most of the charges involve the two MacDonalds' roles in the tribe's purchase of the Big Boquillas Ranch. The embattled chairman is also accused of violating tribal election laws. MacDonald also faces possible federal indictment and numerous civil suits filed in Arizona (HCN, 10/23/89). MacDonald's attorney, Val Jolley, argued for one large trial, claiming it would save time and money, reports the *Navajo Times*. But Yazzie defended his decision, saying one trial involving 80 witnesses and many months of testimony would be overly burdensome and complicated for the jurors. In response to the three trials, MacDonald said: "This is purely harassment. A waste of tribal funds. Just how much are they (the special prosecutors hired for the trials) charging the tribe?"

REPORTER'S NOTEBOOK

The decayed core at the center of rural life

by Ed Marston

More than a half century ago, an enormous reform movement took place in America's countryside. It was the kind of rural reform Latin American nations yearn after but never seem to achieve. The reform consisted of the electrifying of the countryside, and it was done in the face of tough opposition from the privately owned utilities.

In addition to being monopolistic, the investor-owned utilities in the United States during the early part of this century were callous toward rural areas. Those utilities did not see how they could make money stringing miles of line so that poor farmers could have a few 60-watt lightbulbs in their barns, and so they left those areas in the dark.

The Great Depression of the 1930s changed that. With the help of President Franklin Delano Roosevelt's Rural Electrification Administration, farmers could form rural electric co-operatives to electrify the countryside.

Over time, electric co-ops were formed in most of the states to borrow low-interest federal money and gain technical help. With the co-op and funding in place, members then donated power line rights-of-way across their land, and spent their mornings plowing or harvesting and their afternoons digging holes for power poles and stringing lines from power substations across miles of fields to farms. It was the old tradition of community barn raising, extended to kilowatts.

And it was a great success. It led to an explosion of productivity: Electricity was harnessed to grind grain, milk cows, and heat stockwater during freezing winter days. Just as important was the electrification of the farmhouse. Farm families were working economic units; anything that lightened kitchen chores meant more labor elsewhere on the farm.

In addition to greatly increasing the productivity of America's farms and making them better places to live, rural electrification was symbolic: It was a victory for progressive politics and enlightened economics.

I had no share in that victory, but I was on hand recently to witness its tragic results. There are now 1,000 rural electric co-ops. They even have their own umbrella co-op — the National Rural Electric Cooperative Association — headquartered in Washington, D.C., and headed by Robert Bergland, who was a good Secretary of Agriculture under President Jimmy Carter.

Each year, the 1,000 co-ops send representatives to a national convention hosted by NRECA to set policy for the next year and to invite various elected and appointed officials to speak to them and to hear the voice of the organized countryside.

I attended this latest convention, in Orlando, Fla., as a representative of my own co-op, Delta-Montrose Electric Association. I've been elected to DMEA's board three times since 1983.

The convention was striking. For one thing, it made me — a nearly 50-year-old — feel like a kid. This 48th annual convention attracted 12,714 "rural electric leaders and their spouses," to quote a press release, whose median age appeared to be in the late sixties. I realized I was in the same hall with the progressive and pioneering farmers who

had taken on and beaten America's regressive, monopolistic utility holding companies. And if the original members weren't in Orlando, their children were — people who could remember the coming of electricity, something 99 percent of America cannot remember.

Those once-progressive people, judging by the convention, are now allied with the worse elements of the electric utility and energy industry: the nuclear energy establishment, the dam builders, the Arctic oil well drillers, and the other proponents of supply-side, capital-intensive, environmentally-destructive development.

Remnants of the rural electric co-op's origins remain. They still oppose weakening the barriers to utility mergers and to takeovers by investor-owned utilities of co-ops. (The investor-owned utilities now realize that rural America, and the suburbia it has often become, is a profitable market, and they would like to take over certain territories.) And the co-ops still expect the federal government to bankroll and bail them out.

But overall, these pioneers and their children have lived long enough to become reactionary, environmentally callous socialists, much like the people who are currently being deposed in eastern Europe.

For example, there was much gnashing of teeth over proposed acid rain legislation. Mike Synar, a rural Democratic congressman from Oklahoma, and a person who should have been right at home at the convention, told 1,000 or so convention delegates that the co-ops, as part of the utility industry's intransigent opposition to acid rain controls, had failed to get on the political train.

The dye was cast, he said: a bill reducing acid fallout by 10 million tons a year would be passed by the summer. The co-ops and the rest of the electric utility industry, he said in so many words, had hid for eight years behind Ronald Reagan's unbending opposition to acid rain controls. Now they were going to reap the reaction.

Having gnashed their teeth over Synar's talk, the assembled delegates went to work creating a second tidal wave — this one on global warming. They unanimously passed a resolution saying that nothing should be done on global warming until the scientific evidence was clear. It is the same "more research" song and dance they used on acid rain, and the same one that the cigarette industry uses to this day to deny links to cancer, high blood pressure and lung disease.

But while the co-ops would have uncertainty stay America's hand from action on acid precipitation and global warming, they urge full-speed-ahead on nuclear power. Nuclear energy, another unanimous resolution said, is the "most benign form of" energy there is. The inability of the nation to figure out how to bury the waste, the power plant accidents here and overseas, the carnage wrought by the mining and milling of uranium — these don't represent "uncertainty" to the thousands of men and the few women assembled in Orlando.

Like the other 100 or so resolutions, the one on nuclear energy passed with great dispatch. The NRECA is efficient when it comes to resolutions. They passed at a rate of better than one a minute.

So quick was the action that my few

shouted nays in the vast convention center hall were drowned out by the beginning of the next resolution.

Among the resolutions this once progressive organization passed were support for drilling in the Arctic National Wildlife Refuge; opposition to protection of wetlands and prime farmland and wilderness areas if such protection interfered with power plants or power lines; and opposition to the Forest Service charging co-ops or other utilities for fires powerlines might cause. Other resolutions urged increased federal funding for co-ops, easier rights-of-way across sovereign Indian nations, and the like.

As an environmentalist, I was offended by the group's near unanimous hostility toward the natural world, and the unthinking support of everything that would urbanize, industrialize and overdevelop this nation.

As a believer in discussion and diversity, I was insulted by the uniformity and disinterest in any views but the group's own.

And as a rural resident, I was angered by the economic disaster the co-ops are wreaking on rural America. Thanks to tractor-cades in Washington, D.C., and movies like Jessica Lange's *Country*, Americans know that in the late 1970s, farmers and others bid up farmland and overinvested in big equipment. Only recently has the wave of bankruptcies caused by that unsustainable economic activity slowed and recovery begun.

Less well known is that these same wheeling and dealing rural people, sitting on the boards of many of America's 1,000 co-ops, did the same thing in electric generation: they pushed the growth mania as far as they could, using low-interest federal money in a reckless way to build coal-fired power plants and transmission lines and to invest in nuclear power plants owned by the investor-owned utilities.

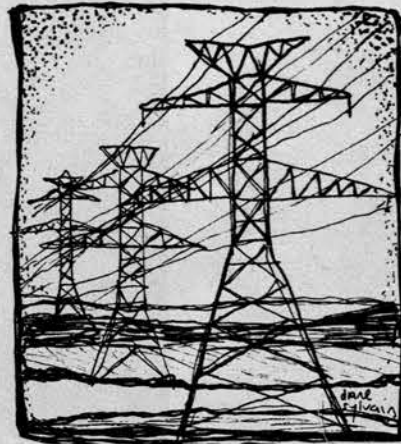
Today, the co-ops are roughly where the savings and loan industry was a few years ago: desperately trying to hold together a deteriorating situation. Everywhere I went at this three-day convention, I heard horror stories of high rates to the consumers, bankruptcies, near bankruptcies, and workouts.

In fact, I chose to attend the annual meeting because the co-op on whose board I sit — DMEA — is threatened by the financial chaos of its power supplier, the reckless Colorado-Ute Electric Association.

But you only heard the horror stories in the hallways. In public, the NRECA convention pretended this was just another annual meeting. It reacted to financial distress the way it reacted to America's call for environmental cleanup — as if it did not concern them, or as if it were an enemy.

The rural electric co-ops today are a regressive, inefficient and dying breed because they are stuck with the same ideologies that formed them over 50 years ago. Industrialization, mechanization, electrification and growth were wonderful formulas in the 1930s, and remained effective for decades. But today, rural problems are not those of keeping the lights on by building more coal-fired and nuclear-fired power plants.

Economically, rural areas must shift from mindless capital investment to using what they have more efficiently. In electricity, the need is for electric



motors, lightbulbs and other devices that do their jobs with fewer kilowatt-hours. The need is not to buy bigger machines, tractors or powerplants, but to work smarter and more precisely.

But conservation — whether we are talking of electricity or of nature — had no place in the co-op's 48th convention. There was not a single resolution proposed or passed at that convention promoting any sort of conservation.

Even worse, there was no discussion. There wasn't enough diversity among those 12,000 attendees to allow for discussion. The people who came to that convention had, many decades ago, made up their minds about how the world works, and they weren't about to re-examine those conclusions in 1990.

There is a great deal of silliness written about America's rural crisis. Some of it is a result of romanticizing the past carried into the present. For their own peace of mind, perhaps, city dwellers want to believe there is some wonderful repository of virtue and yeoman-like behavior out in the countryside. And rural "leaders" use that romantic myth to promote socialistic laws to funnel federal money to a chosen class of rural people, many of whom were gathered in Orlando in February.

But the problems of rural America will not be solved in Washington, D.C. What I saw at the meeting of rural electrification's leaders, and what I could also have seen at a meeting of the American Farm Bureau or the National Cattlemen's Association, was the end of a long process of social and political decline. I do not know when the vigorous co-op movement began its descent. I only know it has reached its nadir, and that political and economic forces are about to end its terrible misery.

There is only one question about the rural electrification convention: How representative is it of rural America generally? In other words, to what extent is rural America responsible for the mess it is in? I am sure there are outside forces that have hurt rural America. But at the same time, rural America must shoulder most responsibility for its problems, and it can only solve those problems through reform that starts on the ground.

Overall, I'm optimistic. I think that the convention I attended was the worst of rural America. It has been able to keep its position, and perks such as trips to places to Orlando, through an unrepresentative political process back home and through the fact that rural America itself has been in decline for decades and so did not clean up the co-ops' boards and managements.

But that is changing. There is growing vigor out in the small towns, and there are progressive elements, as there were in the 1930s. The rural electrification convention symbolizes the forces that vigorous, progressive elements must overcome if the countryside is to move forward again. ■

6-High Country News — March 26, 1990

afield



Fran Craigle

Black bear cub stares back at visiting biologists

Biologists use tranquilizers to collar bears

by Fran Craigle

SPRINGVILLE, Utah — Dark clouds shroud the nearby mountains as I pull into the parking lot of the state's Division of Wildlife Resources office at 7 a.m. It's cold here, 60 miles south of Salt Lake City, but even colder where I'm headed with Jordan Pederson, Utah's nongame mammal program coordinator. Sometimes he's called "Utah's bear man," and today we are going bear denning.

Jordan has been studying Utah's black bears in Diamond Fork Canyon, east of Springville, Utah, for about five years. In order to study them, he has to know where they are and where they go. So Jordan and his assistants fit the bears with radio collars and track them electronically.

There are two ways to get a collar on a bear: 1) Trap it in a culvert or cable snare, or 2) sneak up on it while it's hibernating. The second method is called bear denning. In either case, the bear is tranquilized, weighed and measured, fitted with a radio collar, assigned a unique radio frequency and left to wake up an hour later.

Six of us climb into the trucks and head for Diamond Fork. We drive as far up the pristine canyon as our four-wheel-drive trucks will take us on the single-lane, unplowed asphalt. Then we trade the trucks for snowmobiles loaded with equipment.

For 16 miles we force snowmobiles through untracked powder that hides the narrow road beneath for much of the year. We drive deeper into the spectacular canyon, climbing higher with every switchback. Clouds give way to sunshine that filters through groves of naked aspens. Distant stands of snow-covered pine are more white than green, but steep southern faces where the sun spends much of the winter day display rich red soil and occasional outcrops of red sandstone.

A huge silence envelopes us, swallowing up the whine of the laboring

engines. I scan the mountainsides for deer or elk. There are none.

Sometimes the beginnings of spring runoff breach the trail, and we have to break out the shovels to fill in the gap before we can go. Stepping off the snowmobile tracks, we sink to our knees — sometimes our hips — in the deep virgin snow. We begin to sweat under our layered clothes as the sun works its way across the sky. Huge snow drifts force us to hazard narrow traverses along the mountainside. We fight for every mile.

Two and a half hours after mounting our snowmobiles, we reach the final ridge where Diamond Fork Canyon meets Hobbie Creek Canyon. The sprawling Wasatch Mountains surround us. Steve Bates, a graduate student from Brigham Young University, unpacks the radio antenna and receiving device. He works with Brigham Young University professor Jerran Flinders.

The radio readout tells them Bear Number 3 is right where they hoped she would be. It also tells them she isn't asleep. This will make things more difficult.

We strap packs and equipment on our backs, buckle snow shoes onto our boots and head down the ridge. Two miles later, we stop on a sunny point for lunch. We are perched several hundred feet above a red rock outcrop on the side of a steep slope, and the den is at the base of the rocks, hidden from all but the radio waves. Lunch is brief. There is a lot of work to be done before we run out of daylight.

Abandoning our snow shoes, we make our way down the steep embankment. We whisper. Bear Number 3 can probably hear us now. Just above the rock outcrop housing the den, we unload the packs. Jordan opens the medical kit. It looks more like a tackle box than a medicine chest. The biologists begin their work.

"How much do you think she weighs?"

"Probably around 200 pounds. Bet she's lost 50 pounds this winter."

"Better dose her for 220 just to be sure."

"She's moving around. Everyone stay uphill. If she comes charging out, she'll probably head down."

"How about the cubs?"

"We don't know for sure. Hope there are one or two. They'll be scared."

"If there's only one, it may try to get away. If there are two, they'll probably stay together in the den."

Craig Clyde is the point man today. He climbs down the side of the rocks with the eight-foot-long metal jab stick. A syringe at the end of the stick is loaded with enough medication to tranquilize Bear Number 3 for about an hour.

The entrance to the den is no more than a shallow slit between ground and rock outcropping. Craig maneuvers himself into position: flat on his belly in front of the open den.

"She's awake, all right, but pretty groggy." He looks up at us to whisper his report.

"She's looking right at me! Hey, I see a cub!"

He inches the jab stick into the den. "Damn! Hit her hip bone."

Bear Number 3 growls her displeasure. Her privacy has been violated. Craig jumps away. We wait and watch in silence. Craig looks up. Jordan motions him back up the rocky precipice.

"Let me see the stick." Jordan checks the broken needle. He squeezes out too much drug. "We'll have to reload."

Jordan and Jerran measure another dose of medication and replace the broken needle. No one talks. Craig descends a second time. Steve climbs down the other side of the rocks. The rest of us watch from above. We hear a sudden, angry growl: Craig has hit his mark. He climbs up to Jordan with the jab stick, but the needle is broken. Again, there's too much drug in the syringe.

"Once more," says Jordan.

But the third attempt also fails, so we sit down to wait. Jordan is concerned another dose, even a partial dose, might

harm Bear Number 3. It's mid-afternoon by this time, and our daylight is running out, but Jordan will not risk the safety of the bear. Thirty minutes later we begin the process again.

The jab stick is loaded. Craig climbs down the rocks to the den. Once more, he flattens himself against the ground and peers into the den. His eyes meet the bear's. He threads the jab stick through his left hand toward the bear. Slowly, very slowly. She lunges at the stick. Grabs it in her mouth. Shakes it hard. Craig holds on. Her low growl sounds like a distant engine. She releases the stick. Craig makes his move. The needle sinks into her neck — finally.

Ten minutes later, Bear Number 3 is sleeping soundly. We climb down to the den. Craig wriggles into the den pulling one end of a rope to tie around her leg. He comes out grinning. "There are two cubs, cute as anything you've ever seen."

It takes several of us pushing and pulling to get the big bear out of the den. We don't have much room because the steep slope of the mountain drops off 400 feet just outside the den. Jordan and the biologists begin working immediately. My assignment is the cubs, so into the den I crawl.

The den is about five feet deep, really nothing more than a hollow space under the rock where Bear Number 3 has dug her shallow bed, given birth and spent the winter. Her two cubs shiver against the back wall of the musky den. Four tiny blue eyes stared at me.

These two-month-old cubs have never been separated from the warmth and safety of their mother's body. Suddenly she is gone, and a strange creature is making strange sounds at them, then pulling them out of the only world they know.

Outside the den, I cuddle the little bears, both females, close to my body. They cling to me with their long, harmless claws, burying their faces inside my vest and hiding their sensitive eyes from the sun. The biologists are fitting them

(Continued on page 7)

Bear denning...

(Continued from page 6)

with tiny radio collars while I hold them. They get their own frequencies and are named Bear Number 18 and Bear Number 19.

"Will the collars expand as the cubs grow?" I ask.

"They don't expand. They just break, usually within a month," says Jordan. "We only need them for a few weeks — to check the cubs' mortality."

"Their mortality?"

"We lose a lot of cubs. Mostly to aggressive male bears, poor nutrition and accidents."

I pull the helpless cubs closer while their paws are measured. They squeal as Jerran takes them from me one at a time; they weigh in at 6.5 pounds each.

Meanwhile, Bear Number 3 is hoisted off the ground with ropes and pulleys rigged from the rock outcrop above the den. She weighs 195 pounds. She's in good shape, although thin from nursing and fasting through the winter. Careful to keep her glazed eyes out of the bright sun and constantly monitoring her breathing, the biologists replace her collar (radios typically remain active for about 18 months), measure the length



Fran Craigle

The writer, a public affairs officer for Utah's natural resources department, took this photo close to the entrance to a bear's den

and width of her body and take blood and hair samples. They collect fecal pellets from around the den for food-habit analysis back in the lab.

Then we push and pull Bear Num-

ber 3 back into her den. Everyone takes a turn holding the confused cubs before we return them to their sleeping mother. Their eyes close as they begin to nurse immediately.

We pack up our equipment, climb up to our snow shoes, and struggle up the mountain ridge to our snowmobiles that ferry us back to our trucks and civilization. ■

LETTERS

BLM WANTS AN OPEN PROCESS

Dear HCN,

I was a little surprised by Pat Ford's description of BLM's role in the Saylor Creek Range Expansion proposal, which appeared in the Feb. 12 HCN. Ford said in his article that citizen outcry "forced" BLM to lean on the Air Force for a slower, more open process. Certainly public response on this issue has been loud, clear and influential, but BLM repeatedly advised the Air Force to drastically change its approach to the EIS process, even before the Air Force held its first scoping meeting last August. I feel that BLM's early and persistent objections to the Air Force's approach deserve at least some credit for the changes in the process that have occurred.

Ford also expressed some misgivings about the role of the Work Group that BLM has convened to address the Saylor Creek issue. He said that the function of the work group is unclear and that it needs to become more democratic soon. The confusion about the role of the Work Group is understandable, partly because the Work Group is an innovative approach to achieve meaningful public participation in a controversial public land management issue. Let me try to describe what the Work Group is all about. The Work Group was completely self selected. Initially we asked for all of the interest groups to select members to participate, but in reality anybody who cared enough could be on the Work Group. There were no restrictions on size or types of representation. This was done primarily because we wanted to have the most open process possible and, frankly, because we wanted to avoid criticism that the Work Group was intentionally weighted in one direction or another.

As a result, we have a large Work Group (60 people) that poses some challenges in terms of meeting organization, but I don't know how it could be more

democratic. From the beginning of this process the charge to the Work Group has been to: (a) ensure that all public concerns are identified and properly addressed in the two tier Saylor Creek EIS that the Air Force is now preparing; (b) assist in development of alternatives to be addressed in Tier Two of the EIS; and (c) provide a communications link between the EIS process and concerned citizens and interest groups.

To accomplish this, at its first meeting in January the Work Group identified and synthesized hundreds of issues of concern regarding the Saylor Creek proposal. The Work Group categorized the issues, formed subcommittees to focus on each category, and identified information that is needed to address the concerns.

It was agreed by the Work Group to meet again after the planned late-February release of the Tier One Saylor Creek EIS. The meeting will probably occur in March. At this meeting, and probably for the next several meetings, the Work Group will do the hard, tedious job of analyzing the EIS documents.

BLM has provided the Work Group some initial focus and organization. However, the Work Group can operate in the mode it feels best facilitates the accomplishment of its initial charges. It could also decide to formulate its own preferred alternative for analysis in the Tier Two EIS. The Work Group may or may not arrive at a consensus recommendation, but at least the public issues can be addressed through a comprehen-

sive and closely scrutinized EIS. In either case, the BLM will ultimately prepare a recommendation on the Saylor Creek Range Expansion proposal to the Secretary of the Interior. We believe that the Work Group's efforts will help us prepare a recommendation that considers all the issues and all the facts, and that best reflects the interest of the public lands.

J. David Brunner
Boise, Idaho

J. David Brunner is district manager of the Bureau of Land Management.

Pat Ford replies:

Dave's first point is accurate; "forced" does not describe Boise BLM's role. I apologize. As to the Work Group, I did not express misgivings; some of those involved expressed misgivings which I reported. My point is accurate: many on the Work Group are unclear what their tasks are, and some will resign if that confusion persists.

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Yellowstone . . .

(Continued from page 1)

Examined in the context of summer visitation, when 2.2 million people transform Yellowstone's highways into a state of gridlock, winter tourism might seem innocuous. After all, the number of visitors touring the park between December 1989 and March of this year barely surpassed 100,000, officials say.

But the dynamics of a winter landscape are markedly different from those in the summer, particularly for wildlife stressed by the harsh conditions. Driven by deep snow into lowland areas, elk, bison and moose are often confronted by snowmobilers and cross-country skiers.

Any attempt to evade humans, biologists say, can prove fatal to the animal that is barely surviving on limited supplies of stored fat.

"Winter organisms are here because they've learned to evolve in what we would call a harsh environment," said winter ecologist Jim Halfpenny, who recently joined the scientific staff at Montana State University. "For most of them, life in the winter is a race against how harsh the winter is, and how long it lasts.

"For an elk, the calories you run off in January may be the critical energy you need to survive a snowstorm in May," Halfpenny added.

How much is too much?

Conservationists admit they are in a quandary. Cross-country skiers in the park, who want more access, have traditionally been staunch supporters of the environmental movement.

Even though skiers may appear more aesthetically pleasing than the buzzing lines of snowmobiles, preliminary research studies suggest that skiers are more likely to spook wildlife than snowmobiles or the futuristic snowcoaches, in some cases.

"The biggest problem I see is that winter use is competing for the important winter range of wildlife," said Yellowstone's chief of research John Varley. "But there are places in this park where

you could have winter use and have no impact on wildlife."

According to Varley, the park will have substantive research data on the relationship between winter recreation and wildlife when a college thesis is completed by University of Idaho student Francis Cassier this summer.

However, a 1981 thesis written by Montana State University graduate student Keith Aune already points to the need for restrictions on snowmobiling.

"If a significant increase in winter visitation use in the West Yellowstone-Old Faithful area occurs, a restrictive limit on the numbers of recreationists allowed into this area may be necessary," Aune wrote nine years ago in his project for the Park Service.

A carrying capacity has been recommended by the National Parks and Conservation Association, which has fought for limits on visitation in other national parks, said regional field officer Terri Martin.

"We are going to look at a carrying capacity very seriously for the first time in the history of Yellowstone," Barbee said. "The reason we're doing it is because we've heard the concerns of the public."

Faced with inevitable opposition from the gateway communities, the superintendent nevertheless said limitations may be imposed at the south park gate leading to Jackson Hole, and the west entrance between Old Faithful and West Yellowstone.

According to Martin, an amendment to the Organic Act in 1978 requires Yellowstone and other national parks to implement carrying capacities whenever there is concern about development harming a natural resource.

Five years ago, the National Parks and Conservation Association began developing a method for establishing the saturation point of tourism. In Utah, the group assisted Arches National Park, which initially attempted to solve overcrowding problems by building more parking lots. Martin said a carrying capacity eliminated the need to lay more

asphalt.

At the Glen Canyon Recreation Area in Lake Powell, a carrying capacity allowed the National Park Service to defend its moratorium on development despite pressure from several politicians to build additional boat marinas.

"A carrying capacity is not arbitrary; nor does it mean simply closing the entrance gates once you've reached a certain number of people," Martin said. "The first objective is to define what kind of visitor experience you want to provide.

"Yellowstone seems to be moving ahead with a lot of the right questions but they haven't decided what objectives they want to meet," she noted.

A public opinion poll conducted last autumn showed that of 600 comments received, 25 percent identified "solitude" as a primary reason for exploring Yellowstone in the winter. One-fifth of the respondents said wildlife values should be protected. An equal number of people wanted both additional winter lodges and maintaining the current ban on all off-road snowmobile travel.

Historically, public opinion has paled in comparison to the same politi-

cal powers that exerted pressure over Barbee during the 1988 forest fires and in killing a decision to phase out the Fishing Bridge development which would have helped grizzly bears.

Pressure to open a controversial cross-country ski center at Canyon Village began in 1988, following a congressional fact-finding mission to the park. Employee living quarters were found to be grossly inadequate and existing facilities at Mammoth and Old Faithful were in disrepair.

William Penn Mott Jr., then the National Park Service director, hinted that Yellowstone was being targeted for winter development beyond the realm of necessary repairs when he announced: "I would expect winter use, as we visualize it, to increase. I think we're going to have to recognize that Yellowstone is not a one-season park."

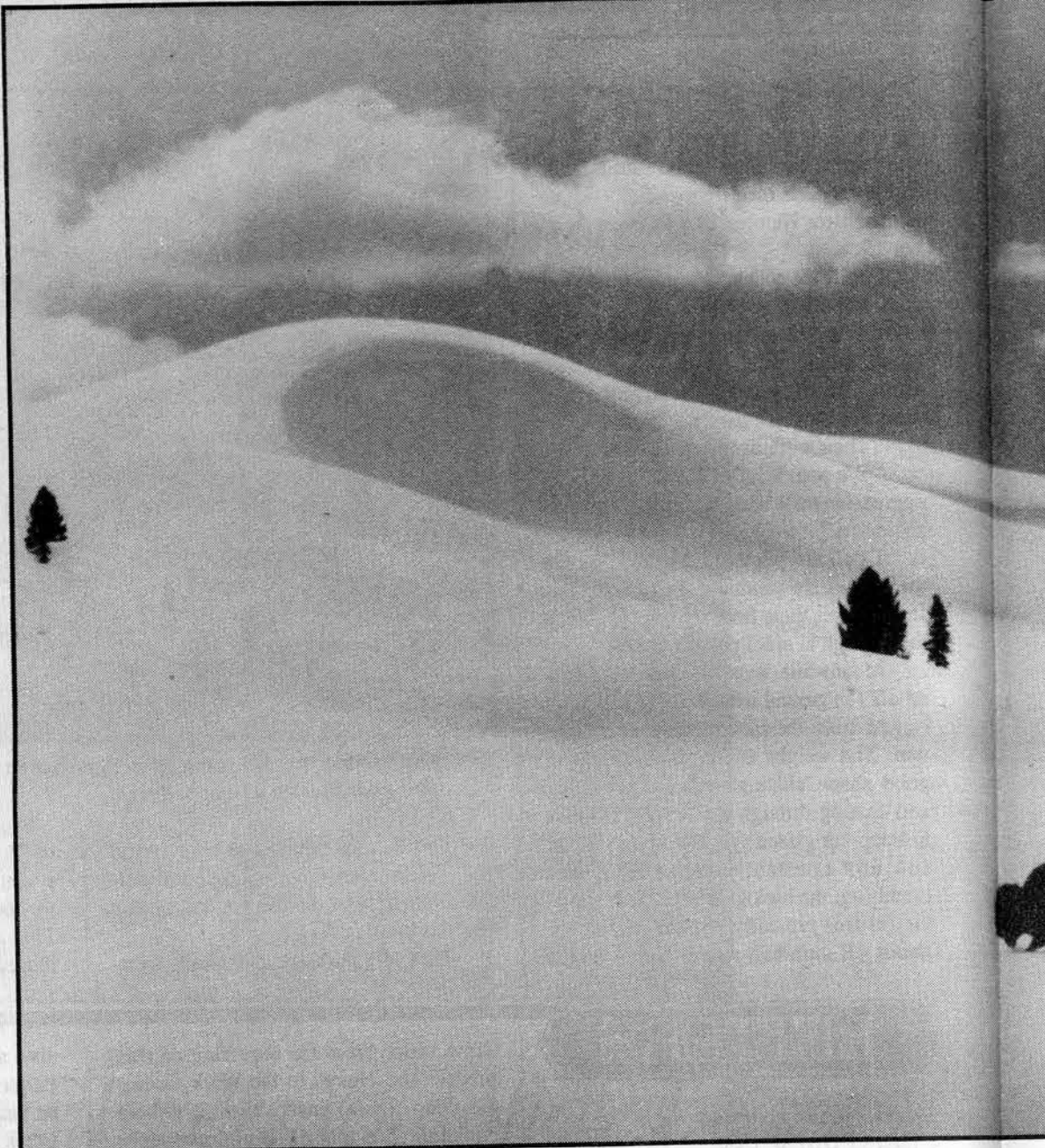
It also became apparent that the chamber of commerce in Cody, Wyo., watching the thriving winter economy of Jackson Hole to the south, wanted a piece of the winter pie.

Wyoming Gov. Mike Sullivan and the rest of the state's congressional delegation unanimously endorsed a proposal to plow and maintain a transportation corridor from the east gate of the park over the avalanche-prone contours of Sylvan Pass, on the northern shores of Yellowstone Lake.

Cody tourism officials vigorously lobbied to winterize several hundred cabins at Canyon Village, then undergoing repair, to create a park development that was easily accessible to the east gate.

Privately, the park concessionaire, TW Recreational Services, reportedly balked at the suggestion, warning that facilities at Canyon were both cost prohibitive and unneeded. The proposal still is pending.

"It is a well-known fact that the profits from the summer subsidize the winter operation," said a TW employee



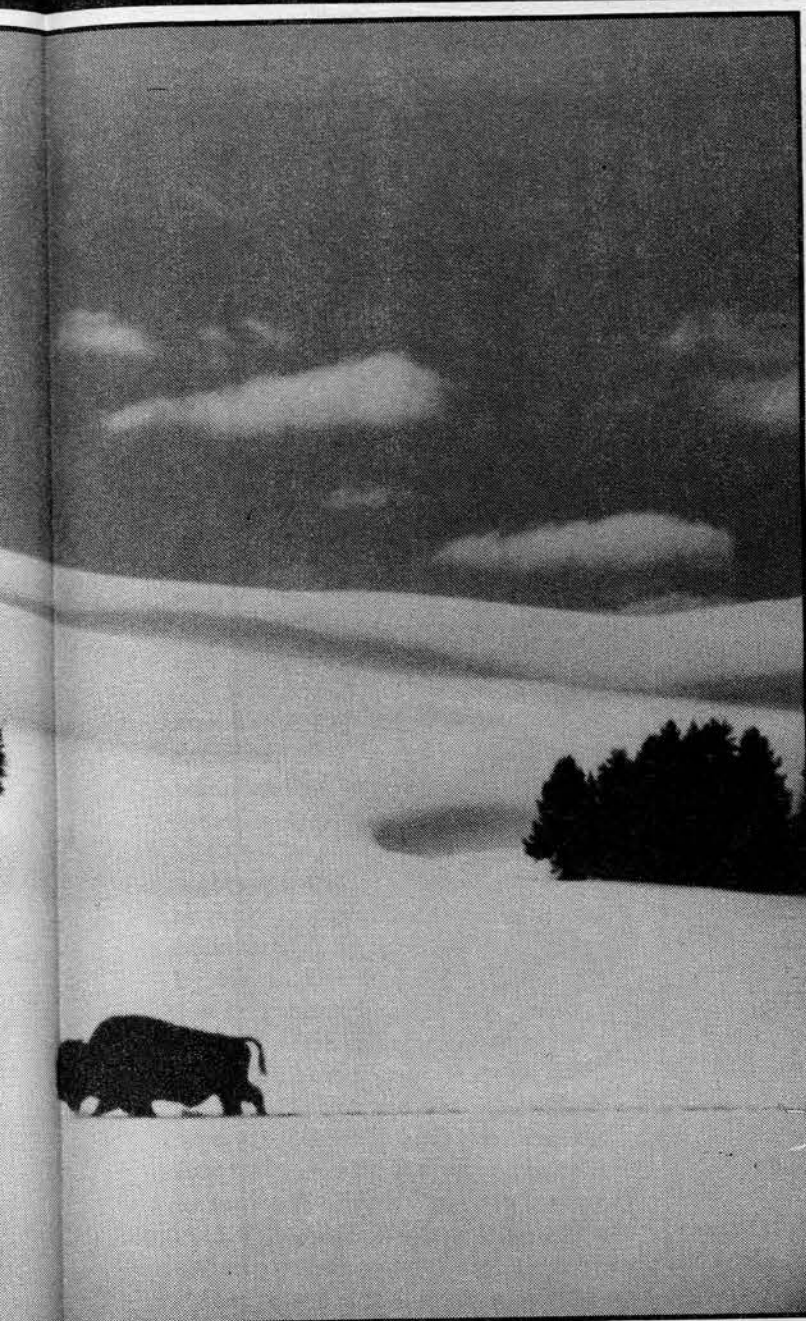
Lone bison plows his way through the snow of Yellowstone



Cross country skiers at the park's upper geyser basin

Wyoming Travel Commission

*"One of the great luxuries
of 20th century America
is to be out of sight
or mind of other humans."*



travel throughout the winter. The Park Service used snowmobiles and promoting the winter experience as a way to stall that off.

"Now it's become a legacy," Barbee added. "Twenty years ago, nobody ever perceived that the snowmobile industry would become a dominant force in this region."

Under existing guidelines, snowmobiles must travel on groomed trails that pass over the summer highway system.

who asked to remain anonymous. "Even though the Old Faithful Snow Lodge is full for much of the winter, it barely breaks even financially. And the Mammoth Hotel wouldn't be open at all unless the Park Service told the concessionaire it had to be."

In comments submitted to the National Park Service, TW administrators opposed expanded development. "With winter visitation of only 100,000, additional facilities or areas should not be opened," the concessionaire wrote.

"At this point in time there is hardly enough use of existing facilities at all park locations to financially support the operation. Unless the National Park Service plans to increase winter visitation, expansion of overnight facilities and other services would only dilute the existing business."

Some observers accuse the Park Service of forcing development even though the market does not exist. However, they confess that if facilities are constructed, then Yellowstone could become a destination resort rivaling even the popularity of Jackson Hole.

The snowmobile legacy

Park Service planners worry that if winter development in Yellowstone moves forward mindlessly, it could easily run amok. Barbee said Yellowstone inadvertently stepped into the business of winter tourism, never expecting that it would become a burgeoning problem.

"I inherited the decisions that were made with winter use a long time ago," Barbee said. "In the late 1960s, the decision was made to keep Yellowstone open to snowmobiling. There was a reason for it."

"The governors from the three states around the park pressured us to plow the roads and keep them open to automobile

Cross-country skiers have access to most of the backcountry trail system and a limited number of groomed trails.

Expanded development likely would result in hundreds of miles of new trails being groomed for skiers and possibly a move to lift the ban on off-road snowmobile travel, Bachman said.

Ironically, there has been no clear consensus from the national snowmobile lobby on how to proceed. Just as entrepreneurs in Cody would welcome expanded accommodations in the park, motel operators in West Yellowstone would just as soon see Yellowstone withdraw all overnight facilities.

"Then we would become the only game in town," said Mike Klostrich,

president of the West Yellowstone Snowmobile Club. "I say we should let everything stay as it is. Snowmobiling is our livelihood in West Yellowstone."

Surprising no one, Wyoming's governor, its congressmen and the snowmobile industry rallied behind the proposed Continental Divide Snowmobile Trail that would extend 350 miles from Lander, Wyo., across two national forests and Grand Teton National Park and link with Yellowstone's south entrance.

From there, snowmobilers would have thousands of miles of continuous trail at their disposal, making the Continental Divide Trail one of the longest in the world. The Greater Yellowstone Coalition and NPCA have been almost alone in questioning the location of the trail, pointing to potential conflicts with wildlife wintering areas and the costs associated with building bridges across streams.

"The whole winter use planning process has been a sleigh before the horse," said GYC's executive director Ed Lewis.

Beyond the obvious elements of winter in Yellowstone, Steven Fuller says there are broader profundities that one never knew existed until they are gone.

"It isn't a matter of *whether* people should have access to the park in winter, but *how*," Fuller mused. "Everyone will scream bloody murder if you intend to inhibit their activity."

"I've found myself lately getting

caught in buffalo jams caused by snowmobiles," he added. "Space and emptiness, free from machinery, are rapidly diminishing quantities."

Fuller, who has been the winterkeeper at the Canyon development for the last 17 years, makes a strong case for moguls, giant snow washboards that accumulate during heavy periods of snowmobiling on hard-packed trails. "In a way, moguls are like a natural defense," he said. "There's a lesson to be learned from moguls. They are a sign of overuse."

Instead of spending thousands of dollars each winter to cut down the moguls with grooming machines, Fuller says they should be let alone to serve as a deterrent to high speeds and excessive traffic.

"One of the great luxuries of 20th-century America is to be out of sight or mind of other humans," he added. "One of the great pleasures of Yellowstone is to see untracked snow, to breathe pristine air, and to hear no sound but wind and ravens."

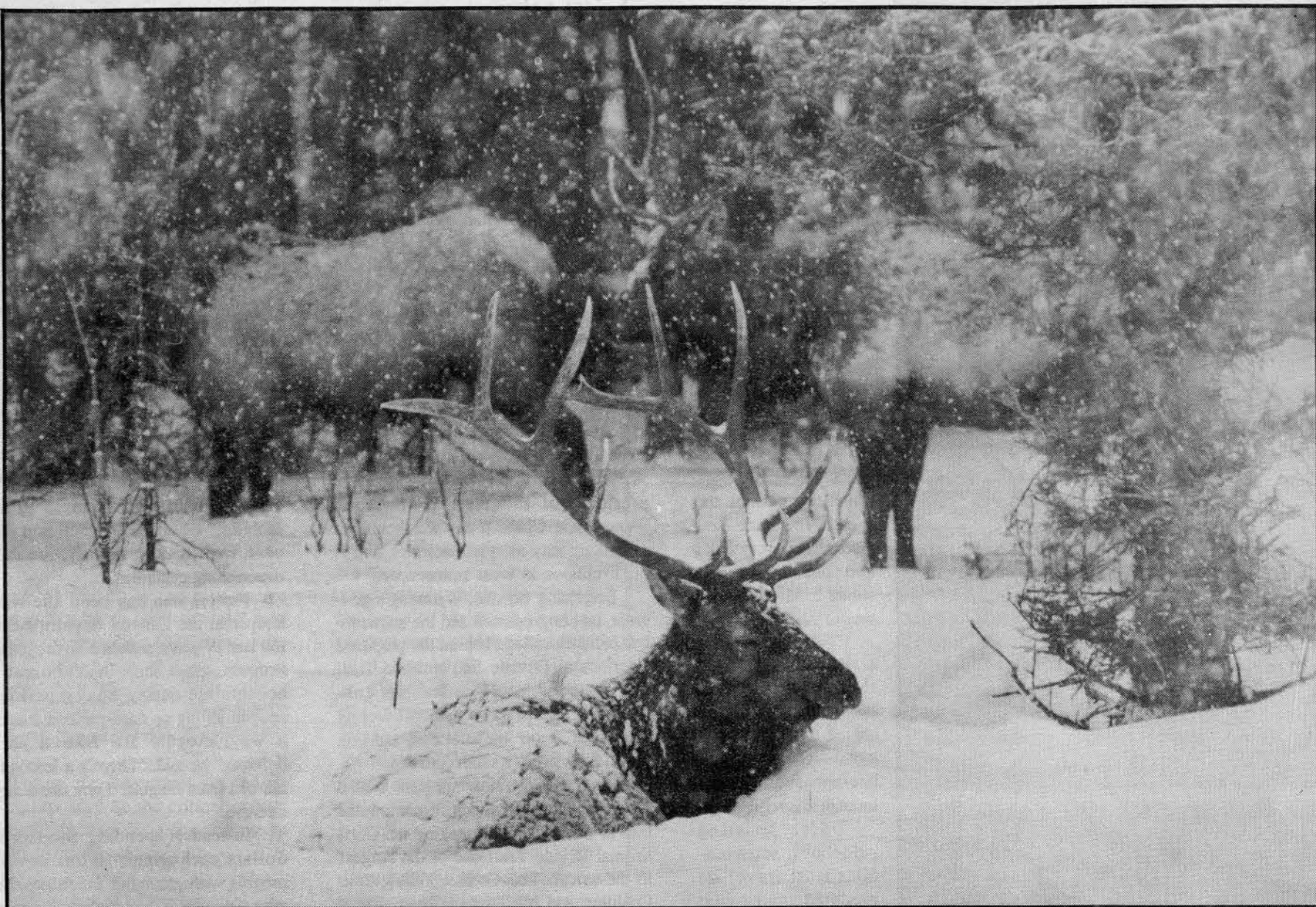
Last week, Fuller said, the noise of snowmobiles stopped suddenly when he heard another noise coming down the road. It was a snowplow clearing the way for another summer season.

Todd Wilkinson is a freelance writer who covers natural resource issues from his home in Bozeman, Montana.



Snowmobilers in Yellowstone National Park

Steve Fuller



Elk burrows into the snow in Yellowstone National Park

Winter's grip: How to survive the freeze

by Bert Lindler

As the sun prepares to return its strength to the Rockies, plants and animals are spending the last of their saved energy. An extreme storm or a prolonged winter could be their undoing.

But the length of winter and the timing of storms are just two of the factors affecting plants and animals during the sun's season off. James Halfpenny, a fellow of the Institute of Alpine and Arctic Research at the University of Colorado, summarizes winter's forces using the acronym SCREW: Snow, Cold, Radiation, Energy and Wind. These are the primary factors plants and animals must endure each winter, Halfpenny told 10 Yellowstone Institute students during a three-day class on winter ecology.

During winter, the earth is tilted away from the sun, the energy source for the earth and its plants and animals. The result is that energy is spread over a larger area, reducing its intensity. Tilt your cold hand toward a wood stove and then away from it. That should help you understand what happens as the earth tilts toward the sun (summer) and away from it (winter).

Freshly fallen snow strongly reflects the sun's short-wave radiation. That's why even nostrils and eye sockets can sunburn on glaciers. The sun gets you from below by bouncing off the snow.

Snow absorbs the long-wave radiation emitted by objects warmed by the sun. This helps explain why water can sometimes be found under snow-covered lake ice. Short-wave radiation passing through the snow is absorbed by the ice. The ice emits it as long-wave radiation, melting the snow.

Where winter is short enough, or mild enough, plants and animals don't have to adjust. They simply survive until more favorable conditions return.

Halfpenny likes to define areas with winter as areas where plants and animals have adapted. The branches of spruce trees slope downward, allowing them to shed snow as they're bent by its weight. In northern climes, weasels turn white in winter, matching the snow. Farther south, weasels are brown year-long.

Lines drawn marking the range of spruce trees and the areas where weasels turn white in winter roughly correspond with a line indicating areas receiving 16 inches of more snow a year. Those are the areas where winter is long enough or severe enough that it can't be ignored.

Many birds migrate to escape winter. Some plants die each fall, surviving as seeds. Some animals, such as bears, survive by digging in for a long winter's sleep.

Many plants and animals have to face winter head-on. Some animals, such as elk, move to lower elevations where winter is not as harsh. For every 1,000 feet the elk descend, the change in climate is roughly the same as if they had traveled 300 miles to the south.

Trees can't leave. During fall they begin moving foods to their roots. Later, they undergo chemical changes. These changes allow the buds of white spruce to survive temperatures of 112 degrees below zero. Short periods of balmy winter weather followed by extreme cold can fool trees into letting down their chemical defenses. In such cases, trees can die or lose their needles, Halfpenny said.

Snow helps many plants and animals survive the winter. Freshly fallen snow insulates as well as the wall of a

log home of similar thickness.

Old-time naturalists noted that many small mammals scampered on top of the snow until the snow was six to 10 inches deep. Afterward, they traveled underneath.

Once the snow is six to 10 inches deep, the temperature will remain relatively stable at the ground, no matter what happens to the air above. That doesn't mean the temperature will be warm beneath the snow, or even above freezing. But it is likely to be warmer than the air.

During the spring, that may not be the case. Snow is such a good insulator that it may remain cold even when the sun is bright and the air is warm. Halfpenny has measured temperatures of four degrees below zero one and a half feet below the snow, even though air temperature was above freezing. Skiers would have to be careful not to frostbite their feet on such a day.

Snow's insulating value wouldn't be of much use to small mammals if it were so hard they couldn't travel through it. But in the Rockies, extreme temperature differences between the relatively warm ground and the much colder air contribute to the formation of depth hoar, or sugar snow, near the ground.

The depth-hoar forms as water vapor moves from warm snow to cold snow. Large cup-shaped crystals form. Voles (small, mouse-like mammals) can scamper easily through the depth-hoar. The depth-hoar weakens the connection between the snow and the ground, however, contributing to avalanches.

A cold feet experiment

Halfpenny conducts experiments to help his students understand what winter

means to plants and animals. In one experiment, four students bared a foot for science while sitting in metal chairs on a snow-covered parking lot. Temperature sensors taped to their big toes ran to a data recorder that took readings every five minutes.

The outside of the toes was about 65 degrees at the beginning of the experiment and about 47 degrees 45 minutes later. The air temperature was about 38 degrees.

After the experiment, Sue Johnson of Billings, Mont., said she couldn't even wiggle her toes. "My mind was telling 'em what to do, but they just wouldn't wiggle," she said.

Halfpenny placed her foot on his bare stomach and covered it with his coat. If he had been helping a skier, he would have tucked their socks between his shoulder and his coat and pulled their boots in under his coat. That way, after their foot was warm, it would have been placed in warm socks and boots.

Graphs prepared afterward showed that Johnson's foot cooled more quickly than the others. She said she's always gotten cold before her companions when traveling outdoors. "It keeps me from doing things sometime," she said. "I know I'll be so cold it won't be fun."

Short, fat people don't cool as quickly as tall, thin people. That's because thin people have less body volume generating heat and relatively greater surface area where heat is lost. People with more fat cool more slowly because fat is an insulator. Men cool more slowly than women, but sex is not as important as the other two factors, Halfpenny said.

Ducks don't freeze their bare feet,

(Continued on page 11)

Winter ecology . . .

(Continued from page 10)

even when they're standing on ice. The blood vessels in their legs act as heat pumps. Warm blood from their body courses down an artery alongside the vein carrying cold blood back from the feet. As the blood returns to the heart, it is warmed by flowing alongside the artery.

Arctic wolves don't freeze their feet either. Navy researchers attempted to use wolves when studying frostbite. But wolves' feet didn't suffer frostbite even when placed in a dry-ice bath far below zero degrees.

Human feet don't work the same way. When the hands and feet become extremely cold, the body quits sending warm blood to them. Once this happens, fingers and toes may freeze.

One way to keep from freezing at night is to sleep in an igloo, snow cave or quinzhee. Halfpenny has his students build quinzhees, which were developed by the Athabaskan Indians. Quinzhees can be constructed anywhere there's a foot or two of snow, while snow caves or igloos require deep snow or drifts.

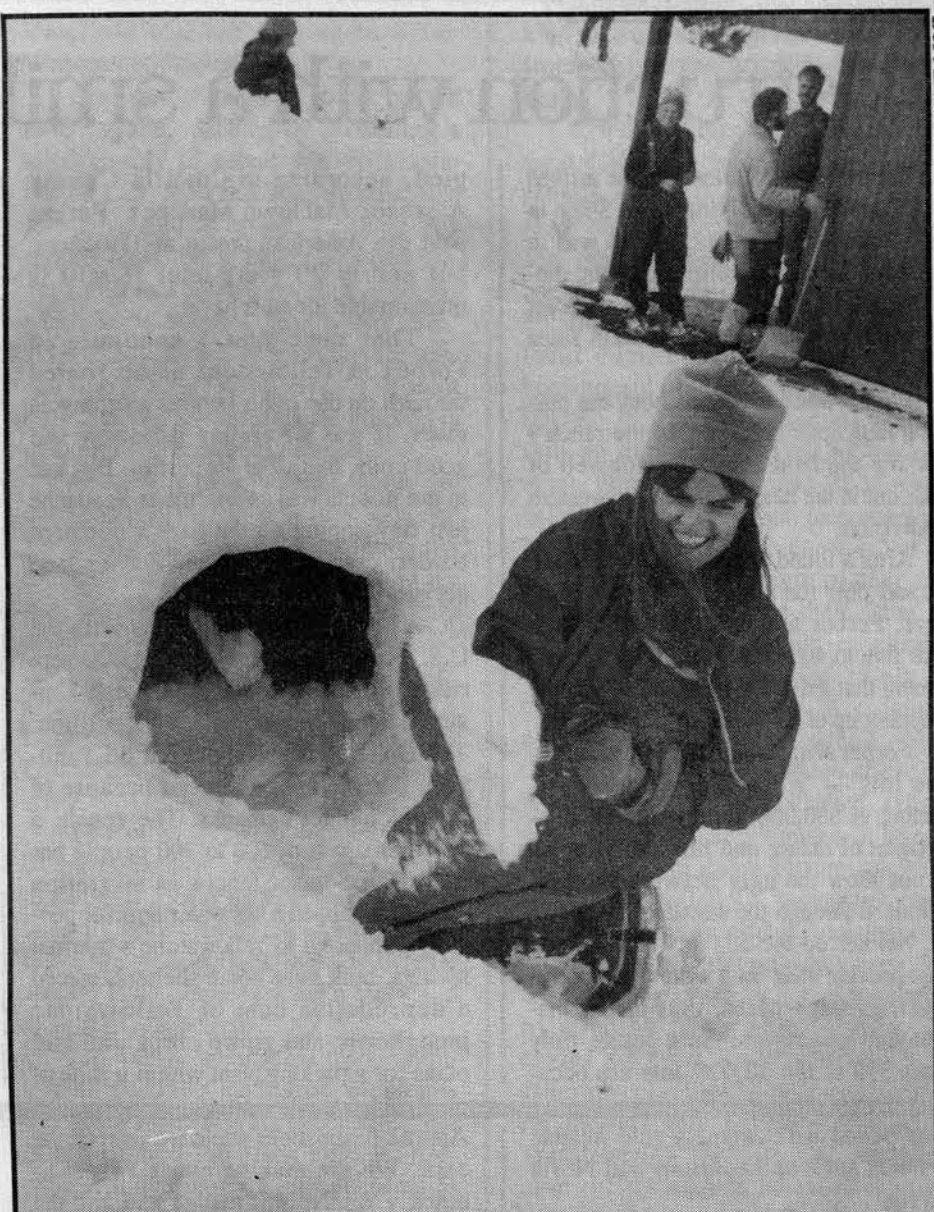
Snow is shoveled into the center of an eight-foot circle until the mound is four feet high or so. The snow is allowed to set for two hours; longer in extreme cold. The inside is scooped out with a shovel, leaving the walls a foot or so thick. When the quinzhee is being scooped out, Halfpenny recommends having someone outside for rescue in case the roof collapses. The day after we built our quinzhee, we took turns standing on the roof for pictures.

Body heat, particularly if supplemented by a candle, can keep the temperature inside a quinzhee near freezing, even when it's much colder outside. A small hole in the roof helps assure good ventilation, particularly if you cook inside.

"I have been colder in a regular tent at the end of the summer," said Beverly Silkwood of Billings, Mont., after a night in the quinzhee.

The previous night, Larry McMullen of Cody, Wyo., slept under the stars with temperature probes taped inside and around his sleeping bag.

Even when he was sleeping on two foam pads, he lost twice as much heat to the ground below as to the air above his



Home-building using natural ingredients in Yellowstone National Park

sleeping bag. When he pulled out the Thermarest inflatable foam pad and slept on just one Insolite foam pad, he lost six times as much heat to the ground as to the air.

One problem affecting winter campers is water vapor that accumulates in their sleeping bags. At the end of a two-week winter trip, Halfpenny weighed his sleeping bag before and after drying it. The bag lost three pounds of water.

Down becomes worthless when it's wet. Quality synthetic insulation is heavier and bulkier than down, but retains more insulating ability when wet. Body heat can dry synthetic insulation from the inside out. For that reason, whenever there's a chance he might get wet, Halfpenny prefers synthetic insulation for parkas and sleeping bags.

Polypropylene clothing is popular

with winter travelers. It's very effective at wicking moisture away from the body. But it takes energy to wick moisture.

No room for errors

"If you can afford the energy, polypropylene is great," Halfpenny said. "For the worst of the worst, I'll stick with wool."

During extreme cold, there's no room for mistakes. Halfpenny led a group of students across Yellowstone in the winter of 1978-79, when 11 of the 14 nights were colder than 40 degrees below zero. One night his thermometer bottomed out at 70 degrees below zero. During that period, guests kept warm by burning wooden furniture in the fireplace of the Wort Hotel in Jackson Hole, Wyo.

Halfpenny's group spent half the nights in tents. Half the nights they built snow shelters and campfires. It's important to go to bed warm, Halfpenny said.

He recommends bedtime Eskimo Olympics. Once a circle has been drawn in the snow, everyone tries to knock each other outside. Hot cocoa laced with butter is the bedtime warm-up beverage. A candy bar by the sleeping bag will provide extra energy if you wake before dawn.

"Our group suffered no frostbite, even though numerous cases of serious frostbite were recorded in the park from other recreationists that winter," he said.

Halfpenny teaches about a dozen short courses in alpine ecology, winter ecology and animal tracking each year at the Teton Science School, Yellowstone Institute or at the Nature Conservancy's Pine Butte Preserve west of Choteau, Mont.

His book, *Winter: An Ecological Handbook*, is published by Johnson Publishing Co. in Boulder, Colo.

Bert Lindler covers environmental stories for the *Great Falls Tribune* in Montana.

ACCESS

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PHOTO EDITOR. BACKPACKER, the magazine of wilderness travel, is searching for a photo editor to oversee the solicitation and selection of photography for its seven issues per year. Must be highly organized, resourceful, enthusiastic, with a deep-seated love of the natural world, and comfortable in "assistant-to-art-directors" role. Camera skills and magazine staff experience an asset, but not essential. Salary negotiable. Emmaus-PA office, send letter of interest with work/academic history to: Personnel Dept. (PE-HCN), RODALE PRESS, INC., 33 East Minor St., Emmaus, PA 18098. E.O.E. (1x6 B)

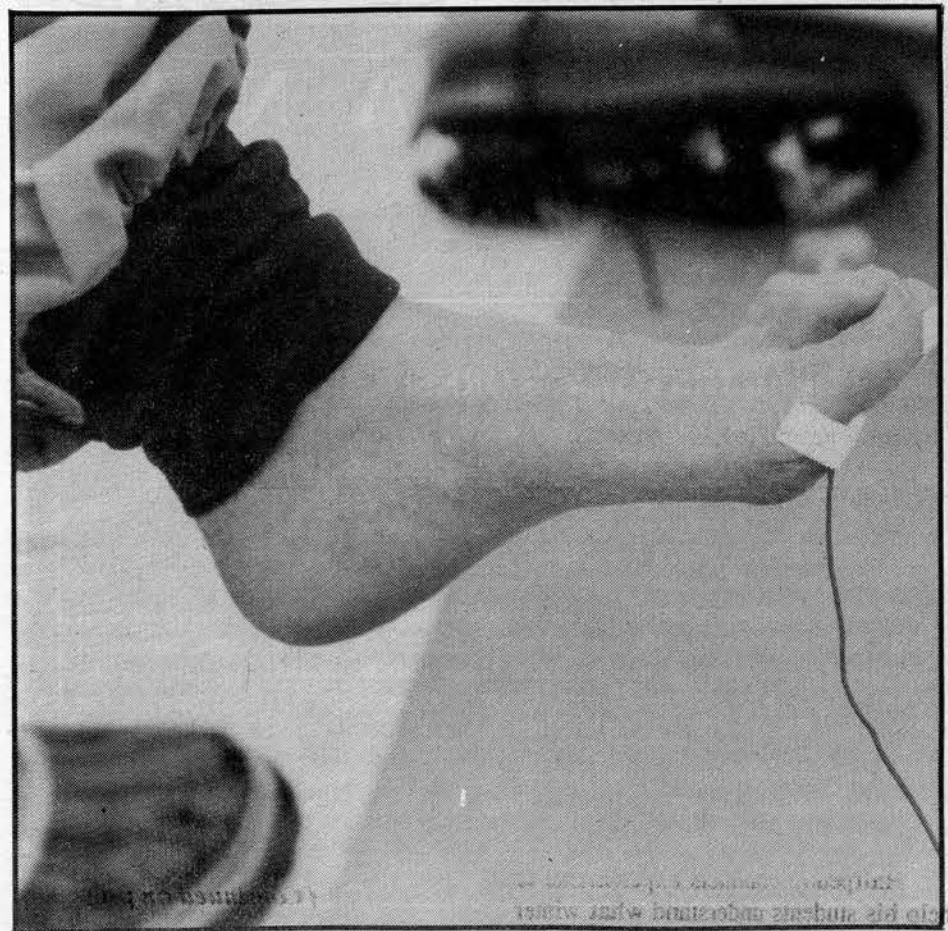
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POSITION: PUBLIC ADVOCATE and organizer to design and carry out a campaign to protect Boulder Mountain, Dixie National Forest, Utah. Requires: working knowledge of NEPA, NFMA, Forest Service policies, communication skills, media, community organizing, ability to work independently at remote government offices, own transportation and willingness to travel by foot. Position is for 12 months. \$18,500 plus limited travel, office and legal budget. Send resume by March 26 to Utah Wilderness Coalition, 1851 East Garfield Ave., Salt Lake City, UT 84108. 801/467-9454

POSITION OPEN. The Colorado Environmental Coalition is seeking an individual to serve as its Public Lands Coordinator. Person will lead CEC's efforts to protect wilderness, wild and scenic rivers, and regulate oil and gas development. Applicants need a four-year college degree and experience with grassroots organizing and public lands management. Send resume by April 6 to Search Committee, Colorado Environmental Coalition, 777 Grant #606, Denver, CO 80203. For more information call 303/837-8701. Salary \$14,000-\$17,000. (1x6B)

ART DIRECTOR. BACKPACKER, the magazine of wilderness travel, is searching for an Art Director to oversee the design and production of seven issues per year. Must be responsible, hard-working, enthusiastic, comfortable in group-planning situations, and have a deep-seated love of the natural world. Strong design credentials required; style must be complementary to subject matter of BACKPACKER. Magazine production experience an asset, but not essential. Salary negotiable. Emmaus-PA office. Send design samples and work history to: Personnel Dept. (AD-HCN), RODALE PRESS, INC., 33 East Minor St., Emmaus, PA 18098. E.O.E. Serious inquiries only; no phone calls, please. (1x6 B)

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Cold foot growing colder

12-High Country News — March 26, 1990

REPORTER'S NOTEBOOK

Forbes: land destruction with a smile

by Jim Carrier

Malcolm Forbes was eulogized with words that praise his "zest for life." He lived as he wanted to; with his money, that meant life on a grand scale.

Long before Donald Trump and Ivan Boesky made the 1980s a decade of decadence, Forbes epitomized the American ethic of life without limits. If you had money, you could spend it. If you owned something, you could flaunt it. Combined with charm and generosity, his no-fault living made Forbes impossible to dislike.

But Forbes' vision contained a blind spot. While he gave millions to AIDS research, food programs for the poor and Princeton University, his love for laissez faire left a legacy of land and resource use unsustainable in the 1990s.

I am sorry he died, but his death at the beginning of the decade should mark a transition away from profligacy and toward environmental sensitivity and sustainability, in this nation and in the world marketplace.

I first met Forbes in 1986 at his 400-square-mile Trinchera Ranch near the

San Luis Valley of Colorado. He arrived in a helicopter after flying from Spain in his "Capitalist Tool" jet. Lunch was in the lodge filled with ship's models, dinner was in the mansion filled with art and the night was spent in a cabin filled with toy motorcycles.

Forbes was a gracious host, but during a helicopter ride across the ranch I saw for the first time the cobweb of roads cut in the landscape for his western subdivision.

After a foiled attempt to fence in the elk and deer for a private hunting preserve, Forbes had created 12,000 lots from five to 40 acres, the kind of development that led the legislature to halt the chopping up of Colorado.

Forbes Magazine still advertises 40-acre lots — "a really big spread" — starting at \$30,000. The beautiful photographs of skiing and horseback riding do not show the ugly network of roads bulldozed through the sagebrush.

Neither do the ads say that owners must provide their own water, power and sewer; in many cases, that means cisterns and generators. As a result, only about 550 of the 12,000 lots are occu-

pied, according to Costilla County Assessor Maclovio Martinez. Forbes sold the American dream at Trinchera, but nearly 20 years later it still is unattainable for most buyers.

That same year, I encountered Forbes in Yellowstone as he roared through on one of his famous motorcycle tours. It was a traveling sideshow and good copy, like all of his parties. But lost in the hoopla was an enormous headache just developing on the park's northern border, created by another Forbes land decision.

After years of negotiations with the U.S. Forest Service over a 12,000-acre ranch, Forbes sold it to the Church Universal and Triumphant for \$7 million. The United States had offered \$6.1 million, but the option ran out because of federal budget cutbacks. The result: a survivalist cult of 500 to 700 people has built game-proof fences in migration corridors, tapped a hot water aquifer possibly connected to Yellowstone's thermal springs, built huge bomb shelters, forced a depredation hunt of Yellowstone pronghorns, and grown crops and laid plans for a packing plant within a mile of

prime grizzly bear habitat.

Ironically, before the sale, Forbes officials had told Roger Johnson, the U.S. Forest Service negotiator, that they did not want to incur the same kind of criticism they received in cutting up the Trinchera. "If there is one regret I will carry to my grave, it is that decision," said Johnson. In defense of his decision, Forbes told a national radio audience in 1988: "It's a free country."

And that, of course, is the problem. Without constraint, the world as we know it will disappear. Forbes could fly 600 people to Tangier for his 70th birthday and call it good business, but his decision to do so consumed energy and represented a wasteful lifestyle that one day will require drilling oil wells in grizzly country, and leave my daughter with fewer resources — and fewer choices.

Malcolm Forbes' tombstone will say: "While alive, he lived." But in doing so, he hastened the death of the planet. ■

Jim Carrier writes about the West for the *Denver Post*, where this originally appeared.

LETTERS

AMTRAK'S POSITION ON DUMPING WASTES

Dear HCN:

Recently, Amtrak has been severely criticized by politicians, the news media (*HCN*, 2/12/90), and some members of the public for the 150-year-old practice of releasing waste from trains along the railroad tracks. I appreciate the concerns that have been raised, and I want the public to know what Amtrak is doing to resolve the issue.

Many of Amtrak's newer cars were specifically designed to release wastes en route to avoid frequent delays that would otherwise be required to empty waste retention tanks. Because there are no proven waste retention systems for long-distance trains currently available anywhere in the world, last July, Amtrak began a research and development effort to identify a system capable of withstanding the rigors of transcontinental train travel. Congress has provided funds specifically for federal study of this problem as well. The ideal system will need to be reliable, easy to maintain, cost effective, and capable of operating over long distances — up to 72 hours — between cleaning and servicing stops.

We have developed plans to test six different systems from four different firms. They are being manufactured and will be delivered and installed, within the next few months, in test cars selected from different types of equipment Amtrak operates: Superliner, Amfleet II, Heritage, Horizon, and our new Viewliner prototype car. In most cases, the test will require retrofitting an existing toilet and/or retention system. One system to be tested is similar to those in use on aircraft. It is designed for air trips of up to 14 hours; we will find out if it will work on a trip of up to 72 hours.

Once each system has been installed and tested for at least 120 days, we will decide which systems will undergo further tests for an additional 9-12 months. Why so long? We need to assess the system's reliability under all sorts of conditions — heavy usage in the peak summer

travel period and extremely cold weather in states such as Montana and North Dakota.

In addition to the on-board waste disposal system, it will be necessary to design and install equipment servicing facilities around the country to quickly empty and service the toilet systems between trips, and at heavy maintenance facilities to clean and disinfect retention tanks as cars go through their preventive maintenance program.

All these changes will cost millions of dollars. We will provide full cost estimates to congressional committees as soon as costs are known. It is my sincere hope that funds will be made available both for the purchase of new cars to replace the 35- to 40-year-old Heritage fleet and for retrofitting Amtrak's approximately 535 newer cars with full retention toilet systems.

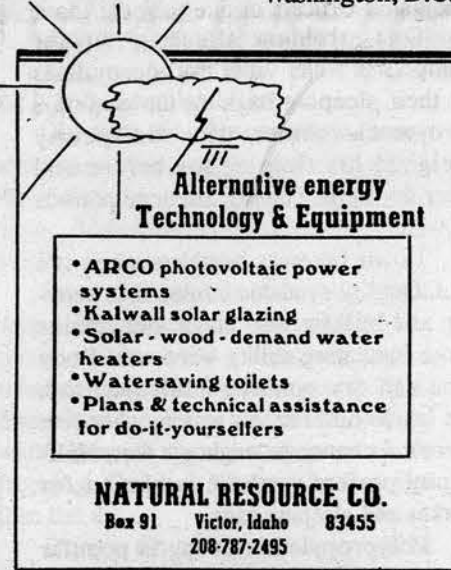
Clearly, these changes will take time as well as money. Since we cannot remove all cars from service at once, and still provide service to the public, we must phase the cars through a retrofit program over a several year period. Meanwhile, it is important to bear in mind that the federal government's investigation of existing practices concluded that they present no significant public health risk or other adverse environmental effect.

This is why we continue to press our case in federal courts to prevent states from enforcing laws which they believe prohibit Amtrak from disposing of wastes along the tracks. To the extent that state laws prohibiting the discharge of wastes from rail cars are held by federal courts to apply to Amtrak, we will of course comply. Unfortunately, in most cases this will mean that we will have to discontinue rail passenger service in those states until we have completed our equipment retrofit program, because compliance is impossible with our existing equipment.

Even if the federal courts rule that Amtrak is exempt from state laws, we will continue our efforts to change our toilets to full retention systems as quickly as possible. However, instead of being forced to suspend service to the public in one or more states, we will be able to maintain passenger service to all 500

Amtrak destinations while we retrofit the cars. We are making every effort to quickly resolve this matter and ask the understanding, patience and support of public officials, media and citizens who are rightly concerned.

W. Graham Claytor, Jr.
President, Amtrak
Washington, D.C.



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The Nature Conservancy
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LETTERS

BACKYARD ELK

Dear HCN,

I was very interested to read the article on poaching by Todd Wilkinson in your Dec. 18, 1989, issue. I am familiar with the elk situation from a different perspective. I raise elk on my ranch not far from the HCN office and am president of the Colorado Elk and Game Breeders Association.

I was taken aback by being lumped together in the article with poachers who illegally kill and steal publicly owned wildlife. Wildlife officers must feel great frustration in confronting poachers and I sympathize with them and support their efforts to stop poaching. I also feel that I am helping them in my own small way.

Let me describe how and why I started raising elk. For 12 years I lost money raising hay and sheep on a ranch with 70 irrigated acres and 70 acres of juniper and sagebrush. I worked other jobs to pay for my farming habit. I enjoyed having up to 90 elk every winter and spring on my hayfields, fenced off my haystacks but did not begrudge them the pasture.

Then I visited New Zealand and saw thousands of Red Deer (the European version of elk) being raised as livestock. I knew I could do that, too, if I had the right fences, as I was already raising the public's deer.

Upon returning to the States I found that elk were already being raised domestically in Colorado. Build an eight-foot fence, agree to keep records, tag your animals, and send in \$100 a year to the Colorado Division of Wildlife, and they will issue you a Wildlife Park license. You then have to buy your elk from other breeders, and you are on your way.

Several aspects of raising elk appealed to me. First of all, there was the possibility of making a living off my ranch. Elk sell for twice what cattle do and eat one third as much. The amount of food that produces one pound of beef will produce 1.4 pounds of elk meat with less cholesterol than chicken. So I fenced 10 acres and still could afford to continue to feed the wild elk on the rest of my land. Elk readily adapt to domesticity, as it turns out. The day my herd matriarch figured out how to open the gate, they all took a tour of the property but when they saw me they ran home.

Then, of course, there are the antlers. Called "velvet" by elk and deer raisers, the antlers are removed in June or July at the stage when the growth hormones peak. The bulls are tranquilized and anesthetized, the velvet is cut and frozen. The bulls suffer only a loss of weaponry, with which they otherwise would injure each other. According to the Rocky Mountain Elk Foundation's magazine, *The Bugle*, a wild bull elk will sustain an average of 50 antler-inflicted wounds during each rut. Removing the antlers prevents injury and, of course, the velvet regrows each year.

Antler is, in fact, the only mammalian tissue that regenerates in this way. Scientists are trying to understand the process, which could offer great benefits to human medicine. Some studies are researching the regeneration process so that severed limbs and nerves might be regrown. Others believe the on/off growth mechanisms may permit the turning off of some cancers. Scientific studies are also under way to verify the medicinal effects that Oriental medicine attributes to the velvet. Is it not arrogant to conclude that Oriental medicine is

quackery and has nothing to offer Western civilization?

One of my intentions in raising elk is to reduce poaching by producing a legal supply of velvet. Mr. Wilkinson quotes U.S. Fish and Wildlife specialist Joel Scrafford as saying, "... there is a serious battle being fought between illegal hunters and conservation officers which is no different than the drug war." Then U.S. Fish and Wildlife Service special agent, John Gavitt, says, "The most effective way to curtail illegal markets is to totally ban commercialization."

Obviously these wildlife agents are outraged and frustrated in their jobs and are letting their emotions get the better of them. We don't have to look far to see that prohibition does not eliminate demand. Prohibition of alcohol was tried in this country, and now a similar attempt is being made with drugs. Demand creates markets, legal or illegal. Prohibition simply produces organized crime.

The most effective way to curtail illegal markets is to allow legal markets to flourish. Legal markets can be regulated to minimize negative impacts, in this case poaching. If there is a legal supply, law enforcement has a chance to control illegal activity.

Mr. Gavitt admits that the prohibition of products made from elephants and black rhinos has not quelled demand or eliminated the black market. Elephants and rhinos are still poached to supply the demand. So the sale of ivory taken from elephants hunted legally in countries managing thriving populations has been banned. Morally righteous, perhaps, but ineffective. How sad for the elephants and rhinos. Now those private game ranches in the United States that the game officers dislike so much have more black rhinos than all of Africa. This will likely save the black rhino from extinction. Similarly, there are 90,000 American bison on private ranches in North America, but only 10,000 or so in parks and preserves.

The reason there is a lack of trophy animals is that the wildlife establishment has allowed the biggest and best to be over-hunted. So some rich businessmen have resorted to poaching where hunting is not allowed. Why not let them pay a commercial hunting park to kill a private animal instead?

I would respectfully submit that the public wildlife establishment in this country has some problems that hamper its effectiveness and decrease respect for the law, resulting in poaching and lack of support for its attempts to protect wildlife:

- Nine thousand elk were allowed to starve to death at Yellowstone last winter. Wildlife officials claimed this was a "natural event." What was natural before wildlife officials arrived at Yellowstone were constant checks on elk population by wolves, bears and man. Human activities have reduced the elk herds' winter range but wildlife officials tried to stop people from feeding the starving animals. The perception created is that the wildlife establishment is more interested in protecting its ideology than in protecting its animals. How can anybody be outraged about poachers and not be outraged at 9,000 animals starving to death?

- In Colorado it is illegal to utilize road kills. Several times when I was poor I ignored this attempt to enforce waste. Now when I find a fresh road kill I tell someone who needs it. The highway here is still littered with rotting corpses. This

kind of rule discourages the public from taking the wildlife laws seriously.

- When I moved from urban to rural Colorado in 1972, the hunting season was 10 days long. Now it runs from August through November, plus special seasons in December and "damage hunts" in January. Political pressure from hunters and local businesses that profit from hunting got the Division of Wildlife (DOW) to transform hunting season into an extended period of harassment. Forest Service and BLM road-building, and the use of four-wheelers by hunters also have contributed to the increased harassment of deer and elk in what used to be their areas of refuge. This harassment, combined with habitat loss, has forced elk to change their behavior. A cultural adaptation. They now spend more time on farm land, where there is food and hunting is restricted. (High powered rifles and houses in every direction are a dangerous mix.) Why aren't the wildlife managers outraged by this incredible harassment?

- Colorado State Law says the DOW will pay for damages caused by species for which hunting licenses are sold. In practice the bureaucracy often makes it impossible for farmers and ranchers to collect. Traditionally farmers and ranchers have tacitly agreed to support wildlife on their land. But now that record numbers of deer and elk have adopted agricultural land as their home for longer periods of time, the burden of supporting them is no longer affordable nor fair.

Poaching is a real problem. However, it is not causing the extinction of the elk or of bald eagles. Bald eagles are about to be re-classified from "endangered" to "threatened" because of their nation-wide recovery. Colorado has over 200,000 elk, the highest level in recorded history. As the West becomes more crowded the wildlife establishment is going to have to face up to their most serious challenge, which is habitat preservation. The habitat on public land must be protected and preserved by preventing additional development such as ski areas, and harassment of big game reduced by shortening hunting seasons. A larger portion of the millions of dollars collected in license fees will have to be spent to purchase habitat and pay landowners for maintaining winter range for public animals.

One of the objectives of the Colorado Elk and Game Breeders Association is to ensure that game ranching is carried out in an ethical way. The prosecution of one game rancher in New Mexico for allegedly capturing wild elk does not implicate the rest of us. In fact, knowing that someone is being prosecuted, may lose their license and entire investment, not to mention facing a jail sentence, is an effective deterrent.

I strongly support federal wildlife agents' recommendations for clamping down on poachers and teaching conservation ethics. In addition, the wildlife establishment needs to examine some of its own ethics to establish credibility, and to address the habitat issue as seriously as it does its main management tool, hunting.

However, a nationwide ban on the sale of all animal parts would be counter-productive. It would cause prices to go even higher and ensure the growth of more sophisticated and organized poaching rings.

Steve Wolcott
Paonia, Colorado



DON'T COLLECT ARROWHEADS

Dear HCN,

Steve Stuebner clearly presents the battle lines being drawn over the issue of military land grabbing in the West in his article, "U.S. military plots vast land coups" (HCN, 2/12/90). However, on a personal level I find the inclusion of arrowhead collectors with legitimate public land users, in the first paragraph of the article, extremely disturbing. As it is commonly practiced, arrowhead collecting on federal lands is a clear violation of the Archaeological Resources Protection Act.

Arrowhead collecting, according to the *Federal Register, Rules and Regulations* (Vol. 49, No. 4, 1/6/84), is not legal under ARPA unless the arrowheads are less than 100 years old and have no archaeological interest. Although arrowheads can be found to have been made from a number of materials, the overwhelming majority are of stone, rarely less than 100 years old. In other words, arrowhead collectors on public lands almost always collect artifacts protected by ARPA and thereby violate the law.

M. Zyniecki
Tempe, Arizona

OUTRAGED

Dear HCN,

Although New Mexico was spared from the current Defense Department land grab (HCN, 2/12/90), I feel as outraged by it as if I lived in Mountain Home, Idaho. This is because New Mexico is very much a part of the extended military sacrifice zone known as "the West."

Yesterday I was riding my bike along a lonely dirt road some 30 miles north of the White Sands Missile Range when I encountered a placard posted on a juniper. It informed me that the area beyond (south toward the range) was "subject to evacuation due to missile firings" and that I should call a number for permission to continue. Signed, the US GOVT. I had been hearing rumors of errant missiles finding their way beyond the boundary of the range, but here was a confession by the military for all the world to see. Clearly, to measure the actual size of a bombing or training area, one must extend the official perimeter out 30 miles, thus increasing its area by thousands of acres. This same point was well made by the Navy in its abuse of its allotted land in Nevada — that missiles, toxic waste, sonic booms, the air above and the water below know no boundaries.

The military can't be trusted any farther than you can throw an M-1 tank (to paraphrase a great wise man) and must be prevented from acquiring one more square inch of OUR public land. Thank God for groups like Rural America for Military Accountability and Citizen Alert; they are the only ones protecting the American public from its own armed forces.

Rob Pine
Socorro, New Mexico

14-High Country News — March 26, 1990

BULLETIN BOARD

TED TURNER LENDS A HAND

An agreement between cable-TV king Ted Turner and The Nature Conservancy has provided permanent protection for over 128,000 acres of Montana ranchland and wildlife habitat, including a large tract near Yellowstone National Park. Conservation easements, donated by Turner in cooperation with The Nature Conservancy, guarantee that no commercial development will occur on the two properties owned by Turner. The easements allow current agricultural uses but prohibit commercial timber harvesting or mining. One of the ranches, the 107,000-acre Flying D, abuts Forest Service land north of Spanish Peaks and is within the greater Yellowstone ecosystem. It provides habitat for over 1,500 elk, as well as deer, bear and waterfowl. But it will be off limits to people. After Turner bought the Flying D in 1989, he told the press he would not allow public access to Forest Service land through his property (HCN, 8/14/89). Like any legal easement, a conservation easement remains permanently attached to the property, regardless of ownership.

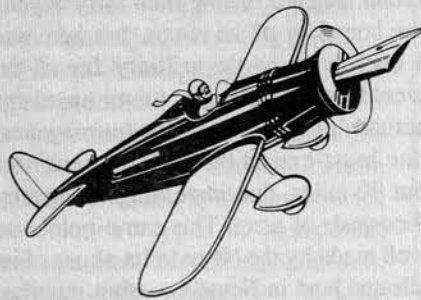
HIGH PLAINS RADIO

News from the high plains and intermountain West can now be heard on public radio. High Plains News Service broadcasts news stories and essays on environmental, economic, Native American and cultural issues in the Dakotas, Montana, Idaho, Wyoming and Colorado. A project of the Billings, Mont.-based Western Organization of Resource Councils, the news service transmits two 15-minute programs on the first and third Wednesday of each month. Available to any public radio station in the country, the program is currently broadcast on approximately 30 stations in the six-state region it covers. Anyone with questions, comments or story ideas can call Mary Boyle at the Western Organization of Resource Councils, 406/252-9672.

75 YEARS IN THE MOUNTAINS

Founded more than 75 years ago to help neophytes become mountaineers, the Colorado Mountain Club has become best known for its backcountry outings. But the club also plays a role in preserving Colorado's mountain environment, says Hugh Kingery, author of *The Colorado Mountain Club: The first 75 years of a highly individual corporation*. In 1915, for example, members helped write the bill that established Rocky Mountain National Park; in 1936, they opposed the Colorado-Big Thompson Water diversion project; in 1964, members joined other environmental groups to lobby for the Wilderness Act; and in 1986, the club sued the cities of Colorado Springs and Aurora over a plan to divert water from the Holy Cross Wilderness. The group now boasts 7,500 members and one of them, Gudy Gaskiel, ramrodded the construction of the 480-mile Colorado Trail.

CMC History Book, 1001 Pine St., Boulder, CO 80302 (303/442-7793). Paper: \$11.00. 125 pages.



Monte Dolack

KEEPING THE SKIES FRIENDLY

It isn't easy to keep abreast of military land grabs and airspace abuses. *Skyguard*, a 20-page quarterly newspaper published in Reno, Nev., fills the void. A joint project of Citizen Alert and The Rural Alliance for Military Accountability, the latest issue includes stories on an air training route through California's Joshua Tree National Monument, military flights over Nevada wilderness and low overflights in West Germany. You can even call a toll-free hotline (1-800/SKYGUARD) to report irresponsible military behavior. For more information and free copies of *Skyguard*, contact Skyguard, PO Box 5391, Reno, NV 89513.

SITTING BULL CENTENNIAL

A group of Sioux Indians on the Standing Rock Reservation have asked five Western states encompassing the old Sioux hunting grounds to declare 1990 the "Centennial Year of Sitting Bull and Wounded Knee." Indian agents killed Lakota Sioux Chief Sitting Bull in 1890 for leading an "uprising," and Custer's cavalry massacred hundreds of Sioux people at Wounded Knee two weeks later. Both events are reminders of the bitter history of Indian-white relations in America. Led by some of Sitting Bull's descendants, Indians on the South Dakota reservation hope the centennial of these events can encourage reconciliation and help "all the citizens of our states to learn more about each other and help each other." In a 12-page proclamation they explain their history and hopes for the future, and they also propose three projects for 1990. One project would establish a trail, with memorials along the way, from the site of Sitting Bull's death to Wounded Knee; a second project would designate Dec. 15 as the "Sitting Bull National Holiday"; and a third would produce a documentary film about Sitting Bull by David Seals, author of the book and screenwriter for the film *Powwow Highway*. None of the states — South Dakota, North Dakota, Montana, Wyoming and Nebraska — have responded to the idea yet, but Seals, who is planning the centennial, says he expects things to "take their time." For more information, contact David Seals, Indian Information Center, P.O. Box 31, Sturgis, SD 57785 (605/347-5601).



FROM DOVES TO GROUSE

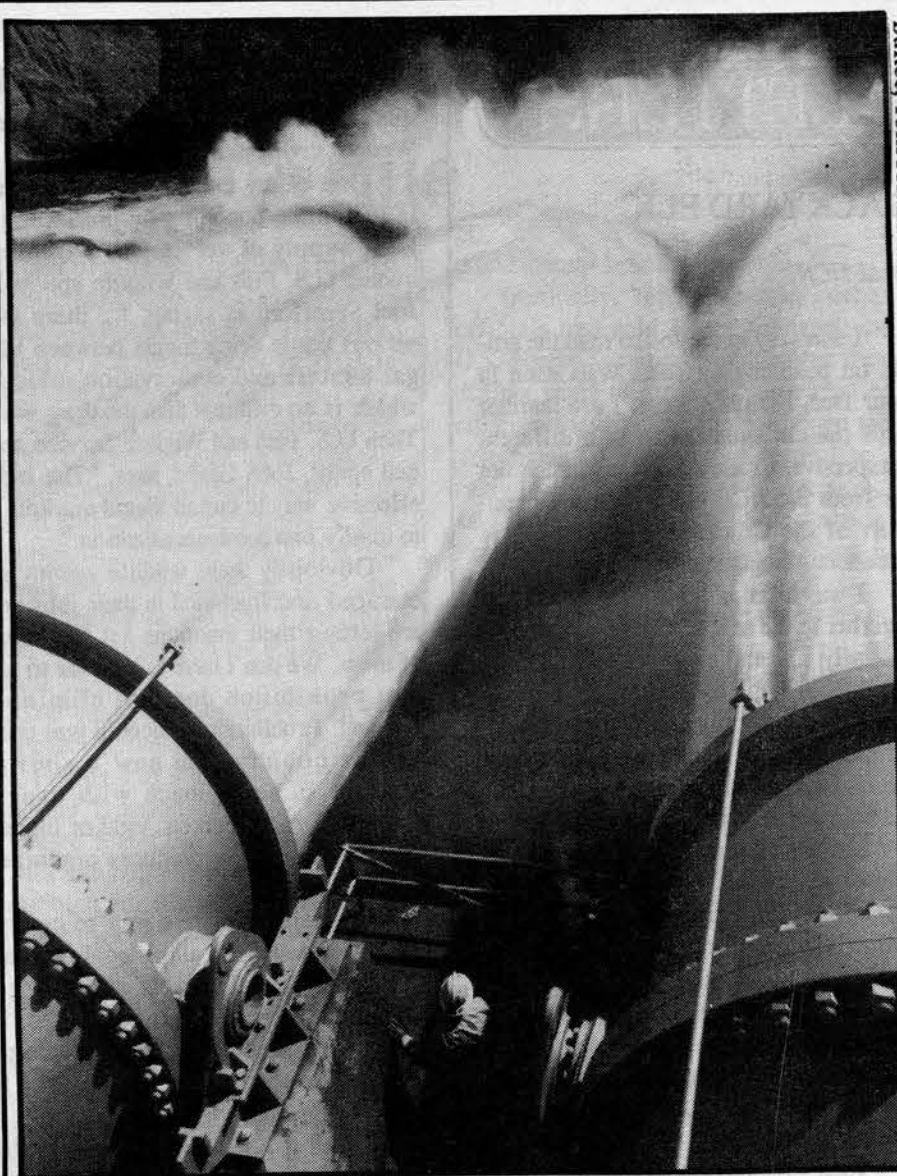
Southern latitudes and elevations ranging from 100 feet to over 12,000 feet combine to give Arizona a unique variety of game birds. Because of the tremendous climate variation in the state, hunters can find white-winged doves in the desert and search for blue grouse in subalpine meadows a few hours later. In *Arizona Game Birds*, biologist David E. Brown provides life histories, population data and habitat information on each of the state's 12 species of hunted birds. Although Brown focuses on Arizona, he adds maps showing the distribution of each species throughout the Southwest.

University of Arizona Press, 1230 N. Park Ave., 102, Tucson, AZ 85719. Cloth: \$19.95. 307 pages. Illustration with maps, photos, drawings, sketches, charts.

A GRAND ADVOCATE

The writer Edward Abbey said of renowned natural historian and essayist Joseph Wood Krutch: "He abhorred the empty spaces of windy rhetoric and never indulged." It is fitting that the University of Arizona Press has reissued Krutch's classic book, *Grand Canyon: Today and All Its Yesterdays*, along with two of his other works: *The Desert Year* and *The Forgotten Peninsula*. First published in 1957, *Grand Canyon* captures the epic scale of an epic place. A former drama and literary critic for *The Nation*, Krutch's style is one of cultivated sophistication tempered with an enthusiastic love of the Southwest. He weaves the human players, from the earliest Native Americans to John Wesley Powell, into the geology and natural life of the canyon. He also asks how we will resolve the dilemma of our national parks, whose mandate is both protection and "pleasure." He knew the resolution of that problem would be a long time coming.

University of Arizona Press, 1230 N. Park, #102, Tucson, AZ 85719. Paper: \$11.95. (*Grand Canyon*), \$9.95 (*Desert Year*, *Forgotten Peninsula*). Maps, index.



Burec, Tom Fridmann

In 1984, these outlets helped release the abnormally high water behind Glen Canyon Dam

CEMENTING GLEN CANYON

A tale must be told and retold with the right blend of drama and nostalgia before it enters the classic annals of Western myth. Russell Martin's new book on Glen Canyon Dam focuses on the drama between dam builders and lovers of a wild river canyon, and he calls it *A Story that Stands Like a Dam: Glen Canyon and the Struggle for the Soul of the West*. Martin examines the Bureau of Reclamation's project from the details of its physical construction to the politics surrounding what David Brower dubbed "the place no one knew." The Colorado-based author takes abundant anecdotes from

river runners, engineers and conservationists and turns them into larger than life metaphors for the post-boom West. A quote from photographer Eliot Porter watching the lake rise is a good example: "Death and the thickening umbrageous gloom take over where life and shimmering light were the glory of the river." Martin succeeds in cementing the story into the stuff of myth, perhaps more permanent than any BuRec project.

Henry Holt and Company, 115 W. 18th St., New York, NY 10011. Hardcover: \$24.95; 337 pages. —Florence Williams

FREE YELLOWSTONE

Free market proponents John A. Baden and Donald Leal are the editors of a new book addressing the management, or mismanagement, of the greater Yellowstone area. *The Yellowstone Primer* includes pieces by economists, naturalists and journalists examining such controversies as instream flow regulation, wolf reintroduction and oil and gas development. Baden, chair of the Foundation for Research on Economics and the Environment (FREE), writes in his introduction: "When we seek the cause of almost any problem in Greater Yellowstone, we find destructive ecological practices coupled with economic inefficiencies." Many of the authors propose how the free market or quasi-private organizations could resolve issues better than the area's federal management agencies.

Pacific Research Institute for Public Policy, 177 Post St., San Francisco, CA 94108 (415/989-0833). Cloth: 226 pages. Illustrated with maps and graphs.

A CONSERVATION ALTERNATIVE FOR WYOMING

Conservation groups across Wyoming are drawing up an alternative to the Bureau of Land Management wilderness proposal. The BLM originally included over one million acres in its inventory of wildlands, but only 570,000 acres ended up as suitable for further study. Wilderness advocates now fear that the BLM will recommend only 200,000 acres as wilderness. Because conservationists say this recommendation would be inadequate for the state's wildlife, volunteers from over 11 conservation groups in Wyoming with knowledge of specific wild areas are helping to develop a more generous alternative. For more information, contact Lynn Kinter, who is coordinating the effort, at Rt. 62, Box 12-E, Atlantic City, WY 82520 (307/332-2453).

WORK IN THE ROCKIES

Instead of a week at the beach, why not spend this year's vacation in Colorado's high country building brawn and maintaining trails for hikers and horse riders? The Colorado Trail Foundation is looking for volunteers to work on week-long and week-end trail crews. A \$25 registration fee enables participants to build or reconstruct sections of the Colorado Trail in locations such as Sayres Gulch in the Collegiate Peaks Wilderness, Matchless Mountain in the San Juan Range and Longs Gulch in the Holy Cross Wilderness. Food and tools are provided by the foundation or Forest Service; volunteers need a sleeping bag, tent and sturdy boots. For more information, contact The Colorado Trail Foundation, 548 Pine Song Trail, Golden, CO 80401.

COMMON GROUND

Where do corporate executives, recreationists and environmentalists come together? If nowhere else, perhaps they will find common ground on the pages of *Trilogy*, a glossy new magazine from Lexington, Ky. Calling itself a "magazine of outdoor commitment," it offers companies and environmental groups the opportunity to write about their own projects in their own words. The magazine was founded by Kevan Khanamirian, a former lifejacket manufacturer, and is edited by Jon Klusmire, a freelancer who lives in Glenwood Springs, Colo. Included in the August issue is an article on Project RAFT by the program's youth exchange coordinator, a look at the Rocky Mountain Institute by director Amory Lovins, and a discussion of conservation ethics by a director of the National Rifle Association. The 208-page magazine includes photos by Robert Werling and David Muench. Yearly subscriptions to the magazine, which is published twice annually, are \$10. Contact Trilogy Publishing, Inc., P.O. Box 11546, Lexington, KY 40576.



COLORIZING WESTERN HISTORY

In 1893, Frederick Jackson Turner declared the Western frontier closed. Western historians have mostly accepted Turner's watershed date as gospel, but not Patricia Nelson Limerick. In *The Legacy of Conquest: The Unbroken Past of the American West*, the University of Colorado historian dispels the romantic myth that the westward migration was purely a search for more elbow room. Economic profit, first and foremost, she argues, motivated 19th century settlers, and the same forces are still at work today. Limerick also takes issue with a traditional, monochromatic view of the West. Her view includes a diverse palette of women, Chicanos, Native Americans, African-Americans, Asian-Americans and religious minorities. Awareness of this complex past, she concludes, may help its inheritors deal with an uncertain future.

W.W. Norton & Company, Inc., 500 Fifth Ave., New York, NY 10110. Paper: \$9.95. 396 pages. Illustrated with black-and-white photographs, notes, index.

RIDE THE NORTHERN ROCKIES

Mountain biker Michael McCoy thinks enough trails exist on spectacular public land in Montana, Wyoming, Idaho and South Dakota to accommodate both hikers and bikers. In his book, *Mountain Bike Adventure in the Northern Rockies*, he offers some 40 "guilt-free" rides on little-known trails specifically designated for off-road vehicles or recommended by land administrators for mountain biking. Recommended rides are on state and federal land and include areas near Yellowstone and Glacier national parks and the Flathead River in Montana. He also includes rides near some of the region's larger cities. Information needed for day trips is packed in, including maps, elevation change, total distance, route difficulty and riding time. McCoy lives in Missoula, Mont., and is program director for Bikecentennial, a non-profit group that promotes bicycling in the United States.

The Mountaineers Books, 306 2nd Ave. W., Seattle, WA 98119 (1/800/553-4453). Paper: \$10.95. 182 pages. Illustrated with maps and black and white photographs.

ROUTE-FINDING SKILLS

Anyone venturing into the backcountry on foot, skis, or in a canoe or sea kayak should know how to use map and compass. Mountaineer Glenn Randall of Boulder, Colo., a veteran of expeditions to Alaska and the Andes, has written *The Outward Bound Map and Compass Handbook* to help teach route-finding skills to novice wilderness users. Randall explains how to read topographic maps in a chapter called "Understanding the Drunken Spider's Web," how to follow a compass bearing, and how to pinpoint your location using different combinations of map, compass and altimeter. Randall also shares some of his own harrowing experiences because, as he has learned, "it's best to plan for the worst case, not the best."

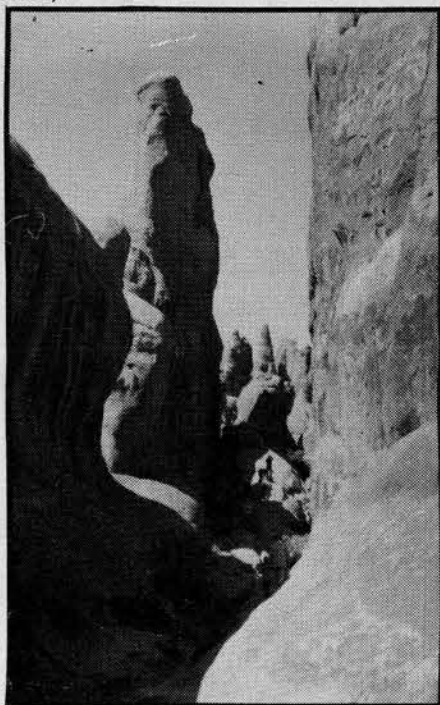
Lyons and Burford, Publishers, 31 W. 21st St., New York, NY 10010. Paper: \$8.95. 112 pages. Illustrated with drawings.

REACH OUT AND BUST SOMEONE

For 10 years, Wyoming citizens have helped the Game and Fish Department identify and arrest poachers by using a toll-free phone number and a reward system. When tips reported on the toll number lead to an arrest, the caller receives a cash reward of \$100, \$500 or more. The 2,000 calls the department has received have led to 427 arrests, 426 convictions and fines totalling \$196,077. The toll-free number is 1/800-442-4331.

REVERSE PERESTROIKA IN THE NORTHWEST

"State Regulation of Federal Public Lands: Cooperation or Competition" is the theme of a March 30-31 conference in Missoula, Mont., sponsored by *The Public Land Law Review* of the University of Montana School of Law. Professor Zygmunt Plater, lead counsel in the landmark U.S. Supreme Court case *TVA. v. Hill*, the "snail darter" case, will give the keynote address. Sessions are planned on wolf reintroduction and water allocation issues on tribal lands, and Prof. Robert Keiter of the University of Wyoming will talk on "Wolf reintroduction: Federalism and the Endangered Species Act." John Bonine of the University of Oregon may have the most colorful topic: "Reverse Perestroika in the Northwest: Will federal land managers obey the law if citizens can't sue?" For more information write *The Public Land Law Review*, attn: Conference, University of Montana School of Law, Missoula, MT 59801 (406/243-6568).



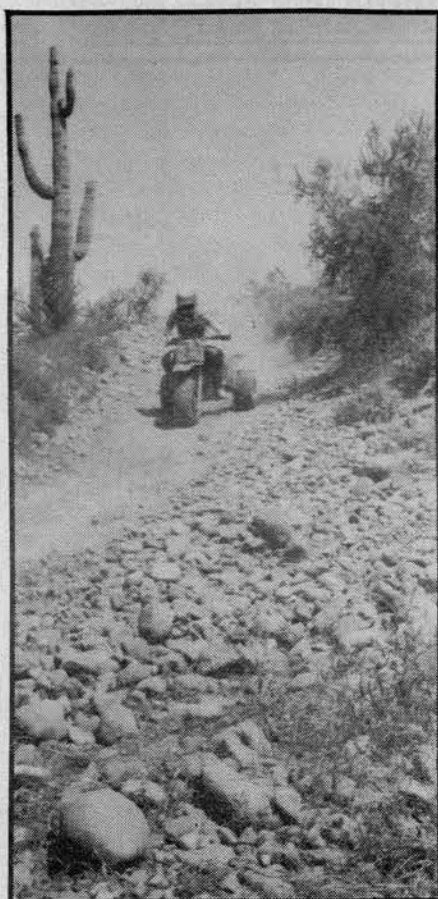
Arches National Park

FEWER IN THE FURNACE

Guided walks through the Fiery Furnace in Arches National Park near Moab, Utah, feature eerie sandstone fins and native vegetation, but not solitude. To reduce crowds, which often number 75-100, the Park Service has decided to require reservations and limit the walks to 25 people. Arches Superintendent Paul Guraedy acknowledged that reservations may irritate some visitors, but he said large groups create a safety hazard in the steep, confusing terrain. Reservations must be made in person at the Arches visitor center, up to 48 hours in advance. The Park Service will offer two walks a day and groups larger than nine can request a special guided tour.

PEACEFUL NETWORKING

Kimberly Mitchell, a resource assistant on the Nez-perce National Forest in Idaho, has begun a nonprofit group for people interested in conservation issues. It's called PEACE, an acronym for People for Ecological Awareness and Conservation Ethics, and it is connected by a bimonthly newsletter, *The PEACE Connection*. The four-page newsletter's objective is to increase awareness of how people's lives affect natural ecosystems, Mitchell says. It focuses on how individuals and groups can become involved in such issues as recycling, energy conservation and air pollution. Mitchell began PEACE last April from her home in Elk City and says it now reaches people all over the country. For more information, contact Kimberly Mitchell, PEACE, PO Box 122, Elk City, ID 83525-0122 (208/842-2386).



3-D Photography

BIKERS GET BYWAYS

The Bureau of Land Management wants to make the backcountry more driver-friendly. To do that, the BLM has established a National Back Country Byway system with designated routes that range from paved roads suitable for air-conditioned cars to paths managed for dirt bikes. So far, the system includes 39 different routes in 11 Western states, totaling over 1,700 miles of byway. Byways were one recommendation of the President's Commission on Americans Outdoors, which found that 43 percent of Americans drive for pleasure. That makes driving the second most popular form of recreation after walking. Interior Secretary Manuel Lujan, BLM Director Cy Jamison, and Nevada Gov. Bob Miller will inaugurate the system April 7 at Whitney Pockets on the Gold Butte Byway in southern Nevada.

USER-FRIENDLY ACTIVISM

Coloradoans Rob and Kathy Cox have designed a new software program that teaches users about global warming and ozone depletion. The IBM-compatible "Save the Planet" features well-researched statistics, graphics and a built-in word processor for writing letters to Congress. Designed as an educational tool for schools, organizations and individuals, the program includes information on everything from fossil fuels to atmospheric chemistry. Best of all, the floppy holds 120 pages worth of print, saves trees and can, of course, be re-used. The Coxes distribute the program under the philosophy of "shareware," encouraging widespread copying and use. They do ask that users send a \$10 registration fee. For more information contact Save the Planet Shareware, Box 45, Pitkin, CO 81241 (303/641-5035).

WILD RIVER-RUNNERS

When river-runners face the long, cold months without rapids to ride, they can flip through the pages of *First Descents: In Search of Wild Rivers* and let their minds travel down once-uncharted streams. Of the 20 personal accounts by some of the world's best boaters, Richard Bangs is one of the more provocative. He describes his metamorphosis into a boatman guru during a summer in the Grand Canyon. The world seems pale after that, he confesses. Royal Robbins takes the reader through California's San Joaquin Gorge, where water drops more than 450 feet per mile, and William Nealy demonstrates urban boating at its best in his fine description of dodging sewage in Alabama's "Polio Creek." Among the other rivers traveled are Peru's Rio Colca and the Braldu River in Pakistan. The book is edited by Cameron O'Connor and John Lazenby, both of whom are boaters and armchair adventurers.

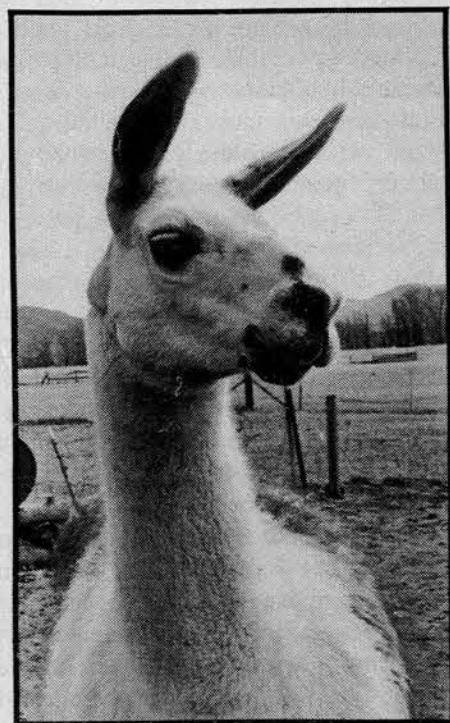
Menasha Ridge Press, P.O. Box 59257, Birmingham, AL 35259. Paper: \$13.95. 184 pages. Illustrated with drawings, black and white photos.

AN ENVIRONMENTAL FILM FESTIVAL

Filmmakers, environmentalists, scientists and politicians will focus on such topics as climate change, overpopulation, deforestation, wildlife and alternative energy sources at the first U.S. Environmental Film Festival, April 27-29 in Colorado Springs. Organized by the Pikes Peak Film Council and co-sponsored by the Colorado Environmental Coalition, the festival will show some 50 feature, short and animated films and videos. Seminars and lectures are planned, and speakers include Sen. Tim Wirth, D-Colo., and Steve Schneider, a scientist with the National Center for Atmospheric Research. Organizers say they also hope to establish an Environmental Film Foundation to keep the dialogue going between environmental organizations and filmmakers. For more information, write the U.S. Environmental Film Festival Committee at 1020 W. Colorado Ave., Colorado Springs, CO 80904 (719/520-1952).

NATIVE AMERICANS AND THE MEDIA

In radio dramas and shoot-'em-up movies about the old West, Native Americans are all too often portrayed as blood-thirsty or ignorant savages. How the news media reinforce these negative stereotypes is the focus of a first-of-its-kind conference featuring Native American leaders, journalists, artists and non-Indian reporters, called "The Media and the American Indian." The conference is sponsored by the National Conference of Christians and Jews, Inc., and set for April 25-27 in Sioux Falls, S.D. Topics include portraying American Indians with balance in the media, what the media is not doing to address Indian issues, and mass media and Indian identity: perspectives on Indian news from different eyes. Speakers include Tim Giago, editor of the *Lakota Times*, Chief Wilma Mankiller of the Cherokee nation, Rob Armstrong, CBS radio senior correspondent, and Geraldine Keams, a Navajo actress and writer. The conference will end with the designation of an American Indian Media Image Task Force to work with the media on reporting issues that affect the Native American community. For more information contact Paul Sand, Project Director, National Conference of Christians and Jews, Minnesota-Dakotas Region, 100 N. 6th St., #531-B, Minneapolis, MN 55403 (612/333-5365).



Arlene Shovard

WALK WITH A LLAMA

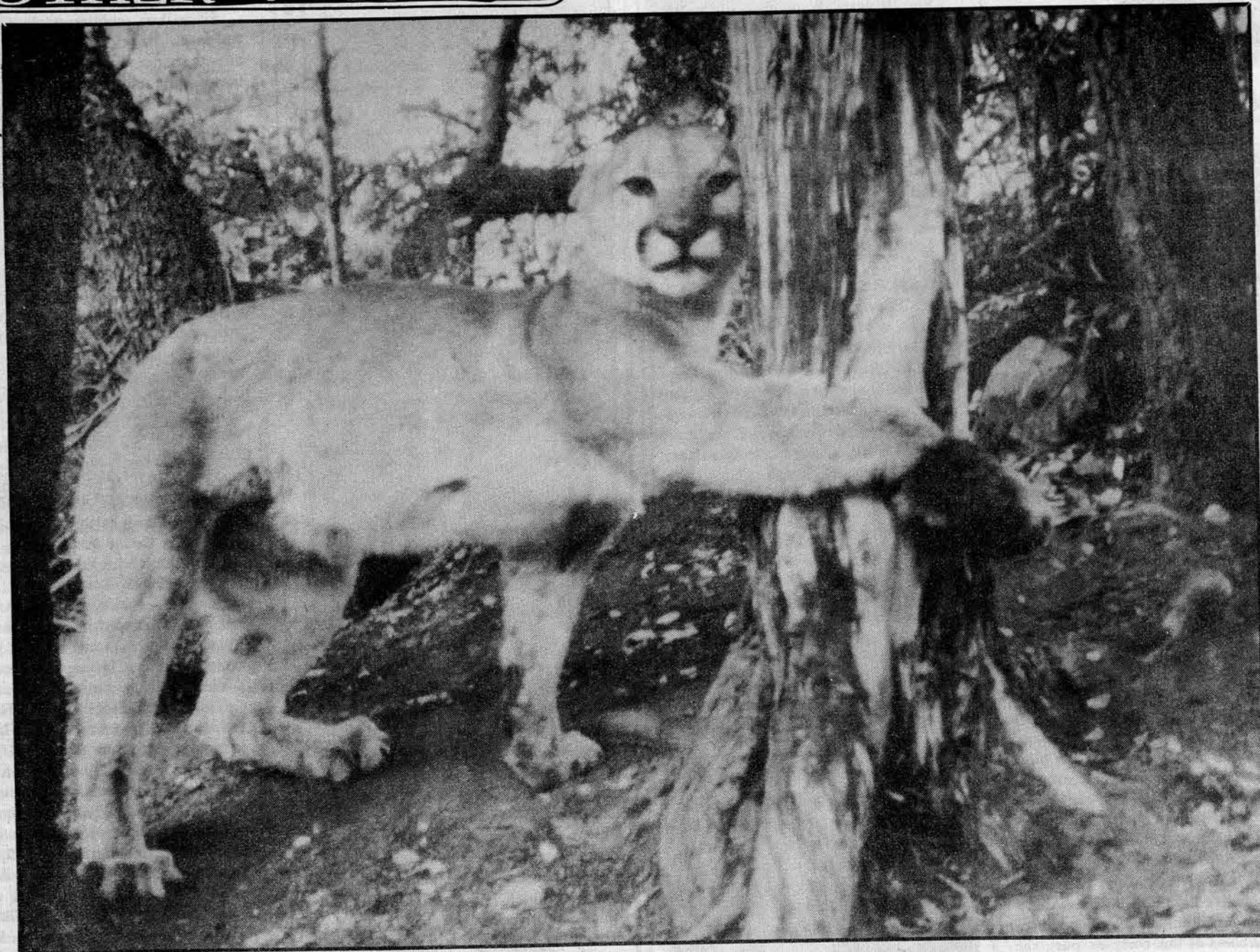
Boots or horses used to be the only modes of backcountry travel. But in the past several years, llamas have become an increasingly popular pack animal and trail companion. *Packing with Llamas*, by Stanlynn Daugherty, provides a wealth of how-to information on llama travel. Daugherty has been a llama packer since 1984, taking Sierra Club, Elderhostel and Womantrek trips into the Wallowa Mountains in northeastern Oregon. She has packed her experiences into this book to explain everything from training a good pack llama to starting a commercial packing business. Appendices include references, poisonous plant lists and addresses of commercial packers.

Juniper Ridge Press, P.O. Box 338, Ashland, OR 97520. Paper: \$11.95. 208 pages. Includes index, appendices and photographs.

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OTHER VOICES

Anonymous source



Bloody paw: This mountain lion in Arizona was held fast in a U.S. government trap for days before it was shot

Arizona ranchers are ripping off wildlife

by Dan Dagget

Reading the newspapers in Arizona can be a risky business. Sometimes the pages are almost too grisly to confront, with blood-dripping pictures of severed mountain lion heads or graphic stories of black bears left to die slowly in spike-toothed traps.

All were casualties in a war conducted under a law that sanctions a livestock owner killing these animals. Because of the outrage these photos helped create, Arizona's Stockkiller Law, as it has come to be called, is itself targeted for extermination. But it is proving harder to put to rest than the stealthiest lion or the biggest bear.

No one knows how many of these animals are killed in Arizona every year by ranchers or their hired guns. That's the case even though mandatory reporting is the only limit on a license to kill that is one of the most lenient in the West.

At best, a dozen or so kills actually are reported every year, but virtually everyone — even ranchers — acknowledges that the real total is much higher. Estimates from hunters as well as state wildlife biologists range from a low of 100 mountain lions a year to a high of 600. This is in addition to a sport hunt that annually kills around 200 lions out of an estimated state population of 2,500 resident adults. The loss of bears may be less, but no one really knows.

In 1989, the discovery of nine desiccated black bear carcasses scattered around a rancher's steel-toothed traps north of Tucson created a wave of outrage and pushed the first repeal of the Stockkiller Law into the state legislature. Shortly after that effort died on the desk of state Sen. James Sossaman, head of the Senate Natural Resources and Agriculture committee, a photo that was to become infamous appeared on the front page of the state's largest newspaper, in *High Country News* (HCN, 9/11/89), on nationwide TV shows and in news magazines. The photo showed a pyramid of 11 rotting mountain lion heads, each frozen in a horrible grimace.

That's the kind of heat nobody likes to sweat under. The Arizona Game and Fish Department, which took the brunt of it, was eager to try to stop

the horror show. The tactic they came up with was one government agencies are fond of using to silence embarrassing information: secrecy. Under a bill drawn up by the state Game and Fish Department, the slaughters may continue but you and I won't be able to find out about them.

"The location of take and identity of the livestock operator filing the report (for killing bears or lions) are not public information," says Senate Bill 1137. The department decided to include this Achilles heel in its bill to court support from livestock operators. Ranchers have said that the main reason they refused to report in the past is that it exposed them to hostile reactions from the public and even to retribution from "radical elements."

Though the concession didn't buy a dime's worth of support from ranchers, it seriously eroded support from conservationists who wanted a strong bill. It was a bad gamble all the way around.

The ranching community might have been better off to support the bill. It is not much of a change from the current situation, which requires no proof of actual loss before livestock operators can call out the dogs or set a bevy of traps. Instead, proof must be produced "on request." There is a requirement that only "the offending animal" be "taken," although considerable doubt remains that such a determination can be made with much certainty. The department promised more restrictive controls and better enforcement if its bill is passed; but not much was really changed.

Why not? The answer becomes obvious when talking to ranchers, even moderate ones, about the stock-killer law. They think that the Sagebrush Rebellion is over and they won. No one's going to tell them what to do on their ranch.

The trouble with this attitude is that their ranch is also your ranch and my ranch, since most grazing in Arizona and throughout the West is done on public land. Ranchers are just tenants whose grazing fees are only a fraction of market value.

What do we the people, the real owners of that land, get in return? A tenant who shoots "our" animals to protect his livestock. What would a rancher do if he had a tenant who was killing his livestock? Louis Lamour

would tell us he would either shoot 'em or string 'em up. In this case, eviction is more likely.

That is a sensible alternative. Ranchers themselves are bringing us to that point, ranchers such as Mike Oden, who gut-shot 20 or so elk down by Prescott last year because they were eating public grass he thought should go to his cattle; ranchers such as the livestock representatives on a state panel who recently asked for the immediate removal of 60 percent of Arizona's elk herd — 10,000 to 18,000 animals — to keep them from "depredating on" public grass.

Those ranchers are making it clear that on public lands we can have either ranching or wildlife, not both. This is one issue on which I don't think most Americans would have any trouble making a decision, and the number who would debate the issue is shrinking every day.

Some ranchers are already seeing themselves more as managers, not just cattle-growers. In as little as 20 years, some people say, public lands ranching will be looked at as a living history exhibit, not a viable economic activity.

Maybe that is what it is today, and maybe it's time we treated it as such. Ranching remains a picturesque way of life and a cherished part of our national myth. As an exhibit of history, however, it ought to stop ripping other exhibits — such as wildlife — from the wall. But for now, ranchers enjoy considerable political clout, even though livestock operators make up less than one percent of Arizona's population and account for less than one percent of the state's economy. Ranchers still have power in the state legislature to kill or at least cripple even the state Game and Fish Department's moderate bill. A more aggressive conservationist bill that stresses non-lethal remedies won't even get a hearing, and a bill that would turn control of lions and bears over to the state's Department of Agriculture hasn't a prayer.

So get ready to see a lot more pictures like the one above, at least until the reapportionment of 1990 sends some of the good ol' boys home, or until the initiative process repeals the license to kill once and for all. ■

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