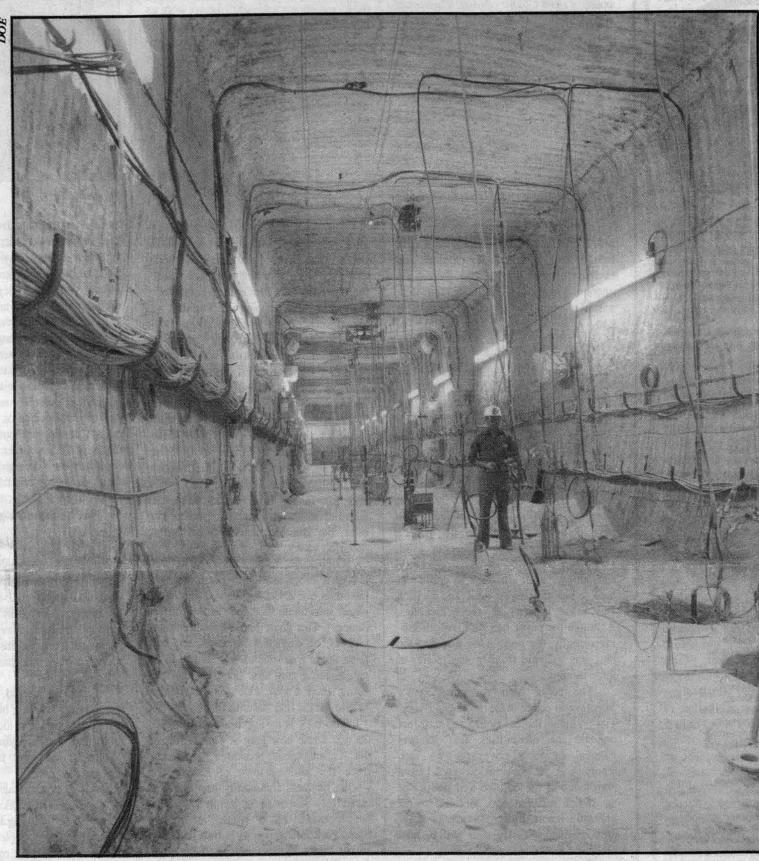
High Country News

A Paper for People who Care about the West

One Dollar



Testing room at the Waste Isolation Pilot Plant

Can nuclear waste be salted away?

by Steve Hinchman

f all goes as planned, the Waste Isolation Pilot Plant -- the nation's first permanent nuclearwaste dump -- will go on line next October. Final construction and tests are proceeding at a quick pace at the dump site in southeastern New Mexico, and in Congress New Mexico's senators are rushing to push final approval of the project to a vote before summer recess.

But all is not going well. Last December underground seeps were reported at the dump site, requiring series of other scientific and transportation problems have hit the project. Despite growing public controversy the Department of Energy says the problems are not bad enough to stop or seriously delay the project.

As October nears, New Mexico's official project review board and a panel of independent scientists have joined citizens' action groups and environmentalists in calling for delay. They say that in its rush to open the Waste Isolation Pilot Plant, the DOE and its backers in Congress may be glossing over problems that could send buried waste gushing back to the surface in the far distant future or spill it on public highways

The Waste Isolation Pilot Project, major changes in design. Since then a or WIPP, is being built in the desolate, alkaline desert 20 miles east of Carlsbad, N.M. by the DOE and its primary contractor, Westinghouse Corp. Its mission, as dictated by Congress in

1980, is to serve as an experimental research station for nuclear waste diposal and, if the tests are successful, to be the final resting place for 6.3 million cubic feet of transuranic waste.

Transuranics are radioactive elements heavier than uranium that have relatively low radiation levels but extremely long half lives. An example is plutonium, which is not highly radioactive, but has a half life of 240,000 years. The transuranic wastes to be buried at WIPP are all military -- the accumulated by-products of 40 years of nuclear weapons research and production. Wastes include contaminated materials from DOE's everyday operations, such as rubber gloves, lab coats, rags, tools, etc., and will arrive packed in steel 55 gallon drums housed in protective casks.

Most of the waste is from the Rocky Flats nuclear weapons plant in Colorado, but shipments will also be sent from DOE facilities in California, Nevada, Washington, Idaho, Illinois, Ohio, Georgia, Tennessee and New Mexico.

It is a large project. More than 500 workers and 200 scientists are working at the 10,240-acre WIPP site and at the nearby Sandia National Laboratories. Over the past eight years, the DOE has spent \$700 million to sink four shafts 2,150 feet deep into salt deposits underlying the desert floor. Below ground, the agency has completed excavation of the experimental test stations and one-quarter of WIPP's planned 56 storage rooms. Once begun, the DOE estimates it will take 20 years to fill the entire repository.

(Continued on page 10)

Line Reference Target LF

Dear friends,



HIGH COUNTRY NEWS (ISSN/0191/5657) is published biweekly, except for one issue during July and one issue during January, by the High Country News Foundation, 124 Grand Avenue, Paonia, Colorado 81428. Second-class postage paid at Paonia, Colorado.

POSTMASTER: Send address changes to HIGH COUNTRY NEWS, Box 1090, Paonia, CO 81428.

Tom Bell

Editor Emeritus **Ed Marston** Publisher **Betsy Marston** Editor Rocky Barker Craig Bigler **Peter Carrels Bruce Farling** Pat Ford Patricia Guthrie Jim Stiak Regional Bureaus C.L. Rawlins Poetry Editor Steve Hinchman Editorial Research **Judy Moffatt** Linda Bacigalupi Developme Sasha Cole Stacle Oulton Michael J. Robinson Interns Ron Sunderland Darkroom C.B. Elliott Circulation/Production Peggy Robinson Grapbics/Typesetting Claire Moore-Murrill **Becky Rumsey** Production **Donna Gregory** Business

Tom Bell, Lander WY
Michael Clark, Wasbington D.C.
Lynn Dickey, Sheridan WY
John Driscoll, Helena MT
Michael Ehlers, Boulder CO
Jeff Fereday, Boise ID
Tom France, Missoula MT
Sally Gordon, Kaycee WY
Bill Hedden, Moab UT
Dan Luecke, Boulder CO
Adam McLane, Helena MT
Herman Warsh, Emigrant MT
Andy Wiessner, Denver CO
Robert Wigington, Boulder CO
Board of Directors

Articles appearing in *High Country* News are indexed in *Environmental Periodicals Bibliography*, Environmental Studies Institute, 2074 Alameda Padre Serra, Santa Barbara, California 93103.

All rights to publication of articles in this issue are reserved. Write for permission to print any articles or illustrations. Contributions (manuscripts, photos, artwork) will be welcomed with the understanding that the editors cannot be held responsible for loss or damage. Enclose a self-addressed stamped envelope with all unsolicited submissions to ensure return. Articles and letters will be published and edited at the discretion of the editors.

Advertising information is available upon request. To have a sample copy sent to a friend, send us his or her address. Write to Box 1090, Paonia, Colorado 81428. Call High Country News in Colorado at 303/527-4898.

Subscriptions are \$20 per year for individuals. \$28 per year for institutions. Single copies \$1.00 plus \$1.25 postage and handling..

Coming from all over

The Board of Directors of the High Country Foundation met in Paonia on June 18, followed by a potluck in the Paonia town park attended by 60 or so people from towns in western Colorado.

High Country Foundation is the name of the foundation which owns and operates *High Country News*. The human personification of this 501(C)(3) charity is a 15-person board from around the nation; it meets at least three times a year to set policy and budget and to staff the paper.

This meeting saw three new board members attend: Lynn Dickey, a Wyoming state legislator and bookstore owner from Sheridan; Michael Ehlers, a salesman from Boulder, Colo., and Dan Luecke, a hydrologist and staff member with the Environmental Defense Fund in Boulder.

Others at the summer meeting were board president Adam McLane, a CPA from Helena, Mont.; Sally Gordon, who lives on a ranch in Kaycee, Wyo., and operates a mail order business; Tom Bell, a staffer with the historical society in Lander, Wyo., who is the founder of High Country News and several other organizations; Herman Warsh, whose ranch is just north of Yellowstone National Park near Emigrant, Mont.; Bill Hedden, a consultant and furniture maker from Castle Valley, Utah; and Andy Wiessner, a land exchange consultant in Denver who was a staff member for former Congressman John Seiberling

This was a comparatively low-key meeting. It is too early in the year to start worrying about the 1989 budget or to have definitive results on the paper's financial or circulatory status for 1988. The board discussed editorial direction, foundations, and whether it could cut back to two meetings a year. The decision was made to stay at three meetings. Although the paper has had smooth sailing recently, the consensus was that the best way to avoid trouble was to stay at three meetings.

The board also discussed staff's intention to concentrate increasing energies on Indian issues. Board and staff recognized the difficulties and dangers inherent in such coverage: we lack reporters in the reservations; we lack a knowledge of the culture and politics of the Indian nations; and, because media generally ignore Indian issues, or cover them only superficially, there will be little precedent for *HCN* to follow.

In addition, environmentalists and Indians are often at odds, as in the Black

Hills dispute, even though each says the same thing about the earth. The board was also concerned that *HCN* not fall into ideology rather than reporting — something that can happen when writing about people who have such a difficult history. After a lengthy discussion, board gave staff permission to continue to broaden its coverage of Indian issues.

Part of that effort has involved the Indian intern program. If you know of a tribal member who might like to work as a journalism intern in Paonia, please tell us or them. Unlike our other intern program, this one pays a modest stipend for three to four months.

Speaking of interns, former *HCN* intern Bruce Farling won a \$1,000 journalism award given by the Great Falls (Montana) *Tribune* to a journalism student at the University of Montana, Missoula. Congratulations.

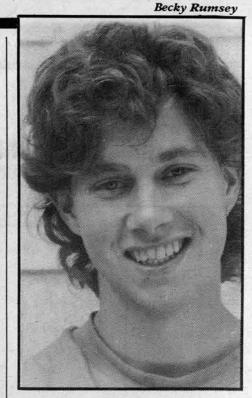
Visitors, visiting

Summer visitors include Joe Huggins, a Colorado social worker, and his sister Anne, a new graduate of Oberlin College. They stopped by on their way to the Ute Mountain Reservation in southern Colorado. Also stopping in for a visit was a non-subscriber -- Joe O'Shaugnessy -- father of Paonia resident Meg Paigen. Joe is an advertising excecutive with a Chicago daily, and he came by to see how we cram as much advertising into HCN as we do.

Staff members Ed and Betsy Marston spent a restorative week in Rocky Mountain National Park in a modest cabin once owned by William Allen White, the country publisher from Emporia, Kan. White and his family fled Kansas heat each summer to spend a month or so looking over the Big Thompson River and its moraine valley.

Glen Kaye, the park's former naturalist, now promoted to regional naturalist based in Santa Fe, had turned the White cabin into home base for "artists in residence." The guest book lists numerous writers, photographers and painters who have spent from one to two weeks in the cabin, recharging their batteries and pursuing their trades. One visitor thanked White for his fine "taste in front yards."

The park is an impressive place. We do not know how long it can withstand the development pressures emanating from the gateway town of Estes Park, whose business community has taken an incredibly low road in terms of tourist development. As a result, downtown Estes Park now serves as both a blockade and a blight at the entrance to the park. But within park boundaries, the National Park Service has been successful in



Sasha Cole

reclaiming the park from inholders, concessionaires, and other development. Private parties now own only 600 acres of park land, down from an original 9,000 acres. And the valley we looked over each evening, and which we thought had not been touched since the glaciers advanced and retreated over the land, once had a golf course on it.

We were most impressed with the Park Service employees. Whether you asked the person sweeping the parking lot, driving a truck or manning the naturalists' desk, everyone seemed to know the park from border to border. Private corporations interested in better serving their customers should visit the national parks, to learn how they might emulate this public bureaucracy.

A California intern

Before coming to Paonia, new intern Sasha Cole had been to the West once. That was for a week-long vacation with his family four years ago in the Bitterroots of Montana. Having little idea what to expect this time, Sasha threw a stack of books in his car to pass the time outside of work.

Since he arrived, he's been so busy fly-fishing, learning how to kayak, being a disk jockey at the local public radio station, and just enjoying the company of Paonians, he says he's hardly had a moment to read.

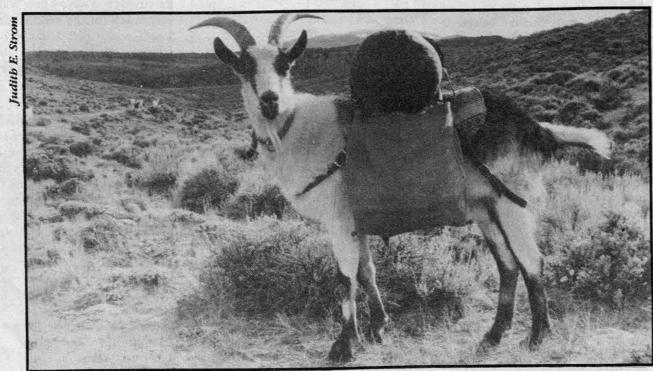
An undergraduate at the University of California, Berkeley, Sasha says he's happy to be working at an issue-oriented paper because people here think about issues and don't just record media-events.

-- the staff



HCN board meeting in Paonia, Colorado

WESTERN ROUNDUP



Pack goat

Goats join mules, llamas on the trail

Hikers on western mountain trails are used to encountering pack strings of horses and mules, and more recently llamas, but pack goats?

If you trek through the Wind River range of western Wyoming, you just might encounter John Mionczynski and his string of pack goats.

Mionczynski discovered the packing ability of goats in 1972 when he was doing a bighorn sheep study for the Forest Service. After a particularly tough trip carrying 125 lbs. of supplies and radio telemetry equipment, he decided there had to be a better way.

An experienced horse packer, he found a horse had trouble negotiating the rough country frequented by bighorn sheep. But at home, John had a wether goat trained to harness. Could "Wether Vane" be trained to carry part of the load through rugged terrain?

For the first packing attempt, Mionczynski used an old pair of saddlebags. This proved too hard on the goat's back. Scaling down the design of a sawbuck pack saddle, he made his first goat-pack saddle out of a hickory shovel handle and an old belt. This worked just fine and Wether Vane was soon sharing the load as John trailed the bighoms.

The goat turned out to be extremely surefooted and negotiated rocky slopes

with ease. An added benefit, he says, came when the sheep spotted him and Wether Vane. "Instead of spooking and running, they would actually approach to investigate their strange cousin."

Myonczynski says he has always liked goats since working with them as a boy on a New York truck farm, and it wasn't long before his pack string lengthened. By the end of his sheep study he had 12 pack goats.

He favors big-boned, long-legged wethers as pack animals, though he packs an occasional doe so he can have fresh milk on the trail. He says a 200 lb. goat can easily pack 60 lbs. for 10-15 miles per day in moderate terrain. His bigger, experienced goats pack as much as 80 lbs. or even a tired, young hiker when necessary.

Most goats readily take to packing, he says, though over the years John says he's had to reject about one-third of the animals he's tried because of weak feet or poor temperament. He accustoms the goats to packing by first using a training harness made from an old horse halter. He then moves to a regular pack saddle and finally a saddle with lightly packed panniers. He takes young goats on short trips to pack out any trash he finds. The only real problem he's encountered is a goat's initial fear of water, but this can be

overcome with experience, he finds.

Mionczynski thinks pack goats have a lot going for them. For the occasional packer they are inexpensive, easy to take care of at home and easy to transport. On the trail their small hooves have very little impact and they feed on weeds, lichen, pine needles and brush rather than grass. Their droppings are hard to tell from a deer's.

Goats excel in rough terrain and on snow where larger animals have difficulty. In fact, this summer John and his goats will pack for a party of scientists studying Bow glacier in the Wind River range. Previous parties had to rely on backpackers hired to ferry gear as horses couldn't be used on the glaciers. John also teaches a goat packing course for the National Outdoor Leadership School.

Besides using the goats for contract work, John guides goat packing trips in the Wind River mountains and Red Desert areas and rents the goats to individuals making trips on their own. In between trips he tries to keep up with demand for his hand-crafted goat pack saddles.

For more information write John Mionczynski, Route 62, Box 250, Lander, WY 82520

-- Judith E. Strom

HAMILTON FARMS DON'T LET THE SPOTTED OWL MAKE JOBS AN ENDANGERED SPECIE ANGUS - HOLSTEIN SPRINGERS

Billboard in Oregon reflects the hot debate over logging old-growth timber

Uncle Sam as spokesman for timbering

HOTLINE

Double wbammy

U.S. uranium producers were hit with a double whammy last month when efforts to revive the struggling industry were zapped in both the U.S. Supreme Court and in Congress. On June 15, the high court unanimously rejected an industry lawsuit asking the Department of Energy to ban imports of foreign uranium ore, which have taken over the U.S. market. The decision reverses two lower court rulings that supported the uranium producers based on a clause in the Atomic Energy Act requiring the federal government to keep the domestic uranium industry alive (HCN, 9/14/87). The Supreme Court said the DOE need apply trade restrictions only if the domestic industry can be saved and ordered the original federal district court in Denver, Colo., to re-try the case based on that question. Jerry Graney, president of Energy Fuels Nuclear in Denver -- one of the three companies that filed the suit -- says the ruling is a setback but not fatal. He says uranium producers will begin immediately to build a case against the DOE's contention that the U.S. industry has been dead for three years and is beyond help. Also on June 15, key House Democrats repelled attempts by Western representatives to attach a uranium compromise to the U.S.-Canada freetrade pact. The provisions would have required the federal government to purchase \$750 million of domestic uranium -- the amount U.S. producers say they need to get back on their feet.

Deep gas in Wyoming

An Australian company recently made the deepest discovery of natural gas ever in the Rocky Mountain region, reports the Casper Star-Tribune. The company, Broken Hills Proprietary, drilled two wells more than 24,000 feet under the Wind River basin in Wyoming. Gas wells typically only reach 10,000 feet and take three weeks to drill. These wells took two years to drill to bedrock. Although the wells will not be put into production immediately, an engineer with the Wyoming's oil and gas commission said they are probably the best producers the state has ever seen. The company said the wells could produce twice the amount of gas now used by central and southern Wyoming. Because of low gas prices and the need to build a processing plant to remove poisonous hydrogen sulfide gas, both wells have been capped.

Old mine is seeping

Gold in them thar hills is not always good news. Just outside Helena, Mont., an unreclaimed gold mine may be washing heavy metals into a nearby creek. Sparrow Resources Ltd., a defunct company that owned the mine, closed down without bonds to pay for reclamation. The company was also long on unpaid fines for water-quality violations, reports the Great Falls Tribune. That means taxpayers now have to pay cleanup costs. Meanwhile, Sparrow Resources founder B. Dale Fayram has started another company and runs a gold and sapphire mine outside Missoula near a prime trout stream. The second mine has already had two water-quality violations' because of leaking settling ponds in March, and the Montana Health Department sued Fayram and his company, claiming the mine threatens the trout stream. Fayram says the state is trying to stop his mine because of local political pressures.

HOTLINE

Stalled super collider

The Superconducting Super Collider smashed into the federal deficit last month, surviving but just barely. The collider, a \$4 billion physics project designed to discover the basic nature of matter, is a coveted federal pork project. Two Western states, Arizona and Colorado are among seven finalists competing to host the project (HCN, 8/17/87). In his fiscal year 1989 budget, President Reagan asked for \$363 million for the collider, to finish studies and begin construction. Reagan kept within the limits of the Gramm-Rudman budget by axing funds for Amtrak and waste water construction grants. However, Congress authorized only \$100 million, which observers say will keep it alive but pass responsibility for construction to the next administration. Meanwhile, the New York Times reports leaders of two of the nation's largest research institutions -- Dr. Frank Press, president of the National Academy of Sciences, and Dr. Robert Rosenzsweig, president of the Association of American Universities -say that glamorous "big science" proiects may have to be scaled down to finance less visible, smaller projects that are more important in the long run.

Threatened near Tucson

Just outside Tucson lies a state park, a city park, a national forest and Saguaro National Monument. To protect these lands from encroaching development, the county zoning board proposed a buffer zone ordinance that requires landowners to keep half their land near the parks and monument in open space. This is particularly important for Saguaro Monument because a housing development has already been proposed just a mile from Saguaro's borders. Angry landowners claimed the ordinance took their land without compensation and persuaded the zoning board to pass a diluted form of the ordinance. Ironically, the proposed ordinance, named BOZO, would not have affected most of the landowners. And zoning board chairman David Yetman said the weakened ordinance essentially affects no landowners and protects none of the parks or monument. Yetman and monument superintendent Bill Paleck said the incident was an example of a small, misinformed group of landowners subverting the will of the majority who want the areas protected. The board did vote to investigate purchasing land around Saguaro to create a better buffer

Tribe attracts plant

The Navajo Tribe recently signed an agreement with General Dynamics Corp., a major defense contractor, that means the creation of 200 jobs and a \$3 million annual payroll. The cooperative effort will bring a new factory to Farmington, N.M., where parts will be assembled for the Stinger anti-aircraft missile. The tribe beat competitors in Mississippi, Florida and Texas by agreeing to pay \$5.8 million to build and equip the plant, which General Dynamics will lease for 15 years. The tribe will also suspend Navajo preference-hiring during construction. But Tribal Chairman Peter MacDonald told the Albuquerque Journal that the hiring suspension is not a precedent for future industrial projects: "This is one specific project requested by a firm with whom we have been working for the past 20 years. It's not just anyone asking for a waiver."

Cottonwoods seeks seek rootholds in river

A dense thicket of agencies and interest groups surround the bosque (riverside forest) along the Rio Grande in New Mexico, and each has a contrasting and sometimes conflicting interest in the waters and banks of the "great river."

When one asks whether or not the Rio Grande Valley cottonwood (Populus fremontii var. wislizenii) will survive, the answer lies with the Army Corps of Engineers, the Bureau of Reclamation, the Middle Rio Grande Conservancy District, at least a dozen state and federal agencies, more than a dozen Indian pueblos, city, town, and county governments, and a number of environmental groups.

At stake is the survival of the cottonwood, the mainstay of the most vivid, peaceful and cool place of shelter for humans and wildlife in this arid

The bosque and its cottonwoods have probably been around for more than a million years. The present range of the broadleaf New Mexico variety of the tree (as contrasted to the narrowleaf varieties found elsewhere in the southwest) is from the village of Velarde in northcentral New Mexico through the Rio Grande's central valley. Valley cottonwoods have also thrived in the San Juan, Gila, Chama, and Pecos river drainages as well as along the full course of the Rio Grande.

But they are disappearing. By some estimates, the bosque was reduced by more than 20,000 acres (the Middle Rio Grande Valley covers some 277,000 acres) from 1930 to 1950. Thousands more acres have been lost since then in the development and maintenance of flood control and irrigation projects, and through the devastation by fires and through the devastation of fires and the invasion of non-native and very aggressive trees.

Irrigation has always been a major use of the Rio Grande's waters. In the 19th century, over 100,000 acres of irrigated farmlands were in production. That number declined rapidly when the flood plain became waterlogged from extensive irrigation, periodic floods and the building up of the stream bed due to an increasing load of sediment from upstream.

This decline in irrigation, and the assumption that irrigated agriculture

NEW MEXICO

Velarde

Santa Fe

Albuquerque

Elephant
Butte
Narrows

Disappearing
Rio Grande Cottonwoods

was the most important economic use that the land could sustain, led to the creation in 1923 of the Middle Rio Grande Conservancy District. The conservancy district's control projects, together with Army Corps of Engineers flood control and Bureau of Reclamation channel maintenance, added more irrigated land. One consequence of that increase was the disappearance of many stretches of cottonwood forest.

Because cottonwoods depend for their early growth on the river's floods and sunny sandbars, the managed river and dredged channel prevented cottonwood forests from coming back. Since 1975, Cochiti Dam between Albuquerque and Santa Fe has prevented the Rio Grande from flooding. Because the Bureau of Reclamation maintains a 600-foot-wide channel, cottonwoods that have managed to grow on river sandbars are rarely able to reach maturity.

The conservancy district's levee and diversion ditch system does provide a place where cottonwoods have maintained themselves, but without regenerated growth. "It's like a bunch of old folks sitting around getting older with no kids coming along," as University of New Mexico biologist Jim Findley, who lives near the river in Corrales, puts it.

In some areas, the "old folks" are surrounded by a thick understory of willow, Russian olive and other smaller trees and shrubs. The air here is loud with the sounds of the thousands of birds who make the bosque home, including such endangered species as the whooping crane, the peregrine falcon and the bald eagle. In other areas

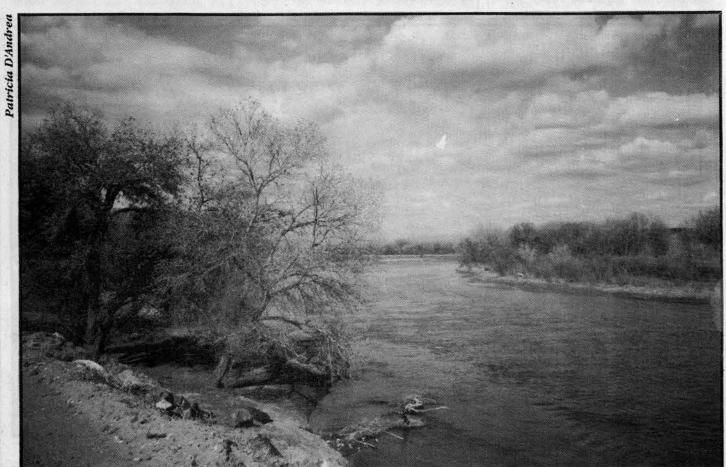
the bosque is a narrow strip; sometimes only a few of the venerable cottonwoods watch over frantic urban and agricultural development along the river's edge.

Beginning in the 1960s, concern over the altered habitat led to creation of the Rio Grande Valley State Park, in the vicinity of Albuquerque. In 1984, the village of Corrales joined with the Nature Conservancy to create the Corrales Bosque Preserve with the idea of keeping intact one of the best remaining examples of Rio Grande cottonwood forest. Ironically, competition between the introduced Siberian elm and the native cottonwood may result in the elm replacing the cottonwood in this particular stretch of the bosque. Meanwhile, the New Mexico Park and Recreation Division aggressively manages the Rio Grande Nature Center's 200-plus acres in the midst of Albuquerque's hubbub, planting cottonwood poles, and irrigating and maintaining young transplants.

The Army Corps of Engineers continues to focus on flood prevention in the Rio Grande Valley. In 1986, the Corps received authorization -- though no funding -- for a levee-reconstruction project in the Corrales and Belen reaches of the river. More than 50 river miles of levee will be reconstructed if the project is funded. Using borrow pits, some located in the bosque itself, the Corps would take down portions of the levees, mix the porous soils that compose them with more water-resistant clays, and replace the levees. Jim Findley says it could threaten large stands of cottonwood and "could be an incredible mess."

While the Corps plans reconstruction, the U.S. Fish and Wildlife Service plans the first comprehensive, 10-year study of 210 miles of historic flooodplain -- from Velarde to Elephant Butte Narrows. Some say that a study hasn't yet saved a tree; others are more optimistic and say that the new study reflects a significant trend away from agriculture and toward a recreation industry that would value cottonwood forest for its scenic, recreational and habitat uses. The study, yet to be funded, could help make the transition from irrigation to bird-watching a practical possibility.

--Patricia A. D'Andrea



Cottonwoods along the Rio Grande



An opening in the dunes

Coastal dunes tied down by tenacious grass

Restless mounds of sand have swirled along the Pacific coast of what is now the Oregon Dunes National Recreation Area since the last glaciers retreated 10,000 years ago. It's taken man just eight decades to threaten them.

European beachgrass, introduced around the turn of the century to stabilize the shifting sands, is now so deeply rooted in most of the area's 32,000 acres that the dunes are slowly turning to forests.

The snowy plover's coastal nesting area has vanished, and efforts to restore the natural balance have had little success. "In our lifetime," predicts Oregon state biologist Charlie Bruce, "the dunes as we know them will disappear."

It seemed like a good idea -- planting Ammophila arenaria, a grass native to the beaches of Holland, -- to stop sand from covering roads, homes and jetties. From California to Washington, government agencies introduced the Dutch import.

Beachgrass, which shoots out rhizomes up to 10 feet deep, performed its task admirably, binding the sand and stilling the fidgety grains. But, like an escapee from a grade-B movie, the alien weed would not stay in its place.

It spread along the 41-mile length of shoreline, creating a long stable foredune through which the previous flow of sand was unable to pass. The nitrogen-fixing grass then crept inland, enriching the soil for other vegetation: lupine, morning glory, wax myrtle and shore pine. Creatures such as ground squirrels and skunks moved into the new ecosystem, but others, like the snowy plover, were forced out.

This dusty grey little bird has seen its nesting area shrink to a narrow strip between high tide and the foredune, where its eggs are vulnerable to people, horses, dogs, crows, ravens and, where they're allowed, vehicles.

The hapless plover has been having a particularly hard time throughout the West in recent years. Its other primary nesting area is marshy ground around alkali lakes such as Utah's Great Salt Lake, which has been flooded by uncommonly heavy rains. According to biologist Bruce, the bird's population is now declining by almost 15 percent a year. In some spots north of the Oregon Dunes it has vanished completely.

But the plover and rolling dunes may find even rougher days ahead as European beachgrass demonstrates its resiliency all along the northwest coast. At the Lanphere Christensen Preserve in northern California, 10 different methods have been tried to control the grass, which covers over half the preserve and is endangering a rare plant, Menzie's wallflower.

Mowing and burning fail because of the plant's deep shoots. Black plastic covers are quickly spotted with holes, through which the sharp green blades defiantly poke. Rock salt and herbicides, used with some success, are toxic to other life of the dunes. Digging it out by hand has proven most effective but also most labor-intensive.

Unfortunately, says preserve manager Andrea Pickard, "Stop digging, and it comes right back. We're never going to get rid of it entirely," she admits. "It will always be at the borders of the preserve."

The most ambitious attempt at solving the case of the disappearing dunes was a 1981 excavation of the foredune near the Oregon Dunes' Siltcoos River. Bulldozers filled 300 dump-truck loads to carve an opening the length of three football fields through the dune.

"We're learning a lot about the dynamics of dune sand movement by observing this area," says Chuck Rosenfeld, an Oregon State University geologist who monitors the project. Unexpectedly, Rosenfeld found that most of the sand migrates through the breach in summer rather than during winter storms. "As soon as any moisture hits the sand, it stops," he says. Ironically, he also found that people driving dune buggies and four-wheelers, anathema to many conservationists, help keep the bulldozed breach open.

Although the opening has succeeded in restoring a flow of sand inland, to do so along the entire shoreline of the national recreation area would carry a cost no agency, public or private, is eager to bear, "We'd like to do more breaches," says John Gould, the resource manager for the recreation area, but none is planned.

Gould, who describes himself as "the world's leading expert on what people ask me," says that aerial photos show 150 acres a year being lost to European beachgrass. At that rate it will take 75 to 250 years for the dunes to be completely covered by vegetation. Over the next two years, new computer technology will be checking that projection. In the meantime, *Ammophila arenaria* will continue to spread.

"It's up to the public to decide if they want to spend the money to keep the dunes in their present form," Gould says.

--Jim Stiak

HOTLINE

Indians make a stand

On the anniversary of Custer's Last Stand, about 150 Indians returned to Little Bighorn battlefield to erect an Indian memorial. For more than a decade, the Park Service had promised it would build a memorial to the Indian warriors who saved women and children from Custer's onslaught, an Indian activist told the Casper Star-Tribune. But the Indians grew tired of waiting, and on June 25 members of the Crow, Cheyenne, Arapahoe and Lakota Nation of the Sioux placed an 8-foot by 2-foot plaque atop a concrete block at the battlefield. They did not have Park Service permission. Indian activist Russell Means said that a plaque at the battlefield commemorating Custer and his men is like Israel living with a statue of Hitler. The Park Service prohibits placing memorials without its approval, and the battlefield's superintendent said the



General George A. Custer

agency's director will decide if any action will be taken against the Indians.

HOTLINE

Hot springs on the block

The battle over Penny Hot Spring on Colorado Highway 133 between Carbondale and Redstone may be resolved this fall. The Colorado Department of Highways will try to sell the hot spring on Sept. 16, ending perhaps years of infighting between adjoining landowners and nude bathers (HCN, 5/23/88). First right of purchase will be offered to any municipality willing to preserve the spring for rest and recreation. If towns do not purchase the spring within 90 days, it can be purchased by the Grange family, the nearby landowners who vehemently disapprove of nude soaking.



Gone with the wind

The drought has caused the secondworst wind erosion in the Great Plains since the government began keeping records of the phenomenon, the Agriculture Department reported in late June. Wind erosion damaged 13.2 million acres in the Great Plains in the six months ending May 31. North Dakota was the hardest-hit, suffering damage on 3.5 million acres. Texas was second on the list of damage, with 2.5 million acres affected by wind erosion. Other states with damage were Colorado, 1.48 million acres; South Dakota, 1.46 million acres; New Mexico, 1.44 million acres; Montana, 1.29 million acres; Kansas, 865,800 acres; Wyoming, 291,370 acres; Nebraska, 173,168 acres, and Oklahoma, 117,428 acres, UPI reports.

Developing the Tetons

Push has finally come to shove for landowner Don Albrecht. He owns land along Highway 287 leading to Grand Teton National Park and has tried to get the federal government to buy it for nearly a decade. This year federal and state officials intensified efforts to obtain the land when Albrecht submitted a proposal for 97 homesites just a quarter mile from the park's entrance. For several years, officials have searched for land near Jackson Hole, Wyo., to exchange for Albrecht's land, but without success. Bridger-Teton Supervisor Brian Stout said purchasing the land has also been difficult under the Reagan administration because of limited funds. Officials are now looking at an exchange in Southern California, where Albrecht lives, as well as possibly leasing the Wyoming tract, Stout said. A California exchange would require congressional approval. Officials want to preserve the scenic corridor along the highway because it serves as the gateway to both Grand Teton and Yellowstone national parks.

HOTLINE



Black bear in a taxidermy shop

Backlash feared

Although West Virginia's black bear population is booming, it could mean fewer bears soon, reports AP. The state's successful re-population plan has led to more confrontations with humans as bears kill sheep, rip screen doors and topple trash cans. West Virginia biologist Joe Rieffenberger says the state failed by not teaching residents how to live with bears, and he fears people may return to thinking of bears as varmints. He says problems are expected to continue because once bears find an easy feod source such as sheep, they continue to return. Trapping and relocating the bears hasn't worked, he adds, because there is no other place to put them. That means the state has resorted to killing "problem" bears. So far this year the state has killed 15 bears.

Candidate visits tribe

Presidential candidate Jesse Jackson encountered 1,300 eager listeners last month when he travelled to Oregon's Warm Springs Reservation. The Spilyay Tymoo, a reservation newspaper, says the crowd of mostly teenage Indians was not shy about answering some personal questions. When Jackson asked people to stand who knew someone who had died from drugs, a few young people did. Three-fourths stood when he asked how many knew someone in jail for using drugs, and when Jackson asked how many knew someone who had tried drugs, almost all stood up. Finally, when Jackson asked those who knew anyone who had contemplated suicide to stand, the audience fell silent. Then almost everybody stood up. "So many of you have experimented with drugs as anethesia for your pain," Jackson said. "We must end the scourge of dope and replace it with hope."

Go West for bealth

There are good reasons to live in the West despite the striking vistas, relatively abundant wildlife and outstanding opportunities for solitude. According to the national Centers for Disease Control, people living in Western states have significantly lower incidence of heart attacks than those living in the Northeast and Midwest. CDC researcher Dr. Patrick L. Remington said the differences amount to "thousands of excess deaths in New York, if you compare them to New Mexico." In 1985, 320 out of every 100,000 New York men died of heart attacks and related heart disease, compared to 151 in New Mexico. The national average was 249. The figure for women was correspondingly lower in the West.

A new front in the Utah land war

Pac Man is alive and well in Utah as the state attempts, once again, to trade for big gulps of federal public

Many management conflicts occur in Utah because 2.5 million acres of state land in 5,000 separate parcels are scattered among vast federal holdings.

Utah claims it is constitutionally required to manage its land grants, received at the time of statehood, for economic return. But the federal Bureau of Land Management, National Park Service and Forest Service have a broader list of do's and don'ts for their lands. Discoveries during the past decade of valuable energy and mineral resources and the desire to develop them also exacerbate conflicts between state and federal governments.

To satisfy all entities, various schemes have been worked out by Utah to assemble its lands into larger blocks for better management. One occurred under former Utah Gov. Scott Matheson, D. The proposal, called Project BOLD, would have exchanged the 2.5 million acres of state land for 2.5 million acres of federal land. Project BOLD legislation, which was introduced in Congress during 1984 and not passed, came at the end of Matheson's administration.

His successor, Gov. Norman Bangerter, R, has not pursued Project BOLD. Instead, he is seeking smaller administrative exchanges adding up to 157,000 acres. One proposal involves 50,000 acres around Lake Powell for marina development.

It has remained for Rep. Wayne Owens, D-Utah, to pick up Project BOLD, although with a significant difference, the formula by which lands would be exchanged. Using a ratio of 1.2 to 1.5 acres of federal land for each acre of state land, Owens' legislation would allow Utah to select up to 3.75 million acres of federal land for the 2.5 million acres of inholdings, or state land surrounded by federal land.

Supporters say this provision is fair because surrounding federal land has prevented the state from fully developing its inholdings. They also say federal land will be enhanced by getting state land out of national parks and monu-

But conservationists expressed serious concerns about Owens' proposal at a public hearing this spring. When lands are exchanged administratively, the Federal Land Policy and Management Act requires that parcels be traded on the basis of value-for-value. A law would circumvent the FLPMA process. Owens' bill lets the Governor of Utah decide what lands to exchange, while Project BOLD legislation had listed the specific lands to be blocked up, and the land had been chosen in conjunction with the Department of the Interior input and data on land values.

Both pieces of legislation supposedly solve potential values disputes by an agreement to share future revenue derived from energy and mineral resources on exchanged lands on a 50-50 basis. Terri Martin of the National Parks and Conservation Association's Utah office disagrees. She says the exchanges are still inequitable and are a land grab by Utah.

The federal lands eyed by Utah include areas rich in oil, gas and tar sands in eastern Utah, and coal deposits on the Kaiparowitz Plateau. Critics ask how the value of these lands can be balanced against the isolated sections to be given the federal government to fill in its national parks and monuments land

There are other complications illustrated by Factory Butte, a piece of land the state has long wanted in southcentral Utah. Factory Butte is a proposed national landmark and part of the Utah Wilderness Coalition's wilderness proposal submitted for BLM review. It also has rich potential for coal development.

Owens' legislation does not protect Factory Butte or other Coalition-proposed wilderness areas, undesignated areas of critical environmental concern, lands with significant archaeological and wildlife values, or recently-proposed new and expanded national parks. Conservationists say Utah has had a hearty appetite for revenue generation from its properties accompanied by a nearly total disregard for natural values.

Rodney Greeno of the Southern Utah Wilderness Alliance says the state has also been interested in a 30,000-acre block bordered by Natural Bridges National Monument, Grand Gulch Primitive Area and two BLM wilderness study areas. The high mesa and canyon country has dense concentrations of Anasazi archaeological sites, and natural, scenic and wildlife habitat values that have been nationally recognized. The talked-about use for this block is commercial development for heavy recreational use and massive chaining of forests for grazing.

The dilemma for conservationists is that while they want the federal agencies to get the state inholdings, they fear what Utah will do to the land it would get. So they are working toward two goals: to get state lands out of parks and other critical areas, and to increase the state's recognition of noneconomic land values through actions such as the appeal of the recent controversial land exchange along the Burr Trail in Garfield County.

At this point, the future of the Owens' legislation and the governor's exchange proposals is uncertain. Both politicians are up for reelection in 1988, but whatever happens Nov. 8, the issue of land consolidation is not likely to dis-

--Karil Frohboese



Marble loaded out in a Colorado wilderness under the watchful eye

of the Forest Service

Aspen marble moves out

and a six-wheeled military truck, Stefan claimed that "weirdo backpackers" have Albouy entered the Maroon Bells-Snowmass Wilderness in western scared away more wildlife than his min-Colorado to claim his marble. Although Albouy has mineral and timber rights that allow him to mine in the heavily used wilderness area close to Aspen, he fought with environmentalists and even Forest Service officials must also county commissioners for three years to gain access to his claim, (HCN, is required to replant vegetation 1/9/87). His move received intense destroyed by the mining, including the opposition and led environmentalists to threaten to build roadblocks to stop him. the Senate Appropriations Committee That is why Albouy armed himself approved money for appraising the marwhen he began his operation last month. ble claim for potential purchase. The Except for an easily dismantled stone- Forest Service has already bought the and-log roadblock, the Aspen Times surface rights on Albouy's claim, (HCN, reported the marble removal went 7/31/86).

Armed with a shotgun, bulldozer unthreatened. Afterward, Albouy done more damage to the area and ing operation. Under his permit, he is allowed 10 trips to remove previously quarried slabs of marble, which Albouy wants for testing the marble market. accompany him during his work, and he three mile road to the site. Meanwhile,

BARBEI

Out of the mouths of top bureaucrats comes unbelievable pap. Interior Secretary Donald Hodel overruled a National Park Service advisory board to designate Whittaker Chambers' farm as a National

Historic Landmark. A pumpkin on

the farm played a big role in the conviction of Alger Hiss as a communist spy in the late 1940s. Hodel said the Hiss case represents "the conflict of two irreconcilable faiths, godless communism versus freedom of divinely created and inspired man."



Thick-billed parrot

Polly gets an old home back in Arizona

America once had parrots. When Europeans first came to North America, two species of parrot ranged our forests. The Carolina parakeet, seen as far north as New York and Illinois, was gone forever by 1904 -- its feathers were nice for hats.

The thick-billed parrot (Rhyn-chopsitta pachyrhyncha), which lived in pine forests of Arizona and New Mexico, could still be found in the Chiricahua Mountains of southeast Arizona in the 1930s. They were gone by the end of the decade, but large flocks still lived in Mexico's Sierra Madre. By the time an endangered species list was made parrots were long extinct in the U.S. and hence weren't included.

Logging in the Sierra Madre now threatens the thick-bills in Mexico, but things are looking up for the birds in the United States. The Arizona Game and Fish Department's Nongame Branch is sponsoring a modest effort to restore the thick-billed parrot to the Chiricahuas. Staffers and volunteers, working mostly with birds confiscated from parrot smugglers, are rehabilitating birds and releasing them to a wild life.

The rugged Chiricahuas, former stronghold of Cochise, are less populous now than they were in the 1930s when the parrots vanished. In those days silver prospectors scoured the area and supported themselves by subsistence hunting. Thick-bills are 15 inches long -- big enough to make a meal.

Noisy and bright green with red and yellow trim, they're easy to spot and vulnerable to attack. When one bird is shot the rest of the flock will hover, calling to the shot bird, which makes it easy to shoot more. With the prospectors gone, the Chiricahua Mountains are more hospitable to parrots. Food is abundant, and because of the steep terrain, the Forest Service allows little timbering.

Their omission of parrots from the endangered species list also works in their favor. The project can proceed in a direct, unbureaucratic way, for if one approach doesn't work, researchers say they can try another without scheduling lengthy meetings to formally amend a recovery plan.

Field supervisor Noel Snyder, who has worked with California condors,

says the many levels of administration involved in that effort caused delays that hurt the program. With the parrots, marvels nongame employee Terry Johnson, "We were able to get the three agencies involved to sign off in 45 days."

This is not a big-budget project, however. Most of the parrots are confiscated birds, and a few are donated. They're housed in outdoor aviaries in the forest and fed native foods. When they're used to the food and the area and each other, they're released.

Is it working? So far, it looks promising even though many of the birds released have vanished. Some, the state's Snyder believes, have flown back to the Sierra Madre. Some seem to have migrated to the Graham Mountains, more than 100 miles north of the Chiricahuas. A few have been killed by raptors, notably by goshawks.

But at least one flock has settled in the Chiricahuas and is doing well. They've formed pairs and are exhibiting courtship behavior.

Snyder says it is important to release more parrots since with endangered species, "you're always playing a numbers game." But he's optimistic.

One morning this spring a flock of nine thick-bills perched in a Chihuahua pine. They plucked pine cones, tore out the seeds and cast the cones to the ground, cackling, chuckling and honking. The sun shone on their green, red and yellow feathers. Then the flock took off for some fancy flying, buttercup-yellow underwings glistening as they flew.

They seemed to exude good cheer, which communicated itself to the people watching. How fine it was to see a vanished part of our wilderness being restored. How unexpected to see a parrot in a pine.

With a yearly budget of \$20,000, including private donations, the project depends to some extent on the goodwill of strangers and the willingness of some of its staff to work for very little. For more information, write Thick-billed Parrot Project, c/o Terry Johnson, Arizona Game and Fish Department, 2222 West Greenway Rd., Phoenix, Arizona 85023.

Susan McCarthy is a freelance writer and naturalist who lives in San Francisco.

Agencies aim at heavy polluters

The Forest Service and Colorado Air Pollution Control Division recently proposed granting the state power to enforce air pollution reduction -- even after an industrial plant has been built.

This policy change would give the state the right to take heavy polluters to court. Under present policy, the state's air pollution division is powerless to restrict pollution after a permit has been issued to an industry. This new policy would apply only to air pollution affecting Class I areas in Colorado designated by the Clean Air Act. Class I areas are usually national parks and designated wildernesses that contain the country's most pristine air.

The Forest Service's Dennis Haddow says the current application process for industry doesn't allow for unforeseen pollution problems, and right now Colorado has no way to restrict pollution from already permitted plants. "In the long run this will also help industry," Haddow says, because if just one industry turns out to be a heavy

polluter, no other permits can be granted in that area. With the new proposal, an industry could be required to reduce pollution, thus opening the door to other industries to receive permits.

Haddow says, "Some industry people are not enamored with the proposal, whereas others -- those who want to develop later on -- like it." A public hearing on the proposal is planned this summer although no date has been set. Colorado's air pollution division is at 303/236-9562.

BARBS

That's funny -- we thought his attitude toward national parks was: "If it ain't broke, break it."

William Horn, who just resigned as assistant secretary of Interior for fish, wildlife and parks, objects to a congressional plan to reorganize the National Park Service. He says, "If it ain't broke, don't fix it."

HOTLINE

Exxon sues Wyoming

Exxon Co. USA didn't go back on its word. In March of this year, Exxon threatened to sue Wyoming if two bills that limit tax deductions on natural gas production became law (HCN, 3/28/88). The bills passed, and Exxon filed a suit against the state and Sublette County, where its LaBarge gas field is located. The suit claims the 1988 law is unconstitutional because limiting deductions interferes with Exxon's ability to make a profit on the expensive LaBarge project. The company also says the law, which exempts smaller companies, is discriminatory against Exxon. The Wyoming officials say the law is fair because the company's taxes are similar to those for other gas producers in the state. This is the third time this year Exxon has been in court over Wyoming natural gas taxes. One decision is still pending with the state Supreme Court; Exxon lost the other suit.



Hovenweep furor

The draft management plan for the cultural resource area around Hovenweep National Monument continues to draw fire from conservationists and oil, gas and mining companies. The monument, located on the border of Utah and Colorado, is known for its Anasazi ruins (HCN, 5/23/88). Dick Strait of the National Park Service says, "It's surprising a small area has drummed up so much excitement and interest." The unpopular plan proposes that the Park Service and Bureau of Land Management co-manage the cultural resource area surrounding the monument. This June, Lorraine Mintzmyer, regional director of the National Park Service, will meet with the Colorado and Utah BLM directors to discuss the public's response to the plan.

Oregon fire fight

In a move that strengthens the position of critics who oppose logging a burned roadless area in Oregon, the EPA gave a Forest Service's draft environmental document its second lowest possible rating. The Environmental Protection Agency says most alternatives, including the Forest Service's preference, will violate state water-quality law. The proposed logging is in Oregon's Siskiyou National Forest, where the Forest Service plans to build 20 miles of new roads to "salvage" an area burned in last summer's forest fires. Forest Service officials said information requested by the EPA will be included in the final environmental impact statement scheduled for release July 8, but there will be no change in the agency's preferred plan. The draft document elicited 27,539 responses, according to Mike Ferris of the Siskiyou National Forest. Timber industry postcards accounted for 20,934 of those responses, and another form letter supporting National Park status for the area accounted for 4,098 responses. The many comments reveal that the issue is "roading" an unroaded area and not salvage, Ferris says. Logging the burned area could start in July, he adds. Lawsuits are likely, but Oregon Sen. Mark Hatfield may write legislation exempting the Forest Service plan from judicial review, reflecting the timber industry's concern that burned trees may decay within two years.

Rhythmsoj

by George Wuerthner

I was out hunting last fall on Mt. Sentinel behind the University of Montana in Missoula. The area I walked through had burned in July of 1985, leaving many dead, blackened snags. The local papers called the event a tragedy. Yet, among the dark, leafless trees left in the fire's wake, I found a chattering horde of woodpeckers attracted by the abundance of beetles and other insects that have recently colonized the burned

Many of these insects, and some woodpecker species that feed upon them, depend upon fires to create new habitat. They colonize these burns, increasing their populations rapidly before crashing or moving on to colonize the next burn. Between burns, both insects and woodpeckers maintain relatively low populations and many small sub-units go extinct. If no new fires create additional blackened snags, few descendants of the woodpeckers I saw in the food-rich snags will survive, but the small number will be able to eke out a living until the next catastrophe reduces a green forest to ashes and skeletons.

Natural systems, like the weather, operate between extremes. The amplitude and frequency of waves varies from ecosystem to ecosystem, but energy pulses through the environment much like a pulse marks the passage of blood through veins. It is the repetition of pulses, or the heartbeat, that keeps us and all biotic systems alive.

The time frames for the pulses of natural systems are often longer than time frames of that maintain the ecosystem.

forests, these pulses were on an average interval of three to 20 years, a unit of measure we can understand. However, many pulses are either much faster, or much slower (like the movement of continental plates on earth's surface), so we don't see them as pulses at all.

This inability to recognize these pulses distorts our understanding of fires in the temperate rainforest. We often refer to them as catastrophic fires because their intense blazes frequently incinerate thousands of acres at a time. Yet even these fires are part of the pulse, although instead of three to 20 year intervals between pulses as in drier ponderosa forests, they operate on intervals of 200 to 300 years or longer. If we examine the ecological parameters of the old growth forest species, we see how

they cope with these energy pulses. Douglas fir, one of the species characteristic of old growth forests, is a long-lived species with many adaptations to protect it from fire. Douglas firs have thick, fire-resistant bark and branchfree boles which enable the older trees to survive all but the hottest blazes. Because they need adequate sunlight for successful regeneration, Douglas firs will establish themselves on a site after a burn clears away the forest overstory. In 200-300 years, when the next fire roars through the forest, the Douglas firs produced after the previous fire are already large and able to ride out the fire storm. These old survivors provide the seeds for regeneration. Long periods without fires are catastrophic to Douglas fir.

Unfortunately, from our human time perspective we view such fires as destructive, although



f the forest

Many plant and animal populations expand their ranges and numbers periodically; then, when conditions change, merely survive through the "bad times" until the next boom. Many human economic systems follow a similar boom and bust cycle. In the 1970s, Wyoming was booming due to high oil and mineral prices. People flooded into the state to take advantage of this energy pulse (jobs). Then came the crash. Now Wyoming is depopulating; but not all people will leave, and the survivors -- especially those with sufficient savings to buy land and equipment -- will capitalize upon the next boom when oil prices rise again. The present booming economies in New England, Colorado Springs and elsewhere depend upon government defense spending, which enlarges the federal deficit. Without this stimulus, analogous to feeding hay to starving elk in winter, these regions might suffer an economic collapse like Wyoming -although due to the greater diversity of their economies, not to the same degree.

In the subalpine forests of the Cascade Range, there was a short period during the 1930s when successive dry winters allowed many conifers to invade subalpine meadows and establish themselves successfully. Before and since that time, snowfall has been too great for the seedling trees to survive, hence the current character of the subalpine forests is the result of a few good years. It may be another 100 or more years before the next successive dry winters occur and the present conifers can successfully replace themselves and perhaps even expand their distribution.

Many wildlife populations regularly fluctuate in numbers. It is during the peak years that new suitable habitat is colonized, genetic exchanges occur, and small populations are augmented with new members. Standard wildlife management sees these peak years as a time of "surplus" animals that can be killed without long-term harm to the populations. In some cases, such a view is probably ecologically supportable. Nevertheless, we must be careful not to overuse this concept of "harvestable surplus."

If we try to make a natural system fit an "average" in terms of population, we may destroy these important expansions. As an

biological justification for this decision was recent evidence (four years' worth) of a population increase among grizzlies in the Northern Rockies ecosystem. The department argued for more relaxed regulations for hunting because of this small blip in the bear's numbers. Yet four years is not a sufficiently long time to determine a trend in a long-lived species like the grizzly. In addition, if the population did expand, such an increase is necessary for the long-term survival of the species in the region; for it is during times of population surplus that the bear can supplement declining sub-populations, and expand its range into vacant but suitable habitat. Undoubtedly, for any number of reasons, the bear population will decline again. Perhaps a series of dry summers will produce poor berry crops, or some disease may reduce the populations. If it can maintain high numbers during peak years, a population can survive the low years -- which are equally necessary to the internal workings of any ecosystem.

Fire, elk and aspen in the Rockies similarly display such fluctuating relationships. Aspen stands typically regenerate from suckers (shoots) after the above-ground parts are removed by some event such as fire, avalanche, or even clearcutting. The suckers sprout and thousands of saplings struggle for the limited moisture, sunlight, and space available, with the losers dying out and a few lucky or particularly strong individuals surviving until the next pulse (fire, etc.) washes through the environment.

Elk like to eat young aspen so much that they will overbrowse a rejuvenated stand if given the opportunity. (Elk, like Indians before the coming of the white man, lived in a "natural harmony" because they periodically died off.) If we artificially maintain elk numbers by winter feeding or reducing predation pressure during harsh winters so that we can have huntable populations, then the elk will often eat the aspen into oblivion -- at least in areas with high numbers of wintering elk.

In Alaska, there is cycling between timber wolf and moose populations. I believe it will be shown that periodic lows in first level consumers, i.e., moose, are necessary for plant communities to recover from browsing pressure. Local moose populations may periodically go extinct, leaving the moose habitat vacant and relieving browsing pressure for years, perhaps even decades. If the local moose population declines to a very low level, it will not support breeding populations of wolves. Wolves also go locally extinct, either because they migrate to better hunting grounds or they fail to reproduce, and their numbers dwindle because of disease, starvation and inter-pack warfare.

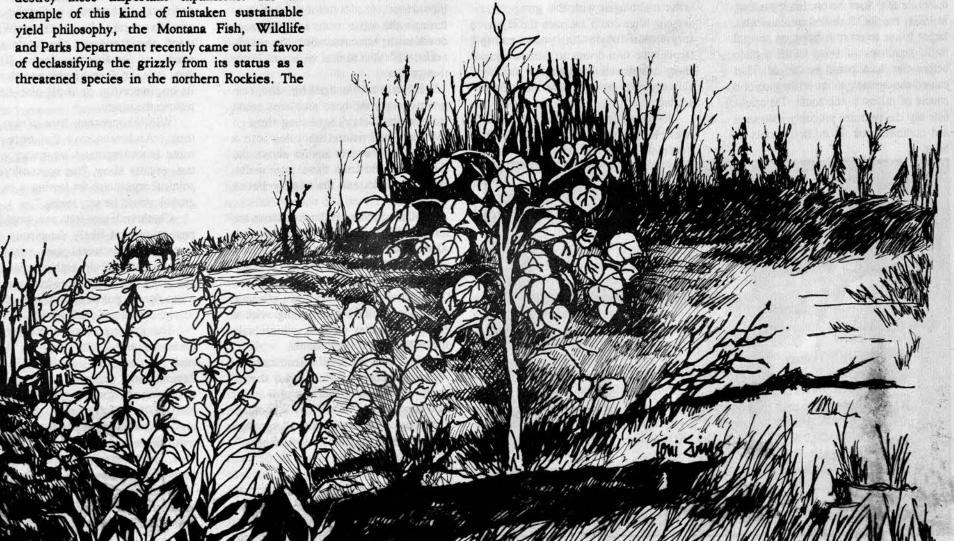
With relief from wolf predation pressure, the moose population can rebound and colonize new habitat. Subsequently the wolf population will also rebound. If we view these lows and highs as unusual events, we miss the importance of energy pulsation, which provides the equilibrium or steady state we call ecological harmony.

One of the great problems in our present system of natural preserves is that we have not provided room for plant and animal communities to shift over time and space. We find a particular habitat that may be suitable for some species at the time of preservation but fail to recognize the need for periodic expansion and shifts in populations. We thus fragment habitat and populations and thereby hasten the extinction of species.

We also manage for individual species rather than ecological processes, as the moose-wolf browse example above illustrates. As a result, we are finding that some ecosystem types are becoming extinct because they no longer function as whole ecosystems. The Forest Service does not plan to cut every stand of old growth forest in the Northwest, and some relicts will survive in wilderness areas and national parks like Olympic and Rainier. Nevertheless, when the forest is fragmented into tiny pockets, it no longer functions over time and space as an integrated system; hence it will gradually disappear as random extinction eliminates more and more species.

Time is a matter of perspective and space is a matter of time. We need to expand our view of time, give natural events more space and look for the heartbeats that keep it all running.

George Wuerthner is a naturalist and freelance writer who lives in Missoula, Montana. He is a frequent contributor to High Country



Nuclear...

(Continued from page 1)

IPP is based on a theory developed in the 1950s that salt is one of the safest places to permanently bury radioactive wastes. The WIPP site's Salado salt formation is about 250 million years old and 3,000 feet thick. DOE scientists say its age and thickness indicates geologic stability -- proof that earthquakes or water which would dissolve and carry the salts away do not penetrate the area.

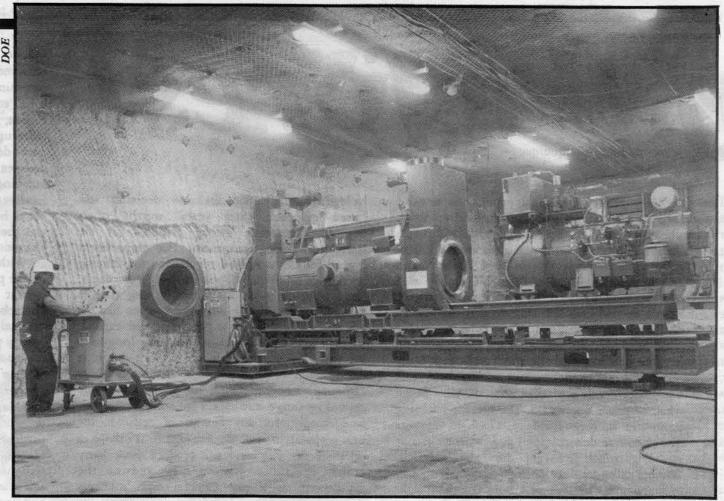
Salt is cheap to mine, but is most attractive for its plastic qualities. The theory is that within 15 to 20 years after rooms are mined and wastes stored, high pressures underground will begin to force the excavated ceilings, floors and walls together. DOE and Sandia scientists estimate that within 100 to 200 years the repository will be completely crushed and sealed in a dry salt tomb that will repel water and seal any future cracks.

Unfortunately for the theory, WIPP has sprung a leak. Last December a volunteer, independent panel of New Mexican scientists formed to review DOE's operations published a report showing that the WIPP salt mines were "weeping."

The Scientists Review Panel is composed of 11 experts in various fields from the University of New Mexico and other institutions who say that according to the DOE's own data, high pressure at mine depths is forcing brine out of the surrounding salt rocks into the open, unpressurized rooms.

Dr. Roger Anderson, a University of New Mexico professor of geology and spokesperson for the panel, says the DOE originally predicted some brine seepage. But it thought once the surrounding rocks were dewatered the flow would diminish. However, flows are steady and in some cases increasing, he

That report rang the first alarm for the many groups that watchdog WIPP. Another alarm went off last month when the Scientists Review Panel published a second report. It revealed that a DOE subcontractor recently discovered what appears to be a highly pressurized brine reservoir 800 feet below the repository. In 1981, the DOE drilled into a similar, larger brine reservoir, bringing several million gallons of brine to the surface before the hole could be capped. That caused the agency to move the project a couple of miles to the south. The scientists say the two are probably connected and contain over 17 million barrels of brine.



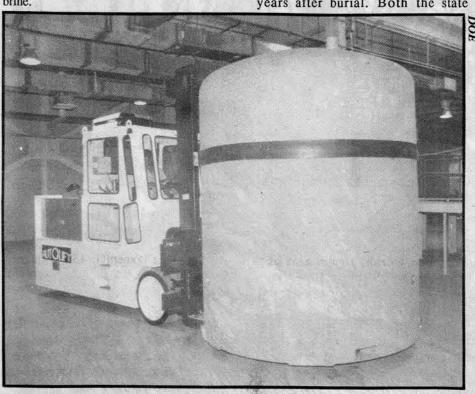
Moving transuranic wastes at WIPP by remote control

he brine problems could change everything at the WIPP site. While not dangerous for this generation, says Anderson, it may blow the project's chances of meeting Environmental Protection Agency standards that protect future generations. Unlike all other radioactive waste dumps, WIPP only needs to meet EPA standards and not the stricter Nuclear Regulatory Commission standards. But if it can't meet the EPA requirements, the law that authorized WIPP would force the DOE to give up the project.

While the Science Review Panel has brought the issue into the open, the group has only publicized the research of New Mexico's Environmental Evaluation Group, a special panel that has monitored WIPP for the past eight years. Although funded by the DOE, the Evaluation Group is responsible for protecting New Mexico's interests and has worried over the brine problems for five years.

Dr. Lokesh Chaturvedi, a groundwater hydrologist with the group, says seeping brine could saturate the repository within 100 to 200 years, eating through the steel drums to form a liquid slurry of radioactive waste and possibly slowing or preventing the tomb from sealing.

EPA regulations say radioactive waste must remain isolated for 10,000 years after burial. Both the state



Transuranic waste will arrive at WIPP in this container

WIPP has sprung a leak. A report showed that the WIPP salt mines were 'weeping'

Evaluation Group and the independent review panel assert that chances of a breach become much greater once the waste liquifies.

That is especially true because WIPP is in the midst of a producing oil and gas region. DOE scientists estimate that future generations seeking oil, and who may not know about WIPP, will sink an average of 4.2 holes directly through WIPP's storage rooms. Anderson says if the rooms are dry, very little if any waste would escape. But if the rooms are wet and perhaps pressurized by then, waste will shoot to the surface. He adds that if the drill goes through the waste rooms and continues down to the brine reservoirs, the roughnecks will have to deal with a radioactive gusher.

Even without drilling, the two groups worry the brine problems could lead to waste slurry squeezing through the seals and natural fractures into a shallow groundwater aquifer above the dump site and from there into wells, surface creeks and the nearby Pecos River.

DOE officials say those chances are remote. WIPP deputy project manager Arlen Hunt says brine seeps so slowly in most places that it evaporates on contact with ventilation air. He says the DOE plans to absorb the flows after air ducts are cut off by backfilling with a dry salt and clay mixture, which will also help seal the waste rooms.

Hunt adds that DOE scientists have yet to see conclusive evidence that a brine reservoir underlies the site. However, he says no wells will be sunk to find out because that would "compromise the integrity of the salt formation" protecting WIPP.

he conflict has become a much publicized debate in New Mexico. Hunt's answers are disputed by both scientist panels and several other groups, leading the

National Academy of Sciences to review the controversy. While the academy's WIPP panel agreed that the danger seems remote, it questioned the DOE's handling of the brine problems and asked for further studies and monitoring.

DOE officials say that should not prevent WIPP from entering the test stage, because the site need not meet EPA standards until permanent operations begin. In fact, DOE officials say they can only show compliance or problems by testing on location. The agency plans to store 26,000 barrels of waste underground begining in October. If, after five years, the tests show WIPP meets the standards, the waste will remain as the first installment. If the plant fails, DOE says it will then change its engineering, or if all else fails, remove the waste.

WIPP's opponents hope to stop the tests. Anderson says that once the waste is underground, no matter what tests results show, "the economic and political arguments for leaving it in the ground would be very strong."

Chaturvedi says tests now would be premature and likely dangerous. He says that under current plans it may be technically difficult, highly expensive and risky for workers to remove the waste due to potential punctures of the storage drums and closing walls.

The groups charge the tests are irrelevant and useless anyway. After studying the test plans the Scientists Review Panel published another report this spring charging the plans were "scientifically indefensible." Anderson says, "Essentially there is no test." They won't generate any new information, he says, and better results could be obtained in a laboratory.

The scientists' third report, again based on the state Environmental Evaluation Group's research, set off yet

(Continued on page 11)

another alarm in New Mexico and another investigation by the National Academy. In June, at its regular meeting with the DOE's project leaders, the academy's WIPP panel sharply rebuked the agency. Konrad Krauskopf, a retired Stanford geologist and chair of the academy panel told the Albuquerque Journal that while experiments with radioactive waste underground are important, DOE officials had failed to make "an adequate case for the particular kind and magnitude of tests that are planned."

The WIPP opposition groups say the tests may be an excuse to start operations under the current administration, no matter the actual working conditions. Dan Reicher, a senior attorney with the Natural Resources Defense Council, says most of the DOE's current facilities are getting old and must be replaced before the next stage of the Reagan administration's arms buildup can continue. But, he says, before a new generation of DOE factories -- such as the proposed Special Isotope Separator at the Idaho National Engineering Laboratory -- can be built, the DOE must dispose of the large amounts of waste currently cluttering the sites. Adding to the agency's urgency, leaks at several temporary storage sites have been discovered over the past year. Those have contaminated soil and groundwater, adding to the amount of waste materials awaiting permanent disposal.

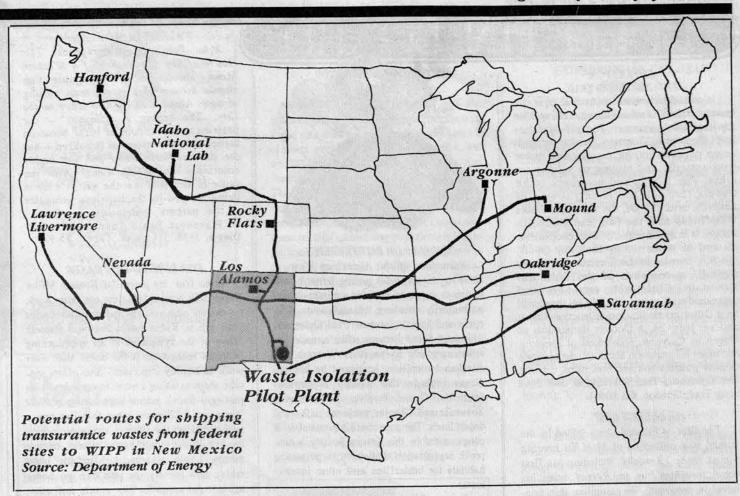
The Scientists Review Panel, and nearly every citizens' action group involved with WIPP, have asked that no waste be shipped to WIPP, even for tests, until the DOE can show that its engineering will meet EPA standards. The DOE responds that, just as its name says, WIPP is a pilot project, and without performing test with actual waste "in situ" it will never get the data to determine if the site is safe.

To begin waste shipments and testing, WIPP needs final approval from Congress. That will come in the form of a land withdrawal bill, with clauses that limit amounts that can be buried and specifies dates when standards must be met. The original WIPP bill gives the DOE the timetable it wants and allows live testing. Proposed by New Mexico Sens. Pete Domenici, R, and Jeff Bingaman, D, and Rep. Joe Skeen, R, it failed last year and has not yet cleared any committees in this Congress.

The reason is Rep. Bill Richardson, D, who represents Santa Fe and most of northern New Mexico. Richardson, a ranking memeber of the two key House committees that oversee the WIPP bill, insists that the DOE meet EPA standards before any waste goes underground. Richardson also wants the DOE to make good on promises to train and equip emergency response teams along waste transit routes and build highway by-passes around large population centers. He is supported by a majority in his district and by many activist groups.

Without unity, most observers say, the New Mexico delegation has little chance of getting Congress to pass a bill, especially in an election year. But the battle is being fought down to the

Richardson and Rep. Mo Udall, D-Ariz., chairman of the House Interior Committee, have introduced their own bill, which authorizes WIPP, but requires the DOE to meet all EPA standards before testing. The two opposing bills have just begun to work their way through the Senate and the House.



DOE has yet to whip transit problems

ven if the Department of Energy can solve WIPP's technical problems in time to open in October, it may not be able to perfect transportation arrangements by then.

Shipping the nation's transuranic waste to New Mexico's Waste Isolation Pilot Plant will be the largest movement of radioactive waste in U.S. history, averaging 800 to 1,000 truckloads a year for the next 25 years.

All of the waste will travel Western highways, much of it solely on Western highways. More than half the waste bound for WIPP is now stored at the Idaho National Engineering Laboratory in Idaho Falls. Other Western shipments will come from the Hanford Nuclear Reservation in Washington state, Lawrence Livermore National Laboratory in California, the Nevada Test Site, Rocky Flats in Colorado and Los Alamos National Labs in New Mexico.

On a statistical basis, Department of Energy Officials expect about 43 of the estimated 21,000 WIPP shipments to be involved in accidents over the lifetime of the project. The DOE will track shipments by satellite and the agency says specially designed containers will prevent radiation from escaping.

However, despite years of work, none of the agency's transit cask designs have met Nuclear Regulatory Commission transit standards. The current design, called Trupact II, is an upgraded version of a design that failed Nuclear Regulatory Commission safety tests last year (HCN, 12/21/87). The new casks are 10 feet tall, will weigh 17,000 pounds loaded and will carry 14 full drums of waste. Unlike the failed Trupact I, the new design is a double-shelled container and has no vents to the outside.

New Mexico's Environmental Evaluation Group is monitoring the Trupact process. The group's environmental engineer, Jim Channell, says the new design looks promising but because of numerous delays it remains untested.

Tests include dropping a container from 30 feet onto a concrete and steel roadway, dropping it from 40 inches onto a steel spike and burning it in an open pit fire at 1,465 degrees Fahrenheit for 30 minutes.

DOE officials recently acknowl-

edged that the delays are the result of faulty rubber O rings which seal the casks' lids. DOE project director Jim Tillman says testing delays could push back WIPP's Oct. 1 opening date or limit types of waste that could be shipped until full certification is obtained.

In the meantime, the DOE has already awarded a three-year, \$10-million contract to a New Mexico trucking company to haul waste shipments. But a Colorado trucking firm that lost its bid for the project has challenged the DOE's decision. The firm charges that, to save money, the agency gave the contract to a firm with no experience hauling nuclear wastes and one which has suffered numerous spills hauling radioactive mine tailings.

Richard Eshe, president of Colorado All State Transportation, told the Albuquerque *Tribune*, "The bottom line is that (the DOE) awarded this contract to a good ole' boy in New Mexico because New Mexico worked hard to get the WIPP site to Carlsbad... It's just dirty, a complete mockery of the bidding process."

While those fights continue, several New Mexico communities have passed or are considering resolutions regulating WIPP waste shipments. The resolutions, such as one proposed by the mayor of Santa Fe, bar WIPP waste shipments unless the DOE notifies town officials

of the routes and times of shipments; builds bypass routes around congested roads; and provides adequate training and equipment to city emergency response teams, among other requirements.

The DOE says the towns have no jurisdiction over federal waste shipments, and that DOE has no money for equipment and road improvements without special appropriations from Congress. However, agency officials say they will work with towns where they can. Westinghouse/DOE spokesperson Sue Kuntz points out that the DOE has already begun "public awareness tours," visiting Colorado and New Mexico communities along the transit route. The tours explain WIPP's mission, explain how the transportation system will work and decribe the dangers that can be expected from low level

Another DOE team is touring the two states teaching emergency reponse techniques for local fire and police officers. Classes examine the inside of the shipping containers; review radiation, exposure limits and control methods; and explain how to coordinate clean up efforts with federal radiation response teams.

--S.H.

Sources of information

wide range of groups have formed to review the DOE's WIPP operations and include scientific panels, citizens' action groups and elected officials. Some groups and addresses are:

Environmental Evaluation Group, State of New Mexico, P.O. Box 968, Santa Fe, NM 87504 (505/827-0556).

Scientists Review Panel on WIPP, c/o Reuben Hersh, Department of Mathematics and Statistics, University of New Mexico, Albuquerque, NM 87131 (505/277-4903)

Committee to Make WIPP Safe, P.O. Box 40437, Albuquerque, NM 87196 (505/262-1862).

Southwest Research and Information Center, P.O. Box 4524,

Albuquerque, NM 87106 (505/262-1862).

Rep. Bill Richardson, 332 Cannon House Office Building, Washington, D.C. 20515 (202/225-6190).

Agencies and officials supporting WIPP are:

WIPP Project Office, U.S. DOE, P.O. Box 3090, Carlsbad, NM 88221 (505/887-8117).

Sen. Pete Domenici, 434 Dirksen Senate Office Building, Washington, D.C. 20510 (202/224-6621).

Sen. Jeff Bingaman, 502 Hart Senate Office Building, Washington, D.C. 20510 (202/224-5521).

Rep. Joe Skeen, 1007 Longworth House Office Building, Washington, D.C. 20515 (202/225-2365).

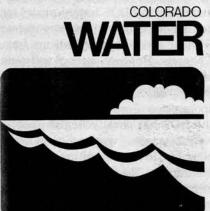
THE COLORADO TRAIL

Created by volunteers from all over the country, the 470-mile Colorado Trail will be dedicated this summer. The trail stretches from Denver to Durango, passing through seven national forests, crossing five major river systems and visiting six wilderness areas. The hiking and horseback route travels through the mining towns of Leadville and Creede, the Collegiate Peaks Wilderness and the San Juan Mountain Range. It is an example of what people can do and of what money can't buy (HCN, 8/4/86), thanks to the leadership of Gudy Gaskill, a member of the Colorado Mountain Club who recruited and organized trail crews. On July 23, there will be a Durango dedication at Junction Creek and on July 24 a Denver dedication at Waterton Canyon, southwest of Denver. For more information about the dedications or new guide book and trail maps, contact The Colorado Trail Foundation, 548 Pine Song Trail, Golden, Co. 80401.

ABBEY'S BEST

The Best of Edward Abbey, edited by the author, is a collection of 31 of his favorite pieces from 12 works, including his first novel, Jonathan Troy, and Rites of Spring, his novel-in-progress. "In compiling this oneman show," Abbey comments, "I have endeavored, as an author naturally does, to present what I think is both the best and most representative of my writing -- so far." Abbey says writing was never a career to him but always a passion "fueled in equal parts by anger and love." This collection introduces the reader to a wide variety of Abbey's essays, nonfiction and novels, much of it set in the Southwest desert.

Sierra Club Books, 730 Polk St., San Francisco, CA 94109. Paper: \$10.95. 383 pages. Illustrated by Edward Abbey.



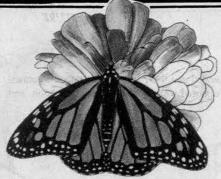
A LIFE PRESERVER

Western water law is difficult at best and Colorado is one of the worst offenders. If you are drowning, the Colorado League of Women Voters has just published Colorado Water, a reference guide to nearly every aspect of water and water law in Colorado. Concisely written, the 32-page booklet describes Colorado's major river basins, fedral and interstate water compacts, state water law and water quality controls; flood nanagement; most of the state's large water upply systems; water administration and vater courts; and ends with a brief survey of vater conflicts now facing the state.

League of Women Voters of Colorado, 600 Race St., Denver, CO 80206. Paper: \$5, lus 3 percent Colorado tax (in Colorado), and \$1 shipping. Maps, charts and diagrams.

HOLY CROSS IS CROWDED

Holy Cross Wilderness, located 15 miles west of Vail, Colo., is one of the most visited wildernesses in the nation. Dominated by a 14,000-foot mountain, the popular area receives especially heavy use in the summer months from both local residents and Denver visitors. Because of this, the White River National Forest has drawn up a draft wilderness implementation schedule that specifically outlines how the Forest Service can protect the area from overuse. Rick Jewell of the White River Forest Service says the plan tries to allow the public as much freedom as possible. It limits camping or prohibits camping at certain overused campsites, restricts climbing Holy Cross Mountain if voluntary reduction does not work, and modifies fish stocking to protect indigenous fish species. For more information on the plan, write District Ranger Bill Wood, Holy Cross Wilderness, Box O, Mintum, CO 81645.



KNOW YOUR BUTTERFLIES

Butterflies of the American West, A Coloring Album is for young butterfly collectors or watchers. Besides a primer chapter on butterfly anatomy, classification, lifecycle and habitat, author Paul Opler and illustrator Susan Strawn offer a made-forcoloring guide to various Western and Alaskan butterflies, arranged by habitat. Areas include the Rocky Mountain foothills, Great Basin, Yellowstone, Yosemite and Glacier national parks and desert lands. The paperback's publication is co-sponsored by the Xerces Society, a nonprofit organization dedicated to protecting habitats for butterflies and other inverte-

Roberts Rinehart Inc. Publishers, P.O. Box 3161, Boulder, CO 80303. Paper: \$3.95.50 pages. Color illustrations.

STATE OF THE STATES

The Washington, D.C.-based Fund for Renewable Energy and the Environment has released its 1988 State of the States report, which ranks states by the strength of their pollution-control efforts in six areas. Ranking in the lower 25 were Colorado, Montana, Utah, South Dakota, North Dakota, Arizona, Idaho, and New Mexico. Wyoming placed dead last. The 49-page report concludes that polluters should be held responsible for their pollution instead of passing costs on to citizens. Scott Ridley, the report's writer, says, "The most important question we face is who is going to pay for the ongoing damage to the environment," which now exceeds \$300 billion. Cutbacks in federal environmental protection and the Reagan administration's shift toward giving states greater environmental responsibility has left most states strapped for funds, Ridley points out. Six areas ranked in the report were surface water protection, pesticide contamination, land use planning, indoor pollution, highway safety, and energy pollution. For a copy, write: Renew America Project, Suite 719, 1001 Connecticut Ave. NW, Washington, Washington, D.C. 20036 (202/466-6880).

A SENSE OF PLACE

The resident of a large Eastern or European city has an advantage over a Westerner -- the former can steep himself or herself in any number of fine books which convey the past and present of their home city. But the West has only a scanty literature. That we are not totally bereft is due in part to novelist Ivan Doig, whose English Creek is long but still ends too soon. The novel tells of life in the 1930s on Montana's Rocky Mountain Front -- the area where the Rockies meet the plains south of Glacier National Park -- through the eyes of the son of a Forest Service district ranger. The story is unremarkable -- an account of the estrangement within the family when the older son rejects engineering school for a cowboy's life and marriage to Leona, who enters the novel riding next to her fiance, "Like the prettiest one of them gets to kiss the other." The story is remarkable for the feel it gives of that time and place. The plot will also interest those who wish to understand today's U.S. Forest Service. The then quasi-military organization is a backdrop for the story -- its discipline, its hatred and fear of forest fires (the regional forester wipes out an entire National Forest and scatters its staff after a fire gets away from them), and the agency's place in a rural, livestock-raising community. Also of interest is the economic times -- the Great Depression -- which reads much like today. In addition to English Creek, Doig has written The Sea Runners (1982), Winter Brothers (1980) and This House of Sky.

Atheneum, New York. 1984. Cloth: \$15.95. 339 pages.

WALKER IN MONTANA

Ivan Doig's augobiographical This House of Sky: Landscapes of a Western Mind, should be set alongside that classic account of a young man coming of age: Alfred Kazin's A Walker in the City. The setting is different -- the prairies and mountains of rural Montana rather than the streets of Brooklyn -- but the dreamy, underwater and yet highly emotional tone is the same. Also the same is the sense that the writer's life is being shaped by the hopeless struggles of the parents' generation.

Harcourt Brace Jovanovich, San Diego, 1978. 314 pages. Paper: \$5.95.

FOR BURNED-OUT CASES

Time Out by journalist Bonnie Miller Rubin tells how to take time out from work, no matter who you are and no matter what your job is. Rubin quotes Bertrand Russell: "One of the symptoms of an approaching nervous breakdown is the belief that one's work is terribly important." She offers specific steps to taking a break interspersed with passages from a journal kept during her first "time out." Chapters cover familiar topics such as: when the office is a prison; making the break; the escape hatch; money, money, money; hearth and home; kith and kin; loose ends; and reentry (or you can go home again). An appendix lists grants and other resources for work, study and travel abroad.

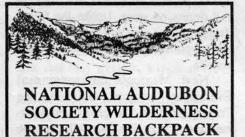
W.W. Norton & Company, 500 Fifth Avenue, New York, N.Y. Paper: \$12.95. 236 pages.

A LONE WOLF RESEARCHER

Although the last wolves were supposedly eradicated from Wyoming in the 1940s, sightings are reported each year. If wolves do roam the area, wildlife photographer and long-time Wyoming resident Cat Urbigkit plans to document their existence. With her own money, she has begun a study of all sightings, which means mapping sightings, then searching each area for wolf tracks and other evidence. Her research eventually will involve aerial searching as well. Between 1969 and 1986, the Forest Service and Wyoming Fish and Game Department have received 53 reports of wolves, Urbigkit said, and she personally has received 35 additional sightings from 1969 to the present. To report any sightings write: Cat Urbigkit, 320 Popo Agie, Lander, WY 82520.

GROWING UP ALONE

Whooping cranes left a chick in North Dakota this spring when they migrated north to Canada. The 130 endangered birds commute each year between Texas and Canada. In 1942, the same flock numbered only 15 birds. The flock that abandoned the chick consisted of four adults and one immature bird and were last seen near the Audubon National Wildlife Refuge in North Dakota. Wally Johman, endangered species biologist for the U.S. Fish and Wildlife Service, says it is not unusual for whooper parents to separate from their young at the nesting grounds. Abandoned chicks can survive well on their own, he adds, since instinct guides them to migrate. This small chick, one of 10 whoopers seen in North Dakota since mid-April, will grow into a large white bird with black-tipped wings that span seven feet. With a slow wingbeat, a whooper flies with its long legs stretching out behind its body and its long neck extended. The birds often fly with their cousins, the smaller sandhill cranes. The USFWS would like to know if anyone sees a whooper: Note the number of birds, color of bands on marked birds, and location, and call 1/800-224-2121.



Join Audubon biologists in scenic northwest Wyoming (Wind River or Absaroka Mtns.). Learn research skills - bird, mammal, plant and insect survey. Contribute to scientific knowledge and enjoy this magnificent wild country. 4 12-day trips, June - August.

Contact: Registrar, Nat. Audubon Society 613 Dept. B Riversville Rd. Greenwich, Ct. 06831 203-869-2017



POETRY BY GUTHRIE

Four Miles from Ear Mountain, the first book of poems by Pulitzer Prize-winning author A.B. Guthrie Jr., includes 23 poems written over a quarter of a century, from 1935 to the present. Kutenai Press, a letter-press shop specializing in handset printing of limited edition books, has taken pains to produce a book to savor. It is illustrated with four original wood engravings by Montana artist Kathy Bogan, and the 300 copies of the edition are signed by both artist and author. Other books published by Kutenai Press include a collection of poems by Mathew Hansen, entitled Clearing, and Phantom Silver, which is speculations on the Lone Ranger by William Kittredge.

Kutenai Press, 515 Stephens Ave., Missoula, MT 59801. \$30.00. Paper. Illustrated. 47 pages.

SOON TO BE 100

The U.S. Forest System celebrates its 100th birthday in 1991, but the National Wildife Federation thinks it still has a lot of maturing to do. A new direction in managing national forests is vitally needed, reports the federation in Our National Forests: Will the Future Be Different? The publication is designed to stimulate debate on current problems and the future of national forests. In the 1800s, says the federation, it was thought the nation would fail if the wood supply failed. Today, people look to national forests to provide recreational opportunities no longer found in urban settings. The problem is that administration policy has stayed rooted in the past, the federation concludes. The 12-page booklet is available free from NWF, 1412 Sixteenth St. NW, Washington, D.C. 20036.



David Lee Richard Shelton William Kittredge Terry Tempest Williams

Pack Creek Ranch, Oct. 14-17, 1988 For information and registration, contact: Canyonlands Field Institute,

P.O. Box 68, Moab, UT 84532.

Conserve Water



With each Flush

- · You can save 30,000 gallons of water with Seiche One, the Water-Saving Toilet.
- · On demand flush: use only the water you need.
- Comes ready to install easily into standard plumbing systems.

NATURAL RESOURCE CO. Box 91 Victor, Idaho 208-787-2495

High Country News

HCN T-SHIRTS make great gifts! Royal blue, kelly green, fuschia, burgundy or turquoise; small, medium, large, extra large. \$10. 100 percent cotton. Send your checks to HCN t-shirts, Box 1090, Paonia, CO 81428.

NEAT STUFF

ENVIRONMENTAL JOB OPPORTUNI-TIES bulletin lists latest openings with environmental groups, government agencies, nature centers, consulting firms, colleges, and universities throughout the U.S. Ten issues annually, just \$10. For free sample, write to EJO, Institute for Environmental Studies, University of Wisconsin-Madison, 550 North Park Street, Madison, WI 53706. (608/263-3185). (1xp)

WESTERN WATER MADE SIMPLE, by the editors of High Country News; \$15.95 plus \$2.75 shipping (\$1.25 each additional book) from Island Press, Box 7, Covelo, CA 95428; 800/628-2828, ext.

WANTED: RUGGED CARETAKER with own income. Beautiful remote mountain ranch. References. F. Wilson, El Rito, N.M. 87530. (3x11p)

BOOKS -- Let Creekside Books, P.O. Box 1234, Buena Vista, Colo. 81211, be your personal bookseller. We carry books for every age and interest, including a large selection of books on Colorado history and nature. Glad to order any book in print for you or to search out-of-print books. Visit, write or call 719/395-6416. Sorry -- no catalog. (3x11p)

LAND

CONSERVATION-MINDED buyer for 160, 320, or 480 beautiful high-desert acres bordering wilderness study area, \$75-\$225/acre, northern Arizona. Call ASAP 914/424-3389 before 9 a.m. N.Y. time. 7/19 - 8/2 call 602/564-2220. (1xp)

CONSERVATION-MINDED BUYERS WANTED for Large Mountain Valley Parcels in Prime Four-Season Recreation Area. Tax Incentives Available. Contact Mary Jensen, Broker, ALPINE VIEW REALTY, Route 2, Box 6, Twisp, Washington 98856 (509/997-6562). (6x6p)

1:134

JOB OPENING: EXECUTIVE DIRECTOR - Alaska Center for the Environment (ACE). Responsibilities: administration of grassroots activist and education conservation organization for Southcentral Alaska; 5 staff with seasonal environmental education program, also. Knowledge of environmental issues, administrative experience, fund development background, past work with volunteers, and strong writing and speaking skills required. Deadline: August 15, 1988. Call or write for more information: ACE 700 H St. #4, Anchorage, AK 99501; (907) 274-3621.

POSITION AVAILABLE: The Alaska Wildlife Alliance is seeking candidates for a Staff Representative position located in Anchorage. Interested persons should contact the Alliance in writing and submit a current resume, letter of interest and references. Please include a writing sample, preferably wildlife-related. Alaska Wildlife Alliance, P.O. Box 190953, Anchorage, AK 99519 (3x11p)

CLASSIFIED ADS cost 30 cents per word, pre-paid, \$5 minimum. General rates for display are \$8/column inch if camera-ready; \$10/column inch if we make up. For ad rate brochure, write HCN, Box 1090, Paonia, CO 81428 or call 303/527-4898.



ANTERO ARTS

429 East Main Street Buena Vista • Colorado • 81211 Box 609 719-395-6291

- DRAWINGS
- PAINTINGS
- ORIGINAL PRINTS
- PHOTOGRAPHY
- WOOD
- FIBRE

OPEN DAILY • ELEVEN TO SIX MID-JUNE TO MID-SEPTEMBER

And by Appointment

Help...

stop the slaughter of Alaska's wolves, including aerial wolf hunts and "aerial trapping". Support balanced wildlife policy and nonconsumptive use of wildlife in Alaska.

"Stop The Wolf Hunt" six-color cloisonne pin \$10 ppd. "The Wolf -Spirit of Wild Alaska" T-shirt \$10 ppd.



For more information, merchandise and sample newsletter contact:

The Alaska Wildlife Alliance P.O. Box 190953 Anchorage, AK 99519 (907) 277-0897

a non-profit organization; \$15 annual membership \$20 for First Class Mail outside of Alaska

BULLETIN BOARD

WYOMING LEGISLATURE ANALYSIS

For the Wyoming Outdoor Council, the state Legislature's 1988 budget session ended in a 4-14 loss. Three bills the council opposed were defeated on introduction, and an amendment delaying funding for Sandstone Dam provided the only victories. The amendment earmarked money for the dam's design but prevented spending it until construction funds are approved. Losses also came on bills addressing pollution control in the state. Funds for the regulatory agency in charge of pollution control were cut, and three bills increasing the agency's power to tackle pollution were defeated. An attempt to buy wetlands for a wildlife refuge also was defeated. The council concluded that 1988 was a "lackluster year for environmental legislation in Wyoming." But the council said several important issues were aired, which the Legislature will be better prepared to face next year. To receive the 27-page "Legislative Analysis: Budget Session February 15-March 11, 1988," send \$5 to: Wyoming Outdoor Council, P.O. Box 1449, Lander, WY 82520 (307) 332-7031.



"LOVE YOUR MOTHER" T-SHIRTS

for all sized earthlings in full 4-color art on sky blue or rich ivory high quality shirts

Adults - 100% cotton - \$9 S (32-34), M (36-38), L (40-42), XL (44-46) Kids - durable 50/50 - \$7 S (6-8), M (10-12), L (14-16) Babies - Yellow or Sky Blue - \$6 12 or 24 month, lap shouldered

Please enclose \$1 for 1st shirt, and 50¢ for each additional shirt.

Environmental Gifts
P.O. Box 222-HCN, Helena, MT 59624
Send for Free Catalog!

EXTRAORDINARY COLORADO NATIVES

The Colorado Native Plant Society, a non-profit organization dedicated to increasing appreciation for and conservation of the state's native flora, will describe nearly 100 rare, threatened and endangered plant species in a new monograph scheduled to be published at the end of this year. The society says the monograph will contain color photos and line drawings of each species, plus detailed descriptions and maps of habitats. More money, however, is needed soon to match a Boettcher Foundation grant to finish the work. The group also sponsors field trips and workshops throughout the year. For

says the monograph will contain color photos and line drawings of each species, plus detailed descriptions and maps of habitats. More money, however, is needed soon to match a Boettcher Foundation grant to finish the work. The group also sponsors field trips and workshops throughout the year. For information on these activities, call 303/759-9701. Monograph contributions are welcome at: Rare Plant Monograph, c/o CONPS, P.O. Box 200, Fort Collins, CO 80522. Checks payable to the Colorado Native Plant Society and need to be received by Aug. 1.

A SCREWY AWARD

A 12-inch screw weighing a half-pound was recently awarded to the Nevada activist group called Citizen Alert. The screw represented what frequently happens to Nevada, award presenters said. Citizen Alert won it for fighting nuclear waste dumps in the state and launching a national hotline to collect and process complaints about military aircraft noise. The award was the first Grassroots Peace Award given by Peace Development Fund, a national peace organization based in Massachusetts.

BARBS

Ambulance drivers and orthopedic surgeons will also be hard hit.

Wyoming has become the last state to raise its minimum drinking age to 21. The Wyoming State Liquor Association estimates that 1,000 jobs related to the liquor industry will be lost.

Renew now!
And beat the subscription rate increase on August l...

New sub HIGH COUNTRY NEWS Renewal A paper for people who care about the West ☐ One year, individual - \$20 Name_ ☐ Two years, individual - \$35 Company___ ☐ One year, institution - \$28 Address___ City, State, Zip_____ ☐ Two years, institution - \$50 ☐My check is enclosed, or, charge my credit card— □Visa □ MasterCard: account no.__ expiration date_ signature ___ ☐ Please bill me Please mail to: HCN, Box 1090,

BOOKS

Can the Forest Service turn entrepreneurial?

Reforming the Forest Service

Randal O'Toole, Island Press, 1718 Connecticut Ave, N.W., Washington, D.C. 20009, 1988. 248 pages. \$16.95, paper.

____Review by Bruce Farling

In his new book, Reforming the Forest Service, maverick economist Randal O'Toole says this about the agency: It is like a "giant but primitive multicelled organism, perhaps something like an algae. When placed by itself in a nutrient culture, the organism grows as long as there is food available. But few organisms are so lucky to live by themselves in a sea of unlimited food. Instead, they typically must compete with other organisms ... The Forest Service and other federal agencies are similar to such organisms, and the food they compete for is the federal budget."

Thus we meet Smokey the Algae.

Reforming the Forest Service is a provocative, well-documented critique on what makes the agency tick: money. O'Toole says the Forest Service is not driven by a sense of responsibility to the public nor, he adds, does it see its mission as servility to the timber industry. He says it is simply a bureaucracy, and as such it is motivated by budget. Most of the agency's decisions are based on what brings in the most money. And because timber generates the most income, logging is emphasized.

O'Toole, who directs an Oregonbased forestry consulting firm, has studied Forest Service activities for 12 years. He concludes that because the agency's budget comes from Congress, and because it gets to keep a large share of its timber receipts -- almost \$300 million a year -- it has little incentive to manage the public's forests for much besides timber.

Ironically, the agency admits that recreation on National Forests is worth more than its timber. However, because it collects few recreation fees, and isn't authorized to keep the ones it does, the agency sticks to what brings the most bacon back to its table. And because it can depend on a congressional appropriation each year -- lately about \$1.6 billion -- it doesn't have to worry about making a profit. So it doesn't. O'Toole estimates Forest Service's expenses exceed income by more than \$1 billion a year.

O'Toole explains in short order how the Forest Service makes money by losing money. He deciphers the agency's oddball economic rationale behind below-cost timber sales, and zeroes in on such items as the manipulation of reforestation funds, cross-subsidization of timber sales and the inappropriate use of clearcutting. The data he cites are from the agency and from recognized research.

Each chapter is loaded with explanatory graphs and footnotes. The lists of sources are good references for people who work on public land issues. Although he's an economist, O'Toole writes like a human being. He explains jargon and uses analogies. Still, it helps to have some background on the issues and in economics.

Interestingly, some Forest Service managers -- the ones not green to the bone -- admit privately that much of O'Toole's criticism is well-directed. They agree that many of the agency's policies, from the taxpayer's viewpoint,

make little sense. But they usually remain mute for fear of being ostracized and accused of "not being part of the team."

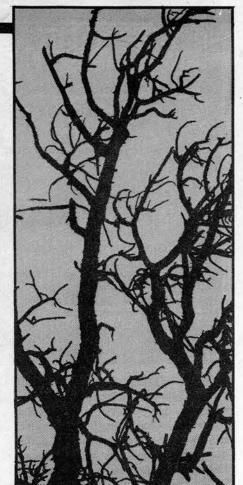
After pondering the ills of the Forest Service, O'Toole prescribes a cure. A controversial cure, and one that most environmentalists, to say nothing of the Forest Service, will have a hard time accepting. He says the agency should be "marketized," his term for letting the public and industry compete for national forest resources in an open market, without congressional funding or meddling.

He suggests funding all activities—logging, recreation, grazing, etc. — out of net profits from user fees and letting the agency charge fair market value for all resources. That means no subsidies. Key to his proposal are the dropping of all congressional appropriations and a decentralized Forest Service. Each forest, he says, should be an independent, publicly-owned institution. O'Toole

wants to use the market to force the agency to serve the greatest public good. This will happen, O'Toole says, because the agency will continue to maximize its budget, but under the new system, maximization will mean meeting public demands.

These changes, we are told, will ensure the preservation of many roadless areas because without subsidies timber interests will not log the areas. Because recreationists, including hunters and wilderness buffs, will be charged fees, the Forest Service will have incentive to manage for resources other than board-feet.

The recommendations are radical, and not without problems, both economic and political. But that they are being discussed could help elevate Forest Service management beyond the plodding course it is now on. It could be that O'Toole is the first person to answer a question that Aldo Leopold raised more than 40 years ago, when he queried, "At



what point will government conservation, like the mastodon, become handicapped by its own dimensions?"

ESSAY

He's anything but dull

Randal O'Toole has been called brilliant, arrogant, a crackpot, a genius, a snake-oil salesman. No one, however, has called the maverick forest economist uninteresting.

When I first met O'Toole, in a class lecture, he sported shoulder-length hair and a scraggly beard. He was accompanied by a staff member of the Oregon Wilderness Coalition whose hair was longer than O'Toole's and tied in a ponytail. O'Toole wore a long black cape and his partner had a bolo tie and pointy-toed boots. They called themselves economists.

That was about 12 years ago, and at that time my knowledge of economics was weak. I thought discount rates were something you got at K-Mart during red-tag specials and that J. Maynard Keynes was Dobie Gillis' geeky, beatnik sidekick. When the economists whipped out pocket calculators, sophisticated technology at the time, the class druids were aghast. Combining wilderness

with economics and calculators was a little too much.

During the next couple of years O'Toole became a familiar face around wilderness advocates in Oregon. He always insisted that he was not an environmentalist, saying with some indignation: "I am an economist." Actually, he had degrees in forestry and geology and was working on a master's in economics.

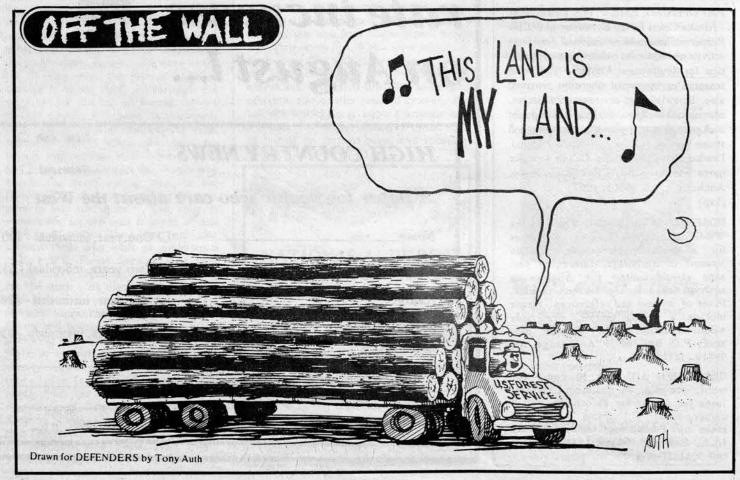
Back then, he was known as ROT. Capital R, capital O, capital T. No periods. At gatherings with people who did not know him, he would simply introduce himself by saying brusquely, "I'm ROT." Eyebrows would raise and you could see people thinking: "Hell, buddy. Don't be so hard on yourself." Today, people call him Randal or Mr. O'Toole.

For a year, I shared a crowded office suite with him where he'd work into the night crunching numbers to expose Forest Service follies while living exclusively on root beer, popcorn and peanut butter-and-banana sandwiches. My environmentalist cohorts, who lived exclusively on beer and Doritos, taunted him about his diet. O'Toole also lived in an old black van that had a cracked windshield. I can't remember the year or model. I only remember it was extremely ugly, and occasionally the city took it for an abandoned vehicle.

During the second half of the 1970s, O'Toole's ideas found their way into many Oregon conservation efforts. During the RARE II study he argued, quite convincingly, that many roadless areas would be better investments as wilderness than as stump farms.

Thanks almost entirely to O'Toole, environmental battles were being aided by economic arguments. National conservation groups started economic analysis departments and a new era in environmental politics was opened. More recently, he has caused some significant changes in forest planning. His review of the Santa Fe National Forest plan, for example, forced the Forest Service to recall it for overhaul and served notice that future plans better be up to snuff.

(Continued on page 15)



OPINION

O'Toole is the Adam Smith of forest economics

This is the *High Country News* issue for "I know Randal O'Toole" articles. My claim to such an article is that Randal has stayed in our home in Paonia twice, or maybe three times, in the last several years. On his first trip or two, I think he came by train -- he loves trains -- but on this most recent visit in May he came by car.

Thanks to the car, he and friend Vickie Crowley were largely self-contained. He brought a Macintosh computer in a sort of Vuiton carrying case, and they also had a box containing six or so varieties of cold cereal.

They had driven from somewhere in the Northwest in a long, 26-hour burst to get from a conference on forest economics to the annual meeting of Western Colorado Congress. In Randal's first visit to Paonia, in 1984 or so, he had come to audit the books of the Gunnison-Grand Mesa-Uncompahgre national forests. He had found that the agency was extremely creative when it came to turning trees into dollars, if not into valuable timber.

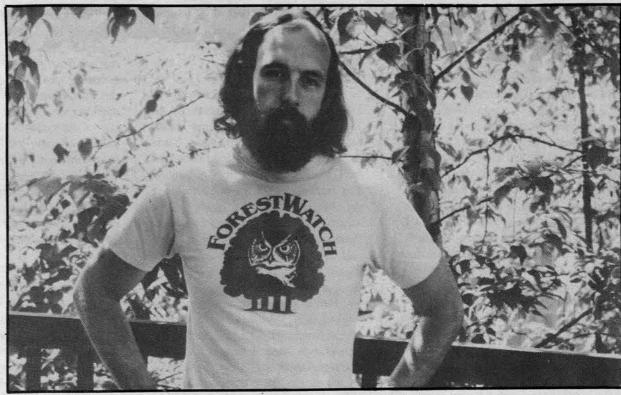
On this trip, he and Ms. Crowley -- at what seemed to have been her behest -- took half a day off and hiked through the Dark Canyon of the Anthracite on the Gunnison National Forest. O'Toole came back complaining of the ticks he'd picked up on the trip, and I had the feeling that trees are more interesting to him in the abstract than in actual forests. It is not surprising -- his mastery of economics, computers and Forest Service trickery enables him to explore the world of national forests in a way closed to most of us. If you have a taste for analysis and management, the paper forest can be as richly complex as the actual one. Adam Smith's life was at least as interesting as the lives of those who worked on the pin-making assembly line he celebrated.

In his profile of O'Toole elsewhere in this issue, Bruce Farling says he never won an argument against O'Toole. Bruce has gotten further than I. When I raise objections to his theories, he brushes them away so forcefully and effortlessly that I end up pretending they weren't objections at all -- just points I handed him for exercise, the way one might give Arnold Schwartzenegger a 200-pound weight for the fun of seeing him hoist it.

But the group gathered at the Western Colorado Congress annual meeting in May, where O'Toole was the keynote speaker, challenged him on the only possible ground: values. WCC is an amalgam of environmentalists, ranchers and reform-minded citizens, and they asked questions of O'Toole for an hour or more. Some were concerned that a rigidly free market approach would upset long-standing relationships. Some ex-urbanites live here at significant dollar sacrifice because the free winter and summer use of nearby forests, canyons and deserts more than makes up for the loss of cash income.

Another constituency also depends on the forest. Many long-time residents live in part off the forest, getting their fuel and meat out of the woods. Charging market prices for firewood, recreation and hunting licenses would harm or destroy both the recreation and subsistence ways of life. It would help ratchet the area into the late 20th century, out of the late 19th century in which it now lives.

So some members of a strongly anti-Forest Service audience felt threatened by O'Toole's rational free market approach. It indicates that the Forest



Randal OToole

Service is serving, to some extent, even those who think they are its fierce enemies.

O'Toole replied over and over again that the nation should not ask the agency to perform welfare work -- not for the timber industry, the ranchers, the recreationists or the guys who drive 1957 Chevy pickups, sometimes equipped with spotlights, and always equipped with a dingo dog, a chainsaw and a hunting rifle.

The WCC audience, of course, was right on when it squirmed at the thought of trashing existing relationships. And O'Toole was right on when he pointed out that you can't abolish timber industry welfare without going after everyone else's welfare.

There is another problem with O'Toole's analysis: He largely disregards the politics of the situation and fails to tell us who will bell the cat. O'Toole has shown that existing laws drive the Forest Service to cut and road, whether cutting and roading make any

larger ecological or economic sense.

In O'Toole's talks, those laws are mere irrational, almost accidental stumbling blocks to the sensible, workable world he lays out. But those laws actually represent 50 or so years of hard work by the timber industry's senators and congressmen and the Forest Service. To change them will require the same kind of revolution that will be needed to change the 1872 Mining Law, the Doctrine of Prior Appropriations and the other bulwarks of the traditional, extractive West that Charles Wilkinson has labelled the Lords of Yesterday. If we had the power to change the laws governing roading and logging, we would also have the power to hand the national forests over to the Nature Conservancy.

Despite the lack, O'Toole has done all of us, including the Forest Service, a great favor. His genius and hard work have shown us that the national forests are governed by a welter of laws whose purpose and workings are exactly the same as those of the 1872 Mining Law.

Moreover, his book has appeared when change is looming. The Forest Service sees the writing on the

wall. Its potential fate is writ large, in the slow death by budget strangulation the U.S. Bureau of Reclamation is experiencing, and in the way the Bureau of Land Management has been turned into the West's version of Tammany Hall, distributing goodies at the orders of local and Washington-based politicos. The Forest Service will change, both because it wants to survive as a professional agency and because the forces for reform are growing so strong that the agency must choose between change and extinction.

O'Toole's analysis of how the Forest Service works is important. The agency's budgetary motivation to log and cut should be removed as soon as the reformers have the power to do so. But his prescription for what to put in its place is suspect.

I wouldn't want to see another self-regulating system replace the present self-regulating system. Such an approach may be fine for a Bureau of Motor Vehicles, but not for the Forest Service. The shame of the present Forest Service is that the human beings in it have suborned their values and even their common sense to a budget-driven bureaucratic imperative. They have betrayed the nation's trust. The post World War II era is one the agency will spend decades living down. The agency, of course, knows that its present situation is inexcusable. Just listen to the public talks they give -- they always refer to Gifford Pinchot and agency activities in the early part of the century. Their past is presentable; their present is not.

But it would be wrong to assume that the Forest Service is so far gone, so beyond hope, that it can only be treated like a flock of Skinnerian pigeons, motivated to peck by recreation dollars rather than timber dollars. The nation's forests are far too valuable and subtle to be managed according to pure market forces. A far better motivator, we think, is to assume that the agency can become what it is supposed to be: an entity that is good for the nation's forests rather than the death of them.

--Ed Marston

Anything...

(Continued from page 14)

When I saw O'Toole at a wilderness convention in Helena, Mont., last winter, I had a lot of questions. I hadn't seen him in a few years. According to his count, 50 forest plan reviews and countless timber sale appeals had flowed under the bridge. The hair is still longish, though thinner, undoubtedly the result of overexposure to forest planning. Sadly, the cape is gone. But his flair for showmanship is not, much to the delight of the Helena gathering.

O'Toole's latest quest is modest. He merely wants to turn the Forest Service

inside-out. He says the agency overemphasizes timber cutting not because, as conservationists often contend, it feels it has a divine mandate to save the world from a timber famine -- but rather, as a bloated bureaucracy, it needs increasing infusions of capital. He says selling timber, thanks to subsidization, politics, and twisted logic, feeds the bureaucracy best. Thus, it probably doesn't matter to the agency what it sells, be it widgets, porcupines, cabbage patch dolls, whatever -- as long as it brings in money to feed the bureaucracy and pay for unnecessary foresters.

I agree with much of this. My own experience in the Forest Service revealed that money drives the agency.

Bigger budgets to a ranger mean more staff, more facilities, more prestige and a faster rise up the ladder. It makes no difference that there may not be any real need for the money. Reasons will be created. In the Forest Service, turning money back in at the end of the year is heresy.

O'Toole's ideas for reform are a little tricky. He says competing interests on public lands should bid for resources, with high bidders getting priority for their use on a particular piece of land. They will pay user fees, which will totally replace congressional appropriations. O'Toole says this will be more environmentally and economically sound than present policies, because the "market" will eliminate uneconomical practices such as below-cost sales and subsidized roadbuilding. He projects a savings to American taxpayers of \$2.2 billion a year.

Like many, I react to his proposals with some nervousness. When I hear the expression "free market" attached to things like wilderness, wildlife and esthetics, I'm reminded of petting zoos, KOA campgrounds and plastic "wildlife trees." I also thought the concept of a genuine free-market went out with Edsels and peace-with-honor. But I'm reserving judgement. I've never won an argument with Randy O'Toole.

-- Bruce Farling

LEASING WAS EXAGGERATED

Dear HCN,

The article "Two National Parks Under Siege" (HCN, 5/23/88, Bruce Farling), cites information from a 1986 Sierra Club report about oil and gas leasing. Unfortunately, the information is inaccurate and misleading.

According to the Sierra Club report, most of the area in the Greater Yellowstone Area is available for lease, and most of what's available for lease has already been leased. However, the recently completed Aggregation of National Forest and National Park Plans for the Greater Yellowstone Area shows a dramatically different situation.

The Aggregation illustrates that when all 11.7 million acres of national forests and parks within the Greater Yellowstone Area are considered, 60 percent is withdrawn or unavailable to leasing. Seventeen percent is available for leasing, but only with the stipulation of no surface occupancy. The remaining 23 percent is available for lease with stipulations designed to protect other resources that may be important.

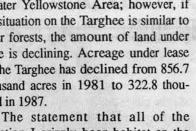
Thus, 4.7 million acres are available for lease, not 9.8 million acres as the Sierra Club reports. Of that total, 2.1 million acres are leased; and 365,700 acres have lease applications pending. That's 52 percent, not 83 percent as cited in the Sierra Club report. It's important to remember too that many of the applications will remain just that -- applications -- because they are in areas such as the Island Park Geothermal Area where forest plan direction precludes leasing. I don't have information for other forests in the Greater Yellowstone Area; however, if the situation on the Targhee is similar to other forests, the amount of land under lease is declining. Acreage under lease on the Targhee has declined from 856.7 thousand acres in 1981 to 322.8 thousand in 1987.

Situation I grizzly bear habitat on the Targhee and Gallatin national forests has been leased is simply false. There are a few leases in Situation I habitat on the Gallatin, but none on the Targhee. The fears that wildlife populations in the Greater Yellowstone Area will be reduced have not come to pass since the 1986 report. Populations of wildlife such as elk, deer, mountain goats, bison, eagles, etc. are at very high levels and many are still increasing.

I invite your readers to review the "Aggregation" -- copies are available at all forest and park offices in the Greater Yellowstone Area. I believe they will find it portrays a well managed situation with a high level of coordination between the national parks and forests. In particular, they will find the mineral leasing program to be very conscious of other resources and not "...full-bore oil and gas everyplace."

> Robert G. Williams St. Anthony, Idaho

Forest planner Robert Williams works for the Targhee National Forest.



existence.

population.

field, replacing feeding from barnlots. The point is that mechanization has created enormous impacts on nature, and there is literally no concept publicly as to its destructiveness, but much appreciation of its economy of labor and convenience. I could go on and give many other examples of how it is our Dr. Jekyll and Mr. Hyde. The Mennonites have incorporated this recognition into their religion by farming with restraint and respect for the

Without beauty, life is empty. It is not a state of mind but an unexpendable reality. Our civilization is expending it and the millions of years behind its cre-

Van Shipp

BURR TRAIL

Dear HCN,

the Burr Trail is not undertstood.

The major complaint about the Burr Trail voiced by the Garfield County Commission is it's not serving as a fourseason, all-weather road. In the wintertime parts of it turn into a bottomless bog of mud; certain stream crossings

WITHOUT BEAUTY

Dear HCN,

Please find enclosed my renewal for HCN. I have been on your mailing list from inception, and have seen HCN retain its basic philosophy while shifting from Tom Bell's belief (as well as my own original) that idealism and common sense will win out over greed and corruption in the end. However, my thinking has overgone some drastic facing of the reality which I have always subconsciously known in my bones: that increasing population pressures together with total freedom which is still "coat-hangered on in this country" will eventually destroy any semblance of a healthy and supportive environment compatible with long-range human

Healthy freedom requires restraint and discipline. It has to be earned. Our national sickness of permissiveness has gotten to the point where anything goes as long as there is a profit in it. In nature I see neither profit nor loss, but an impartial arbitration that is final, when it comes to what survives and what withers.

Against this background was laid our origins, somewhere in the distant past. Man has become man with lust for power and godliness of his own creation. Nature has made many mistakes in the past, but it always takes care of them by eliminating the products which perpetuate untenable decisions. Today, untenability in human affairs is more common than ants in the world ant

Once common Southern leopard frogs are also on the decline in Kentucky. I think you are right in your story (HCN, 5/9/88) that acid rain is probably the culprit. I have worked in the fields with my hands, (as well as my mind), for many years. The Southern leopard frog here, only a few years ago, was a common sight in newly-plowed fields. They devoured numerous insects as youngsters and no doubt supplied food for reptiles. Now snakes are bailed up in huge rolls of grass that is harvested and fed directly to livestock in the

land.

Versailles, Kentucky

BACKGROUND

Because letters are being exchanged on paving the Burr Trail, it may be that the reason Garfield County has been sued by three conservation groups over



wash out with every substantial rain. The Southern Utah Wilderness Alliance proposed graveling parts of the road and hardening stream crossings in a package of improvements to the road that SUWA recommended as an alternative to paving.

The legal issue is not paving per se and never has been. Garfield County no doubt has a right-of-way for the Burr Trail in its current location, and I know of no legal basis to object if they wanted to pave the current road. (Many of us have an aesthetic objection, but that belongs in the political arena.) The legal issue has been and continues to be how one obtains right-of-way for a major realignment of a road on federal land.

When paving was proposed, it was the paving of a new route designed as a high-speed highway resembling half of an interstate. The only obvious thing such a high-speed highway permits that the all-weather road improvements SUWA advocated do not is to whiz people down the switchbacks at Capitol Reef. The wisdom of making a major public highway investment in rebuilding the Burr Trail to a standard I'd envy on U.S. 191 south of Moab, given financial crisis in priorities like education,

escapes me. This is no mere widening; you can't see the existing Burr Trail from some places on the new roadbed. Most importantly, Garfield County claimed it had right-of-way to put a new Burr Trail through three wilderness study areas and miles of federal land where the road is not now located without a by-your-leave from anybody. It based this claim on a 19th century law repealed in 1976. The precedent this right-of-way claim would set if it is unchallenged seems to be what is most important to Garfield County -the Sagebrush Rebellion again. If Garfield County gets away with this, then it establishes that a county can put an existing road anywhere on federal land, regardless of the federal management status of that land, and damage to other resources (wilderness, archaeological, botanical, wildlife, watershed, etc.), which the road realignment may cause.

on federal land. It denies it needs to file an environmental impact statement assessing construction impact on natural values. Thus, they are clearly pursuing the defining goal of the Sagebrush Rebellion: to eliminate federal land management authority under the Federal Land Planning and Management Act of Please note that the Garfield County

The county denies it has to get a

permit to build its road in a new location

Commission is pursuing this political agenda with taxpayers' money. The Utah Energy Impact Board gave Garfield County an additional grant to cover its legal costs in this suit; the Iron and San Juan County Commissions have also made contributions to the Garfield County lawsuit from local tax revenues.

> Lance Christie Moab, Utah

The silly season

by Andrew Melnykovych WASHINGTON, D.C. -- It's only summer, but the contest for Environmentally Insensitive Dunderhead

of the Year, private citizen category, is

The almost certain winner is Buddy Bray, described in a recent article in Time magazine as an enthusiastic rider of all-terrain vehicles (ATVs) in the California desert. Mr. Bray takes issue with those who say the desert has been permanently damaged by indiscriminate use of ATVs.

"I don't believe riding ATVs destroys the desert," he told Time. "All you kill is the bushes."

In other strange developments on the environmental front:

Hawk-killers tried

As expected, three British gamekeepers who slaughtered scores of hawks on billionaire John Kluge's central Virginia private hunting preserve have been convicted of violating federal wildlife laws.

Their trial presented an interesting contrast between wildlife management as apparently practiced by the British upper crust and accepted procedures in this country.

Sir Richard Musgrave, the Irish nobleman who ran the hunting preserve, displayed a haughty disdain for the quaint notions held by simple-minded Americans.

The American practice of releasing pen-raised pheasants in the morning and then using dogs to flush them out for hunters to shoot in the afternoon is barbaric, he said. Musgrave finds it far more sporting to shoot at free-ranging birds driven by beaters toward waiting

The jury simply did not understand the necessity of killing predators in order to protect the thousands of semitame gamebirds needed to sustain such sport, he said. Operating the hunting preserve was simply impossible without shooting the hawks, Musgrave implied.

U.S. District Judge Harry Michael Jr., evidently mistook Musgrave's arrogance for cooperation. Saying that Musgrave and his two henchmen "did not attempt to hide or conceal" their guilt, he gave them a slap on the wrist consisting of suspended jail terms and fines totalling \$15,000.

Business, yes

The Wyoming Heritage Society recently proclaimed that it is going to promote business and development in Wyoming.

Bill Schilling, the group's executive director, said Wyoming business interests are not getting a fair shake from the Legislature. The WHS will now take up their cause, he said.

Schilling's announcement raises the question of just what in the heck the WHS has been doing in past years when it has supported logging, oil and gas exploration, and water development, and opposed creation of wilderness areas and setting aside of water rights to protect wildlife habitat.

While belaboring the obvious, the WHS' new forthrightness about its goals does represent a change of sorts. At least the group is no longer trying to fool people into thinking it is a conservation organization.

The writer is Washington correspondent for the Casper Star-Tribune.