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The Environmental Biweekly of the Rockies and Great Plains



# High Country News

Vol. 11 No. 7

Lander, Wyoming

Friday, April 6, 1979



## Slurry carries coal, water and controversy

by Dan Whipple

Many of the rivers and streams of the West must have been christened by pessimists. Some of the names — Powder River, Salt Creek, Big Sandy — suggest more the absence of water than its presence.

Water in the West has long been a matter of contention. How much is used for what purpose has been the subject of arguments, negotiation, range wars and complex court battles. And, as new projects using Western water are proposed, everyone fights to hold a share of the precious resource.

Westerners say that "water flows toward money." Recently, most of the money to purchase water has been in the hands of energy companies. And few energy projects are more controversial than slurry pipelines. New coal slurry proposals are raising major regional questions concerning water use priorities, Indian water rights, interstate cooperation and competition, and perhaps even the scale of future Western coal development.

At first glance, a slurry line seems innocuous enough. It is a pipeline, usually about three feet in diameter, through which is pumped finely crushed coal and water in equal proportions. It is an economical method of moving large volumes of coal over long distances or over terrain that is unsuitable for a railroad. Only one coal slurry pipeline is operating in the United



Photo by Mike McClure

TOM JUDGE AND WYOMING GOV. ED HERSCHLER

**Montana Gov. Tom Judge says flatly that he will sue if Wyoming appropriates water for slurry without his state's consent.**

States today — the Black Mesa pipeline, which moves coal from Arizona's Black Mesa mine to the Mohave power plant in Nevada — a distance of 278 miles.

Two slurry pipelines are proposed to move coal from Wyoming and Montana

south. The first, which has been struggling along for several years, is the Energy Transportation Systems, Inc. line from Gillette, Wyo., to White Bluff, Ark., and Baton Rouge, La. The ETSI line would require about 20,000 acre-feet of water an-

nually — which it will pump from the underground Madison formation in northeast Wyoming — to move 25 million tons of coal a year. ETSI has obtained its water rights, but the company is having difficulty obtaining rights-of-way across railroad property. Construction is still not under way.

The company pushing the second pipeline, Texas Eastern Corp., surprised the 1979 Wyoming legislature by requesting 20,000 acre-feet of water annually to move 25 million tons of coal from Decker, Mont., and Gillette, Wyo., to Houston, Tex. — nearly 1,200 miles. The Texas Eastern proposal has focused attention on the serious issues raised by slurry pipelines, including water, environmental concerns and energy development.

Any proposal to move water out of a Western state is greeted with howls of protest, and the slurry proposal is no exception. However, the legislature tentatively approved the Texas Eastern proposal, giving Wyoming Gov. Ed Herschler 90 days to decide whether to enter into a contract with the company for construction of a water diversion on the Little Bighorn River near Sheridan, Wyo.

While approval of the project would mean exportation of 20,000 acre-feet of water, the company offered Wyoming several carrots to increase the appeal of the proposal. The diversion would store as much as 42,000 acre-feet of water annually.

(continued on page 4)

## A winter's tale of wildlife suffering

by Philip White

Although the death toll is not in yet, Wyoming Game and Fish Department personnel say it was the worst winter for wildlife in memory. In other northern Rocky Mountain states that were afflicted with the frigid temperatures and deep drifted snows of the winter of 1978-79, wildlife fared only slightly better.

The biggest losses of game animals were reported in Wyoming, especially in the south-central part of the state, where woven-wire fences along Interstate 80 and other highways stopped antelope migrations and funneled the animals into the towns of Rawlins, Rock Springs and Green River. Bill Crump, a supervisor for Game and Fish, estimates that 50 percent of the

antelope in his district, which stretches from Dubois to Rawlins, died.

An estimated 10,000 antelope, unable to cross Interstate 80 and harassed by local dogs, gathered near Rock Springs. Game wardens shot 200 of the dogs, mostly pets of Rock Springs residents. The Denver-based American Humane Association investigated the dog killings and accused the Wyoming Game and Fish Department of negligence in failing to lure wildlife farther from cities and of shooting some dogs that weren't chasing wildlife.

The Montana Fish and Game Department says it received a dozen complaints during the first two weeks of February of deer being chased or killed by dogs in the Missoula area. One deer, its chest torn by dogs, was chased right into Missoula and

had to be trapped with a wire cage for relocation. Utah, Idaho and Colorado officials also reported dogs harassing wildlife.

Colorado and Wyoming agencies issued statements asking snowmobilers to stay away from wildlife, saying the energy required of a weakened animal to move away from humans could push the animal beyond the survival point.

Emergency feeding operations were instituted in Colorado, Wyoming and Idaho.

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Photo by Bart Smith

**SNITCHING a bite to eat from a haystack near Lander, Wyo. Hay fills deers' stomachs but doesn't necessarily nourish them.**



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## HCN Letters

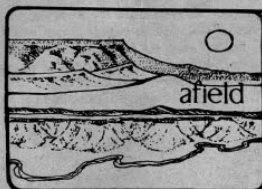
### INSPIRATION

#### Ladies and Gents —

A sudden inspiration — prompted by your suggestion on page one of each issue — to renew early and save you paperwork. Such inspirations are rare. Let's see, I do recall feeling moved to write Nixon in '74 or '73 urging him to resign. That was a good inspiration.

An HCN renewal? Not such a dramatic inspiration in a political sense, but a good one nonetheless. You're needed.

Geoff Pretsch  
Miami, Fla.



by Hannah Hinchman

Here in Wind River Valley despite a couple of brief, wet spring storms spring is advancing. Beetles, spiders and spiky grass shoots are poking through the mat of pale dead grasses on the banks of the Popo Agie's North Fork.

### ALASKA PIONEERS 'SELF-SUFFICIENT OSTRICHES'

Dear HCN,

Coming Into The Country, a recent best seller by John McPhee, raises important issues for conservationists. McPhee is an excellent story teller. He tells of rivers recently "fished out" and how natives abandoned once productive coastal areas. Using hearsay and tales from the foggy memories of old folks, McPhee describes long-term natural "cycles" to explain the current lack of caribou. McPhee, a journalist, strangely ignores ecologists' data and relies on colorful storytelling.

River people described by McPhee are totally dependent on oil and technology. These river people refuse to acknowledge their dependence on their aircraft and fossil fuel, which bring in salt, beans and basics. Essentially no different from a sub-

urban bureaucrat with a vegetable garden, the river people imagine their lifestyle as "independent".

Most disturbing is the attitude the grub-stake "pioneers" take toward the predators. The predators are the tip of a vast Alaskan ecological pyramid of biomass. They are vulnerable. Like vandals destroying the tips of Egyptian pyramids for profit, these "pioneers" continue to live by destruction, resource exploitation and "rugged individualism."

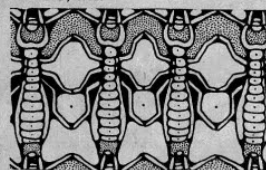
McPhee's people of the country believe that if they flee from the 20th century, it will go away. As long as their rapidly vanishing geographic isolation holds out (and I hope it does forever!), the Alaskan pioneers can deceive themselves into believing they live in the 19th century. If wishes were horses, we would all ride.

Unfortunately, a rugged "self-sufficient" ostrich with its head in the glacial alluvium is in no position to make decisions

in a world arena where choices will affect vast areas. Nuclear fallout from a Mideast war — caused by resources gulped down in pig-like fashion by the U.S. — can foul the chromosomes of every tree, pine marten, grouse and grizzly of Alaska as well as the kids in Iowa gradeschools and Canton communes.

Alaska, indeed the world, is playing for big stakes. McPhee's sincere individualism, so strongly defended by selective storytelling, is perhaps out of place.

Mark Stromberg  
Madison, Wis.



### RESENTS INSINUATIONS

Dear HCN Staff,

In the article on Stewart Brand, you take great offense at being dumped "into one distasteful heap." Not a very pleasant feeling, is it? Yet you folks are very often guilty of the same offense.

You state that guest editorials do not necessarily reflect your opinions. It might be time to strive for a little more diversity in your pick of guest editorialists.

As a rancher-cowboy, I too resent being categorized. I love my land and all of its inhabitants and strive for a form of management compatible with my feelings.

Continual insinuations that anyone who works a horseback and chews Copenhagen is a red-necked ass get kind of tiring. And they are not progressing toward solving the grave problems of our environment.

Having two groups, each armed with only one "acceptable" solution to a problem, is getting us nowhere. Locally, there are many aspects of the Bureau of Land Management mustang and predator problems which need to be considered.

Communication and compromise are two free tools which we have at our disposal: let's use them!

Eric Sprado  
Wells, Nev.

### 'BIASED DEFENDERS'

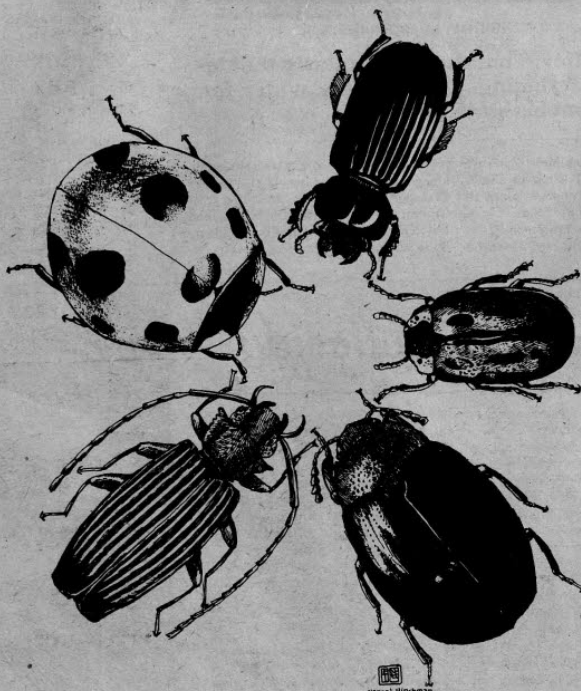
Dear HCN,

I am renewing my subscription to HCN for another year despite the strong impression that you show bias toward the range affairs of the Bureau of Land Management and the Forest Service. At least in that respect, you show yourselves to be highly selective defenders of your environment.

It is incomprehensible to me that you people can be so blind to the gross erosion and overuse damage so obvious to the observing eye. My most plausible assumption so far is that all of you must be so young that you have no conception of what the public, and much private, range should be like and was like, once upon a time, and can be again if managed right.

I wonder if any of you have examined the vegetation in an unmowed and tightly fenced corner of a really old graveyard? Such a place may be the only place where former range conditions may still be found.

William Voigt, Jr.  
Blackshear, Ga.



## Let's not export our heritage in slurry lines

by Bart Koehler  
The Wilderness Society representative  
for Wyoming, South Dakota and Nebraska

Slurry lines sound innocent, right? But export of water and rapid coal development sound ominous, and both would result from approval of slurry pipelines.

As Dr. Seuss wrote in *The Lorax*, we're "biggering, and biggering and biggering."

It's time that we slowed down, caught our breath and really examined what the effects of this will be before we flat out sell the ranch.

Whether it's subsurface water, as Energy Transportation Systems, Inc. prop-

oses, or surface water, as Texas Eastern proposes, it is still the export of water and a corporate robbery from non-Indian agricultural, recreational and municipal users — as well as from the Indian tribes.

Export of water should be illegal under Wyoming water law. Once the first water export pipeline is in place, the floodgates will be opened. A map of the proposed slurry pipelines looks like a spider web with spokes leading out of the coal region in all directions carrying chunks of our high plains and our precious water. We will be engaged in interstate commerce, and none of the consumer states would ever permit Wyoming or any other Great Plains

state to stop their energy-water fix.

We are sacrificing more than enough of Wyoming in the form of coal in order to serve the gluttonous energy appetite of this nation. There is absolutely no need to bankrupt ourselves further. Furthermore, we have a far greater national need for magic places, clear skies, open spaces and wild country. The Great Plains states still have that magical heritage that fulfills our vital human need for peace of mind and beauty.

Let's stand together as a Great Plains Coalition and defend our land, our air and our water before our sacred ground and human heritage is hauled away forever.

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Guest editorials do not necessarily represent the opinions of the staff of HCN.

## How far are we from Three Mile Island?

Distant as we may seem from the Three Mile Island nuclear disaster, the Rocky Mountain states are the source of all that nuclear power brings this country. We supply the uranium fuel that keeps the industry alive.

High Country News has focused on the horrors at our end of nuclear development: radioactive tailings piles, spills on our highways, sabotage of weapons-grade materials and disposal of the growing heap of long-lived radioactive materials. While we recognized the possibility of a core meltdown, we had let others worry about it.

Three Mile Island has reminded us that we must face not only the problems that affect our area — but, as a vital link in the nuclear fuel cycle, we must monitor reactor safety and economic problems as well. That is a heavy burden indeed. Certainly too heavy for any newspaper. Too heavy as well for any region, nation, or planet. We can argue forever about the specifics — whether nuclear waste materials can be

isolated from living things for thousands of years, for instance. The fact remains, waste disposal is only one of half a dozen nuclear dilemmas — each of equal magnitude. Even if some of these problems can be solved the benefits to be derived from nuclear power do not make it worth the extraordinary remaining risks.

Reputable sources insist that the United States does not need nuclear energy to survive in high style. Energy expert Amory Lovins documented this in *Soft Energy Paths*. So did the Ford Foundation Energy Policy Project in its 1974 book, *A Time to Choose*. Assuming a growth in energy consumption slightly higher than the U.S. rate last year, the Ford researchers concluded that the U.S. standard of living could be maintained without massive new commitments to nuclear power — or large scale development of Western coal and oil shale where the land cannot be reclaimed.

Most recently, a Harvard Business School report tells us that the nation would be better off putting its dollars into energy conservation and solar power rather than into the four standard alternatives: oil, gas, coal or nuclear power. (See "Hot Line," page 10.)

Of course, most of this technical and economic wisdom has been around for a number of years. We hope that the drama

at Three Mile Island will inspire our leaders to take it seriously.

In the meantime, Westerners should renew their support of those groups that have been educating our leaders about the dangers of nuclear power for years. News reports about Three Mile Island identified many of the key national leaders. You may have heard less about some of the local prophets: the National Indian Youth Council, Albuquerque, N.M.; the Southwest Research and Information Center, Albuquerque, N.M.; the Wyoming Outdoor Council, Cheyenne, Wyo.; the Northern Colorado Resource Council, Fort Collins, Colo.; the Rocky Flats Action Group, Denver; the Colorado Open Space Council Mining Workshop, Denver; and Environmental Action of Colorado, La Veta, Colo. New groups are emerging to fight growing nuclear problems, among them the Black Hills Alliance in Rapid City, S.D. and Citizens Concerned about Radiation Hazards, Canon City, Colo.

If Three Mile Island reminds you that you'd like this country to get off the perilous nuclear path, let government leaders know — and send a few bucks to groups such as these to help them do their jobs.

— JN

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Managing Editor: Jean Nise  
Associate Editor: Marjane Ambler  
Contributing Editor: Dan Whipple  
Correspondent: Peter Wild  
Business Manager: Phil White  
Circulation: Jazmyn McDonald  
Art and Production: Will Murphy  
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## The inside track on slurry lines

To participate confidently in casual cocktail party conversation about coal slurry pipelines, it is necessary to cram one's head full of facts that are useless for any other purpose. However, nearly anyone can sound like a slurry expert in minutes.

The first thing any coal slurry aficionado says is, "A coal-fired power plant uses seven times as much water as a coal slurry pipeline." This phrase is mandatory in coal slurry pipeline discussions. The implication is, of course, that if a coal slurry pipeline exists, there will be no need for the dreaded power plant. This assumption is fine in casual conversation, but the choices are rarely that clear in real life.

Secondly, one must have a thorough grasp of acre-feet. An acre-foot of water is that amount of water needed to cover an acre of ground 12 inches deep. In most places, an acre with a foot of water on it would be considered flooded, a candidate for disaster relief. Not so with slurry pipelines — acre-feet are coveted like gold.

When explaining an acre-foot, you, as the emerging expert, must give your conversational partner a real-life example of the power of an acre-foot. You can say that an acre-foot is 43,650 cubic feet of water or 325,900 gallons. But such large numbers mean little to the average person. A tidy example from everyday life is needed. For instance, one acre-foot will provide enough water for a family of five for one year. A coal slurry pipeline requires 20,000 acre-feet of water annually to move 25 million tons of coal. That 20,000 acre-feet would keep that same family of five for 20,000

years. It would be enough water to fill our hypothetical acre 20,000 feet deep. And so on. You are probably beginning to get the idea.

Coal moves through a coal slurry pipeline at about four miles an hour. This conversational tidbit is usually followed by the comment "or about as fast as a man can walk." If he's in a hurry. It will take about 13.5 days for the coal to walk from Wyoming to Texas, if it doesn't stop for coffee.

After you have presented your explanation of water and acre-feet, it is acceptable to call the water the "slurry medium" or the "carrying agent." You do this in the hope that the person you're talking with will forget that it's water.

No slurry conversation is complete without a few references, usually unfriendly, to the railroad industry. "The slurry line will only share in the future growth of the transportation market, and railroads will continue to grow."

A railroad proponent says, first, "The railroads are perfectly capable of carrying all the coal produced in the West." He then follows with, "Slurry lines merely grab up the most profitable routes and deprive a nearly bankrupt American railroad system of desperately needed revenues."

If the speaker is a railroad executive, an astute slurry expert (as you have now become) will nod knowingly and say, "And exactly whose fault is it that the nation's railroads are nearly bankrupt?" The railroad executive will look befuddled at first, then walk away without a word.

— DSW



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## Slurry carries controversy. . .

(continued from page 1)



Photo courtesy Texas Eastern Corp.

**ELK HABITAT** may be threatened by the project. Texas Eastern is working with the state to minimize the adverse impact to the animals. Photo shows tagging of elk near project site.

ally. The 22,000 acre-feet in excess of the project's needs would be turned over to the state to do with as it pleased. All costs incurred by the state would be paid by Texas Eastern — giving the state, in effect, a free water project.

In addition, at the end of the useful life of the pipeline — after anywhere from 30 to

Horn Mountains in Northern Wyoming and flows directly into the Crow Indian reservation in Montana. When the river crosses the Wyoming-Montana border, its average annual flow is 110,000 acre-feet. The battle over who controls that flow may make the other famous battle of the Little Bighorn look like a skirmish.

### A Colorado slurry pipeline expert says, "There are very few environmental problems with most slurry lines."

50 years — the diversion project and the water would be turned over to the state at no charge.

The water would be sent from the Little Bighorn River to Montana's Decker coal mine. There, in the pipeline, it would transport two million tons of coal annually from the Decker mine, seven million tons from the Spring Creek mine and, farther down the line, about 15 million tons from three Wyoming mines near Gillette.

In addition to water, the pipeline offers Wyoming annual property tax revenue of \$3.3 million. Texas Eastern intends to hire only about 368 people, who would be spread around the state along the pipeline route, thus minimizing the social impact, the company says. A power plant would concentrate 1,000 or more workers in one community during construction.

The water diversion reservoir would also provide a recreation area for Sheridan residents, according to the company.

#### WATER RIGHTS CONFUSION

Texas Eastern acquired the water rights to 42,000 acre-feet from TR-12, a group of Sheridan landowners and businessmen who have been searching for seven years to find a company with enough capital to develop the Little Bighorn water. In doing so, it ignited a major controversy involving two states, several Indian tribes, Sheridan County, Wyo., residents and environmentalists.

The Little Bighorn originates in the Big

In Montana, the Crow Tribe claims all of the flow of the Little Bighorn as its own. Several Montana landowners who irrigate from the river are concerned about the size of the proposed Texas Eastern diversion, which would store 35 percent of the average annual flow of the river.

Further complicating matters, the Little Bighorn flows into the Yellowstone River,

and Montana insists that the water is covered by the Yellowstone River Compact. Under the compact, Wyoming, Montana and North Dakota must unanimously agree on any water transfer out of the Yellowstone Basin. The Montana Legislature, upon learning of the proposed slurry line, unanimously passed a resolution condemning the shipment of water out of the basin in coal slurry pipelines.

Texas Eastern says that the Little Bighorn is not covered by the compact because the river is not specifically listed in the agreement. Wyoming Assistant Attorney General Jack Palma agrees. "It is our initial opinion that the Little Bighorn River is excluded from the compact," he says.

However, at a hearing conducted in Sheridan on the pipeline, Montana Gov. Tom Judge said flatly that he would sue if Wyoming tried to appropriate the water without Montana's consent. Phil Roy, a lawyer for the Blackfeet tribe in Montana, called the Texas Eastern proposal "the most blatant, ill-timed raid on the water of Wyoming and Montana in the history of those two great states." Roy also contends that the only reason that the Little Bighorn was not specifically mentioned in the Yellowstone Compact was because of the Crow claims to it.

For one reason or another, the question will almost certainly wind up in the courts. A source in another company says that his organization looked at the Little Bighorn as a possible slurry water source and examined the legal issues surrounding it. He says, "We looked at this water source and thought it was really a can of worms. Our lawyers said that a good case could be made on either side of the question, but they thought they could win it. However, they also said that it would take 10 or 15 years to finally settle the issue, so we abandoned it."

Don Thomas, project analyst with Texas Eastern, says, "I wish I knew how long it would take. Our biggest stumbling block as far as the water is concerned is the Crows."

Dan Old Elk of the Crow Indian Tribe Water Resource Commission says that the tribe claims all 110,000 acre-feet of water crossing into Montana. Old Elk says that the tribe is currently planning a reservoir on the main stem of the Little Bighorn and that the Texas Eastern diversion would interfere with the project. The Crow claim the water under Winters Doctrine rights. This 1908 Supreme Court decision gave tribes water rights to all water they could use originating within, flowing through or adjacent to the reservations.

Twenty-six other Indian tribes within the Missouri River Basin are backing the Crows in this dispute, including their neighbor and traditional enemy, the Northern Cheyenne. How much water the Crows actually own has been debated in the Montana court system for two and a half years now. There are hundreds of litigants in the case.

#### LOCAL CONCERNS

Herschler held the Sheridan hearing to help him decide whether he should allow Texas Eastern to begin construction. About 800 people attended, and nearly 50 testified. Reaction ran heavily against the proposal or at least for delaying it until a number of questions are answered.

At the Sheridan County site, the project will consist of a diversion dam in the Little Bighorn, which will back water up about 100 feet in the river. The water will be sent in a pipe, about eight feet in diameter, to a reservoir site off the main stem. The reservoir site has not been selected, but the

water will cover about 950 acres of pasture lands, according to the company.

One major concern expressed at the hearing is whether the state will actually receive the surplus water that Texas Eastern is promising. Although the company will provide a 42,000 acre-foot storage capacity, some minimum stream flow — as yet undetermined — will be required. In addition, although the average annual flow in the river is 110,000 acre-feet, in some years it is considerably less than that. In dry years,

### Westerners say "water flows toward money."

the in-stream requirements, the prior downstream water rights, the Texas Eastern project and the Crow tribal claims might use up all the water, leaving none for the state.

A second major local concern is for the Little Bighorn Canyon, where Texas Eastern proposes to put its diversion dam. The canyon is narrow and steep, and portions of the stream pass between nearly vertical walls as high as 600 feet. Residents said they are concerned about the effect of putting an eight foot diversion pipe through the canyon. This would require roads and considerable construction activity. Many people said that they would like to see the diversion moved out of the canyon.

Texas Eastern did not respond to this request at the hearing, but sources say that there may be alternative sites available for the diversion that would be more acceptable.

The Wyoming Game and Fish Department is also concerned about the project's location. The site is near a game range that winters about 700 elk.

In a letter to State Sen. John Turner (R) on the proposal, the department said, "We are concerned with potentially severe impacts which a portion of the pipeline and the water diversion . . . could have on fish, wildlife and their habitats. We do not believe (the legislation) offers sufficient protection for the state's fish and wildlife resources."

In comments sent to the governor by the department, the agency said of the proposed construction work in the canyon, "It is doubtful if this work can be accomplished without serious encroachment or alteration of the Little Bighorn River."

Texas Eastern's problems notwithstanding, slurry pipelines in general are relatively environmentally benign. Robert Faddick, slurry pipeline expert at the Colorado School of Mines, says, "There are very few environmental problems with most slurry lines. The major impact comes in the construction stage while laying pipe in the trench."

#### ENVIRONMENTAL CONFUSION

Environmental groups in Wyoming hadn't yet adopted a general position on slurry lines, and they were caught off guard by the Texas Eastern proposal. They were conspicuous only by their indecisiveness. The Powder River Basin Resource Council, a rancher-conservation group based in Sheridan, initially said it would support the proposal if Texas Eastern would submit the project to the scrutiny of the Industrial Siting Council. Under Wyoming law, pipelines are specifically exempted from siting review. The company agreed, however, and siting review was written into the law.

However, at the Sheridan hearing, representatives of the Powder River group said, "We now recommend that no contract be signed between the state and Texas

(continued on page 5)



Photo by Mike McClure

**DAN OLD ELK** of the Crow Tribe in Montana said that his tribe claims the entire 110,000 acre-foot flow of the Little Bighorn.



Photo by Mike McClure

**HERSCHLER** told the hearing audience that he has not decided yet whether to approve the slurry project. More than 800 people attended the hearing.

Eastern until further studies are completed."

At a board meeting two days before the Sheridan hearing, another major environmental group in the state, the Wyoming Outdoor Council, voted seven to six to oppose the line but not to present any testimony at the hearing. A committee was appointed to draw up comments to present to the governor.

The slurry issue is extremely sensitive for these environmentalists because they support a policy of exporting coal out of the region, rather than building mine-mouth power plants and exporting electricity. This presumably means less social impact, less air pollution and less water loss to the state. One of the often-cited advantages of slurry pipelines is that they require one-seventh the amount of water consumed in a power plant.

On the other hand, many environmentalists fear that slurry lines will stimulate coal production. In addition, the export of any water from a semi-arid region is unpopular in the West, and environmentalists don't want to support a project that might hurt agriculture or unnecessarily deplete an already-scarce resource.

Another reason that the groups had such trouble reaching a final position may have been that both had board members representing parties interested in the success of the pipeline. John Jenkins, a member of PRBRC's board, served as a consultant to Texas Eastern during legislative debate on the issue. Dave Palmerlee, WOC board member was the attorney for TR-12, the group that holds the water rights on the Little Bighorn. Another WOC board member, Marilyn Kite, served as an attorney for Texas Eastern. However, while these individuals presented their cases to their respective groups, none of them voted on the groups' final positions.

Neither Wyoming environmental group took a position on the ETSI pipeline when it came before the legislature several years ago. Only Wilderness Society representative Bart Koehler — wandering afield somewhat from his usual concerns — has taken a strong public stand in opposition to slurry lines.

Environmental and conservation groups in Montana have not been subject to such ambivalence. They have consistently op-

posed slurry lines as an inappropriate use of the state's water.

Leslie Petersen, president of the WOC board, reveals some of the groups' uncertainty on the issue. She says that WOC didn't take a position on the ETSI line because they didn't realize the significance of slurry pipelines to the future of Western development. Even now she says, the slurry may be better than some other possible uses of Wyoming water. She says, "If

considering Western coal because of the rapidly escalating rail rates. The slurry line is a prerequisite before they would buy Western coal."

For example, Houston Power and Light, one of the potential customers of the Texas Eastern pipeline, is planning seven 1,000 megawatt power plants in Texas between 1985 and 2000. Jack Arlett, fuel purchasing agent for the company, has been looking to Midwestern coal and coal imported

### One lawyer called the Texas Eastern proposal "the most blatant, ill-timed raid on the water of Wyoming and Montana in the history of those two great states."

the Crows were going to use the water to build power plants or gasification plants near the Wyoming border, I think I'd have to support the slurry proposal."

from other countries to supply these plants. Alternatively, the company could build mine-mouth power plants in the Texas lignite fields. Asked if the cheaper

#### NEW MARKETS

One of the uncertainties surrounding slurry lines is whether they would open new markets for Western coal, thus speeding up development. According to the Congressional Office of Technology Assessment study on slurry lines, a Wyoming to Texas slurry pipeline could carry coal for a cost of \$6.50 per ton. Comparable rail rates, according to OTA, are \$9.10 per ton. Since rail rates are often as expensive as the coal itself, the differential could be influential in the decision of where to buy the coal.

A spokesman for the National Coal Association in Washington, D.C., says that he doubts that slurry lines would affect the volume of coal shipped out of the Western fields, but it could affect the location of new federal coal leases. He says, "With the current administration's attitude of reducing environmental impacts, new leases will probably be offered where there is already access to rail spurs. However, since slurry lines have less environmental impact, they could open up areas that are farther from rail transportation."

However, Texas Eastern's Thomas says that slurry pipelines will definitely open new markets for Western coal. He says, "A number of Texas utilities have stopped

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transportation provided by coal slurry pipelines would make Western coal competitive with these other options, he says. "Definitely. If the people in Wyoming are going to market their coal, they have to use all methods of transportation."

Arlett says, "One of the problems with high volumes of coal is logistics. We'll be getting 22 trains a week into Houston by 1983. It is very difficult logistically to move this many trains in a congested area. The railroads are doing a good job, but they can't do the total job. There's just no way that one method of transportation can move this much coal."

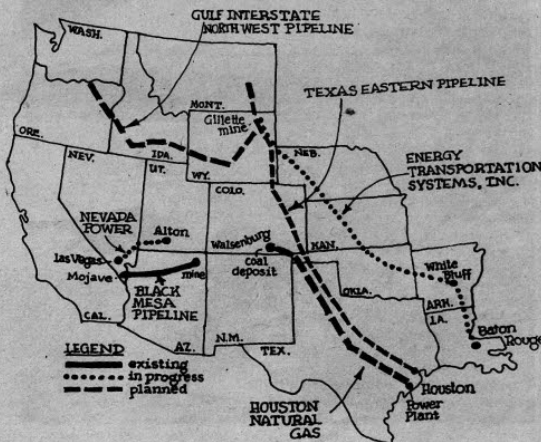
The railroads, naturally, disagree. Many Western railroads make a substantial portion of their income from hauling coal, and they fear the inroads that slurry lines could make. Ed Sencabaugh, a special representative with Union Pacific, says, "The railroads are perfectly capable of hauling all the coal produced in the Western coal fields. In addition, we can deliver to small users as well as the large ones. Slurry lines only deliver large volumes of coal. It's just a cream-skimming method — taking all the biggest customers and depriving the railroads of desperately needed revenues."

The railroads' competitive position could be improved somewhat if President Carter's proposal to deregulate railroads comes to pass. Sencabaugh says, "Rate flexibility would help a great deal."

Sencabaugh also says, however, "I can't see where a coal slurry pipeline will open any new markets."

Wyoming's Gov. Herschler has not indicated whether he will agree to sign a contract with Texas Eastern. The company hopes to be under construction in two or three years and be slurrying coal by 1985. Herschler says that April 10 is the deadline for public comment on the issue.

The outcome of the Texas Eastern proposal also may have long-range implications for the future of Western coal transportation. Although ETSI and Texas Eastern are currently the only two with firm proposals, as many as 10 slurry lines to move Western coal have been discussed in varying degrees of seriousness. Five routes have been mapped out, affecting nearly every Rocky Mountain state.



6-High Country News — April 6, 1979

## A winter's tale of wildlife. . .

(continued from page 1)

Feeding continued into April, funded partly by donations. The Anheuser-Busch Foundation gave \$70,000 to Colorado and \$30,000 to Wyoming for the operations.

The region had been enjoying a warm, lovely autumn. In early November, some Wyoming towns reported record high temperatures. Then on Nov. 9, an arctic storm brought an early winter, dumping a record 36 inches of snow at Lander. Intense cold and more snow followed. Lander residents wouldn't see the ground for nearly four months.

"Across Wyoming, it was the worst winter on record," says Stan Sigler at the National Weather Service in Cheyenne.

In Denver, December and January were the coldest two-month period on record.

A month of good weather beginning in mid-February saved thousands of depleted animals.

Wildlife biologists emphasize they can only guess as to the statewide effects of the severe winter until the snow clears and surveys can be conducted. This handicap caused a striking divergence of opinion among officials in Colorado.

An Associated Press report in March quoted Harris Sherman, Department of Natural Resources head, as saying Colorado could lose 30-40 percent of its elk.

However, senior game biologist, Cliff Moser at the Division of Wildlife, told HCN on March 22 that "it was a typical winter with hardly any elk loss statewide and perhaps a five percent deer loss above normal." Moser predicted no significant reduction in hunting allowances for the fall.

### FIRE AND ICE

Wildlife's attempt to cope with the severe winter has had repercussions in the Colorado Legislature that worry Division of Wildlife personnel. "It's the worst winter we've had as far as wildlife damage to ranchers' property," Moser says. "It snowed,

thawed, froze and snowed again, and the deer and elk couldn't paw through the ice. They went to the haystacks."

On the west slope of the Continental Divide ranchers complain that the Division of Wildlife has allowed herds to grow too large and didn't do enough to help ranchers protect their stored hay from damage. The ranchers are pushing for state legislation that would compensate ranchers for damages to native pasture and fences. Present law allows recompense only for damages to stored crops and croplands.

"If the bill passes, we hope to receive a general fund appropriation to finance it. If we don't get that, the payments will come from our traditional funding sources: fines and license fees," Moser says.

"Ultimately, this philosophy will bankrupt the wildlife agencies," according to George Kaminski, National Wildlife Federation regional representative in Cheyenne. "The attitude for generations has been that landowners made some provision for wildlife cover and foraging in winter."

In January, the Colorado Division of Wildlife began an emergency feeding program expected to help 12,000 elk and 5,000 deer in nine areas at a cost of nearly \$500,000. Bob Tully, chief of wildlife services, says the program is a "one-shot" deal

**"The animals are a casualty of our modern times."**

and is not designed to support wildlife populations above the number the winter habitat can support in an average winter. Feeding is being done both to provide emergency food and to lure animals away

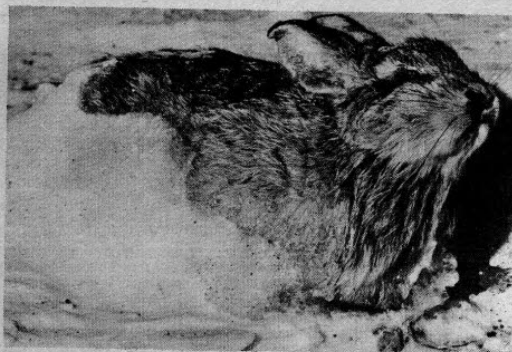


Photo by Robert Hilgenfeld

**THE COTTONTAIL RABBIT** froze where he crouched in the subzero weather this winter.

from areas where they are damaging property.

### A PATHETIC SCENE

In Wyoming, severe winter losses have dramatized the increasing conflict between expanding human developments and wildlife survival. Through the centuries, severe winters have strengthened wildlife populations by culling the weak, sick and old and leaving the strong to propagate. Indiscriminate human obstacles are now lessening the efficiency of nature's plan.

Kaminski says the dead animals along highways in several parts of Wyoming "are pathetic scenes, really."

According to Assistant Chief Game Warden Francis Petera, between 1,500 and 2,000 antelope died in the Rock Springs area alone. "Along Interstate 80 near Arlington we picked up 85 dead antelope in a five-mile stretch." Unable to pass the interstate fences, the animals starved to death. "In a cut in the railroad right-of-way east of Rawlins," Petera says, "a single train killed 28 antelope."

Bill Morris, assistant director of the Game and Fish Department, says people have a "direct bearing on wildlife losses. Before people came to this area, there were no road kills, no train kills, no fence losses. The accumulation of all these things is depleting wildlife habitat and restricting movements."

Petera says "the animals are a casualty of our modern times."

Department personnel estimate that up to 30 percent of the state's antelope and 15-20 percent of the deer may have perished.

In the 1920s, the state began supplemental feeding for elk at Jackson Hole, where human development had eliminated the traditional elk wintering grounds. Today, the U.S. Fish and Wildlife Service feeds alfalfa pellets to 8,000 elk each winter on the National Elk Refuge just north of the town of Jackson. The Wyoming Game and Fish Department provides half of the feed. The department operates 21 other elk feeding grounds in northwest Wyoming each winter, boarding 12,000 elk on alfalfa hay. In addition, up to 300 moose are fed alfalfa hay at five regular winter feeding grounds in the Pinedale area.

This year, Petera says, the extreme conditions caused emergency elk feeding at Saratoga and Sheridan, in addition to the usual sites. Emergency antelope feeding occurred in several parts of the state.

Petera says elk losses were "probably about normal, and we didn't have any significant loss of bighorn sheep or moose."

Bill Crump says it was "the toughest winter in the 30 years I've been working for the department. In the Big Horn Basin,

half of our ground-dwelling game birds, like chukar partridges, probably died. We have huge areas of complete wipeouts on cottontail rabbits," Crump says.

Both Crump and Petera express gratitude to Wyoming ranchers for allowing wildlife to feed on their lands. "In the Lusk area, for example, we would have lost most of our antelope without the hay provided by ranchers," Petera says. "They really took the interests of the wildlife to heart."

Petera expects damage payments to ranchers to exceed the \$36,000 the department paid last year, despite outlays from license revenues of \$330,000 to provide panels and fencing to protect haystacks and \$1.2 million to move animals off private property. In both Colorado and Wyoming, the wildlife

(continued on page 7)

## Slim barrier protects man from nature

From the Cowley Progress, March 1, 1979:

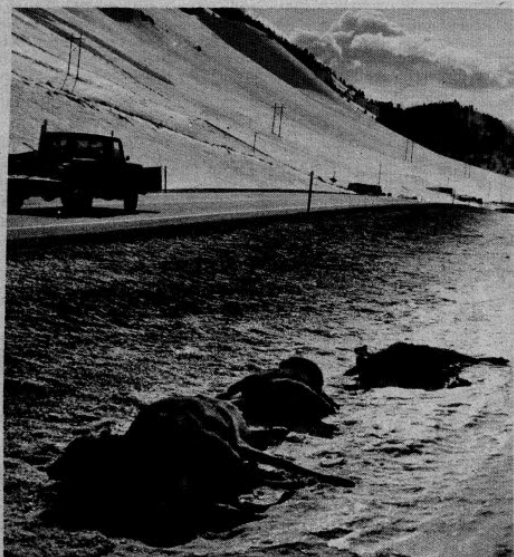
"We read in the papers each day about the godawful miseries the people of Chicago and other northern cities are suffering with the terrible blizzards, the deepening snows and the dreadful cold (giant drifts, frozen salt slush, broken water pipes, apartment temperatures of 50 degrees, and so forth)."

"While the miseries are real enough (we won't argue with that) from a perspective of earlier times, the suffering isn't even a joke, a trivial inconvenience. Compared to what primitive man had to put up with routinely, and what nearly all northern wildlife has always had to undergo in winter, the torment in Chicago is nothing but solid comfort."

"May it not be to some extent the elusive, subliminal awareness of that truth that is the basis of more than a little of the pervasive anxiety that so unceasingly wracks modern men?"

"We know in our very gizzards that this whole fantastic superstructure of infinitely complex technology, organization and culture which holds back the cold and darkness of northern winters is like a great dam placed in the canyon's throat just a few miles above the city."

"Just a few cracks opened up by a minor earthquake and a very ocean of thundering water sweeps the city to oblivion. So we peer anxiously out from our snug burrows listening sharply for that cracking sound that may be the dam giving way."



A PHOTO BY ARNE KERNAN

**MURDERERS' ROW**, as it is known by some people near Jackson, Wyo. The deer were all killed by cars.

agencies also made use of firecrackers to scare animals away from haystacks and cities.

In Idaho, Fish and Game biologist Roger Williams says wildlife in southeast Idaho experienced "one of the toughest winters in 30 years," but that the situation was about normal elsewhere in the state. The department was feeding 2,000 deer and 1,000 elk at 18 sites until the freeze broke. "We haven't seen a really high loss where we've been feeding, but we won't know until we make mortality surveys," Williams says.

At a ranch near American Falls, Idaho, 15,000 ducks and 7,000 geese were feeding on waste grain from livestock feed. Ranch foreman Lee Bush says the birds "came right into the mangers and ate with the calves. We were glad to have them."

In North Dakota, deer and game birds fared better than the previous winter but suffered more than usual losses, according to Chris Grondahl, chief of game management for the Game and Fish Department. Grondahl is concerned that two winters of antelope losses, especially in the northwest part of the state, have reduced populations to low levels.

Fish biologists in North Dakota and Wyoming indicate that heavy snow and ice accumulations on lakes could have caused extensive fish kills. Dale Henegar, chief of fisheries for the North Dakota Game and Fish Department, says "65 to 80 lakes in the state have dangerously low oxygen levels."

Mike Stone, fisheries biologist with the Wyoming Game and Fish Department, says the thick ice and snow stop light from penetrating and plants die. "Then, instead of producing oxygen, the plants decay, which uses oxygen."

Jim Burruss, biologist for the Utah Division of Wildlife, says no deer or antelope were being fed in Utah. "The winter has been more severe than usual but not one of our worst winters for wildlife losses," Burruss says the division did feed 600 elk to alleviate agricultural damage in Cache Valley near Logan.

#### TROUBLE ON TROUBLE

Although wildlife managers throughout the region are confident that wildlife will bounce back from the winter's devastation, the future is not particularly bright. As the grim tale of animal suffering unfolded in late winter, wildlife devotees in at least two states were fighting development proposals which would cause future winter losses.

The National Wildlife Federation's Kaminski criticized a proposal by the Bureau of Land Management to fence a large tract of public land northwest of Rawlins. "Remembering the dead antelope piled up along the fences in 1971-72, and the losses along Interstate 80 this year, we must protest this plan to build miles of fences at taxpayer expense for the benefit of three or four ranchers who want to run livestock in there," Kaminski says. "This would have a severe impact on the largest single herd of free-roaming antelope in North America in a habitat already heavily impacted by coal and uranium mining and oil drilling."

BLM says the fences will allow the agency to better manage the land through control of livestock movement.

In early March, Douglas F. Day, Utah Division of Wildlife director, protested a move by the Salt Lake City Commission to annex the lower third of Emigration Canyon for residential development. Day told the council there had been an "alarming loss of critical, irreplaceable wildlife habitat" along the Wasatch Front and "even small parcels of winter range may provide the critical over-wintering habitat necessary to sustain the deer we all enjoy in summer and fall."

## Is a free lunch really a boon to wildlife in winter?

by Philip White

To feed or not to feed—and if so, what to feed and how and when—these are the questions that have always troubled wildlife managers in the northern Rockies in the wake of icy winters.

They agree that artificially maintaining wildlife through the winter has serious drawbacks. The congregation of animals at feed grounds allows the spread of disease, more harassment by dogs and the degradation of native range. The animals remember the free lunch and may bypass more nutritious natural food. Many animals are killed by vehicles when the feeding is done near highways (which is also hazardous to humans). The feeding operations are very expensive.

The managers also agree that artificial feeding is needed when unusually extreme winter conditions would otherwise cause a mass die-off of game animals. This was the prognosis in several places in the Rockies this winter, where elk antelope and deer were fed by state wildlife agencies.

Roger Williams of the Idaho Fish and Game says feeding is started only when the animals can't be moved to adjacent areas of native forage by baiting, herding with snowmobiles or helicopters or even by live-trapping.

Although wildlife agencies agree in principle that wildlife should be governed by natural conditions and that winter feeding should be a "last resort," the artificial maintenance of large elk herds has become a way of life in western Wyoming. Agricultural and residential developments have eliminated much of the historical elk winter range, but winter feeding programs, started as much as 40 years ago, have sustained elk populations at high levels. Without the state's 22 elk feeding operations each winter, many would starve, and extensive agricultural damages would occur.

An additional complication is the

long-standing belief by some game managers that feeding hay to deer often causes digestive problems and kills more deer than it saves.

A Colorado Division of Wildlife release this winter said, "Deer have a problem converting their digestive system from natural to man-produced foods. Past attempts to pull deer through severe winters have proved disastrous, with as many deer dying from digestive complications as probably would have died anyway from starvation."

Jim Burruss, wildlife biologist with the Utah Division of Wildlife Resources, includes the "inability of deer to digest hay due to microorganisms in their stomachs" in a list of reasons why his agency has never fed deer in winter.

In both Colorado and Idaho, wildlife agencies tried a specially formulated high-protein pellet for deer this winter. Jim Houston, area supervisor at Gunnison, Colo., says the deer that were obtaining natural forage as well as the pellets were "looking real good. But we're still losing some that are relying totally on the pellets."

Houston says the pellets are "substantially better than anything we've had before."

The Colorado pellet is made primarily of wheat middlings, brewer's grain, cottonseed meal and alfalfa with specific vitamins and minerals added. The division says the pellet is higher in fiber, protein and digestible nutrients than other available feeds.

Problems with deer eating hay also were reported in Utah. Burruss says, "Does will feed (at ranchers' haystacks) and then move off and eat some natural browse. The eight-month old fawns will gorge themselves on the hay and die."

In Wyoming, the Game and Fish Department is reluctant to establish formal deer feeding programs, even dur-

ing severe winters. But according to Ron Dean, supervisor of elk and moose feeding programs in western Wyoming, the problem of hay digestion is not the reason.

"If the deer is starving, he will die in spite of the hay, not because of it," Dean says. "A lot of deer are fed after they are in real poor shape and are very susceptible to any extra stress, such as a cold night. Alfalfa hay is not a total maintenance ration, but it is much better than nothing and can sustain the deer if he has some reserves left."

Dean, who has a doctorate in animal nutrition, says that deer are "better off out on their own because native browse provides better nutrition" but that the hay digestion problem is something of a myth. "We simply do not see a lot of deer mortality around these feeding sites and a lot of the hay isn't the best quality."

The department's reluctance to feed deer, Dean says, is people-related and is highlighted by the events in Jackson Hole during the past two winters. Since "a lot of people think it's neat to have deer in the backyard all winter," Dean says landowners began feeding hay to deer early in the winter of 1977-78. "Much of the feeding was done near roads, and many deer were killed by cars."

"This year," Dean says, "a citizens' group wanted to start feeding deer a month before we felt it was necessary. We had a meeting with them, explained all the problems with winter feeding and asked them to be careful where they fed. I think they were more careful this year."

Dean is worried that the artificial feeding programs are "habit-forming to the deer. They remember where they were fed, and next year, when they could perhaps survive in the hills, they will walk by good winter range down into the populated areas where they are susceptible to cars and dogs."

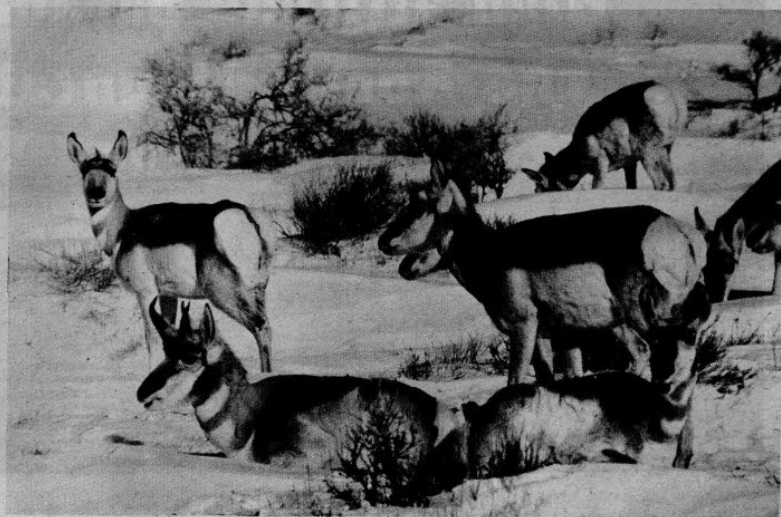


Photo by Dick Randall

CRUSTED SNOW covers food in many places. Combined with subzero temperatures, the snow defeated many of the young, the old and the weak antelope this winter.

8-High Country News — April 6, 1979



**High altitude paradox:  
the Rocky Mountain  
Columbine**

by Thomas M. Jenkins

Photos by Tom Jenkins

*Aquilegia caerulea*, the Rocky Mountain columbine, is an amazingly hardy perennial of exquisite beauty.

Found in late spring and summer at altitudes from 6,000 to 12,000 feet, the columbine grows on rocky outcrops as well as in shady ravines. In locations north and west of Colorado the blueness of the sepals fades until it becomes almost pure white; those at the higher altitudes are usually a deeper blue than those at lower elevations.

The five ovate sepals form a delicate saucer-like star behind the inner cup of five white petals. The bases of the petals extend slender, hollow spurs gracefully backward between each of the sepals. The precise positioning and color nuances of the sepals and petals give this flower its inexpressible elegance.

A measure of controversy surrounds the flower's scientific name, *Aquilegia caerulea*. The renowned botanist, Asa Gray, said the name came from the Latin *aquilegus* (water-drawing) but gave no further elucidation. Others say that the Latin *aquila* (eagle) was its source, seeing a likeness to the talons of an eagle in the curved spurred petals. Others see the words *aqua* (water) and *legere* (collect) in the name and reason it might have been inspired by the nectar at the base of the hollow spurs.

Its common name is from the Latin, *columba* (dove), which may refer to the quiet, peaceful beauty of the flower.

Declared the state flower of Colorado in 1899, the abundant columbine filled the mountain meadows with a flood of blue. No one then imagined that its survival would

someday be in doubt. So common were columbines that professional florists sold them by the bouquet, and special trains journeyed to the mountains from Denver packed with misguided horticulturalists and flower-fanciers who returned home with armfuls.

The conservation efforts of the Colorado Mountain Club and a 1925 Colorado law that forbids picking more than 25 columbines slowed but did not prevent the continued destruction of the wildflower. The years from about 1935 to 1955 witnessed fewer tourists to the Colorado mountains and an increased public sensitivity to the ecological and esthetic value of leaving wildflowers in their natural settings.

But the last two decades brought an explosion of tourists, hikers, cyclists and backpackers who, along with some unexplained weather and soil conditions, have led to the scarcity of the columbine. A recent Colorado law, the Recreation Land Preservation Act of 1971, made it unlawful (with a maximum fine of \$500) to pick any natural flora, including the columbine.

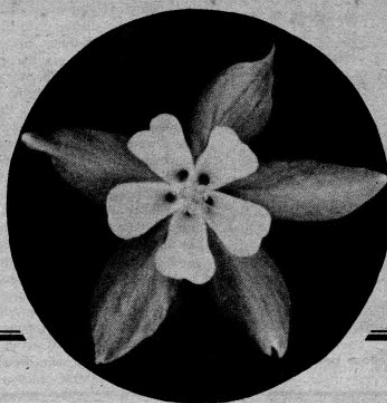
The columbine is not as vulnerable to natural adversity as it looks, however.

Last summer on August 30 I was walking along the trail leading to the summit of Mt. Toll in Colorado's Indian Peaks Wilderness. Autumn's changes had begun. But as I moved past brown clumps of dead weeds and wildflowers, I suddenly came upon a bright batch of green foliage with a flawless, fresh blue and white flower in its midst, an exquisite columbine.

Long past its normal growing season, it was defying the freezing nighttime temperatures and the buffeting wind. In the quick sunlight following a light rain with minute waterdrops glistening on its petals it was a lovely, insouciant anachronism.



Declared the state flower of Colorado in 1899, the abundant columbine filled the mountain meadows with a flood of blue. No one then imagined that its survival would someday be in doubt.



10-High Country News — April 6, 1979

## N.M. Legislature kills tough nuclear waste bills

by Dede Feldman

The New Mexico state legislature adjourned its 60 day session in Santa Fe in mid-March with few gains for environmentalists, opponents of the state's uranium industry or foes of the controversial Waste Isolation Pilot Project (WIPP) in Carlsbad, N.M. Carlsbad is the leading candidate in the federal government's search for a nuclear waste disposal site.

Much of the difficulty faced by citizen groups and environmentalists stemmed from a shake-up in legislative leadership early in the session. Liberal Chicano legislators from the northern part of the state were replaced in important committee chairmanships with pro-nuclear, conservative Democrats from southern New Mexico.

In the two key committees, the House Energy and Natural Resources Committee and the Senate Conservation Committee, the result was disastrous for environmental interests. Chaired by two Democrats who are involved in the mining industry, the committees succeeded in killing five nuclear waste related measures and an important bill relating to dewatering uranium mines.

One of the rejected bills would have taxed the transportation of nuclear waste to WIPP. Others would have placed a two-year moratorium on waste importation, prohibited waste importation altogether and directed the operator of a vehicle carry-

ing hazardous waste to notify state police at least two hours before entering the state.

Also killed by the committee was a constitutional amendment that would have provided for citizen disapproval of nuclear waste disposal in New Mexico.

In the senate, a proposal authorizing and financing a plebiscite on WIPP next fall also went down to defeat.

Environmental and anti-nuclear groups lobbied heavily for another unsuccessful WIPP related bill — H.B. 106. The bill called for state veto power, licensing by the U.S. Nuclear Regulatory Commission, federal liability for damages, funds for stabilization of uranium mine tailings and fulfillment of National Environmental Policy Act requirements as preconditions for WIPP siting in New Mexico.

A house committee came up with a more conservative bill — "the Radioactive Waste Concurrence Act," which was the only WIPP measure to pass the legislature. It creates a nuclear waste task force and an interim legislative committee to study nuclear waste disposal.

According to the bill's prologue, "It is the purpose of the Radioactive Waste Concurrence Act to provide a vehicle for proper consideration of legitimate concerns without unnecessarily hampering the nuclear industry or compromising the nation's defense."

Sally Rogers, lobbyist for Friends of the Earth, says the WIPP bill that finally came out was "really bad.... The bill was passed

two minutes after the deadline, and there were loads of amendments that most legislators had not even read.... The key condition — that of NRC licensing of the facility — was taken out at the last minute." It is still unclear whether the federal government will require NRC to license such a facility.

Rogers is also disappointed that the legislature gave all authority for the regulation of the transportation of radioactive waste to the state, preempting county and city regulation. There have been several moves on the part of small cities in the state to regulate such transportation.

"The legislature misinterpreted the growing grassroots sentiment to stop WIPP," Rogers says. "People wanted something concrete, something specific before it's too late and construction has begun or huge amounts of money have been spent."

However, Sen. John Rodgers, a Democrat from Los Alamos who favors WIPP, thinks the legislature acted properly in rejecting both a legislative veto on WIPP and a popular referendum. Rodgers, who is a scientist, feels that decisions of this type are best left to the experts.

"The public has a great lack of understanding of the nuclear issue," Rodgers says. "There comes a point when you must put your faith in people who know."

Another bill to go down to defeat in this year's legislative session was a mine dewatering bill.

At present 100,000 acre-feet of water a year are being pumped from the mines in the

state — more than the annual water consumption of the city of Albuquerque. Pumping is necessary because the geologic formation that contains the uranium often is also a water-bearing aquifer. The present law requires companies to obtain a permit for water discharges from the mines only if the water is put to "beneficial use." The defeated legislation would have required companies to obtain permits for any discharge.

Supporters of the measure said that the present law allows depletion of ground water supplies and infringement on the water rights of farmers and surrounding towns. Furthermore, they say that if the firms damage the water rights of a farmer or a rancher, for example, the farmer or rancher must prove that dewatering activities hurt his water rights. The senate proposal would have shifted the burden of proof to the companies.

Uranium and other energy companies lobbied heavily against the bill, which they said could halt uranium mining if there were damage to adjacent water users.

Lobbyists for energy companies outnumbered all others registered at the secretary of state's office. At mid-session, there were 99 energy company lobbyists registered.

In another area of interest to environmentalists, the bottle bill banning throwaways was again killed in committee. This is the third year that the bill has been defeated.



**FLATS FIGHT.** The Rocky Flats Action Group hopes to assemble another "large, non-violent presence" this year at the Rocky Flats nuclear weapons plant near Golden, Colo. The group ultimately wants authorities to close the plant and convert it to "useful peacetime industry." The facility, which manufactures plutonium triggers for nuclear bombs, undermines global security and is a local health hazard and a waste of taxpayers' money, the protest

group says. A rally from 11 a.m. to 2 p.m. is scheduled for April 28. "Non-violent direct action" is slated for the following day. For more information contact the group at 1432 Lafayette St., Denver, Colo. 80218 (303) 832-4508. The group held a similar demonstration last year that attracted about 6,000 protesters. Members of the Wyoming New American Movement will also be participating in the demonstration. For information, contact Michael Durgain, executive secretary, Box 338, Laramie, Wyo. 82070.

**OIL SHALE BILLS.** A package of bills backed by industry that promotes development of oil shale with new environmental safeguards will be introduced in Congress by Sen. Gary Hart (D-Colo.). The bills direct the Environmental Protection Agency to set performance standards to limit pollution from shale production and require shale producers to monitor the effects of their operations.

**URANIUM PROTEST.** The American Indian Environmental Council (AIEC) has announced that on April 28-30 Indians in the Southwest will congregate near Grants, N.M., to "physically and spiritually protest uranium mining on sacred Navajo and Pueblo lands in the Grants Mineral Belt." Over half of the nation's uranium supply lies in the belt. Mt. Taylor, near Grants, is one of the four sacred mountains of the Navajos and is currently being mined for uranium by Gulf Oil Company. The protest will be the first in a series of actions proposed by the first National No-Nukes Strategy Conference, which was held in Louisville, Ky., last year.

**A BOOST FOR COLSTRIP?** The fate of legislation expediting construction of Colstrip power plant units 3 and 4 is in the hands of Montana Gov. Tom Judge. The state legislature has passed a law that would exempt the plant from a re-run of the 1976 Board of Natural Resources hearings, which a recent district court ruling would otherwise require. Judge has said he does not like the bill but also that he does not want to see the state start over on the Colstrip hearings. If Judge signs the bill, the plant still needs a nod from the U.S. Environmental Protection Agency, assuring that it won't degrade the Class I air on the nearby Northern Cheyenne reservation.

**LINK QUASHES BILLS.** North Dakota Gov. Arthur Link has successfully vetoed two bills passed by the legislature that were very attractive to utility companies in the state. One of the bills would have allowed public utilities to include ongoing construction costs in the consumers' electric bills. Another would have exempted electric plants from paying property taxes during construction. In his veto message, Link said the first bill would have hurt elderly customers, who would pay for energy they might never use.



Photo by Dede Feldman  
LAST YEAR'S Rocky Flats demonstration. A repeat performance is scheduled for April 28-29.

### WILDERNESS ADVENTURE with an environmental twist

Friends of the Earth's Wyoming Representative, Howie Wolke, announces a new idea in wilderness travel: backpacking, mountaineering, and cross country ski trips featuring high quality guiding and instruction in the use of safe, low impact wilderness travel techniques. Also, we offer two intensive field courses focusing on public lands and wilderness, designed for the environmental activist, but valuable for anyone who shares our concern about the management of our public lands.

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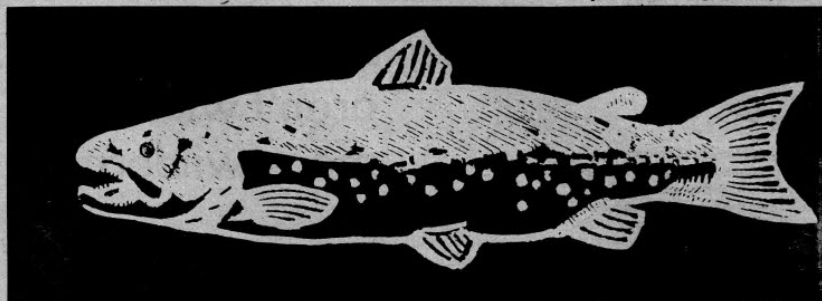
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## Savings for Idaho utility may mean fish deaths

by Glenn Oakley

By attempting to relax requirements for the state's hydroelectric dams, the Idaho Legislature may be placing some of the state's fish in jeopardy, environmentalists and state officials say.

In late March the legislature passed a resolution to lower dissolved oxygen standards for rivers below hydroelectric dams. The move, which must be approved by the U.S. Environmental Protection Agency, could save irrigators and Idaho Power Co. money. But it could also place a strain on fish living below the dams. Whether it would kill them is in dispute, but Lee Stokes of the Idaho Department of Health and Welfare says the proposed new stan-

dard "puts us very close to the level that could be a problem."

The resolution would change the state standard from six parts per million (ppm) of dissolved oxygen to five. It passed the senate 19-16 and the house 53-15.

Sen. John Barker (R-Twin Falls) explains that the resolution is a "legislative directive" to the Board of Health and Welfare to change its regulations.

The Board of Health and Welfare first must conduct public hearings and submit the change to the EPA, according to Eldon Edmundson, an EPA ecologist in Boise. Edmundson says EPA has "not taken a stand" on the change in standards.

Wendel Smith, IPC's environmental director, says lowering the dissolved oxygen

standard will save IPC "an immense amount of money." IPC generates electricity at the dam by drawing oxygen-depleted water from the bottom of the reservoir through the generators.

To put oxygen back into the water, IPC must spill water over the dam. Because IPC cannot generate electricity from the spilled water, it loses money.

The American Falls Reservoir District, a partner with IPC in the American Falls Dam, also would save money under the new standard. Barker is president of the American Falls Reservoir District. He also is chairman of the Senate Health, Education and Welfare Committee, which approved the resolution.

The Idaho Conservation League charges Barker with a "blatant conflict of interest" in the issue. Barker dismisses such charges, arguing he is elected to the reservoir district and receives only \$10 for each day's work. He says he owns farms in Twin Falls County, which draw water from American Falls Dam, but said other legislators vote on issues that affect their businesses, too.

IPC's Smith says five ppm "will not kill any fish. . . Trout can live in four ppm, but five is better."

But not everyone agrees. Pat Ford, director of the Idaho Conservation League, says five ppm can be damaging to fish if there are other adverse conditions, such as high water temperature and heavy algal growth.

Stokes of the Department of Health and Welfare says a standard of five ppm also could be damaging below dams where fish spawn. While few fish spawn at American Falls, he says the problem would arise with future dams.

John Coon of the Idaho Department of Fish and Game says rivers can carry 10 ppm, so a five ppm standard reduces oxygen by half. If the oxygen in the air were reduced by half, a person could still breathe, but he or she would be affected considerably.

However, the Fish and Game Department did not testify against the resolution. Bob Salter, assistant director, says the department remained mute on the issue because it has little hard data to prove the five ppm could be damaging to fish.

Conservationists and some state officials are also concerned that the resolution may allow oxygen levels to be measured farther downstream, in effect eliminating a portion of the river from any standard. The resolution also provides for averaging the oxygen readings, so oxygen levels could drop below five ppm as long as they increased enough during the remainder of an hour to make up for it.



The **HCN**  
Hot Line

energy news from across the country

**BUSINESS EXPERTS FOR CONSERVATION.** In a six-year study of the nation's energy problems, Harvard Business School analysts have reached conclusions "remarkably close to what the environmentalists have been saying," according to an article in the *Los Angeles Times*. The Harvard researchers say that energy conservation and solar energy are cheaper to develop than oil, gas, coal and nuclear energy and that "the effort required to exploit them seems...economic and less socially disruptive than trying to force too much from conventional sources." They recommend decontrol of domestic oil prices, with a tax on windfall profits "specifically assigned to financing—through tax credits, grants and loans—programs for conservation and solar energy." A summary of the Harvard Business School study was published in the latest issue of *Foreign Affairs* magazine.

**FEDS PREEMPT CALIFORNIA.** A federal judge has overturned a California statute that had halted the development of nuclear power plants in the state, saying that only the federal government could pass such a law. According to District Court Judge William Enright, the statute, which required "demonstrated technology or means for the disposal of high-level nuclear waste" to gain state approval for a nuclear power plant, "stands as an obstacle to the purposes and objectives of Congress as stated in the Atomic Energy Act of 1954." The ruling marks the third time that state or local legislation regulating

nuclear plants was found to be preempted by federal law, according to a *Los Angeles Times* story. California Energy Commission Chairman Richard Maullin has vowed to appeal the decision to the U.S. Supreme Court if necessary.

**SOLAR HYPOCRISY?** In Senate subcommittee hearings held at the end of March, senators questioned the Carter administration's avowed commitment to solar energy. Members of the Senate Subcommittee on Energy Research and Development asked a Department of Energy official why, if the administration was interested in promoting solar power, it had proposed a cut in new funding for solar energy in its 1980 budget. The group also asked why the government was making it so hard to get insured home loans and tax credits for some kinds of solar houses. The official admitted that new funding for solar was slated for a cut. As to the problem of tax credits, particularly for passive solar heating systems, the official blamed the Internal Revenue Service. The Energy Department says IRS is interpreting solar tax breaks approved by Congress last year "in an overly restrictive fashion."

**SOLAR FOR SAUDIS.** U.S. solar energy experts will help electrify two remote desert villages in Saudi Arabia, according to a *Denver Post* story. The Saudis asked the federally-funded Solar Energy Research and Development Institute in Golden, Colo., to bring the "good life" of television and appliances to 3,000 isolated villagers. The institute plans to provide a \$100 million array of photovoltaic cells, devices that transform sunlight directly into electricity. The electricity will be costly when compared with electricity from conventional sources—40 to 70 cents a kilowatt-hour as opposed to 3½ cents a kilowatt-hour in Denver, for instance. However, the oil-rich Saudis say it is the cheapest alternative available to them for remote locations.

12-High Country News — April 6, 1979

## Western governors aren't wild about more wilderness

by Marjane Ambler

Wilderness advocates in the Northern Plains and Rocky Mountain states found something in their governors' recent messages on wilderness to be pleased about although none of the messages came close to their own recommendations. The governors had until March 15 to let the U.S. Agriculture Department know what they thought of the Forest Service's second Roadless Area Review and Evaluation (RARE II).

### COLORADO: MORE THAN FOREST SERVICE

Colorado Gov. Dick Lamm (D) apparently scored the highest with conservationists by recommending 25 percent more acreage for wilderness or further planning than the Forest Service.

Jerry Mallett of the American Wilderness Alliance says his group is pleased that Lamm asked for further planning on 700,000 acres more than the Forest Service. He hopes to get several hundred thousand more acres designated as wilderness later in the process.

In his letter to the U.S. Agriculture Department, Lamm said grazing, which is specifically allowed in the Wilderness Act, should continue on wilderness lands, and ranchers should be allowed motorized access when necessary to maintain range improvements and to manage herds. Motorized vehicles are generally prohibited in wilderness areas.

Lamm also called for extending the deadline for mineral exploration in the newly designated areas beyond the current deadline of 1984.

Lamm, an outdoors enthusiast, said, "I or members of my staff and cabinet will personally examine (some) areas this summer."

Lloyd Stahl of the Federal Timber Purchasers Association in Denver says he hasn't studied Lamm's proposals in detail, but in general, he feels pretty neutral. "It was a good political letter," he says.

### UTAH: END OF THE DROUGHT?

While Utah Gov. Scott Matheson (D) supported only 71 percent as much acreage as the Forest Service proposed for either further study or wilderness, Wilderness Society representative Dick Carter is pleased. "This is the first time we've gotten any wilderness support from a high ranking elected official in the state," he says. Carter thinks many important roadless areas have been overlooked by Matheson's recommendation, but he says the tone and content of Matheson's wilderness position paper indicate that the state has "moved a long way toward ending its drought of wilderness."

"He made a sincere, positive attempt to find common ground for the most controversial issue facing Western states right now," according to Carter. Matheson was the only governor to establish a state cabinet-level committee accessible to the public to study the wilderness question.

Matheson proposed 50,000 more acres for wilderness or further planning than the committee did. In his letter, he supported designating a High Uinta Wilderness Area. Carter is also pleased about that, even though the governor's recommendation was 250,000 acres less than conser-

vationists and 100,000 acres less than the Forest Service's.

Carter says Matheson and the wilderness committee were overly influenced by misconceptions of local governments, who mistakenly think, for example, that grazing isn't allowed in wilderness areas and that new wilderness areas will automatically be protected as Class I air management areas.

Nevertheless, the governor reacted to what Carter calls "strong constituency support" for wilderness, as evidenced by RARE II public input and by an industry poll in the state.

### IDAHO: LESS THAN INDUSTRY WANTED

Idaho Gov. John Evans disappointed conservationists with his recommendations for wilderness, which were much lower than even the timber industry's. However, conservationists are pleased with Evans' recommendation for their top priority — the River of No Return Wilderness Area in central Idaho. Evans added several important areas to the Forest Service recommendations for the area — requesting a total of 1.9 million acres. Conservationists have asked for 2.3 million acres.

Idaho has the most remaining wilderness of any state other than Alaska, according to Pat Ford of the Idaho Conservation League. "This is a blessing for Idaho people that is beyond price, but it also means we have more to lose than any other state," Ford says.

Evans recommended wilderness status for about 575,000 acres of the seven million acres of roadless land studied by the Forest Service in RARE II. The Idaho Forest Products Council, an industry group, recommended 1.6 million acres and the Forest Service a little under two.

"If Evans' recommendations are followed," Ford says, "Idaho would experience the greatest loss of wilderness in one step in the state's history."

Both Evans and Montana Gov. Thomas



1876 photo by William Henry Jackson  
HOLY CROSS ROADLESS AREA. Colorado Gov. Dick Lamm recommended that proposed wilderness boundaries be adjusted to take into consideration the need for water development structures. However, Lamm says wilderness is needed to protect big game habitat.

Judge put several thousand acres in special categories. Judge asked that 738,000 acres be declared "backcountry," and Evans asked that 836,580 acres receive "special management to maintain their present roadless and undeveloped condition."

Neither conservationists nor timber industry representatives are particularly pleased with these ambiguous recommendations.

Conservationists say that if the governors wanted the areas to be protected, they should have recommended either wilderness or further planning. Since the RARE II process doesn't provide for these categories, the recommendations will be considered "nonwilderness" by the Forest Service.

Dennis Hurtt of the Idaho Forest Council, a nonprofit association of forest product companies, says, "We would hope that any areas that Congress says will be nonwilderness will be returned to multiple use management, including timbering, mineral extraction and use by motorized vehicles...."

Hurtt would like Congress to pass a rider to any RARE II bill saying that any lands released will not be available for further wilderness consideration. "Otherwise, wilderness groups will continue their harassment," he says. "Anyone with a 15-cent stamp can appeal a land use plan" that calls for other uses, Hurtt believes.

### MONTANA: STRONG ATTACKS

Bill Cunningham of the Wilderness Society in Montana commends Judge for holding firm on the 600,000 acres he recommended last fall for instant wilderness despite "strong attacks" from the timber industry and state legislators.

Judge recommended the same number of acres as the Forest Service for wilderness but differed on which areas should be chosen.

Cunningham is especially happy that both Judge and Sen. Max Baucus recommended the Jack Creek area of the Madison Range for wilderness or further planning, despite the Forest Service's negative

recommendation and despite development threats.

### WYOMING: SPECIAL STUDY

As an indication of how controversial wilderness is in Wyoming, a member of Gov. Ed Herschler's staff wouldn't release information to *High Country News* on the letter he sent to the Forest Service, even though legally, it is public information.

According to the Forest Service, Herschler said in his letter that he was concerned about oil and gas potential in four areas, two of which he recommended for nonwilderness. Because of the other two areas' high wildlife and scenic values, Herschler recommended they be put in a special category in which oil exploration would be allowed under limited conditions, but timbering and mining would not be allowed. If no commercial reserves are found, the areas should be restored and managed under wilderness or other protection, he says.

However, according to a spokesman for the Forest Service, RARE II doesn't provide for special categories, so the recommendation would be considered a vote for nonwilderness, which is how the Forest Service had designated the two areas in its January recommendations.

Overall, Herschler recommended further planning for four of the 19 areas that the Forest Service wanted for wilderness. He recommended nonwilderness for three areas that the Forest Service recommended for further planning because he fears conflicts with state water projects and-or timber and minerals.

Phil Hocker, chairman of the Sierra Club in Wyoming, says, "Overall, we're pleased that the governor didn't take a totally anti-wilderness stand. However, we think his recommendations fall short of what would be best for the long-term future of Wyoming."

Hocker says the area on the West Slope of the Teton, which the governor recommended for nonwilderness because of its oil and timber potential, has zero oil potential, according to the Rocky Mountain Oil and Gas Association. In addition, he says oil and gas exploration is permitted under further planning.

### SOUTH DAKOTA: SUBSTITUTION PREFERRED

South Dakota Gov. William Janklow and the state's Congressional delegation supported the Norbeck area in the Black Hills for wilderness, despite the Forest Service's opposition. The agency had recommended one roadless area for wilderness in the state, the Beaver Park area in the Black Hills, but conservationists and others had mixed emotions about the desirability of the area. The governor and the congressional delegation substituted the Norbeck area for Beaver Park. Norm Nelson of the Sierra Club in Rapid City says, "We're gratified at the support we received."

On April 16, President Carter will announce his RARE II recommendations, taking into consideration the Forest Service positions and input from elected officials and agencies.

Final decisions will then be up to Congress, which is expected to act on a state-by-state or area-by-area basis.



## Western Roundup



### Snowmobilers who killed two coyotes say it was an accident

by Jill Bamburg

A recent snow machine incident in Grand Teton National Park, which resulted in the killing of two coyotes, has added to the controversy about snow machine use in the Potholes area of the park.

Three men were charged in connection with the March 12 incident: Frankie E. Howard of Jackson, who was charged with illegal possession of park wildlife; and Wayne Embler and Wayne Parks; both from the Midwest, who were charged with reckless and careless driving of their snow machines. Both offenses carry a maximum sentence of six months and a \$500 fine.

All three pled guilty and received lesser

sentences, which were suspended due to "mitigating circumstances": their claim that the incident was an accident. Embler and Parks testified that they, Howard and another snowmobiler were riding four abreast on snowmobiles when three coyotes ran out in front of them, and the men were unable to avoid running over two of them. The third coyote may have also been hit, according to rangers.

Grand Teton Ranger Bob Andrews, who investigated the incident, says, "What we found was not an accident." He explains that the snowmachine tracks he and other rangers found showed that three coyotes had been chased and circled.

In the absence of an eyewitness or other

conclusive proof, however, Andrews says it was "virtually impossible" to tie the tracks the rangers found to the three individuals charged.

The incident occurred a little more than two weeks before the April 2 cut-off date for public comment on a proposed new snow machine policy for national parks. Under the proposed policy, snow machines would continue to be permitted in the Potholes area. This is one of only three exceptions to the general Park Service policy of confining snowmobile use to "properly designated routes and water surfaces which are used by motorized vehicles or motorboats during other seasons."

Grand Teton's Potholes area would be

excepted from this general rule for two reasons, according to the park's assistant superintendent, Jack Neckels. The first is that snowmobiling in the area is a "traditional, pre-existing use." The second, according to Neckels, is that there has been "no evidence of environmental damage or conflict between users."

Neckels says the March 12 incident is "not indicative of what all snowmobilers do."

"What it did do was clearly identify the need to monitor or manage the snowmobiling activity with the same vigor we've managed other activities in the park," he says.

### Shrunken Garrison too big for Audubon

The National Audubon Society again has challenged the Garrison Diversion Unit in North Dakota. The group's original lawsuit attacked the Bureau of Reclamation's plan for canals, reservoirs, and pumping stations to irrigate 250,000 acres. Secretary of Interior Cecil Andrus favors shrinking the project to 96,000 acres.

According to Audubon Regional Representative Richard Madson, the revised project must have new authorization by Congress. He also contends that the secretary's decision "was made on a political basis, and is therefore arbitrary, and in violation of the secretary's duties under federal law."

Audubon says that work should halt on

the project until all questions are decided. At present, Madson says, nobody knows whether construction work is for the old project or for the revised project, both of which are "internationally and environmentally unacceptable."

In early March, Andrus said he favored deauthorization of the whole project, but that if he couldn't accomplish that, Congress could force approval of the larger project. The smaller acreage is, therefore, a compromise. He acknowledged that his proposal was flawed: "You're still going to be removing about the same amount (of farm land) as you're trying to put water on." The smaller plan would remove about 103,000 acres from farm production and either put them under water or use them to replace wetlands destroyed by the project.



CLIF MERRITT

### Clif Merritt to head wilderness group

Clifton Merritt, regional director for The Wilderness Society for the past 14 years, has been named executive director for the American Wilderness Alliance, a Denver-based national non-profit conservation organization.

Merritt left his position with The Wilderness Society when the society closed its regional office in Denver. He is a founder and a member of the Montana Wilderness Association.

The alliance was established two years ago to promote the conservation of America's wild lands, waters and related resources.

Five staff members now serve the group at its Denver headquarters, and field staff will be added later. Jerry Mallett, director of development, says the group will be working closely with The Wilderness Society and other citizens' groups.

The alliance will be publishing a monthly information letter, *On the Wild Side*, and a quarterly magazine, *Wild America*, both of which will be sent to members. For information, contact the American Wilderness Alliance at 4260 E. Evans Ave., Suite 8, Denver, Colo. 80222 (303) 758-5018.

### Wolverine killer won't be prosecuted

The March 15, 1979, shooting of a male wolverine has given the Utah Division of Wildlife Resources a renewed interest in the animal. In a "Catch 22" situation the animal has not been listed as endangered because none were thought to be left in the

state, although several unconfirmed sightings have been reported each year to the wildlife division.

The shooting was "unfortunate, but at least now we know the animals do exist in Utah," says Bob Hasenyager, division

mammalogist. Hasenyager says a pamphlet will be circulated by wildlife officers throughout the state to gather more data on the wolverine.

Since 1924 there has been no official sighting of a wolverine in Utah. Although state law provides that killing a wolverine (classified as a "furbearer which cannot be taken") is punishable as a misdemeanor, wildlife personnel involved were unaware of such protection for the rare animal and did not cite the hunter.

The Colorado Division of Wildlife suspects the wolverine may have been killed in Colorado but can't prove it. The exact location of the shooting is of interest to biologists since three or four females may be in the area.

Both wildlife divisions would like to have the carcass to study, but the hunter wants the hide. The dispute wasn't settled at press time.

Utah wildlife officials would like to get more legislative protection for wolverines and other rare species, but the legislature doesn't meet for two years.

Seven endangered animals have been reported in Utah—the black-footed ferret, Utah prairie dog, bald eagle, American peregrine falcon, humpback chub, Colorado squawfish and woundfin.



Photo courtesy of David Hall, Division of Wildlife Resources  
**BOB HASENYAGER** of the Utah Division of Wildlife Resources measures the wolverine that was reportedly shot in Utah.



Drawing by Margaret Pettis



## HCN Bulletin Board



### LOONEY LIMERICKS

by Zane E. Cology

For favors from Texas we curried  
Our stream will be black and coal slurried.  
The Crows may resort  
To warfare in court  
And Montana seems equally worried.

### WOMEN AND TECHNOLOGY

A conference "Women and Technology: Deciding What's Appropriate" will be held April 27-29 at the University of Montana in Missoula. Workshops and speakers are scheduled. Registration fee is \$5. Contact the Women's Resource Center, University of Montana, Missoula, Mont. 59801 for more information.

### UPPER MISSOURI RIVER PLAN

The final management plan for the Wild and Scenic Upper Missouri River in Montana is now available to the public. Copies of the plan are available through the Bureau of Land Management, Lewistown District Office, Airport Road, Drawer 1160, Lewistown, Mont. 59457.

### OIL TRANSPORT HEARINGS

The U.S. Department of Energy will hold the second of two hearings in Montana on a preliminary draft report covering alternative proposals for the transport of crude oil to the Northern Tier and Inland States. The hearing will be at 9:30 a.m. Wednesday, April 18, in the West Conference Room of the Federal Building, Pine and Pattee Streets, Missoula. Persons wishing to testify at the hearing may register until the preceding day at the DOE Regional Office, 1775 S. Yukon St., P.O. Box 26247, Belmar Branch, Lakewood, Colo. 80226.

Written comments may be submitted until April 20 to Public Hearing Management, Box WY, DOE, Room 2313, 2000 M St., NW, Washington, D.C. 20461.

A limited supply of the draft report is available from the DOE Region VIII office in Lakewood.

### ENERGY FAIR

On April 21-22, Fargo, North Dakota will host The Prairie Energy Fair. Workshops, discussions, films and exhibits will be included. Reservations for booth space and/or workshop participation can be made by writing Jan Valdez, Southeastern North Dakota Community Action Agency, 670 4th Ave. N., Fargo, N.D. 58102.

### COOPERATIVE BANK

The National Consumer Cooperative Bank recently created by Congress will provide low-interest loans to people who want to start or strengthen cooperatives. In December the Northern Rockies Action Group in Helena, Mont., sponsored meetings about the bank. For a summary of the meetings, send your name and address to Northern Rockies Action Group, 9 Placer St., Helena, Mont. 59601.

### SIERRA CLUB JOBS

The Sierra Club's Washington D.C. office is now accepting applications for two lobbyist positions. The person would represent the Sierra Club before Congress and the administration. Salaries will range from \$15,000-\$18,000 per year, with benefits. For more information write Brock Evans, Director, Sierra Club Washington Office, 330 Pennsylvania Ave., SE, Washington, D.C. 20003.

### SOLAR ENERGY CONTEST

The Fort Collins Transfort Bus system and the Colorado Office of Energy Conservation are sponsoring a contest for the design of passive solar heated bus shelters. The deadline for the contest, which is open only to Colorado residents, is April 30, 1979. Information packets are available through Fort Collins Transfort, 1715 W. Mountain Ave., Ft. Collins, Colo. 80521.

### ENVIRONMENTAL WORKSHOP

An in-depth workshop entitled "Natural Resources and Environmental Education" will be held July 9-27 at the University of New Mexico-Albuquerque. The cost for participants will be \$72, with college credit available. Reservations must be made in advance. Contact Sally Wisely, Bureau of Land Management, P.O. Box 1449, Santa Fe, N.M. 87501.

### RESOURCE PLANNING REPORT

Assistant Secretary of Agriculture M. Rupert Cutler says a draft report on the nation's renewable resources points out that shortages and higher prices of renewable resources are not inevitable. The report analyzes the present and future demands for timber, water, range forage, fish and wildlife, outdoor recreation and wilderness. Copies of the report can be obtained from all Forest Service offices. Comments will be accepted through June 8 and should be sent to the nearest Forest Service office.

## service directory

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### WILDERNESS PROPOSALS MEETINGS

Public meetings to review Bureau of Land Management proposals for wilderness in Utah have been scheduled during April and May in cities across the state. The meetings are to be held in the following cities: Green River, April 10; Castle Dale, April 11; East Carbon, April 11; Monticello, April 11; Moab, April 11; Loa, April 11; Richfield, April 12; Price, April 12; Blanding, April 12; Fillmore, April 17; Tootle, April 17; Nephi, April 18; Brigham City, April 18; Vernal, April 18; Cedar City, May 1; Kanab, May 2; St. George, May 3; Escalante, May 3. For details, contact local BLM offices.

Written comments will be accepted until July 2. They may be sent to Paul L. Howard, state director, Attention Wilderness, Bureau of Land Management, University Club Building, 136 E. South Temple, Salt Lake City, Utah 84111.

### SOLAR EDUCATION DIRECTORY

The Solar Energy Research Institute (SERI) has recently published a National Solar Energy Education Directory. The 300-page directory contains a listing of solar-related courses, programs, and curricula offered at nationwide institutions. The price is \$4.75. A copy of the directory can be purchased by writing The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The stock number is 061-000-00210-3.

### ENERGY FAIR

The third annual Laramie Energy Fair is scheduled to take place on Saturday, April 28, from 10 a.m. to 5 p.m., at the National Guard Armory, 2901 Armory Road, Laramie, Wyo. Exhibit space can be reserved through the Chamber Office, 312 Grand, Laramie, Wyo. 82027.

### BIG HORN CANYON PLAN

The National Park Service has completed and made available for public review a draft plan for the management of the natural resources of Bighorn Canyon National Recreation Area in Wyoming and Montana.

Copies of the 42-page document are available upon request from the park headquarters at P.O. Box 458, Fort Smith, Mont. 59035 and from the Rocky Mountain Regional Office, 655 Parfet Street, Denver, Colo. 80225.

Written comments will be accepted until April 30 and should be submitted to the superintendent at park headquarters.

### RESOURCE MANAGEMENT SYMPOSIUM

Utah State University will hold a symposium entitled "Dispersed Recreation and Natural Resource Management: A Focus on Issues, Opportunities, and Priorities" on April 26-27, 1979. A reservation form may be obtained through Conference and Institute Division, Utah State University, UMC 01 Logan, Utah 84322.

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## STATE OF WYOMING PUBLIC NOTICE

April 6, 1979 — High Country News-15

### PURPOSE OF PUBLIC NOTICE

THE PURPOSE OF THIS PUBLIC NOTICE IS TO STATE THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS UNDER THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (FWPCA), P.L. 92-500 AND THE WYOMING ENVIRONMENTAL QUALITY ACT (35-11-101 et. seq., WYOMING STATUTES 1987, CUMULATIVE SUPPLEMENT 1973).

IT IS THE STATE OF WYOMING'S INTENTION TO ISSUE WASTEWATER DISCHARGE PERMITS TO (1) ONE INDUSTRIAL FACILITY; AND TO MODIFY (1) ONE COMMERCIAL AND (1) ONE WATER AND SEWER DISTRICT DISCHARGE PERMIT WITHIN THE STATE OF WYOMING.

### APPLICANT INFORMATION

(1) APPLICANT NAME: PIONEER NUCLEAR, INC.  
MAILING ADDRESS: P.O. BOX 151  
AMARILLO, TEXAS 79189  
FACILITY LOCATION: HARDY PROJECT  
NE $\frac{1}{4}$ , SW $\frac{1}{4}$ , SECTION 22  
T38N, R73W, CONVERSE  
COUNTY, WYOMING  
APPLICATION NUMBER: Wy-0028207

Pioneer Nuclear, Inc. plans to open an open pit uranium mine in Northern Converse County which will be known as the Hardy Project. Groundwater and surface runoff which enters the mine pits will be pumped to the surface and routed through a Barium Chloride feed system (for removal of Radium) and a settling pond prior to discharge to the Dry Fork of the Cheyenne River (Class IV Stream) via an unnamed drainage.

The proposed permit requires the discharge to meet federal effluent standards which are considered to be best practicable treatment for the uranium mining industry. The permit also requires control of runoff from disturbed areas and self-monitoring of effluent quality on a regular basis with reporting of results quarterly.

Because of present uncertainties regarding the U.S. Environmental Protection Agency's future effluent limitations on toxic materials a short term permit with an expiration date of December 31, 1980, is proposed.

(2) PERMIT NAME: UNITED STATES FOREST SERVICE  
"BURGESS JUNCTION"  
MAILING ADDRESS: U.S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
11177 WEST 8th AVENUE  
LAKEWOOD, COLORADO 80225  
PERMIT NUMBER: Wy-0020931

The United States Forest Service operates a wastewater treatment plant at Burgess Junction, Wyoming. The facility consists of two non-aerated lagoons with a chlorination unit and treats wastes which originate at various campgrounds in the Big Horn National Forest. The discharge is to the North Fork of the Tongue River (Class I Stream) via an unnamed drainage.

The treatment facility includes two points of discharge. Discharge point 001 is the outfall from the final lagoon, discharge point 002 is the outfall from the drain system which lies under the facility.

The proposed permit requires compliance with national secondary treatment standards from both discharge points effective immediately. Since any discharge would have to flow a considerable distance through a diffuse and undefined drainage before reaching the North Fork of the Tongue River, effluent limitations more stringent than the national secondary standards are not considered to be necessary.

The proposed permit requires self-monitoring of effluent quality on a regular basis with reporting of results quarterly for discharge point 001 and yearly for discharge point 002. The permit is scheduled to expire June 30, 1984.

(3) PERMIT NAME: JACKSON HOLE SKI CORPORATION  
"TETON VILLAGE"  
MAILING ADDRESS: TETON VILLAGE, WYOMING 83025  
PERMIT NUMBER: Wy-0020087

During 1978, numerous difficulties occurred in conjunction with wastewater disposal at Teton Village, Wyoming. These difficulties have included the following: (1) Failure of the Corporation to meet discharge permit limitations during most of 1978; (2) A lengthy legal action by the Department against the Corporation due to the permit violations; (3) A court order which requires the Corporation to cease discharging across Snake River Ranch lands by June of 1979; (4) Designation of Fish Creek as a Class I Water and subsequent confusion about the exact location of Fish Creek and the name of the receiving water; (5) Expiration of the Corporation's discharge permit on September 30, 1978, and subsequent failure by the Department and the Corporation to agree on a new permit limitations; (6) Action by Teton County to restrict new hookups to the Corporation's sewage collection system.

At this time items 1 and 2 have almost been resolved. The Department and the Corporation have agreed to a consent decree which finalized the legal action and recent self-monitoring reports indicate that the Corporation is now in compliance with permit limitations. It is the Department's understanding that the County has lifted the ban on additional taps to the system, thus, resolving item 6.

Items 3 and 5 remain to be resolved. Because of the court order, the Corporation plans to move their point of discharge from the existing location, which results in a flow across the Snake River Ranch lands, to a new location which the Corporation believes will satisfy the requirements of the court order. The Corporation has requested that the Department amend its discharge permit to include this new point of discharge. Because the change in discharge point will have no practical water quality impacts, the Department proposes issuance of a permit to the Corporation which would allow a discharge at either the existing point (001) which is located near the southeast corner of lot 6, Section 24, T42N, R117W, or the new point (002) which is located in the NW $\frac{1}{4}$  of the SE $\frac{1}{4}$  of Section 24, T42N, R117W.

The Department proposes that this permit include exactly the same effluent limitations and requirements as the existing permit but that the expiration date be extended only to August 31, 1979. The reason for this short permit duration is that it is very likely that the permit will have to be again modified once the classification of the receiving streams is finalized.

The Wyoming Environmental Quality Council is scheduled to hear that question at a public

hearing to be held March 28, 1979, in Cheyenne, Wyoming. It could take the Council up to sixty (60) days after the hearing to make a decision, then it will take the Department approximately another 60 days to go through review and public notice procedures, therefore, it is unlikely that a final permit can become effective before August 31, 1979.

(4) PERMIT NAME: PARADISE VALLEY WATER  
AND SEWER DISTRICT  
MAILING ADDRESS: 109 MARIGOLD AVE.  
CASPER, WYOMING 82601  
PERMIT NUMBER: Wy-0020141

The Paradise Valley Utility Company which was privately owned and operated, recently sold its wastewater treatment plant to a public entity known as the Paradise Valley Water and Sewer District. Paradise Valley is a large housing development located southwest of the City of Casper. The sewage treatment facility serving the District consists of three package treatment plants followed by a single polishing pond and a chlorination unit. The discharge is to the North Platte River (Class II Stream) and is immediately above the water supply intakes for Brooks Water and Sewer District and the City of Casper.

The District is now requesting that their discharge permit be modified to allow increased levels of total suspended solids (TSS) to be discharged. The District contends that normal operation of the polishing pond will result in algae blooms which will result in TSS levels in excess of discharge permit limitations.

The Department proposes to grant the request for the following reasons:

1. The situation will be temporary. The District and the City of Casper have an agreement whereby all sewage from Paradise Valley will be collected in a new interceptor line and treated by the City of Casper. Current projections call for completion of this line in approximately three years.

2. Total suspended solids as algae are not a significant environmental problem. The level of TSS allowed to be discharged in the proposed permit is the same as that which the Department allows to be discharged from any stabilization pond system of less than 2.0 MGD design. The maximum discharge from this facility will be less than 1.0 MGD.

3. Except for total suspended solids, the effluent limitations in the proposed permit remain unchanged from the existing permit and require compliance with national secondary treatment standards effective immediately. In addition, effluent limitations designed to insure compliance with Wyoming's in-stream water quality standards for fecal coliform bacteria and total residual chlorine remain. The limitation on fecal coliform bacteria at the Brooks Water and Sewer District and Casper water supply intakes will not exceed 200 per 100 mls at any time. To meet these strict limitations, the facility will have to be properly operated.

While the proposed permit requires self-monitoring for ammonia, it does not contain any specific limitations for that parameter. One reason for this is that in the near future a Step I plan for the entire Casper area will be prepared. It is assumed that the plan will recommend consolidation and elimination of many of the sewage treatment plants in the Casper area. Until it is known what plants will ultimately exist, what their capacities will be, and where they will be located, it will be very difficult to conduct a waste-load analysis on the North Platte River in the Casper area. The proposed expiration date of December 31, 1981, is intended to correspond to the date when the answers to those various questions will be known. The other reason is that during the summer and fall of 1978, DEQ conducted a complete monitoring program on the North Platte River through the Casper area. The results of that program indicate that the River meets all in-stream water quality standards (including ammonia) down to the City's sewage treatment plant, and that even below that point the violations were marginal. Therefore, it does not appear that a limitation on ammonia for the Paradise Valley plant is critical at this time.

Self-monitoring of effluent quality and quantity will continue to be required on a regular basis with reporting of results monthly.

### STATE-EPA TENTATIVE DETERMINATIONS

Tentative determinations have been made by the State of Wyoming in cooperation with the EPA staff relative to effluent limitations and conditions to be imposed on the permits. These limitations and conditions will assure that State water quality standards and applicable provisions of the FWPCA will be protected.

### PUBLIC COMMENTS

Public comments are invited any time prior to May 7, 1979. Comments may be directed to the Wyoming Department of Environmental Quality, Water Quality Division, Permits Section, Hathaway Building, Cheyenne, Wyoming 82002, or the U.S. Environmental Protection Agency, Region VIII, Enforcement Division, Permits Administration and Compliance Branch, 1860 Lincoln Street, Denver, Colorado 80295. All comments received prior to May 7, 1979, will be considered in the formulation of final determinations to be imposed on the permits.

### ADDITIONAL INFORMATION

Additional information may be obtained upon request by calling the State of Wyoming, (307) 777-7781, or EPA, (303) 327-3874, or by writing to the aforementioned addresses.

The complete applications, draft permits, and related documents are available for review and reproduction at the aforementioned addresses.

Public Notice No: Wy-79-004

## classifieds

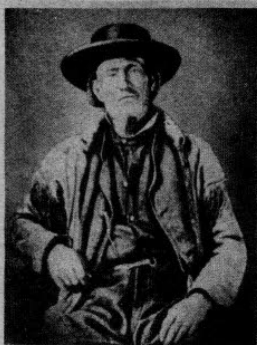
WANTED: Executive director for the Wyoming Outdoor Council, a growing, statewide environmental group. Responsibilities include: administering staff of three; fundraising and recruiting members; coordinating legislative lobby; developing programs. The director is accountable to the board of directors and serves on a year to year contract. Experience required in Western conservation issues, political organizing, administration and public relations. Salary \$800-\$1,000 per month plus benefits. Send resume, four references, writing sample and description of relevant experience to: Pam Minier, Box 1184, Cheyenne, Wyo. 82001. (307) 635-3416. Deadline mid-May. Starting date negotiable.

WANTED: skilled journalist with a good heart and low material needs to work at High Country News. Full-time position on news staff involving writing, editing and some travel. Experience necessary. HCN is run by its employees, who each make \$500 per month plus health insurance. Must be willing to move to Lander. Send writing samples and resume to HCN, Box K, Lander, Wyo. 82520. Position open soon. Deadline for applications: April 30.

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16-High Country News — April 6, 1979

## GHOST TRAILS OF WYOMING



Jim Bridger about 1866.

by Mae Urbanek, Johnson Publishing, Boulder, Colo., 1978. \$8.95, paperback. Black and white photos.

Review by Myra Connell

It seems doubtful that travelers on historic trails in Wyoming would see ghosts as suggested by the title. But anyone in-

terested in Wyoming's history, geology and archaeology will find Mae Urbanek's book a useful and entertaining guide. She retraces the well-known trails and routes that give Wyoming its name of "Crossroads of the West," then branches off on delightful, but less well-known paths.

She describes in detail town sites, stage and pony express stations, forts, monuments, petroglyphs, geologic features and mines. Mining camps, battlefields, and even a lynching tree are included. The book also contains explicit instructions for locating the sites described, but a good road map and a historic map, if one exists, would be useful accessories. For example, the text mentions "Pierre's Hole" several times; I, as reader, have no inkling of its location.

Logically enough, Urbanek begins with John Colter, believed to have been the first white man in Wyoming. In following his routes, she mentions that Colter used trails already established by Indians.

The trailblazers who searched out the passes across the mountains are given due credit. The deep trails worn into the face of the land by the migrants obsessed with moving west are noted.

Many readers may be delighted to discover places that have a particular interest for them. For example, the state's first oil well was discovered and developed at Dallas Dome, about 11 miles southeast of the High Country News office.

Tales connected with the locations are skillfully woven into the text, along with

historical facts and the author's personal commentaries.

Urbanek's sense of humor is evident. "When Col. Maverick came back from the Civil War, he found unbranded cattle wandering on his estate. So he got busy with his branding iron and created a word for the dictionary: maverick — an unbranded range animal or motherless calf whose father has run off with another cow."

## Dear Friends,

Too often people from "The States" tend to think of Canada as a younger sibling, if we think of it at all. We refer to ourselves as the Americans, and our newspapers pay more attention to Europe and China than to our neighbors.

However, a recent trip to Canada for the National Wildlife Federation annual meeting reminded me that there is much to be admired in our neighbor.

While there I read a news story about crime in the New York City subway, which a new program had reduced to 20 felonies in a 24-hour period. It's illustrated with a picture of a grim-faced policeman, hand near his gun, standing in a grimy, crowded subway train, its walls filled with graffiti.

I looked around me. I was riding a subway in Montreal. It was clean, quiet, and this evening, it was filled with men and women in business clothes, students loaded with books and a middle-aged couple dressed for a night at the concert hall. Opera buffs, perhaps. They knew they could return home by subway, too, because the trains will be busy and safe until they stop running at 2:30 a.m.

Forgetting the other passengers, I stepped out at the main downtown station where a huge stained glass mural decorated one wall. In the other direction, glass doors opened to an underground city of boutiques, sandwich shops and newsstands. I could walk for blocks protected from the harsh north wind, knowing that the shops, too, were naturally insulated.

The underground shopping attracts people from the suburbs, who can link with the subway through bus and train connections. Yet Montreal is a little smaller than Denver, which has a terrible time getting support for even its limited bus service. Toronto is only slightly larger than Phoenix, another U.S. city almost entirely dependent upon cars, yet Toronto has a well-used subway.

Train stations, too, are bustling — not the cavernous, desolate places most of our stations are today, full of echoes and ghosts.

Of course, Canadians have not escaped many of the environmental problems we face. They, too, are dependent upon foreign oil; they're losing agricultural land to housing pressures; they're pressured to develop fossil fuel reserves in delicate areas and to slice through important wildlife ranges with roads and pipelines. In fact, since the northern two-thirds of the country is virtually unpopulated, it's even harder for wildlife officials to convince the public that loss of a little habitat can matter.

A big question mark hovers over the vast, open tundra of the northern provinces and the lush agricultural fields to the south. The political climate

For photos *Ghost Trails* draws heavily on such sources as the Wyoming State Archives and Historical Department, the University of Wyoming, the Historical Society of Nebraska and the Wyoming Travel Commission, as well as the author's collection and that of Beryl Williams. The photos assembled should serve as a valuable reference for writers, painters and givers of parades and pageants.

— MJA



RIGHT AROUND HOME  
by Myra Connell

Country kids ramble all over their environment, exploring every nook. So it was with my brothers and sisters and me on the ranch.

One of our favorite places was a deep gulch walled by low cliffs where we held picnics. On the cliff was a crude outline of a human-like figure incised into the rock. In other gulches nearby were other drawings. Grownups dismissed the rock pictures as "Indian writings." I'm sure they were unaware of the significance of the archeological treasures staring us in the face. No one was at hand to teach us their importance.

Fifty years flashed by, crammed with living and making a living and I remained ignorant of anthropological artifacts right around home.

My friend in the Dubois area asked me to ride with her to the mountain sheep range along Torrey Creek. She pointed out a rock carving of a fantastic long-horned animal obviously of prehistoric origin. So began for me a fascinating trail of discovery. The "Indian writings" dismissed with indifference when I was a child became an interesting study. I was amazed to learn that prehistoric people left evidence of their presence on rocks and cliffs throughout the world. Petroglyphs, carved inscriptions, are numerous in our own area and in most of the Western states. In other areas the pictures are painted on the rocks and are termed "pictographs."

The long-horned animal specimen at Torrey Creek can be seen from the road, about 75 feet (as stepped off by a short-legged woman) up a gentle slope.

I wondered why the artist made the horns so long. Are they meant to be bighorn sheep with their curled horns straightened out?

I returned to that area with a university

student who was studying the petroglyphs of this locality. We traced several specimens on sheets of clear plastic.

I know that several extensive studies of the Torrey Creek petroglyphs have been done by persons with expertise. This in no way detracted from the wonderment and excitement of searching and discovering for ourselves. At Castle Gardens south of Riverton, Wyo., we wriggled through a coyote-sized opening where the protective fence met the cliff, to get tracings of a pregnant buffalo.

Two schools of thought seem to conflict in this regard. On the one hand are the secret keepers; on the other, those who feel that the best course may be teaching the public to appreciate prehistoric art.

Efforts are being made to capture these ancient communications through artificial

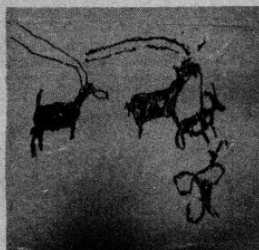


Photo by Myra Connell  
A TORREY CREEK petroglyph specimen traced on clear plastic.

means, before they become obliterated by time, weather and human cussedness. Photography, tracing, copying and casting have been undertaken by people trained in these skills.

Others seek to educate by writings such as the article "Indian Rock Art: A National Treasury in Jeopardy," *Reader's Digest*, Oct. 1978. So far I have never returned to the gulch where we kids used to play to see how the rock portrait has fared. But as soon as snow and mud are gone this spring, I have plans.

## SPRING PLANTING



This spring plant something that will really grow. Place *High Country News* in the hands of a friend and watch a growing awareness take root.



Enclosed is \$12 for 25 issues. Send HCN to my friend:

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Or send them a seed copy — ask for a sample. High Country News, Box K, Lander, WY. 82520.

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