

Dear friends,

Summer visitors

A touring group of graduate and undergraduate students from the University of Wisconsin, Madison, came by in early June to see the West's mining industry. It was more than an academic visit. A mineral belt has been discovered in northern Wisconsin, and the small towns there are wondering how they should cope with the coming extraction of copper, zinc, iron, gold and silver ores. One result of the tour will be a report and recommendations to the Wisconsin Legislature.

Among their stops were the former oil shale towns of Rifle, Craig and Meeker, the old hardrock mining towns of Central City and Black Hawk, and the coal town of Paonia.

Their guide was Bill Freudenburg, a professor of rural sociology whose doctoral thesis was about the 1970s-era energy boom towns of Meeker, Paonia, Walden and Craig.

Other visitors came by in smaller groups. Doreen Dethmers and Skip Edwards stopped by. He is a BLM river ranger on the Colorado River in Utah and she is a volunteer. University of Colorado law student Mike Chiropolis and CU law school graduate Gretchen Biggs, who is about to take the Idaho bar, visited after rafting the San Juan River.

Subscriber Donna Edwards, a pediatrician from Wayzata, Minn., came through with her mom, Bessie Knutson, and her cousins, Tom and Audrey Fariss, of Palisade, Colo.

Santa Fe style

Normally, the board meetings of the High Country Foundation occur amid storms. It is the HCF board that extinguished the Yellowstone fires by holding a board meeting in Jackson Hole on Sept. 10, 1988. The storm that swept into town with the board put out the fires, although not the controversy. And the next board meeting in late January 1989 brought a huge snowstorm to Santa Fe, N.M. The town didn't have enough equipment to clear the streets, so it opted for style, decorating the piles of fallen snow with beautiful red sand.

But this time the board brought beautiful summer weather to Santa Fe. The June 12 meeting at the Randall Davey Audubon Center at the top of Upper Canyon Road was a mix of business and pleasure, with even the business a pleasure because it was held in painter Randall Davey's rock and adobe house, decorated with his paintings and murals. *High Country News* is grateful to Dave Henderson of the Audubon Center for arranging its use of the facility and to Alletta Belin of the office of the New Mexico attorney general for speaking to board and staff at lunch time.

The evening potluck, held on the center's grounds, attracted about 70 subscribers. Staff learned that Santa Feans, Taosons, and those from other nearby towns eat differently in winter than in summer. At the January 1989 potluck, readers brought enchiladas, pots of posole, green chile stew and the like. This time, in honor of the season, it was mostly salads.

The event was organized by Lynda Taylor, a board member of the High Country Foundation and an employee of the Southwest Research and Information Center. Lynda and Robert Haspel also hosted a small army of staff members in their home, which happens to be near the site of one of the golf courses writer Bruce Selcraig described in his May 17 article, "Fore! in Santa Fe."

Twelve of the board's 17 members attended the all-day Saturday meeting.

They reviewed circulation and financial results (all on target) and discussed the issues of *HCN* that have been published in the last four months. The "Small towns under siege" got rave reviews; Ed Quillen's opus on Denver-Los Angeles had fierce partisans and very unenthusiastic critics; Steve Hinchman's long, balanced article on the Animas-LaPlata project was praised.

The board also discussed a \$142,000 check *High Country News* received from the estate of Steve Arrowsmith, a young man who died on June 5, 1992, of a severe asthma attack, a few months before he was to become an intern at *HCN*. The board tentatively voted to use the money for financial reserves, research and writing, and moving the newspaper into new areas, such as making *HCN* available electronically. Board members also discussed new approaches to promotion. At present, *HCN* is heavily dependent on direct mail to gain new subscribers. Finally, the board strongly urged the staff — some would say ordered the staff — to begin regular radio programming.

We are a foundation

For those who are new to the paper, *High Country News* is owned and operated by the High Country Foundation, a non-profit corporation whose only present activity is *High Country News*. Although newspaper articles occasionally say the paper is owned by the staff, that is not true. Staff serves at the pleasure of the board.

The Santa Fe meeting was attended by the following board members: Karil Frohboese, president, of Park City, Utah; Maggie Coon of Seattle, Wash.; Judy

Donald of Washington, D.C.; Michael Ehlers of Boulder, Colo.; Sally Gordon of Buffalo, Wyo.; Judith Jacobsen of Boulder, Colo.; Diane Joseph Peavey of Carey, Idaho; Jim Ruch of Flagstaff, Ariz.; Emily Swanson of Bozeman, Mont.; Lynda Taylor of La Cienega, N.M.; Mark Trahant of Salt Lake City, Utah; and Andy Wiessner of Denver, Colo.

A new intern

Julie Nelson, from Seattle, Wash., arrived in Paonia after a long drive through mountain passes and high deserts. Having grown up along the Wasatch Front in Utah, she says she's happy to be back in the Rockies in the company of sage, aspen and sandstone.

Julie, a senior at Harvard University, is trying to get that institution to approve an independent major in environmental ethics and ideology. She spent her sophomore year studying environmental issues and the implications of economic development projects in six countries: England, India, Thailand, Malaysia, New Zealand and Colombia. "It was fascinating to discover problems similar to those affecting my country represented throughout such a range of cultures," she says.

In the fall she'll be back in Boston helping teach second graders, volunteering for urban planning and pollution prevention projects, working with the Native American Youth Enrichment Program, dishwashing and waitressing, and even taking courses.

Skipped issue

There will be no July 12, 1993, issue of *HCN*. In order to give readers a break, staff is reluctantly skipping that issue. The next *HCN* you receive will be dated July 26.

— Ed Marston for the staff



HIGH COUNTRY NEWS

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Cindy Wehling

Intern Julie Nelson at the newly refurbished "Intern Acres"

WESTERN ROUNDUP

Author of *Eco-Warriors* is jailed

PULLMAN, Wash. — The author of a book on “eco-warriors” was jailed May 7 for refusing to testify before a federal grand jury.

Rik Scarce, 34, was imprisoned in Spokane County Jail by U.S. District Court Judge W. Fremming Nielsen after fighting subpoenas and incarceration for a year. Because federal law allows jailing witnesses to coerce them to testify, Scarce

can be held until December, when the term of the grand jury expires.

Three federal grand juries in the West are investigating six raids that caused about \$1.8 million in damage to four universities, a mink farm and a mink feed manufacturer between June 1991 and October 1992. No one has been indicted, but two witnesses, including Scarce, have been jailed.

Scarce wrote *Eco-Warriors: Under-*

standing the Radical Environmental Movement and is a doctoral student in environmental sociology at Washington State University. Rodney A. Coronado, a key suspect in an August 1991 raid by Animal Liberation Front activists at Washington State, was house-sitting for Scarce at the time of the incident. Scarce was on the East Coast visiting family.

Federal investigators want to know if Scarce and Coronado talked about the incident. Scarce refuses to say if he talked to Coronado or anyone else. He says he was conducting research on radical environmentalists and animal rights activists both for future editions of his book and for his dissertation. Even acknowledging having interviewed Coronado and his companions, he says, would breach his promise of confidentiality. The American Sociological Association’s code of ethics also binds him to protect his sources, he adds.

The jailed author says he has a First Amendment right, as a writer and scholar, not to testify before a grand jury. But he lost an appeal on those grounds to the 9th U.S. Court of Appeals. It is not clear why the appeals court made its ruling since a written opinion has not been released.

The U.S. Supreme Court afforded journalists limited protection from grand jury probes in the 1970s with the “*Branzburg v. Hayes*” decision but said states could take up the issue also. Twenty-eight states and the District of Columbia passed shield laws that say journalists can’t be forced to reveal confidential sources. Washington state has no shield law.

Scarce’s attorney, Jeffrey K. Finer of Spokane, is preparing to ask the U.S. Supreme Court to hear the case in the first test of whether a scholar can claim such a privilege. The American Sociological Association and the American Civil Liberties Union are expected to join in the appeal, says Finer.

Scarce is only the second scholar in recent history to be jailed for refusing to



Cover of Scarce’s book, published in 1990

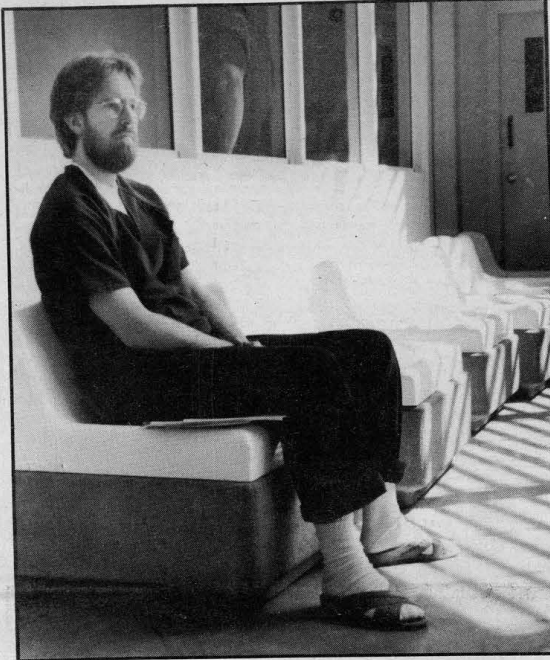
testify before a federal grand jury. The other, a Harvard scholar doing work on *The Pentagon Papers* and the Vietnam War in the 1970s, was released after a week when the university and other groups came to his defense. Washington State has not involved itself in Scarce’s case, claiming his research was personal.

Another recalcitrant witness, Jonathan Paul, 27, of California, was held 158 days for refusing to testify before the Spokane grand jury. He was released in April. Paul was suspect Coronado’s roommate and was his business partner in a private investigation firm for a brief period about three years ago.

For more information about Rik Scarce’s case, write Rik Scarce Defense Fund, P.O. Box 2463CS, Pullman, WA 99165.

— Ken Olsen

Ken Olsen covers environmental issues and higher education for the *Moscow-Pullman Daily News* of Moscow, Idaho/Pullman, Wash.



Rik Scarce in jail

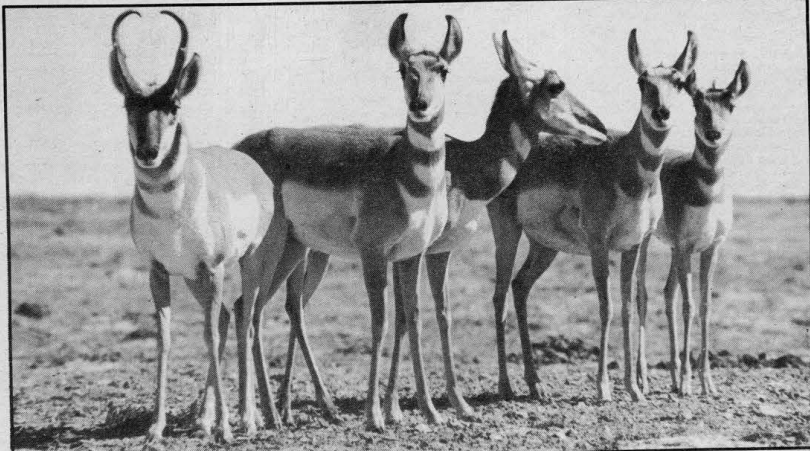
Kenneth R. Olsen

Wildlife refuge starts to heal

The deer and the antelope still play at the Hart Mountain National Antelope Refuge in eastern Oregon, but only because the refuge has had 56 years to recover from severe overgrazing. Scientists say it may take another 50 years to complete the recovery.

Before the 277,893-acre refuge was established in 1936, as many as 50,000 sheep and 10,000 cattle roamed to the mountain each summer to get to the grass. Since then, the U.S. Fish and Wildlife Service has leased land to neighboring cattle ranchers, reducing the number of livestock to 13,000 a year, according to refuge manager Barry Reiswig. Then drought forced the agency in 1990 to exclude all cattle from the refuge, giving scientists the opportunity to study the area. Their work is now being used to write the Hart Mountain National Antelope Refuge Management Plan and draft environmental impact statement, scheduled for release and public review this month.

Reiswig says researchers found that once high-desert habitat is damaged, large investments of time and money are



Robert Hilgenfeld

Pronghorn antelope

needed for full recovery. “The refuge has improved a great deal since it was established, but ... it is a long way from being in optimum condition,” Reiswig says.

Severest conditions exist along streams and in meadows, which make up only 2 percent of the refuge but support most of its wildlife. Cattle have degrad-

ed streams, while lack of wildfire has allowed sagebrush to dominate 95 percent of the original grasslands. The changes endanger wildlife, including two protected species of trout.

Limited grazing may be allowed on the refuge in the future, but Reiswig says, “Things in the desert change slowly.”

The refuge periodically publishes the *Planning Update* to keep the public informed and involved. To receive a *Planning Update* or for more information, contact Hart Mountain National Antelope Refuge, P.O. Box 111, Lakeview, OR 97630 (503/947-3315).

— Greg Peterson, HCN intern

HOTLINE

Here comes trouble

A grizzly bear that broke out of a cage near Grants Pass, Ore., in early May is probably traveling east, over the Cascades, on a 1,000-mile trek back home to Montana. The 290-pound 3-year-old female named Trouble climbed a 7-foot fence, ripped a small hole at the top of the chain-link barrier, and pulled herself through it by gripping an overhanging tree limb with her teeth. "We were hot on her trail for six days," said Dave Siddon, manager of Wildlife Images rehabilitation center. "I feel devastated. After more than 20 years of working with animals, we'd never had this happen before." The bear's chances in the wild appear good, AP reports. Trouble was captured after she raided dumpsters near Kalispell, Mont., and robbed live-stock feeding bins on private lands in the same region last fall. Federal biologists trapped, then released her near Great Falls, Mont. But Trouble soon returned to her home range and familiar habits. After several unsuccessful attempts to relocate her, U.S. Fish and Wildlife Service officials placed the bear in captivity. If she is alive, she is thought to be in the Kalmiopsis Wilderness of southwestern Oregon. That makes Trouble the first grizzly in 54 years to live in Oregon.

Pistol-packing pickers

Shots were fired over the heads of mushroom pickers in early May near La Grande, Ore., as a warning not to invade commercial pickers' turf. Gunfire harassed people three times last month, reports the Bend, Ore., *Bulletin*, recalling a 1992 attack that left one mushroom hunter dead. What used to be small-scale, personal harvesting on Forest Service land has turned into a lucrative business, with mushrooms such as the matsutake selling for \$95 per pound. Even powerful corporations think twice about taking on mushroom pickers on company lands. Boise Cascade forester Bob Weinberger said the amount of money involved makes pickers unpredictable. "I've instructed all my people to avoid confrontation," he says.

How L-P soiled the air, and itself

Louisiana-Pacific Corp., the nation's second-largest wood products company, continues to flout the nation's environmental laws. Last month, Attorney General Janet Reno and EPA Administrator Carol Browner announced they had fined Louisiana-Pacific \$11.1 million — the largest penalty ever for violations of the Clean Air Act. The investigation started two years ago in the small town of Olathe, Colo., but eventually covered 11 states and involved the entire EPA organization.

"This is the single worst company I have ever seen," says Joshua Epel, a Denver environmental attorney who won a \$2.3 million case on behalf of four Olathe families who moved away from their homes because of L-P air pollution. "They come into communities, exploit communities, mislead regulators and build facilities under false premises."

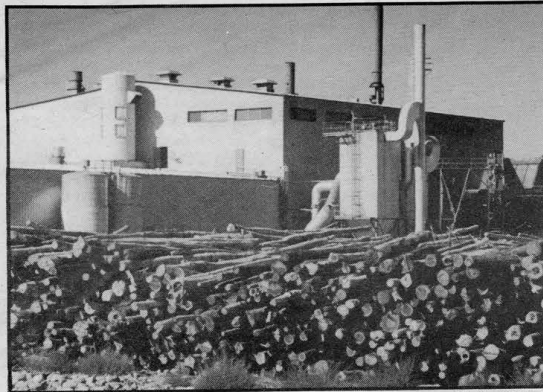
"They've demonstrated a consistent pattern of deliberately violating air quality standards across the country," said Mark Massara, a San Francisco lawyer who won a \$2.9 million judgment from L-P for its toxic discharges off the northern California coast.

An EPA lawyer familiar with the investigation says the company was keeping two sets of books — concealing accurate records of its discharges and releasing a doctored version to federal inspectors. Rather than fight the charges, L-P pleaded the equivalent of a no-contest; that is, it agreed to the fines without admitting guilt. As a result, L-P will clean up emissions at the 11 mills cited in the allegations and four others. In all, these improvements will cost L-P some \$70 million, in addition to the fines.

No evidence has come to light that Harry Merlo, L-P's chairman and president, had direct knowledge of the violations when they were occurring. The EPA action was civil, not criminal, and as such does not hold him or any of his employees personally liable. Had those violations occurred after Nov. 15, 1990, when changes to the Clean Air Act took effect, the EPA could have filed felony charges against L-P officials. All of the violations occurred before that date, and could have been prosecuted as misdemeanors.

Louisiana-Pacific spokesman Barry Lacter emphasized that the allegations against L-P are just that: allegations. The company admitted little more than that it could have done things differently.

"What we are saying is that the company did not get permits where it should have," Lacter said. "The company estimated emissions on the optimistic side,



Stephen R. Wenger

Logs await processing at the Louisiana-Pacific plant in Olathe, Colorado

and the EPA is complaining that we should have been more conservative in our estimates."

If Louisiana-Pacific officials thought their failure to disclose this information was a serious problem, the company's press release reads differently. It said L-P was not charged with significant emissions of hazardous air pollutants and would not admit any guilt.

Why would Portland-based Louisiana-Pacific, a company with enormously deep pockets, play fast and loose with environmental laws? The fine and improvements will be expensive, but not prohibitive for a company with sales last year of \$2.2 billion. The fine made hardly a nick in L-P's 1992 profits of \$177 million. The company says the fine won't affect earnings. It just had its best third and first quarters ever.

Some critics speculate that disregard for environmental regulations is part of the corporate culture at L-P, a company ruled by Merlo, who tends to embrace causes and candidates of the conservative right. Merlo refused to be interviewed for this article. His spokesman, Lacter, said Merlo hasn't talked to any reporters regarding the fines, and does few interviews on any topic.

The laws Louisiana-Pacific broke require the company to produce accurate estimates of discharges. These laws apply to all industrial polluters and are designed to inform, among others, neighbors who want to know whether carcinogens might be settling in their lungs. The laws also set limits on the amounts of pollution a plant can legally emit.

Within days after the Louisiana-Pacific mill in Olathe opened in 1984, neighbors, supported by a local group, Western Colorado Congress, began to complain to state health authorities of smoke and toxic formaldehyde fumes filling their homes. They lived less than a quarter-mile from the mill (*HCN*, 3/31/86).

The Colorado mill and numerous others like it make a patented Louisiana-Pacific product known as Inner-Seal oriented structural board. The product looks like plywood and has a red-cedar texture, but is made from aspen and cottonwood. The resulting boards are as strong as plywood, more uniform, and 25 percent cheaper than cedar.

Some of the emissions at Olathe came from a boiler that kept the logs and building warm during winter. The process of making the boards by binding wood pieces with heated glues and resins also caused pollution.

"These people said it was like having the flu all the time," said Epel, their attorney. "Imagine 500 to 1,000 wood stoves across the street from your house, with all the smoke going into your house." According to Epel, witnesses said later in court that the plant would operate cleanly by day, but illegally by night — when people might not notice that production and emissions had increased.

By 1987, four families living closest to the mill had evacuated their homes and filed suit. In March 1992, a jury found the company guilty of "fraud, and wanton and reckless disregard for the rights and feelings of others." It awarded \$2.3 million to the four families, including \$1.9 million in punitive damages.

The EPA also took L-P to court for violations at Olathe and a sister plant in Kremmling, Colo. A jury threw out the EPA's Olathe sanctions in a dispute over carbon monoxide test results, but approved a \$65,000 fine against the Kremmling plant. The Kremmling plant closed about 18 months ago, but the Olathe plant is still running.

Louisiana-Pacific's problems didn't stop there. The EPA was puzzled by the fact that the Kremmling plant emitted a relatively large volume of toxins for such a small plant. It began to suspect that the oriented structural board manufacturing process was causing serious pollution problems and, in 1990, it began checking L-P's record of compliance across the country. That investigation resulted in the penalties announced last week.

— Paul Koberstein

Paul Koberstein writes for *HCN* from Portland, Oregon.

A culinary threat to desert tortoises

A 70-year-old desert tortoise narrowly avoided becoming the centerpiece of a Cambodian wedding feast in May.

Sao Pet, a 40-year-old Cambodian from Tacoma, Wash., was arrested in the Mojave Desert with nine desert tortoises he and five companions had collected to serve as the main dish at a wedding ceremony in Modesto, Calif. A California Highway Patrol trooper stopped Pet for driving too slowly on Wild Wash Road near Interstate 15 south of Barstow, Calif., where Pet and friends were apparently looking for more tortoises.

Pet could be fined up to \$100,000 and spend a year in prison for violating the Endangered Species Act, which protects desert tortoises as a threatened

species. He was arrested and booked at the Barstow sheriff's office and released under a federal magistrate's waiver. The Bureau of Land Management cited the others for unlawful possession of a threatened species.

"We recognize other cultures have different customs and practices," BLM California Desert District Manager Henri Bisson told the *Las Vegas Review-Journal*, "but the bureau will aggressively pursue any taking of tortoises and prosecute violators to the maximum extent that the law will allow."

The tortoises were mostly females ranging in age from 9 to 70 years old, according to BLM official Tom Egan. All were tested for upper respiratory

tract disease, an illness that has afflicted thousands of the animals in recent years. Three showed symptoms of the disease, and since all nine were together in the car, they have been quarantined until test results come back. Three of the tortoises had been marked with identification numbers as part of a long-term study in the area. Egan hopes to return at least those three to the wild but the fate of the other six is undecided as there is no way of knowing where they came from. Reintroduction of tortoises to the wild can be difficult because they are social, territorial animals who stay within the same four square miles throughout their lifetimes.

— Pat Guinan, Great Basin intern

Nature's helper: A sculptor who builds habitat

Wyoming sculptor Lynne Hull has an out-there philosophy about art. Her work can be found not in galleries but at rest stops along Wyoming highways or on rock slabs in Utah's backcountry.

Hull says it's not enough to create objects of beauty. She also wants her art to nurture the environment by restoring habitats that have suffered years of human misuse. Lynne Hull calls what she creates "trans-species art" — sculptures that are art, yet serve as homes, perches, nesting places and water holes for wildlife.

"This is about taking a new approach to the land," she explains. "We understand that we are caretakers, not owners."

For Hull, this means taking action. She made "raptor roosts" after reading that birds were being electrocuted when they roosted on power poles, a tempting perch in the nearly treeless high desert of Wyoming. She makes these 14- to 20-foot-high sculptures from recycled power poles, scrap metal, sun-bleached branches and wire "junk" she collects near her Laramie home. By bolting the discarded materials to the top half of the power poles, Hull fashions lyrical sculptures that capture the complexity of the landscape, yet serve as functional perches.

Hull, wiry and energetic, started out as a potter after earning an art degree from the University of Wyoming in 1969. Dissatisfied with objects that "just sat there," she began making pieces that integrated art with the natural environment.

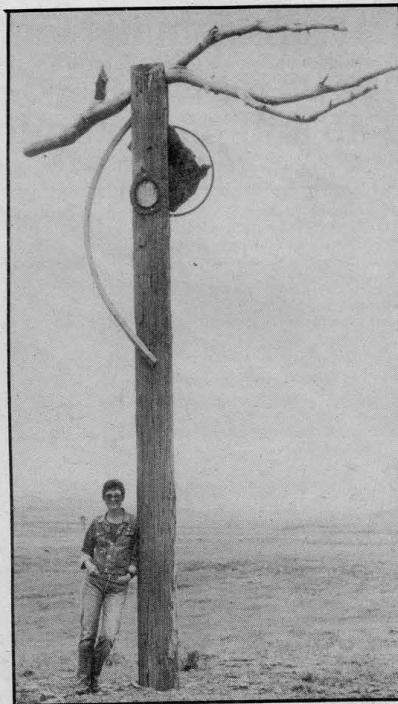
"I decided to make my art positive by giving something back to nature."

Because she makes art for animals, Hull's first concern is function. She begins by consulting Wyoming Game and

Fish Department biologists about the needs of the animal and the best places for an installation. After visiting the site, she sketches and builds test models to make sure her design is safe and functional. Only then does she move into the artistic realm, choosing items from her collection of found objects to finish the sculpture.

One of Hull's early trans-species works used rocks as a medium. In the summer of 1986, she hiked into the blistering desert to cut designs by hand into horizontal rock surfaces. The designs hold rainwater, dew and snow runoff for desert creatures to drink. *Scatter*, a four-part series of horseshoe-shaped designs, is located on private land near Moab, Utah.

Raptor Roosts can be seen at rest stops along Wyoming Highway 487 and Interstate 80 (near the Crestone Junction), but some of her art is farther afield — on the Navajo Reservation, where she helped



Artist Lynne Hull with "Raptor Roost L-1"

B. DePeyer

Navajo students build habitation sculptures for birds, and in Griededale National Forest, in England, where she created nesting platforms in a damaged riparian area.

She also helped the Pine Bluffs Recreation Department and Wyoming Game and Fish biologists transform the Pine Bluffs rest area along Interstate 80 into a "Nature Trails" area. Included there

are Hull's sculptures: *Bat House*, *Raptor Roost* and *Grandmother Trees*, all of which provide shelter for wildlife.

Grandmother Trees are a "gesture of protecting" for small birds, Hull says. She hollows out several cavities in large, dead trees for nesting places, then adds decorative carvings and a branch which curves around the front of the piece like a protective arm.

In May 1992, she was invited to participate in a preservation project in Massachusetts, where she made several small sculptures for birds and bats, and a new work titled *Predators' Gate*. This piece, located at a trail entry point, includes arch-shaped wooden gates for four different predators: foxes, coyotes, bears and humans.

"This is part of a new series of *Acceptance Gestures* which shows that man is equal with animals. We need to learn to accept predators and their need for space," Hull says.

Most recently, she was invited by the Wyoming Game and Fish Department to create sculptures along the green belt at Green River, Wyo. The project included two goose nesting platforms, several *Bat Houses*, and two 30-foot-tall osprey nesting platforms. She also assisted with *Track Game*, a piece that includes footprint patterns of native wildlife set in concrete.

Hull is currently working on two new sculptures: an otter haven and a salmon spawning ground, and advising homeowners who want to create aesthetic, yet environmentally friendly back yards.

"My overall goal," she says, "is to be invited by others to new environments to help reclaim and restore damaged habitats by building sculptures for wildlife."

For more information, write the artist at 1414 Kearney, Laramie, WY 82070.

—Mary L. Larson

Mary Larson is a free-lance writer in Boise, Idaho.

Artist creates sculpture with a point

Bernie Jestrabek-Hart gives the concept of recycling a new twist. This Idaho artist reuses barbed wire by welding and shaping it into small and life-sized sculptures including horses, mountain sheep, eagles, bison, birds, llamas and people.

"There isn't any subject I wouldn't



Bernie Jestrabek-Hart with a barbed wire horse and colt

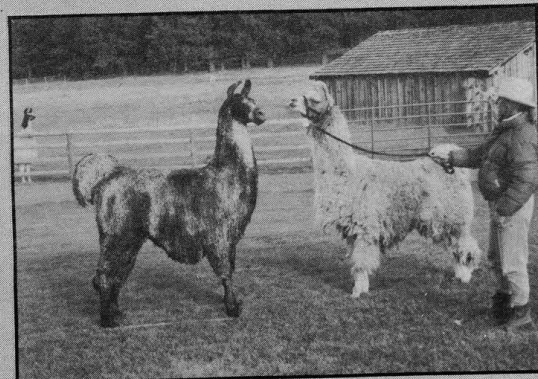
try," she says.

If you stop by Jestrabek-Hart's place on the outskirts of Boise, you'll find her in her shop, decked out in leather chaps, goggles, heavy gloves and lace-up work boots, sculpting her latest commission.

"Doing wire sculpture is magic; like line drawing in the air," she says. "I can see how the head would turn or the foot would lift — things I couldn't visualize when I worked in two-dimensional art."

To create a sculpture, Jestrabek-Hart first gathers information on her subject and, if possible, sees the animal up close. From this, she develops a rough idea of a pose for the sculpture. Next, she welds the basic lines of the head and body. She continually adds wire to the basic lines until it becomes an animal, complete with fur, muscles and movement. Finally, she adds a patina of paint to add color and protect it from the elements.

Her sculptures sometimes touch people. She tells of the time she displayed a piece which depicted a newborn foal



The one on the left doesn't need a leash

trying to stand while its mother licked it.

"I had five different men tell me it brought tears to their eyes," she says.

Bernie Jestrabek-Hart began sculpting wire in 1980. Her works are now in collections throughout the United States, and she is represented by galleries in six Western states.

Because wire sculptures are not typical gallery fare, Jestrabek-Hart travels

about 20,000 miles a year to market her pieces. "I find people have to see them in order to understand that they are works of art and not something crafty."

For more information, contact Bernie Jestrabek-Hart at 208/853-4433, or write to 6968 Bogart Lane, Boise, ID 83703.

—M.L.

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HOTLINE

Floods fade, fires feared

Flood fears have ebbed in Colorado and Utah, but some of the West remains in drought. Mostly, however, this spring was a case of too much water. New Mexico reservoirs by the end of April were at about 133 percent of average, says Rusty Rodke, staff engineer with the Interstate Stream Commission. Officials expected flooding, but winds turned much of the snow into water vapor. The southern Rockies had huge snowpacks, but cool mountain weather delayed the melt and kept flood damage down. Along Utah's Wasatch Front, a two-week cold spell dropped temperatures 10 to 20 degrees below normal, reducing flows, says Steve Shumate of the National Weather Service. In the northern West, dry conditions persist. The Bureau of Reclamation says a strip of land from the Pacific Northwest to the Dakotas received below-normal precipitation this winter, affecting everything from salmon runs to agriculture. Snowpack in the northern Rockies is 20 percent below normal. In Idaho, experts have stopped short of declaring the state's six-year drought over despite the winter's snows and spring's plentiful rain. In eastern Colorado, expected above-average flows didn't materialize. John Lawson of the Bureau of Reclamation says dry soils after six years of drought sopped up some runoff before it reached the reservoirs. Although most reservoirs in the southern part of the West may be full or nearly full now, one wet winter did not wipe out the drought, as the Bureau of Reclamation's 70-page report on the West's water supply picture, *Water Supply Conditions for the Western States*, indicates. For a copy, call Sylvia Duncan at 303/236-3800. With the flood season over, the fire season has begun. By early June, according to the Forest Service, 79,000 acres in the Gila National Forest in New Mexico had burned; the Washington Cascades, now in their seventh year of drought, remain a tinderbox; and the Forest Service has allocated \$25 million for fire control in Oregon and Washington.

—Peter Mali, HCN intern

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Backpacker at the Grand Canyon
 Gary Ladd

This land is dangerously lean...

White Sandals

I am wearing white,
open-toe, sling-back sandals,
lattice, with a buckle.
They look old-fashioned, 1940's,
like those my mother wore
in that snapshot of her caught
out by the farmhouse peeing.
Aunt Hazel always was a card,
trying to catch someone with her pants down.
Here is my mother laughing wide
while pulling up her pleated slacks
in the outdoors against all rules,
laughing in the face of the black dresses,
corsets, hair tightly twisted,
bound into nets barely seen.
Here she is showing her middle
to the Kodak as she struggles
to get her pants up
before the shutter snaps,
her hair blowing free
beside the house she left
laughing, always laughing.

Barbara M. Smith
Rock Springs, Wyoming



Steve collector

Farmhouse

The attic, still packed
with what was never thrown away:
old trunks from Sweden,
the phonograph tall as my shoulders.
One bare bulb still tries to illuminate
the roof beams.
The stairs, narrower than before,
still creak.

I cross the narrow walkway
to the finished room in a corner,
stare through the black ventilator
into the room below
that has shrunk
from the layers of wallpaper.

A round oak table remains
as big as childhood.
The flour bin holds
the whiteness of twenty years.
Only the windowframes are changed,
metal - no longer painted shut,
no thick covering of frost
to scrape my fingernails against.

My eyes trace the scarlet sevens
that crisscross each other
on the gray linoleum floor.
I imagine the black paste underneath,
the heavy roller pushing at the seams,
still invisible.

A black stove, with white porcelain front
stands cold,
all its doors, anxious mouths.

Anita Tanner
Cortez, Colorado

Inventory of a Pond

Now, I've got to count
That stone you just
Skimmed across the pond's surface,
And all the rain lightly falling.

I almost forgot about
The reflections jutting
From beyond the ripples:
Countless trees and clouded sky.
Shall I go with each leaf,
Or a composite view?

I see round, washed pebbles
Near the mouth of the spring,
And I know of large boulders
In the middle.

Scientific measurements
Require graphs, you say.
What about the wisdom of the fish?
Children splashing in the water?

I have trouble with this.
Let me show you how to
Carry an image from beyond this
To paper,
Blank as birth.

Amy Elise Hunkler
Kennesaw, Georgia



Dale Schicketanz



Steve Collector

Finite Station

I have learned
to revere the desert.
It is the victor
and hides from no one.
Bringing topos and my pack
into Indian summer sage,
I chalk pictures of lizards
sunning on lichen-speckled rocks.

I think of the time
I first walked here,
numb-tongued; not even water
from my canteen eased my throat.
Afraid to leave the truck, looking
into flats that hid rattlesnakes
under ledges, fossilized fish,
forsaken drilling pads,
and Overland Trail ruts
waiting to be reclaimed.

This land is dangerously lean.
A steppe, like a precambrian shelf,
could change me, as freely
as I could disappear from rim to rim,
having nothing to hold but sand.
As simply as bones return to the range,
taken back to be cleaned. I've seen
the evidence jutting out of dirt,
a green stoned femur. It seemed
so logical then.

Today, I come addicted:
my feet crave the ledge,
that margin of origin or end.
And now I think I'll hike
south to the Gates of Lodore,
toward the squall line
sweeping a distant ridge,
strip and tap-dance
on the desert floor.

Leslie Bridewell
Green River, Wyoming

Rocky Flats Trail

My black gelding is dusty:
I have groomed and groomed,
yet when I spread my fingers
and slap him on the rear,
the dust handprint blooms
like a warpaint palm
on the rump of an Indian pony.

We climb dry October hills,
note how the season has stripped
cottonwood trees, leaving them half gold,
half bare bones hung for Hallowe'en.
When the magpie lights there
his whiteness surprises me.
He is albino.

Faulty dust in the eggshell
ticked wrong codes
into feathers last spring. He flies,
astonishes the "proper magpie"
section of my brain. The mushroom
whiteness of his wings
reminds me of the nuclear plant
seven miles south.

Near that no-man's-land,
ranchers whisper of mutations:
were calves born with three legs?
Five? Double heads? No eyes?
White?

I yearn to accept this freak magpie
into the realm of the wonderful,
not to worry, nor to think of maternity wards
in Denver, a few miles east.

I ride my gelding through October hills,
cherish this known landscape,
the vivid, familiar colors,
while an alien magpie
chatters over my head
in the lethal, golden air.

Joanna Sampson
Boulder, Colorado

Godmother: for Christopher John on Mother's Day

On Mother's Day
in an old Norwegian church
with dragons crouched on the roof,
I became your godmother.
The church is a reproduction,
but the floor is cold slate,
the backless benches hard,
just like the real ones.

Those dragons aren't just decoration:
one of them snorted fire when I promised
to raise you as a Christian.
Your father almost winked,
sure I wouldn't say "No"
before his parents, and mine.
He knew what I meant
by swearing something else.

I could teach you
how to cheat at solitaire,
how to live if you're lost
in the Hills where you were born,
how to ride a horse -
but your father can teach you
that, and more. He'd rather
I didn't teach you to say "ERA now!"
Your mother will teach you
to be fair to women,
to think before you speak,
to work for what you want.

I could tell you stories
about your dad, your Aunt Sue,
your grandparents; show you
the home ranch - in case they can't.
I'm not entirely sure what my job is,
but know that my mute vow
covered events none of us has weighed.

You cannot say how I might help;
you had no choice, being inarticulate
(though loud). We'll leave the matter open.
If I live, I'll be here
when you are old enough to care.
If I'm not, you have this pledge,
this public statement of my love.
I can't promise that all who love you
will see you grow into a man,
or that you'll never have to fight
for your beliefs. I hope you'll love
wolves howling in clean dark air,
moose drinking from a crystal lake.
But I can't promise that.

So I stand before pure water,
between black slate and dragons,
make covenant with earth and fire,
to love you, and your sister,
whatever that may come to mean.

Linda M. Hasselstrom
Heirma, South Dakota

by Steve Hinchman

Several years after his famous exploration of the Colorado River, Major John Wesley Powell returned to the north rim of the Grand Canyon with Thomas Moran, one of the foremost landscape painters of his time. The view, Powell later wrote, was the best in all of the Southwest, "awful in profound depths, sublime in massive and strange forms, and glorious in colors."

Moran's painting, *The Chasm of the Colorado*, hangs in the Smithsonian. But today, more than 100 years later, few of the 4.5 million annual visitors to Grand Canyon National Park can see what Moran's painting portrays.

Instead, the spectacular scenery is dulled by a murky, polluted haze. Occasionally the air is so foul that the daily quota of 12,000 visitors can hardly see to the bottom of the mile-deep gorge.

If the tourists are from Texas or Southern California, they are probably looking at their own waste. The smog is regional haze, a multi-state brown cloud generated by millions of distant, unknowing polluters and carried to the desert Southwest by prevailing winds.

The worst days occur when a strong high-pressure system above Texas forces winds clockwise, up from the oil refineries on the Gulf Coast, above the heavy industries of Monterrey, Mexico, and past copper smelters on both sides of the Sonora-Arizona border. By the time it reaches the Grand Canyon, chemical reactions in the air have brewed a dense, ugly haze choked with sulfates, hydrocarbons, ozone, nitrates and other gasses.

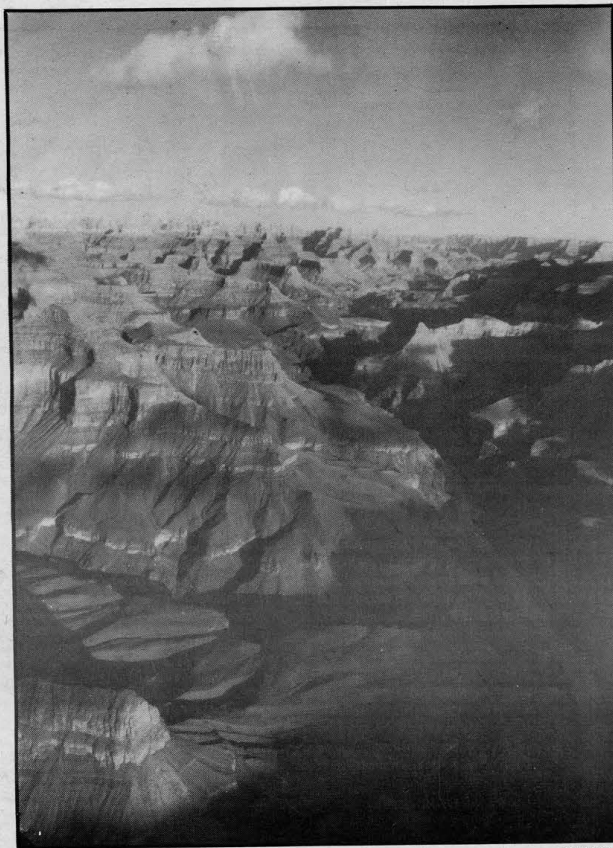
The view is not much better during normal weather, when the wind blows in from Southern California. Unless rains wash the air clean as it moves inland, smog from the Los Angeles basin veils the canyon's myriad colors and textures, turning the tourists' Kodachrome to black and white.

Only when the weather rolls down a relatively narrow slot from northern California to Oregon and across Nevada's basin and range country do visitors still experience the famous clarity of the desert air. On those rare days, you can see over 200 miles — well past the horizon formed by the curve of the earth — and the Grand Canyon's cliffs and colors stand out in bold relief.

Air pollution in the Grand Canyon is not new or even worsening. National Park Service and university researchers are merely beginning to understand the problem after 15 years of gathering data.

Their findings are startling: 90 percent of the time, 330 days a year, visibility in the Grand Canyon is "somewhat impaired" by human-caused pollutants. On the best days you can see 240-plus miles. On the worst, such as a three-week period in February 1989, smog cuts the view to 20 miles and completely obscures most of the canyon below the rim.

It's not just the Grand Canyon. Air quality at dozens of other national parks,



David Nelson

The Grand Canyon on a clear day

The blurring of the West

For decades the West has chosen to ignore the brown, polluted haze that often fouls its skies, obscures the scenery and rains acid down on the high country. But as the haze widens and worsens, the West can no longer pretend to be blind.

At the direction of Congress, the governors of eight Western states have begun work on a strategy to protect the region's world-famous air. Not since the 1922 Colorado River Compact has the West tried to negotiate such a critical shared resource. Now under consideration are innovations including pollution taxes, electric cars and solar power.

monuments and wilderness areas in the West has become as bad or worse. Automated cameras and laser transmissometers in parks and forest wilderness areas, from Big Bend National Park in Texas, to Glacier National Park in Montana, show that visibility has dramatically faded over the last two or three decades.

Park and Forest Service warnings of a softening, blurring landscape were ignored for years by state and federal regulators. But those alarms recently got an incontrovertible second. In a two-year study, the National Academy of Sciences found that over the past several decades regional haze has, on average, cut visual range in Western parks and wilderness areas in half.

The creeping spread of foul air threatens more than just parks and wilderness, the academy warns. The tiny particles that disrupt visibility also cause urban brown clouds, ozone pollution, acid rain and

snow, and respiratory illnesses. Haze may be linked to rising acid levels in lakes in the Sierra and Rocky mountains. And a recent 15-year study in San Francisco found that haze-forming particulates are responsible for elevated rates of death from lung and heart disease.

But regional haze is not likely to disappear from Western skies soon. The National Academy concluded that most of the air pollution controls required by the Environmental Protection Agency in the last 15 years failed to control regional haze in the West — or anywhere else in the U.S. The 1990 Clean Air Act amendments in fact allow visibility in parks such as the Grand Canyon to worsen.

Keeping the West the West

More than anything else, the ability to see far and to see clearly makes the West the West. No other region of the country has such sweeping and awe-

inspiring vistas. The average visual range in the East and the South, for example, is only 20 miles.

Historically, the West's clean air was taken for granted. Like trees or land, there was so much of it around that no one thought to protect it. But as haze problems intensify, the Southwest's clean air and 200-mile views are increasingly seen as a key natural resource, comparable to the region's other great shared natural asset: the Colorado River.

Now pressure is rising to do something about the thickening haze. And calls for action are not just coming from environmentalists.

"It is vital that we protect the imagery we have about the West," says Arizona's Fife Symington, a Republican governor in a staunchly Republican state. "If we do harm to these great natural resources we do harm to ourselves."

Symington, who hiked into the canyon with President Bush in 1991 and saw the haze firsthand, is dismayed by escalating damage to what he calls "one of the truly great treasures in the world."

Harm to the Grand Canyon, Symington fears, will also harm Arizona's economy, where one in six jobs is related to tourism. It is the state's number two industry, after manufacturing, and brings in \$270 million a year in taxes. The top places people go — over 24 million last year — are the Grand Canyon, Lake Mead and Lake Powell, areas that bear the brunt of the haze problem.

But Arizona can't go it alone since most of the haze drifts in from across the state line. Nor can other states do much about regional haze on their own. The one program ever attempted in the West, Utah Gov. Norm Bangert's "Integral Vistas" study in 1984, found significant impairment of views in all of Utah's five national parks. But because the pollution came mainly from out of state cities, coal-fired power plants and copper smelters, Utah could never figure out how to regulate the haze and dropped the project.

The federal government has also failed to address regional haze. The 1977 Clean Air Act required the EPA to protect air quality in national parks and wilderness areas. But, under the Reagan administration, the EPA refused to enforce Phase I of the act, which prevents large "point-source" industries from directly polluting parks and wilderness areas.

In 1983, the Environmental Defense Fund and several other environmental groups sued the EPA for violating the Clean Air Act and won. Since then, the agency has taken action against only one facility, the giant Navajo Generating Station, a coal-fired plant in Page, Ariz., 12 miles from the Grand Canyon. And it only took that action because it was sued again by environmental groups.

By the time Congress began deliberations to reauthorize the Clean Air Act in 1990, the EPA had not even written rules for the second part of the 1977 Act, which regulates regional haze.

Given the failure of the federal government and the individual states to clean the air, Congress decided to try

something new. In the 1990 Clean Air Act Amendments it created the Grand Canyon Visibility Transport Commission, composed of the governors of eight Western states, and ordered it to develop a consensus plan to combat regional haze in the Southwest.

The act holds the governors to the national air quality goal: "prevention of any future, and the remedying of any existing impairment of visibility in mandatory Class I federal areas." Class I areas are all national parks, monuments and wilderness areas larger than 6,000 acres. Of those, Congress said that cleaning up the haze over Grand Canyon National Park should be the commission's first priority.

If the states can't agree by 1995, the act says the EPA or the courts will do it for them.

Negotiations begin

Protecting their air may be the biggest challenge to the Western states since they over-appropriated the Colorado River in 1922.

Potential economic impacts alone are staggering. Pollution controls at the Navajo Generating Station will cost \$430 million to install, and \$89 million a year to operate. That's just the beginning. Every city, power plant, smelter, refinery, factory, feed-lot operator, car owner, wood-stove user and dirt biker will have to ante up to clean the skies over the Grand Canyon.

Politically, the challenge is even greater. Any plan to protect regional air quality in the future will probably limit states' rights to pollute — potentially governing where and if new industries and cities are built in the West. That may seem draconian, but downwind states point out that the 1922 Colorado River Compact set a strong precedent.

"New Mexico is downwind of everybody," says Ray Powell, an advisor to New Mexico Gov. Bruce King. "We're asked to share our water with California and Arizona. It's not unreasonable for us to ask them for clean air to breathe."

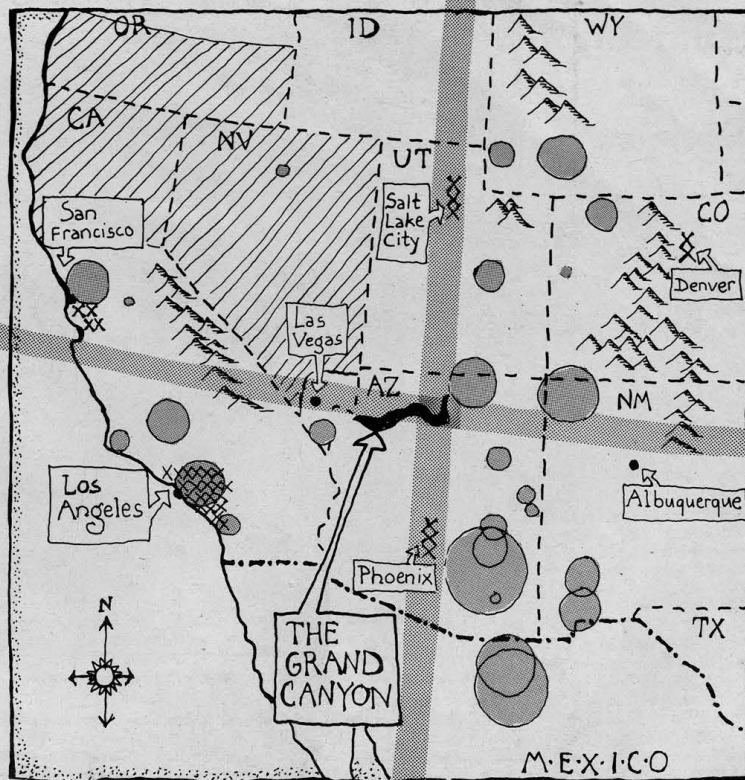
With so much at stake, regional haze is becoming a front-burner issue. Negotiations officially began in November 1991, when seven states — Arizona, California, Oregon, Nevada, Utah, Colorado and New Mexico — convened the Grand Canyon Visibility Transport Commission. (Although appointed by Congress, Idaho has so far declined to participate.)

It is a high-profile commission. Five governors sit on the commission themselves, and the governors of California and Oregon send their top air quality people. Arizona Gov. Symington is chairman.

The group has until 1995 to present Congress and the EPA with a scientifically and politically viable plan to reduce regional haze. The commissioners get the final say, but until then it is a public process.

Representatives of five federal agencies — the EPA, Park Service, Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service — sit on the commission as ex-officio members. And because Congress asked for a consensus approach, the commission has asked the Western Governors' Association to staff the project.

Under executive director Jim Souby and former Colorado air pollution control expert John Leary, the governors' association pulled together representatives from electric utilities, refineries, mining companies, state air and health departments, federal agencies, environmental groups, Native American tribes, and the Mexican government.



Adapted from a report to the Grand Canyon Visibility Transport Commission, "On the potential of regional-scale emissions zoning as an air quality management tool for the Grand Canyon," Warren White et al, March 24, 1993.

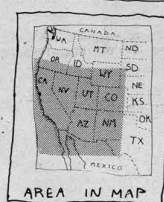
POLLUTION:

● SO₂ emissions from utilities, refineries and smelters. This size circle is equivalent to 100 tons/day.

x CH₂Cl₂ (methylchloroform) an indicator of urban smog. Each x represents 1 ton/day.

CLEAN AIR:

▨ Average population density of less than 1 person per 50 acres.



Air quality at the Grand Canyon is a meteorological crap-shoot. The cleanest air comes from the north-west quadrant, upper left, which has few people or cities. Winds from the southwest quadrant, lower left, bring smog from Los Angeles. But the dirtiest air comes from the southeast quadrant, lower right, which is polluted by smelters and coal-fired power plants in Arizona and northern New Mexico, as well as by refineries and heavy industry in Monterrey, Mexico, and on the Gulf Coast (not shown). On rare occasions, winds come down from the north-east quadrant, upper right, bringing mostly clean air except for sulfur dioxide from coal-fired power plants.

The several hundred participants — many saw each other last in court — are split into committees to advise the commission on politics and science. Scientific committees review existing research, direct new studies and report back on how bad haze is, where it is coming from and how it can be controlled. A single, larger political committee guides the process and advises the commissioners on a variety of technical and policy issues.

"Right now everybody is on their best behavior because it's a precedent-setting commission," says Souby. "I sure hope it stays that way."

But the group is almost as volatile as the pollutants it seeks to eliminate. From the start the committees fiercely debated how much of a problem haze is and how tough the commission should get.

The initial work plan proposed by Symington and other commissioners enlarged the scope of the Visibility Commission beyond the Grand Canyon, to include regional haze in 15 other national parks, monuments and wilder-

ness areas on and around the Colorado Plateau, an area called the "Golden Circle." The logic held that regional haze affecting one park will of course affect all parks in the area.

The expanded plan sparked an angry outburst from industry representatives and eight Western senators, who charged that the commission was considering regulations tantamount to a no-growth policy for the entire Southwest.

In a letter to Symington, Sen. Dennis DeConcini, D-Ariz., and seven other senators of both parties from New Mexico, Utah, Wyoming and Nevada, wrote, "At no time was it envisioned that the jurisdiction of your commission should be expanded beyond the Grand Canyon to include the 'Golden Circle' of Class I areas on the Colorado Plateau."

But perhaps in recognition of how bad the West's air pollution is getting, the commission readily approved its new mission, with strong backing from the National Park Service, the Forest Service, the EPA and most of the state air quality departments involved.

Increasing the stakes has made the commission both stronger and more vulnerable to political sabotage from special interest groups. Once it got wind of the deal, Wyoming, the largest coal-producing state in the U.S., petitioned to join. Likewise, private industries and electric utilities have paid closer attention, donating the time of scores of scientists, technicians and computer modeling experts.

"Regional haze is a problem that has to be dealt with," says Shawn Kendall, an executive assistant with Phelps Dodge, which operates several copper smelters in Arizona. "But with a process like this it's important to be involved to make sure their information is complete, that their recommendations are based on sound science and the acknowledged limits of the data."

Industry's almost overpowering presence has made environmental groups such as the Environmental Defense Fund, the Grand Canyon Trust and the

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The blurring of ...

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Land and Water Fund of the Rockies keep their guard up. On one occasion two environmental representatives argued for hours to prevent the commission from accepting an electric utility association offer to do a large chunk of important research for free.

The polluters are us

The almost constant infighting ended in January 1993, with the release of the National Academy of Sciences' three-volume report, *Protecting Visibility in National Parks and Wilderness Areas*.

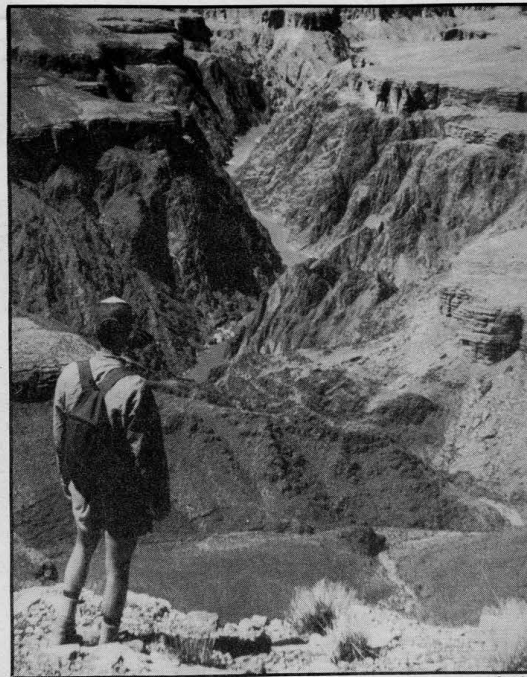
"Before, people were hiding behind scientific uncertainty," says Souby. "Now the National Academy has cleared the way for the commission to go ahead and do its business."

The academy's panel of two dozen scientists confirmed the commission's worst fears: regional haze has cut visibility in the West in half, to about 60 to 100 miles. Moreover, in the next two decades pollution levels are expected to significantly increase due to economic growth.

The studies also said that even though the East has worse pollution, the West will have a harder time cleaning its air. Because of its naturally clean skies, the West is dramatically impacted by even small increases in air pollution. Moreover, while Eastern haze is caused mostly by sulfur dioxide from coal-fired power plants, in the West organic particles, hydrocarbons, ammonia, nitrates, soot and dust complicate the picture. Many of these pollutants, invisible at first, react with each other to become a visibility problem several days and hundreds of miles later.

Because of these complications, the academy concluded, the West will require a "different and more comprehensive approach" than the rest of the nation.

Surprisingly, the traditional bad guys — utilities, copper smelters, refineries and other industries — combined only contribute a third of the problem. The real polluters, the scientists report, are us. Gasoline-powered vehicles cause about 16 percent of the haze; dust from traffic, agriculture and construction 15 percent; diesel-fueled vehicles (buses, trucks, trains, jets, ships and heavy equipment) 14 percent; and residential wood burning 2 percent. The last



Gary Ladd

On a clear day: Good views of the Colorado River in the Grand Canyon

20 percent comes from miscellaneous sources such as human-caused forest fires, controlled burns, and feedlots.

That's why the EPA's current strategy to control individual, large polluters will fail to protect air quality in national parks or eliminate regional haze. "Determining how much a single source contributes to haze tends to be time consuming, expensive and unlikely to lead to definite answers," says Robert Duce, chairman of the National Academy's research panel.

For example, he says, it took years of studies and millions of dollars for the National Park Service and EPA to prove that the Navajo Generating Station was polluting the Grand Canyon. Yet the agencies still can't say how much the expensive scrubbers now being installed will improve the views.

The good news is that a regional effort to clean up the Grand Canyon's air could clean up virtually the entire Southwest, plus reduce acid rain and respiratory disease.

While the National Academy concluded that we have the technology and the regulatory ability to begin reducing haze now, a companion study by the EPA shows that, for a while at least, the problem will get worse.

Although the 1990 Clean Air Act will improve the air in the East and over Los Angeles, Denver and other cities, it will allow sulfur dioxide pollution to increase throughout most of the West. EPA air quality expert Bruce Polkowski says the Clean Air Act revisions will have no effect on the Grand Canyon on very clean or very dirty days. At best, he says, the new act will offset a small portion of the additional haze expected from economic growth in the Southwest through 2005.

Building a consensus

Surprisingly, the National Academy's studies pleased both environmentalists and industry. Instead of allowing regional haze to degenerate into a political brawl, the National Academy report may have opened doors for cooperation.

Environmental groups feel vindicated by the academy's call for action. At the same time, electric utilities and copper smelters, which have traditionally

erhood when you go after vehicles. We have to educate the public that they are part of the problem."

Cordner and others say the Visibility Commission must look at urban air programs, driving patterns, and limits on wood stoves just as carefully as scrubber retrofits for existing industries and strict controls on future plants.

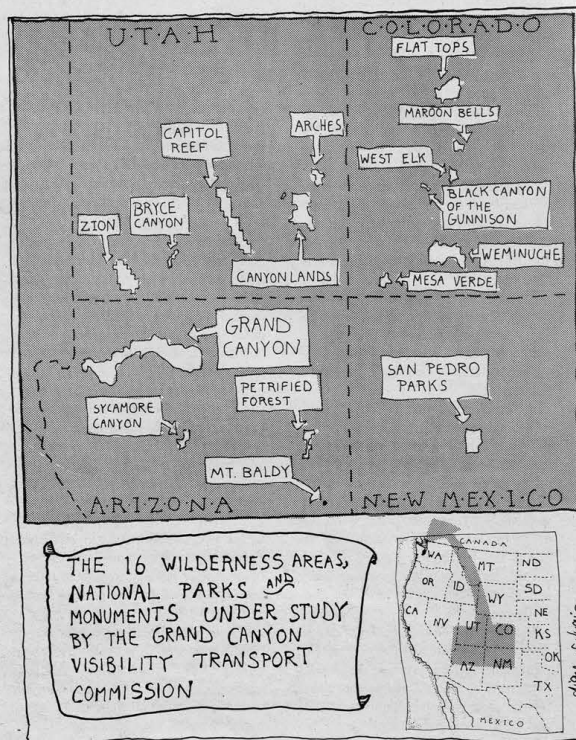
In the six months since the academy report, the commission has functioned more and more like a team. The commission recently sent a budget request to Congress for \$1.25 million each for fiscal years 1994 and 1995. Along with it went a letter, signed side-by-side by Phelps Dodge and the Environmental Defense Fund, the Nevada Mining Association and the Natural Resources Defense Council, Intermountain Power Association and the Sierra Club, and a dozen other strange bedfellows.

The commission's diversity and collaborative structure, the letter argues, is an alternative to costly, top-down regulations that often result in endless litigation. Ultimately, it adds, the commission could "serve as a model process to other divisive environmental and natural resource issues across the Nation."

Whether the commission can stay cooperative will be tested when it starts to propose solutions in 1994 or 1995. Research centers on two strategies, one to prevent new sources of haze and the other to reduce existing pollution.

An exciting but politically divisive idea is "clean air corridors." Dr. William Malm, who heads the National Park Service visibility research group, says we already know where the pollutants come from that cause regional haze. A five-year study by Warren White, a chemist at Washington University in St. Louis, found that Los Angeles' five-day work week shows up two days later, Wednesday through Sunday, as dirty air at the western edge of the Grand Canyon National Park.

Malm says rather than try the impossible — cleaning up L.A. — the



U.S. Environmental Protection Agency
Smog-obscured sun over Los Angeles

first priority is to "keep clean days clean." So Malm's group is working to identify corridors of clean air. The Visibility Commission could then propose regulations to keep them clean by banning coal power plants, smelters and other polluting industries in large parts of the West.

Initial data show the clean air corridors for the Grand Canyon run to the northwest and the northeast, which means that Nevada, Utah and western Colorado could be asked not to build new polluting industries.

Already states are positioning themselves to bargain. "Utah wants to protect the five national parks and the wilderness areas where we have good visibility," says Cordner. "But only if it's a shared thing." It is unfair to ask Utah to restrict growth because it has clean air and let Southern California continue growing because it already has dirty air, he warns.

Alternatives

To avoid regional warfare, the commission is looking for ways to reduce existing pollution and make future factories and cities cleaner. If the Visibility Commission is to succeed, Souby says, it will have to find ways that eliminate pollution without eliminating profits or lifestyles.

The focus now is on market-based solutions — ideas that pay for themselves — as an alternative to expensive and time consuming regulations.

A report presented to the commission in April by Bruce Driver of the Land and Water Fund of the Rockies and Christine Shaver of the Environmental Defense Fund identified half a dozen alternative energy sources that could compete dollar for dollar with coal-fired power plants. The report also cited conservation programs, renewable power projects and utility reforms already under way for economic reasons in Colorado, California and Oregon, which will also help prevent air pollution. States and utilities could do even more, Driver suggested, if they added in the costs of regional haze.

Utilities have long resisted attempts to incorporate the costs of air pollution or other environmental impacts (*HCN*, 6/29/92). But, at a private meeting in Phoenix in May, the Electric Power Research Institute and four leading regional utilities decided that such reforms might be cheaper than another layer of strict regulations.

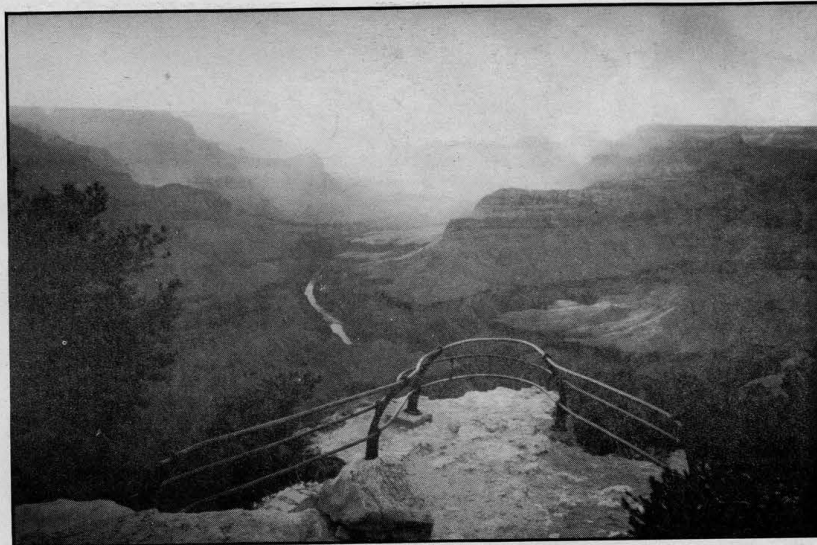
"Some of the regulations being considered (by the Visibility Commission) are so unpalatable to the utility industry that they would probably be challenged in court," says Dave Mills, an environmental expert with PacifiCorp, the West's largest private utility.

To avoid that conflict, Mills says the industry may be willing to re-evaluate the economics of renewable power and demand-side management. Soon the four utilities and the Electric Power Research Institute will begin an in-depth study of if and how much alternative power can reduce regional haze.

Arizona and California are pioneering research on the electric car, in hopes that turning the Southwest into an "electric Detroit" will both revive the economy and cut air pollution.

According to Arizona Public Service Co., electric vehicles produce 85 percent less pollution than gas-fueled vehicles, counting pollution generated at the power plant. The benefits are even greater when electricity replaces diesel in vehicles like city buses.

To combat pollution from Sonora,



Gary Ladd

Hermit Rapid on the Colorado River, as seen on a smoggy day from the South Rim near Grand Canyon Village

Mexico, copper smelters and heavy industries in Monterrey, the commission is considering debt-for-nature swaps. In theory, Mexican loans could be forgiven in return for pollution controls. Other suggestions include a mix of new technologies, such as super-efficient cars, mass transit systems, new fuels, efficient manufacturing and refining processes, and improved air pollution control devices for industry.

Another idea is assessment alternatives — fees for controlled burns, gas taxes, pollution taxes, or any way to change people's behavior by pricing activities based on their social costs.

Finally, the commission is evaluating traditional command and control regulations, which set limits on emissions from everything from smokestacks to tailpipes and are enforced by federal and state agencies.

If any state is in the driver's seat on the Visibility Commission, it is California. Although California is the source of

much of the pollution affecting the Southwest, it also has more experience and better data on how to control air pollution. And because of the strict air quality targets mandated by the California Clean Air Act, everyone expects California to keep its lead role.

"We have such serious air pollution problems here in our urban areas we will be doing far more to clean up our own air than we would ever need to do to clean up the Grand Canyon," explains John Holmes, director of research for the California Air Resources Board.

The other goad on the commission is the consequence of failure. Agreeing

on a solution may be far cheaper than allowing the EPA or the courts to impose one.

"If the commission fails to act within its timeframe there is a legal remedy," says Chris Shaver, a senior attorney with the Environmental Defense Fund, and a former frustrated air quality expert with the National Park Service. "We are not willing to wait another 15 years."

As if to reinforce that threat, the 9th Circuit Court of Appeals recently upheld the EPA's authority to require strict emission controls at the Navajo Generating Station in Page, Ariz. — and at any other facility that causes any pollution in a national park or federal Class I area.

As soon as the ruling was released, John Leary, staff director of the Grand Canyon Visibility Transport Commission, sent copies to each of his commissioners. "The EPA has tremendous authority to deal with this problem if the commission fails," says Leary. "This is the West's last chance." ■

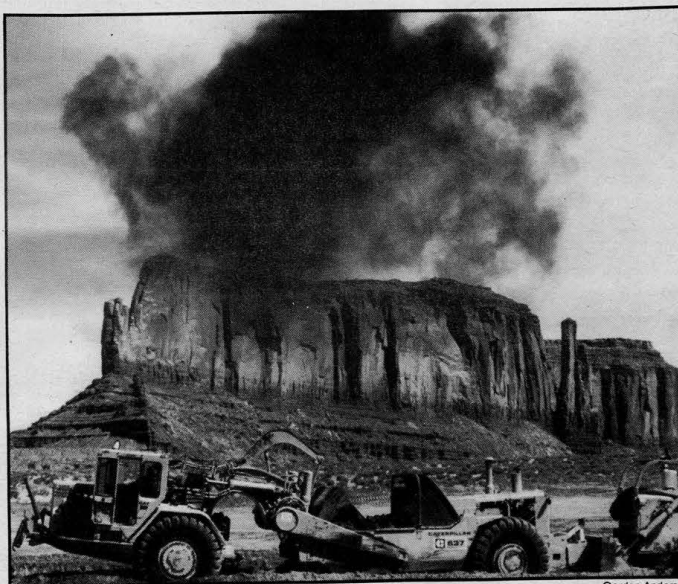
Steve Hinchman is staff reporter at *High Country News*.

For more information contact the **Grand Canyon Visibility Transport Commission** through John Leary, Western Governors' Association, 600 17th St., Suite 1705 South, Denver, CO 80202 (303/623-9378).

The **National Park Service** visibility research team is headed by William Malm, NPS, CIRA-Foothills Campus, Colorado State University, Fort Collins, CO 80523.

A copy of the **National Academy of Sciences** study, *Protecting Visibility in National Parks and Wilderness Areas*, is available from Craig Hicks, Public Information Officer, National Research Council, 2101 Constitution Ave., N.W., Washington, D.C. 20418 (202/334-2138).

The **LAW Fund and Environmental Defense Fund** report, *Alternative Energy Strategy*, is available from Bruce Driver, LAW Fund, 1405 Arapahoe, Suite 200, Boulder, CO 80302 (303/444-1188).



Gordon Anderson

Road construction in Monument Valley, Arizona

BULLETIN BOARD

TAKINGS AND GIVINGS

You can't watch a baseball game without a hotdog in one hand and a program in the other. And you can't follow the ongoing skirmishes about grazing privileges and rights and the Catron County movement without a guide. The summer 1993 issue of *The Workbook*, published by the Southwest Research and Information Center, is a concise, understandable guide. Writer Barry Sims describes the legal issues and sketches the major players in the "rights" and "takings" movements. He does it all in a calm tone. Write to the Southwest Research and Information Center, P.O. Box 4524, Albuquerque, NM 87106; or call 505/262-1862.

GO WITH THE FLOW

Can rivers quench everyone's thirst? A course sponsored by Oregon State University College of Forestry, July 13-15, will examine how rivers can support economic and recreational interests, preserve riparian ecosystems, and sustain wildlife and fish habitat. The instructors are Bo Shelby, a forest resources professor at Oregon State, and Doug Whittaker, outdoor recreation planner for the National Park Service in Alaska, co-authors of *Instream Flows for Recreation: A Handbook on Concepts and Research Methods*. Their workshop, in Springfield, Ore., includes two days of classes and discussions plus a float trip down the North Umpqua River. For more information contact the conference assistant for the Instream Flows for Recreation Workshop, Oregon State University, College of Forestry, Peavy Hall 202, Corvallis, OR 97331-5707 (503/737-2329).

MONTANA FOR GROWNUPS

A week-long "educational adventure for adults," called *The Montana Frontier: Old Dreams, New Realities*, is set for July 25-31 at Montana State University in Bozeman. The course will cover issues that range from pioneer and Native American history to battles over wilderness preservation and development that stretches the limits of the land. The week also includes a train ride to historic mines, a day-long tour through Yellowstone National Park and a soak at local hot springs. For more information contact the Office of Institutes and Conferences, 318 Montana Hall, Montana State University, Bozeman, MT 59717 (406/994-4930).

RAILS WITH TRAILS

A group that advocates building a national trails system next to abandoned railways now says there may be no need to wait for a line to go defunct. In a survey of 16 trails, the Rails-to-Trails Conservancy found that joggers, hikers, cross-country skiers, bicyclists and equestrians in California, Colorado and Washington all use trails next to active railroads. Those questioned said the system is safe and that railroads support the projects. Peter Harnik, the Conservancy's vice president for trail development, said he has received an increasing number of inquiries from trail planners and citizen activists about building trails next to working railroads. The non-profit conservancy, created in 1985, encourages railroad companies to convert abandoned lines to trails. In the last 10 years, more than 470 rail corridors have been converted into parks and trails, and another 350 conversions are under way. The group will hold its fourth national conference Sept. 29-Oct. 2, in Concord, Calif. Its report, *Rails-with-Trails: Sharing Corridors for Transportation and Recreation*, is available for \$9 from Rails-to-Trails Conservancy, 1400 16th St., NW, Suite 300, Washington, D.C. 20036 (202/797-5400). — Greg Peterson



Clearcut visited in *Wilderness: The Last Stand*

Dale Burk

FILM INDICTS CLEARCUTS

When award-winning director Miranda Smith was growing up, her farming family's most reliable source of income came from selling timber for pulp. But at the Mountainfilm '93 festival in Telluride, Colo., Smith premiered an advocacy film about the destruction of the national forests. In *Wilderness: The Last Stand* she focuses on the Bitterroot district in Montana, contrasting the multiple-use mission of the Forest Service with current reality: getting the cut out. From early news films to recent interviews, Smith reveals an agency that meant to save America's old-growth forests but ended up destroying most of them. Smith, whose previous work includes an award-winning documentary on Chico Mendes and the Brazilian rubber-tappers, did not intend to make an advocacy film. But Bitterroot Valley log haulers and most members of the valley's wise-use group refused to be interviewed. Drawing her own conclusions, she says the Forest Service's latest approaches — even-aged management, overstory removal and seed tree cuts — all bear a striking similarity to the clearcut. Smith interviews Forest Service Chief Dale Robertson, vice president Al Gore and Jeff Debonis, founder of the Association of Forest Service Employees for Environmental Ethics. For more information on the 53-minute film, contact Miranda Smith Productions Inc., 251 W. 30th St., Suite 16W, New York, NY 10001 (212/563-2370).

— Orna Izakson

GREAT BASIN ADVENTURES

Photographer Linda Dufurrena and her daughter-in-law, geologist and writer Carolyn Dufurrena, live on a sheep ranch in remote northern Nevada. When summer comes to the high desert, the Dufferenas lead a series of back-country camping trips

over long weekends, exploring some of the little-known treasures of the Great Basin. Other attractions include hiking and biking, painting and picture-taking, gourmet Dutch oven cooking, Basque paella, and fireside serenades by chef Joyce Vetter. The trips are limited to 18 people. Storyteller and historian Jay Marden accompanies the "Emigrant Trails Adventure" July 30-Aug. 1, which visits mining camps, ghost towns and other stopping grounds of Mark Twain and contemporaries. A collection of cooks will share their culinary talents on the "Dutch Oven Gourmet" trip, Aug. 13-15. For more information contact Linda or Carolyn Dufurrena, Star Rt. 397, Winnemucca, NV 89445 (702/941-0357). — Jon Christensen

ENVIRONMENTAL HEROINES

Honoring women who have done Mother Earth a good turn, Tambrands, manufacturers of Tampax tampons, gave 53 women \$1,000 each in April. As "1993 Environmental Women of Action," each honoree can donate the money to the school of her choice to develop or reinforce environmental education. Now in its second year, the program pays tribute to women who have acted on behalf of the environment in their communities and inspired others. Winners in the West include Susan Tixier of Monticello, Utah, who established "Great Old Broads for Wilderness," a group dedicated to fun and the protection of wild lands; Linda Zupan, a student at Montana State University, whose efforts led the university to establish a recycling program; and Bessemer Bend, Wyo.'s Cathy Killian, who spared nearby Bessemer Mountain from a proposed mine by spearheading a successful attempt to grant the area "rare and uncommon" status in the state (HCN, 12/14/92). For more information, contact Jennifer Swidler, 212/614-4949.



Burlington Northern



Free-lance photographer Tim Jewett took this photo of a variation on the theme of clearcutting on the Tillamook State Forest, Oregon.

How the Forest Service dug itself into a very deep pit

Essay by Brandon Fowler

The supervisor of the Dixie National Forest stood near the rim of southern Utah's Markagunt Plateau, framed by the canyons of Zion below and the desert beyond.

"Sure, we made mistakes in the past, but we do things differently now," Hugh Thompson explained to timber industry managers, forest activists and Forest Service employees. We were assembled for a field trip meant to demonstrate forest recovery in logged-over areas. We stood listening in the bright light of a clearcut amid the stumps and scars left behind by loggers over 30 years ago.

We had gathered to see firsthand the reported recovery of logged-over areas. But a long day traveling dusty roads revealed sterile, even-aged stands referred to as "successful regeneration."

Successful replanting was acknowledged to be difficult in poor soils at 10,000 feet with sparse rainfall, competition from shrubs and damage from animals. Even seedlings planted in pots with sheltering screens failed, and in some cases three or more plantings were needed to achieve three-year survival goals. Yet the Forest Service persists in prescribing logging.

The Dixie National Forest, located in southern Utah, is surrounded by three national parks: Zion, Bryce and Capitol Reef, and Cedar Breaks National Monument. It is a beautiful forest with trees taking 120 years to mature on land that ranges from 8,000 to 11,322 feet.

This field trip was supposed to ease the discontent of local people interested in the timber

management of the forest, but the comments offered showed little satisfaction in any group.

Timber mill representatives from Kaibab Industries and Allied Forest Products complained about the loss of a dependable and long-term supply of logs and predicted job losses resulting in dire consequences for the local communities of Panguitch and Escalante.

Members of the grass-roots group Friends of Dixie National Forest joined in the criticism, citing the long-term damaging effects of unsustainable logging levels on watersheds and wildlife, as well as on fast-growing recreation-based businesses. Friends of Dixie was formed five years ago in response to concerns over management of this forest, and it quickly attracted over 300 members.

Through research, members concluded that the "Allowable Sale Quantity" developed by the agency's 1985 management plan was fatally flawed by distorting the "suitable timber base" and by an economic analysis that fails to properly account for costs associated with timber management.

The Forest Service stood in the middle, accustomed to granting the wishes of industry but now unable to meet scheduled timber harvest targets due to administrative appeals and public demands for improved technical support of proposed sales.

In the year and a half since that field trip, one mill has closed and another will soon lay off more than half its workforce. The crippling economic impact on the timber-dependent communities has led many to blame forest activists for the hard times. But watchdog groups like Friends of Dixie did not shut down the mills. They exercised a citizens' right of participation to ask the hard questions

about degradation of the public lands and to insist on protection for the Mexican spotted owl and the northern goshawk.

The blame for the loss of timber jobs belongs to the Forest Service for promising unsustainable logging levels while failing to meet the challenges raised by the many public interests clamoring for a stake in the forest resource.

In the process the agency lost credibility as decision making based upon good technical work was warped by political expediency. Rational decision making has been replaced by compromise, damage control and cover-up as the agency struggles to redefine its mission.

The path to regaining support of the interested public could lie in successfully restoring damaged landscapes. But current budget allocations favor the timber-management program at the expense of other multiple-use objectives. Monitoring requirements detailed in the plan are seldom funded, but money is available for money-losing timber sales in popular recreation areas.

Miles of road built to serve the logging interests already exceed the stated "future desired condition" outlined in the plan, yet more construction is under way, fragmenting remaining wildlife habitat and damaging watersheds.

With a different administration in Washington, the Forest Service has the opportunity to reverse the pattern of abuse of our public lands and begin an active program of restoration. Like many on-the-ground watchdog groups, we're hoping the agency can finally protect everyone's public land. ■

Brandon Fowler is vice president of Friends of Dixie (FOD), Box 1234, Duck Creek Village, UT 84762.

ONE OF A KIND

Essay by Ed Marston

I've seen David Brower several times, but until Telluride's Mountainfilm last month, he hadn't strongly registered. But this time, in Telluride's Sheridan Opera House, he was so vivid that for the first 15 minutes I searched for the spotlight that had to be trained on him — the spotlight making his features sharp and his skin glow while fellow panelists were shadowed and indistinct.

There was no spotlight; Brower was getting the same candlepower as the others. But his white hair, erect carriage, and ruddy complexion sent more of his light back at us.

He was a good choice to be guest of honor at the annual festival: Impeccable environmental credentials combined with 70 first ascents from his first "career" as a mountaineer. Brower transcended the two worlds the event tried to combine.

It was good to see integration of physical daring and environmentalism. At my last Mountainfilm seven or eight years ago, I snoozed happily in the Sheridan's comfortable seats while on the screen mountaineers and kayakers did their thing as if the Himalayas, the Alps and South America's rivers were jungle gyms erected for their convenience.

This 15th festival had some of that — crazed Welsh kayakers scraping down vertical rocks on thin films of moisture, a Frenchman who skied avalanches in an impossible at-the-dinner-table crouch, and a round-the-world search for perfect powder.

But instead of being the main course, organizer Rick Silverman presented these as, shall we say, entertaining appetizers to intriguing films about the Donner party, about industrialization, and about caving in the Thai archipelago. This last film, *Chasseurs des Tenebres*, my favorite, is a wonderfully photographed portrayal of the barefoot men who use enormous bamboo scaffolds to reach the vertical walls of huge caves in search of swiftling nests.

The movies were preceded by a forum organized by the Telluride Institute to explore the fate of mountain towns. Telluride, once a mining town, has been given up for dead many times, most famously by Edward Abbey, who mourned its willing, almost eager, submission to industrial tourism.

Despite its death at the hands of the Green Economy, Telluride still looks like a small mountain town surrounded on most sides by abruptly rising, wonderfully sharp and jagged peaks.

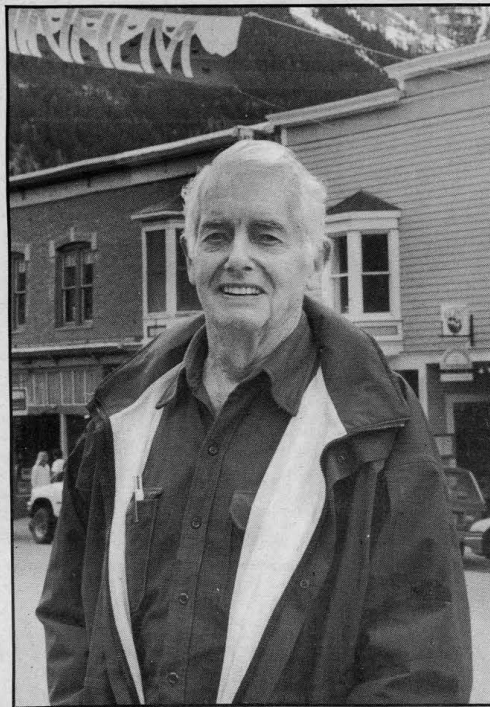
But the panelists said there is trouble in paradise. Lots are \$100,000 or more, and modest Victorians go for \$1 million. If you have \$200,000, you can get yourself a 1,500-square-foot condo with a view of a gas station.

Those who lack \$200,000 must commute to Telluride on roads that can provide as many winter-time thrills as a ride down the town's Plunge ski run.

The panel wasn't sure what could be done about people flocking to the town to build "trophy" homes — 5,000 to 20,000 square foot monuments occupied a few weeks a year.

The problem is not just Telluride's. It used to be a rough rule of thumb that the West is rural below 7,000 feet of elevation, where valleys are broad and mountains in the distance, and urban above 7,000 feet, where valleys are narrow and mountains are in your face.

Until recently, the lower-elevation rural areas were not subject to the same urbanizing pressures as the mountain towns. That is changing. The rich and very rich concentrate in mountain towns, while the merely



Ingrid Lundahl

DAVID BROWER

comfortable, and those who commute to jobs in the mountain towns, settle the once-rural valleys. Panelists implied that Colorado would someday be 100,000 square miles of 35-acre lots, each with one home, a horse or two, and a septic tank.

The large lot size flows out of Colorado law, which allows land to be divided into 35-acre parcels without governmental review. Smaller lot sizes require creation of a subdivision and provision of services.

The obvious antidote to thousands of square miles of subdivisions is controls. But the West is not yet a good place for that. Long-time residents believe "you can't tell a man what to do with his land." (Whether you can tell a woman what to do with her land has not been addressed.) And while newcomers talk controls, many of us quietly hope they don't come before we've made our piles.

It could all go bust

That leaves us partly in the hands of economies, societies, and climate. If beaver, silver, gold, wheat, livestock and oil shale could bust, then trophy houses can bust. If interest rates rise, subdividing will slow. At 10 or 12 percent interest, even the very comfortable may pause before they build a "Christmas House" in a ski town.

It is also possible that the region's climatic and cultural defenses will kick in. The West's small towns — with their long winters, lack of shopping and, almost always, marginal schools — may lose their appeal. It may be that people who thought they wanted to live in a small town for the rest of their lives will decide that a year or two in their dream town felt very much like a lifetime.

A hint of that dynamic was expressed at Telluride by a woman who hangs wallpaper for a living in a ski town. Because of her job, she comes into new homes toward the end. Several times, she said, she has found the woman of the house crying. The wife had only

agreed to move to such a small place because her husband had promised her a fancy new house.

And now, the paper hanger said, "The fun part of building and furnishing was over, and she was going to have to live out here, in the middle of nowhere."

It would be easier to believe in such passive defenses as an economic collapse or the length and dreariness of small-town winters if I hadn't seen Brower at Telluride, for it is Brower's essence to act, and to act with joy and spirit. Praying for a depression or hoping that rotten schools will save the West's landscape is not Brower's style.

What is Brower's style? There is, of course, his most famous feat: the use of ads in *The New York Times* to defeat dams in the Grand Canyon. Had he not turned to environmentalism, he could have made a fortune on Madison Avenue selling toothpaste and beer.

But it was inevitable that Brower would look higher than the marketplace, because he sees so much farther than most of us. He is also solidly positioned in the center, where the best of America resides. The Earth First!s and Greenpeacees can't match his style, any more than the environmental bureaucracies can. He is one of a kind and America knows it.

It is Brower's genius to be able to say "Ask the animals" without seeming a kook. And he can speak of tearing down dams and dismantling the most destructive parts of industrial society without seeming an enemy of America.

That is because Brower, who will be 81 on July 1, seems to have no hidden agenda. He doesn't hate America. He isn't filled with an internal despair that he needs to find mirrored in external events. He isn't even hostile to technology. He ended the Telluride panel by consulting a calculator that told him by how much the world's population had grown while we were arguing about trophy homes.

And he likes the right kind of bigness. He praised *High Country News* — "it's as close as we've ever come to having an environmental newspaper" — but deplored its 13,000 circulation. "You should be at least 2 million."

And he's willing to embrace the works of this world when he thinks they are successful. He praised the National Park Service and the concessionaire at Yosemite for good management of that park in the face of increasing numbers. Ever practical, he liked the fact that most visitors stay in the Yosemite Valley, and out of the areas he spends his time in.

Like all druids, Brower is a hedonist. He loves good food, good drink, and lively parties. He and his wife, Ann, are spending this year celebrating their 50th wedding anniversary. They enjoyed a recent mountaineers' convention because mountaineers tell more stories and jokes than environmentalists.

Brower, while I was listening to him, didn't have a prescription for saving the West from subdividing. But he did return time after time to restoration. It's not enough to simply preserve what earlier generations didn't get around to destroying, he said. We must put the world back together.

If that is our charge, then plunging the West back into poverty so that Westerners won't have the wealth to commit more destruction isn't enough. It isn't even the right direction.

To restore the land will take wealth and hopefulness and joy. Our task is to harness this latest surge into the West — to inform newcomers of what was once here, and of what can be here again. ■

Ed Marston is publisher of *High Country News*.