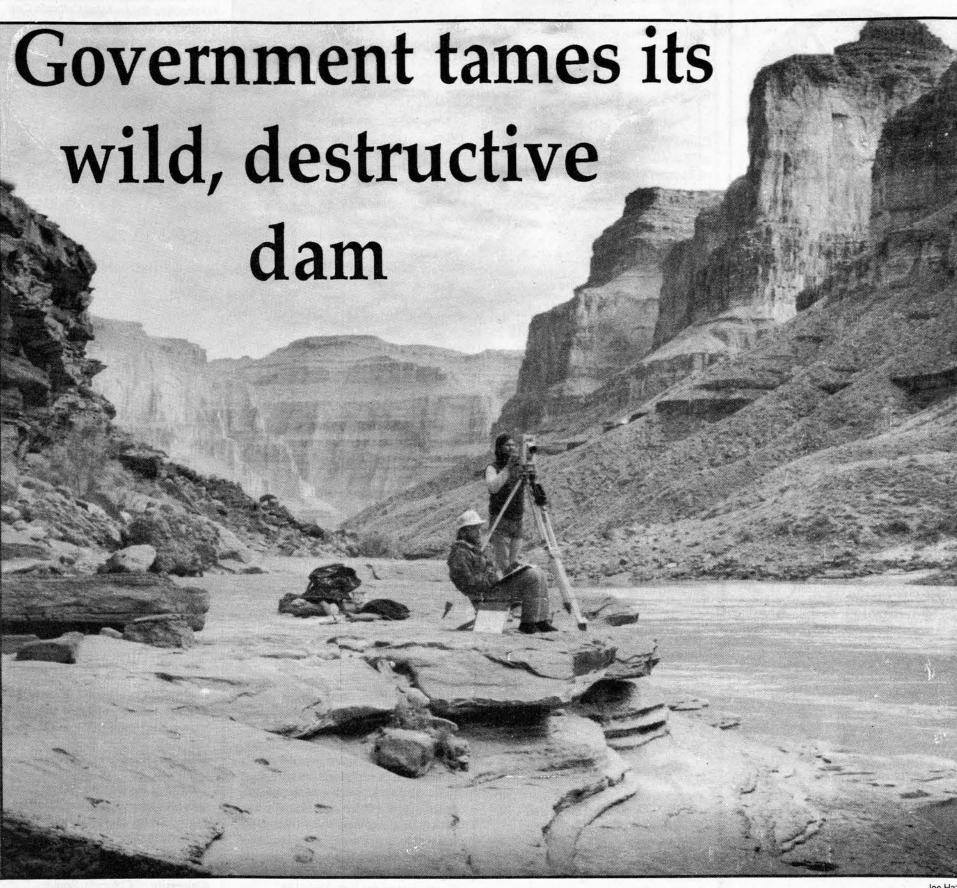
High Country News

A Paper for People who Care about the West



Surveyors measure erosion at Forster Beach in the Grand Canyon

by Florence Williams

arly this month Interior Secretary Manuel Lujan issued a decree to alter the operation of a key faucet on the Colorado River — Glen Canyon Dam. After eight years and \$15 million of studies, the dam will no longer release water just to generate electricity or deliver water to thirsty irrigators downstream. Now the dam has new constituents: the canyon's ecosystem, beaches

"This is the biggest thing to happen to the Colorado in 30 years," says David Wegner, the manager of the Glen Canyon Environmental Studies for the Bureau of Reclamation. "For the first time, changes have been made to dam operations to protect resources and not to make money."

In a major victory for environmentalists, Secretary Lujan issued regulations beginning Aug. 1 that reduce by three-quarters the Colorado River's fluctuations and by one-third the river's high water line. The new flows are designed to offer interim protection to the Grand Canyon's resources while work continues on the dam's environmental impact statement, due out in 1993.

"We're all very surprised," says Gail Peters of American Rivers, a group supporting the new regulations. "[The Interior Department] finally looked at our science seriously, and it finally dawned on them, 'We can do something to help these resources."

The Western Area Power Administration

The clout science

(WAPA), a federal agency that manages the 28-yearold dam and markets its hydropower, now faces restrictions on how much water it can pour through the dam's turbines, and when.

In the past, WAPA has turned the Colorado River on and off like a spigot, releasing water according to the demands of its electricity consumers. This has meant that during the heat of the summer and cold of the winter, the river below the dam has fluctuated wildly to accommodate morning and evening power

The river level rose and fell as much as 13 feet in a

Such extreme variations left whitewater rafters and anglers stranded on banks and sand spits. The mercurial flows have also eaten away fragile beaches and the biological life they sustain. Moisture-loving plants are left high and dry one minute, and drowned the next. Two endangered fish, the humpback chub and the razorback sucker, which need steady water levels for spawning and feeding, are declining fast.

"We've lost two endangered fish already, the bonytailed chub and the Colorado River squawfish, as well as endangered vegetation," says Wegner of the Bureau of Reclamation. "The goal is to take away stresses so that the canyon can heal itself."

To WAPA, an agency whose motto is "Keeping

Continued on page 10

Dear friends,



HIGH COUNTRY NEWS

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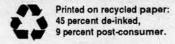
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Attention, federal employees

Thanks to staff member Gretchen Nicholoff, *High Country News* has made it through a bureaucratic high- and low-hurdle course to qualify for the Combined Federal Campaign — a sort of United Way operation, in which federal employees are able to contribute to charitable organizations of their choice. *HCN*'s hope is that federal employees who do not directly contribute to the Research Fund will do so through the Combined Federal Campaign.

Admission to the Combined Federal Campaign should help repair a weakness in *HCN*'s fundraising. About 35 percent of the paper's income comes from contributions to the tax-deductible Research Fund. But while Research Fund letters go to all subscribers, our bet is that the letters are not circulated to all readers in an office. We hear that in federal offices 10 or more people may read a single copy.

HCN's admission to the Combined Federal Campaign may help, if the word gets out to federal employees. Hence, the paper for the next several months will contain notices reminding federal employees that the High Country News Research Fund is a part of their workplace.

Approximately 40 federal employees have volunteered thus far to distribute information — probably samples of *HCN* — to their fellow employees. Others who wish to help should contact Linda Bacigalupi by mail or by calling 303/527-4898. Hints on working with the federal campaign will be especially helpful.

Those wishing to contribute to the Research Fund through the federal campaign should look for *HCN* in the National Unaffiliated Agencies category, under the name High Country Foundation — Code 1059. In our copy of the 1991 CFC National List, *HCN* is found just below the Heritage Foundation and just above the Histiocytosis Foundation of America, Inc.

Fax follies

The Idaho Rivers United organization sent us a press release on August 13, but readers of this paper won't find out what the release said. That is staff's bit of revenge: The release was sent to a local fax service and cost us \$3 to retrieve. Groups that have a fax number for HCN should destroy it. As a biweekly, the mails are a better way to get information to HCN. If something is urgent, please call first to get our fax number of the moment.

Building a trail

Putting their muscles where their pens are, High Country News staffers helped subscriber/trail-builder Dick Guadagno construct a small section of hiking trail across Bureau of Land Management property in early August. Once completed, the trail will connect the McClure Pass highway (Colo. 133) with a 30-mile stretch of the Forest Service's Ragged Mountain Trail in western Colorado.

The crew consisted of interns Rick Craig, Auden Schendler and Jane Bailie, Jane's father, Kim, of Palo Alto, Calif., editor Betsy Marston, daughter Wendy Marston, staff reporter Florence Williams and Paonia cabinet maker Jim Maulhardt. They were joined by Paul Woodin and John Arkins, two seasonal recreation technicians from the Montrose BLM office.

Visitors this summer

Summer visitors included former intern Richard Hicks, who pedalled the 250 or so miles from Boulder with friend Bradford Armstrong to say hello. They had biked from Aspen the day we saw them and were on their way to Gunnison.

Lisa Caputo, an aide to Colorado Senator Tim Wirth, dropped by as part of a long road trip to Cortez, Durango, Ouray, Montrose, Gunnison, Delta, Carbondale, Eagle, Vail,

Meeker, Rifle, Grand Junction... and that's just a sample, she said.

Ying Hung of Austin,
Texas, passed through on
his way from Wyoming to
Utah to California. He is a
computer software engineer who was laid off earlier this summer and happily
took the opportunity to
visit the cooler parts of the
Rockies. While here he
visited an organic fruit
orchard run by Marty and
Steve Chartier.

One visitor played a role in this week's lead story. Rick Inglis, a hydrologist with the National Park Service, has been spending 28 days at a stretch camping in the Grand Canyon, where he measures beach erosion as part of the Glen Canyon Dam environmental impact studies.

From Gunnison, Colo., came Brian Judd and Brian Krupa. From Phoenix came Jim Stevenson, wife Patty and their golden retriver, Dudley. Former HCN intern Rob Bleiberg of Boulder stopped by on his way home from the Carlsbad Caverns in New Mexico. Rob was spelunking

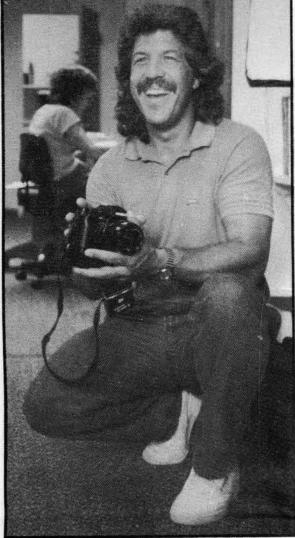
with a group of Park Service volunteers from the Student Conservation Association; he is its western director.

From Salt Lake City came Holland Shepherd, a high-altitude mined-land reclamation specialist, and his wife, Julie, who works with homeless people. James Allgood of San Antonio, who has been subscribing to HCN for five years, stopped by on his way to visit his mother in Dallas, Oregon. The Air Force is moving him to Keflavik, Iceland. Julie Davis, a musician from Nederland, Colo., visited before her Paonia performance on old instruments, including the gemshorn and psaltery. With her was husband Roy Laird, a manager at one of the country's largest bookstores — the Tattered Cover in Denver. A recent article in the New York Times on large bookstores speculated that Powells, in Portland, is so immense because the rain keeps Oregonians indoors a lot. The Tattered Cover is even larger, probably because people in the Denver area stay out of the sun even more than people in Oregon stay out of the rain.

John Parker of St. Charles, Missouri, came through with Joe, 10, and Matt, 7. Joe told us he reads *High Country News* "sometimes." Gary and Vivian Williams of Paonia and Germany stopped by to say hello and subscribe. She teaches school in Germany; he is an environmental specialist with the Department of Defense.

Jim Link, who owns Paonia Farm and Home Supply with his wife, Linda, brought over one of his visitors — Sam Hitt. Sam is director of Forest Guardians, a group that just joined other organizations in a suit against the Forest Service. His visit turned into an interview, and a Hotline in this issue.

Denver photographer Jim Cook spent a few hours in Paonia on Aug. 14 on behalf of *Newsweek*. Competition being what it is in the newsweekly (and biweekly) business, Jim couldn't tell us exactly what is planned, but others on his shooting list included Colorado Congressman Ben Nighthorse Campbell, a spokesman for People for the West, and



Cindy Wehling

Jim Cook of Newsweek with circulation manager Kay Bartlett in the background

Doc and Connie Hatfield, a couple in Brothers, Oregon, who raise and market organic beef to Japan.

Out of the past

Out of the past came Kevin Markey with his spouse of one year, Candice Miller. Kevin was famous in the early 1980s as the Friends of the Earth specialist on oil shale. He is now a graduate student of language acquisition at the University of Colorado, Boulder. Candice is also at CU, where she works with medical students. They were on their way to Canyon de Chelly, Chaco Canyon and Santa Fe. Staff almost left with them.

Jim Decker, a professor of political science at Fort Lewis College in Durango, Colorado, came through on a scouting trip. He teaches an environmental policy course, and was looking for onthe-ground examples of environmental issues. Hot on his heels came Dave Adamson and Pat Willits of the Nature Conservancy. Dave, based in Boulder, is director of development for the Colorado chapter; Pat directs TNC's San Miguel River preserves out of Telluride.

Staff illustrator Diane Sylvain now has some of her brilliantly colored pastels and watercolors at the Phenix Rising Gallery in Cripple Creek, Colo. The exhibit ends Oct. 1.

> - Ed Marston and Betsy Marston for the staff

ESTERN ROUND

Earth First! defendants seek plea bargain

PRESCOTT, Ariz. — In this highdesert town where retirees dance a slow two-step on the courthouse lawn at night, a peculiar courtroom drama unfolded this summer. Peculiar, because the testimony from an undercover informant for the FBI was so lurid that spectators in the packed courtroom occasion-

So far, the federal government has spent an estimated \$2 million to prosecute Earth First! co-founder Dave Foreman and four environmental activists for conspiring to sabotage the nation's largest nuclear power plant.

The government charges Foreman, 44, a Tucson resident, with providing money and know-how to Mark Davis, 40, a cabinetmaker, Peg Millet, 37, a singer and horse trainer, Ilse Asplund, 37, a health educator who worked with AIDS patients, and Marc Baker, a rain forest botanist, all of Prescott.

The defendants say they were too naive and clumsy to be taken this seriously. But they face fines of up to \$250,000 and 10 years in federal prison on each count of conspiracy and sabotage of an Arizona uranium mine, aqueduct and ski resort.

In a surprise move Aug. 13, all five defendants pleaded guilty to different felony counts of sabotage and conspira-

In Foreman's case, only one felony count would be left, which would drop to a misdemeanor after five years of probation. Judge Robert Broomfield, however, said he needed time to decide whether to accept the plea agreements.

Foreman, who left Earth First! in 1989 to write and speak on ecodefense and biodiversity, enlisted Wyoming attorney Gerry Spence as his defense

Spence, who has represented Imelda Marcos and the family of Karen Silkwood, says the trial, is "one of the great events in the history of our nation."

Spence argues that Foreman's only crime was to speak in defense of the wild places on earth.

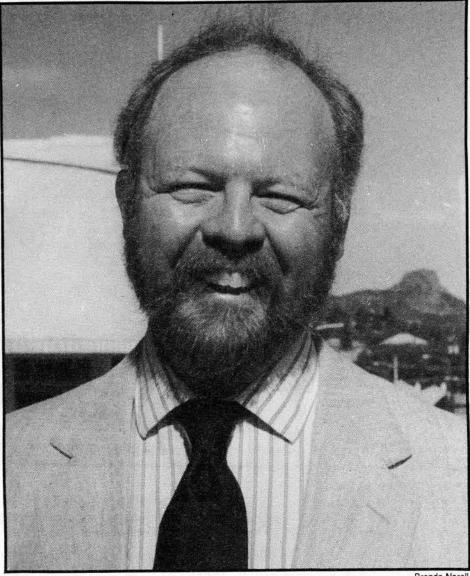
But the government charges that Foreman aided a conspiracy when he gave FBI informant Ron Frazier money and a copy of the controversial book he edited, Ecodefense: A Field Guide to Monkeywrenching.

During his 11 days of testimony, Ron Frazier quickly became an object of amazement. He talked of a past filled with drugs, lies and audio-taped betrayal. Frazier testified he used LSD, hallucinogenic mushrooms and marijuana while receiving \$53,800 as an FBI informant, beginning in January 1988.

It was necessary to notify the FBI and turn informant, Frazier said, or else he would have had to "pull a Rambo at the Earth First! rendezvous." In federal court, Frazier explained that a "Rambo" is a "violent act of killing people."

Frazier said he was upset because defendant Ilse Asplund, for whom he felt affection, had spurned him and began living with Mark Davis.

In his meeting with the FBI, Frazier said he feared Davis was trying to control him telepathically. Under hypnosis during a videotaped session with the FBI, Frazier said he was "ready to play the game" and that he hoped to nail "some bigger fish" for the government. To do that, Frazier wore hidden audio tape equipment, although he pointed out that he removed the machinery when he popped into a hot tub with the defen-



Dave Foreman outside the Prescott courthouse

Frazier had his hidden tape recorder rolling when he discussed with defendants using thermite to burn through power poles to Palo Verde, Diablo Canyon and Rocky Flats nuclear facili-

On the tape, Davis said: "So, we're going to hit as many of the nuclear power plants on the West Coast and Palo Verde as we can ... Drop all lines going in and out of them ... and I think we've got ... I think I've got people lined up for five plants."

In his role of monkeywrencher, Frazier admitted giving workshops on sabotaging diesel machinery at Earth First! gatherings, teaching defendant Mark Davis how to use a cutting torch and shopping with Davis for much of the truckload of evidence now on display in

The defense was prevented from asking Frazier about allegations he molested a child, fired shots at a van and "abused a sheepdog" in his home town of Bisbee, Ariz. These allegations were stated in a motion by prosecutors.

Among the spectators were members of the Sea Shepherd Society, professors and attorneys, Earth First! members and writers such as Charles Bowden of Tucson, Ariz., author of Blue Desert. All had to pass through metal detectors operated by U.S. marshals.

The courtroom drama had its genesis on May 30, 1989, the night that two of the defendants, Baker and Davis, were arrested near a Central Arizona Project power pole. Baker, who has a doctorate in botany, says the FBI targeted Earth First! the same way it went after Black Panther members and American Indians.

"But now they are dealing with white middle-class people who have the means to put an end to the oppression," Baker said in an interview. Baker said he was in Ecuador studying the rainforest during the time he is accused of conspiring with Foreman.

Thanks to a tape recorder that had

accidentally been left running, Baker said, it is obvious that the FBI targeted Foreman as a scapegoat.

Undercover FBI agent Michael Fain, alias Mike Tait, who engendered sympathy from Millett by claiming he was the son of an alcoholic, accidentally left his tape recorder running after a meeting with Foreman, who gave him \$100. Fain was recorded talking later to fellow FBI

"So, in actuality, we probably ought to give them their money back when this is all over because they don't really say what it's for. [Laughter] Now they're low budget, and I don't really look for them to be doing a lot of hurting of people ..." Fain said.

"Cause this [Foreman] isn't really the guy we need to pop, I mean in terms of actual perpetrator. This is the guy we need to pop to send a message. And that's all we're really doing. And if we don't nail this guy and we only get Davis, we're not sending any message he hasn't predicted ..." Fain added.

If the plea bargains are rejected, Fain, who infiltrated Arizona's Earth First! from June 1988 through May 1989, will begin testifying in late

Also on tap are 36 FBI agents, including members of an FBI SWAT team who may recount how Peg Millett eluded them in the desert. Despite a helicopter with search light, searchers on horseback, tracking dogs and dozens more FBI agents hiding in the Palo Verde bushes near her that night, Millett escaped into the desert.

She then hitchhiked back to Prescott and was arrested the next day at work at Planned Parenthood.

— Brenda Norell

Brenda Norell is covering the trial for The Associated Press. She worked as a free-lance reporter for 11 years while living on the Navajo reservation.



A funny thing happened on the way to the printer

No one would guess on picking up a one-pound tome called the Final Supplemental Environmental Impact Statement to the Grand Mesa, Uncompangre and Gunnison National Forest Management Plan that humor exists inside. After all, this is the long-delayed amended version of an aspen-cutting plan for western Colorado that galvanized opponents (HCN, 8/12/91). But some unusual definitions appear in the glossary, including:

"Section, Township and Range: a softshoe dance team from rural sawpit,

"Silvaculture: a Latin word meaning 'Grow, dang it! Grow.'

"Forester: one who sits in a lookout tower and plays pinochle.

"Mean Annual Increment: a government forester's salary increase.

"Deranged Mutant Ninja Forester: a once-normal forester who has been forced into the oblivion and under-street life of land management planning and I.D. team involvement.

"Roundwood: logs, bolts and other round sections cut from trees."

Forest planner Jeff Burch said the Forest Service was still deciding how to address the problem. The agency will either send a letter of apology or reprint the glossary and mail it to the 300 recipients of the report. He said overall reaction to the six wayward definitions has been "sympathetic." The perpetrator remains at large.

Add Johnson, Reagan and Bush, and we'll have the entire rise, decline and fall of the nation up there.

The U.S. Park Service wants to raise \$40 million to restore the sculpted faces of Washington, Jefferson, Lincoln and Teddy Roosevelt at Mount Rushmore.

Just another "friendly" amendment.

The "Human Protection Act" was introduced in Congress by Utah Rep. Jim Hansen, reports the Salt Lake Tribune. The amendment to the Endangered Species Act would require the consideration of economic impacts before animals could be listed for pro- High Country News - August 26, 1991

HOTLINE

NRDC wins irrigation battle

A major court battle has ended with a ruling that could change the way irrigation law functions in the West. On July 26, a federal district court in Sacramento, Calif., ruled that the Bureau of Reclamation violated the National Environmental Policy Act by failing to prepare an EIS before making rules to implement the Reclamation Reform Act. The bureau's regulations allow unlimited access to federally subsidized water by large corporate farms, causing serious environmental damage, according to Hal Candee, a lawyer for the Natural Resources Defense Council. The House of Representatives passed a water projects bill in June to clarify congressional intent in light of the Bureau of Reclamation's current interpretation. The bill contains some reform, including tighter restrictions on subsidies to farms larger than 960 acres, but "does not cover all the issues that need strengthening," said Candee. The bill will be considered in September by the Senate, where environmentalists hope its scope will be broadened. The court has not decided what to do in the short term while an environmental impact statement is being prepared by the Bureau of Reclamation.

Idaho finishes first

Despite a nearly 3 percent decline in the state's mining industry, Idaho's personal income ranked first in the nation during the first three months of 1991. Of the six categories listed by the U.S. Department of Commerce, Idaho posted gains in five: durable and nondurable goods, construction, service and government. These figures were almost the inverse of nationwide statistics, where mining posted a slight increase and durable, non-durable and construction all reported declines. Residential construction, high technology and tourism are credited with the strong ranking, said state Commerce Department spokesman Alan Porter. "The housing market has been extremely strong," he added. "It's a reflection of an inflow of population and confidence in the economy." The state also posted a \$27,000,000 surplus during that quarter, which will go toward a "rainy day fund," said state Commerce Department spokeswoman Georgia Smith. The report came as a surprise to the residents of Idaho's panhandle, where struggling timber and mining industries kept the unemployment rate at 9.7 percent, according to the Spokane-Review. "If you're an unemployed miner or logger, it's little consolation to know that the region is expanding in terms of retail trade," said Michael Ferguson, Idaho's chief economist.

BARBS

For sale: 10,000 canning jars, slightly used.

Unable to secure further sponsorship, the National Cold Fusion Institute in Salt Lake City, Utah, has closed down after running out of its \$5 million budget, AP reported.

This one's on U.S.

Interior Secretary Manuel Lujan charged taxpayers \$26 a day for expenses, even though he was living at his Albuquerque, N.M., home, reports Scripps Howard.



Julie Titone

Line Reference Target I I

Retired forester Chuck Wellner

Forester works to establish research areas

When Idaho Gov. Cecil Andrus came out in support of a logging road through the proposed Aquarius Natural Research Area, Chuck Wellner wrote him a letter.

"I told him that putting a road through Aquarius would be like nailing the *Mona Lisa* to a wall," the retired forester recalled.

That was a couple of years back. The road hasn't been built, although the timber industry hasn't given up, and in June the chief of the Forest Service made the "research area" designation official. For Wellner, this was a great day, for he and volunteers had worked for years to set aside some 200 small preserves on Idaho's public lands.

The Forest Service began its research natural area program in 1927. The idea was to keep intact habitats that would provide an ecological comparison to nearby disturbed lands and to interpret biological history. The minimum size for a research natural area is 300 acres, Wellner said, and at 3,900 acres Aquarius is one of the largest.

The region's first research area was established at Tepee Creek, on the west side of Idaho's Priest Lake. That was in 1933, at the start of Wellner's 40-year career in the Forest Service's research branch.

In 1938, Wellner wrote up plans to establish several other areas. But the regional forester wouldn't sign them. For decades, he said, agency managers hesitated to take any timberland out of production. Then came the post-World War II demand for housing, and timber harvest became the agency's top priority.

"By the late 1960s, we were really rolling across the land," Wellner said. "I got worried."

In 1966, the Forest Service's Northern Region, which encompasses North Idaho, Montana and the Dakotas, established a Research Natural Area Committee with Wellner as chairman. In 1970, Fred Johnson, a University of Idaho forestry professor, suggested that Aquarius would make a dandy research area.

What got the foresters excited was work done by Johnson's graduate student, Bob Steele. Steele, now a Forest Service researcher in Boise, went to the North Fork of the Clearwater to study red alder. The small tree is what the foresters call a "disjunct species," one found outside of its usual range. In the alder's case, its natural range is Pacific coastal forests.

Wellner said Aquarius turned out to be one of those areas where vegetation from 3,000 years ago has persisted even though the climate changed.

Aquarius is a moist, low-lying area filled with Western red cedars. On a hike into the area this summer, Wellner stopped to identify some of the 20 kinds of ferns, about half the fern species found in Idaho.

Thirty-five rare plants have been found at Aquarius. Among them, most famously, is the bank monkeyflower. The flower, with its delicate purple blooms, made headlines in 1989 as the plant that stopped the road.

Dworshak is the reservoir created when the North Fork of the Clearwater River was dammed in 1973. It flooded two-thirds of Steele's red alder study area, Wellner said.

The timber industry uses Dworshak for low-cost log hauling. It would like to see a road built through three miles of the research area, which straddles the remaining free-flowing river, to increase its access to the reservoir. Wellner contends a road would cause erosion on the steep hillsides, as nearby roads have done, and change the character of the area.

Timber industry spokesman Nick Chenoweth of the Clearwater Resource Coalition said the road would affect less than 3 percent of Aquarius and make timber more economical for local sawmills

"It's a great highway and it's a great savings," the Orofino attorney said. "It would give this area an edge."

Industry found support for the road from Gov. Andrus, Rep. (now Sen.) Larry Craig and then-Sen. Jim McClure, all Republicans, but the district ranger decided in April 1990 against building it. Industry officials appealed his decision to two levels of the Forest Service, but lost.

The only way the road would be built now, said Clearwater National Forest biologist Dan Davis, is if it's mandated by an act of Congress. "And that's what they're going to get," said Chenoweth, who plans to press the issue.

Meanwhile, state ecologist Bob Moseley, who documented the monkeyflower's presence, is back at Aquarius, setting up test plots around other plants the Forest Service has designated as "sensitive," or potentially endangered.

There are nine sensitive plants within Aquarius and at least one sensitive animal, the Coeur d'Alene salamander. The variety of animal life hasn't been thoroughly studied, Wellner said, but undescribed species of earthworms and beetles have been found there.

Research natural areas are not offlimits to the public. At Aquarius there is a good trail on the north side, favored by fishermen, and a small campground nearby. The Forest Service plans to build another campground, Wellner said.

Although some forests do so, agency policy is not to mark research areas on forest maps. The idea is to prevent overuse, but Wellner thinks people should be aware of their existence and might be inclined to protect the areas if they recognized their value.

Wellner, who lives in Moscow, Idaho, has written "establishment records" for 65 research areas, most of them in Idaho and most since he retired. That's when, frustrated that the Forest Service wasn't acting quickly enough in his region, he established a statewide research area committee, including Steele, Johnson and other university scientists.

Wellner considers himself an environmentalist, not a preservationist. Still, he said, there are pieces of land that simply shouldn't be disturbed. Aquarius is one of them.

"This is a pretty special place."

- Julie Titone

Julie Titone works for the Spokesman-Review in Spokane, Washington.

Drug firm gets a monopoly on harvesting yew trees

A drug company has been given a monopoly on Pacific yew trees, and conservationists fear it could spell trouble for both the life-saving evergreen and the old growth it lives in.

The Forest Service and Bureau of Land Management have signed agreements with Bristol-Myers Squibb giving the pharmaceutical giant first rights to all Pacific yew trees on federal lands for at least five years. In exchange, the drug company will fund an inventory of the trees on federal lands, develop yew conservation guidelines, and conduct research toward the establishment of yew plantations.

The bark of the yew is used to make taxol, a drug that has shrunk tumors in several forms of cancer, most successfully ovarian. But there's not enough taxol to go around. Both the clinical trial program of the National Cancer Institute (NCI) and Bristol-Myers Squibb's permit for new drug approval are being held up by lack of taxol. Some observers fear that the old growth where most Pacific yews are found will be destroyed in the search for the drug. The Forest Service so far has confined its bark collection program to existing timber sales areas, but the drug company wants to log spotted owl habitat.

"The federal agencies are using the yew as a pawn in the old-growth battle," says Jerry Rust, a Lane County commissioner in Oregon who has led the fight to preserve the tree. "They're using reasons of health to prepare us for the destruction of millions of acres of forest."

All taxol is now derived from yew bark in a process that kills the trees. But NaPro, a natural products company based in Boulder, Colo., plans to start extracting taxol from yew needles and twigs, in a process that doesn't harm the tree. The problem, however, is that NaPro must first build an expensive facility before it can get federal Food and Drug Administration approval for the process. What's more, there's no guarantee that it will be able to sell its taxol, since only the drug company

"I've got taxol sitting on my shelf that I can't sell," says David Carver of NaPro.

Bristol-Meyers Squibb has an agreement with the National Cancer Institute whereby the company is the sole supplier of all the taxol for the institute's clinical trials. The drug company has also been given "Orphan Drug" status for taxol, which means that once taxol is approved for use in ovarian cancer (which is likely to happen next year), Bristol-Myers Squibb will be the only company that can buy or sell the drug for several years.

The drug company plans to extract taxol from yew needles and other sources eventually, but for the time being, yew bark will be the only source of the drug, says BMS spokesperson Dianne DeFuria. BMS has contracted with Hauser Chemical Research Inc., to collect the purple bark, and turn it into the white, crystalline drug.

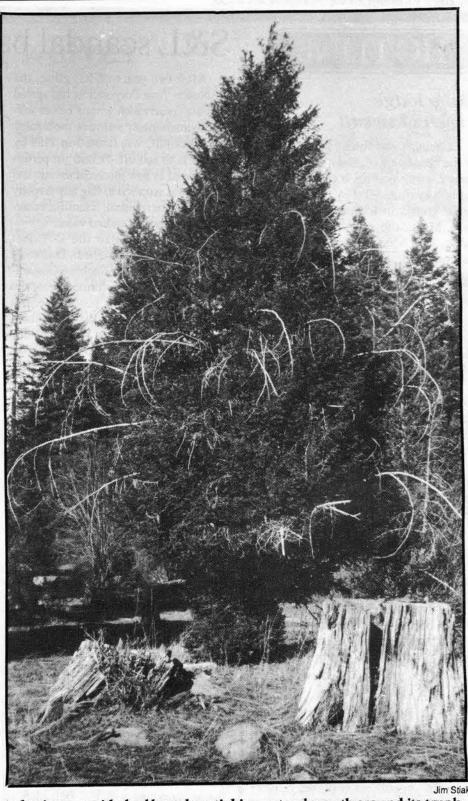
Stripped yews lie like bleached bones

In early August, Weyerhaeuser Co. announced an agreement with the drug company to develop large-scale greenhouse cultivation of the tree. It takes 50 years for a yew tree in the wild to reach a harvestible age, but in a greenhouse seedlings may be adequate to produce

Meanwhile, about 1,000 "local laborers" are working the woods, says Hauser president Dean Stull, most of them bark peelers who bring the goods to a handful of collectors. They in turn deliver it to one of five bark mills established by Hauser in Idaho, Washington and Oregon.

There, in clouds of dust, masked workers shovel bark into dryers, chippers and grinders before it is boxed and shipped to Hauser's extraction plant in Boulder. Hauser says it is well on its way to collecting the 750,000 pounds of bark that the cancer institute has requested for this year.

In addition to the bark stripped legally, poachers have stolen almost three tons of yew bark in recent months, according to the Forest Service. Since



A classic yew, with dead branches sticking out and growth around its trunk

there is no other legal market, the pilfered bark is presumedly finding its way to Hauser, mixed in with the legal pickings. The Forest Service has offered a \$10,000 reward for information leading to the arrest of the poachers.

The Forest Service estimates that 38,000 yews will fall this summer to meet the goal of 750,000 pounds of bark. NCI requests in years to come are likely to be considerably higher.

In logged areas thoughout the Northwest, stripped yews lie like bleached bones, orange against the gray debris of clearcuts. Many more dead yews are stacked in tall piles at Hauser's mills. Although yew wood is highly prized for its use in making musical instruments and cabinets, most of the trees falling this year will either rot in place or wind up as firewood.

- Jim Stiak

Jim Stiak is a free-lance writer from Eugene, Oregon, and a regular contributor to High Country News.

Logging of a Colorado old-growth forest seems imminent

All seems quiet, at least for the moment, at Middle Sandbench, an oldgrowth forest northwest of Pagosa Springs in southern Colorado. Yet it remains a magnet for protesters such as Marty Walter, a math professor at the University of Colorado, who arrived in the area last May for what he called a "funeral service" for the towering trees.

Instead of mourning, however, he and other environmentalists "bush camped" in the San Juan National Forest. They alerted the media and made the case for preserving 777 acres of mostly spruce and fir that the government had sold to Stone Forest Industries Inc., a mill in Colorado.

The company has built a 2.5-mile road into the old-growth stand, one of the few remaining in the West, but the mill's Kevin Cain says logging won't begin until sometime in the fall.

For almost a month this summer, a 10.000-acre area in and around Middle Sandbench remained closed to the public. Citing acts of vandalism and sabotage, Forest Service officials said blocking public access was necessary for the protection of public health and safety. Environmentalists protested the closure, which was ordered by San Juan National Forest Supervisor William T. Sexton, but the agency's deputy forester upheld the decision.

Attorneys Bruce Bailey and Jim Grizzard, representing environmentalists, called the closure, which was lifted July 25, a "violation of protesters' constitutional rights to freely associate and speak their minds on a public issue." Bailey said he will challenge the closure order again in the upcoming trial of Mike Long, a "tree sitter" charged with refusing to leave his tree June 29. Another act of civil disobedience involved Geoff Bindeman, who chained himself to a cattleguard.

Both Bindeman, of Nederland, Colo., and Long, of Denver, are out on bail and await September trials.

The Forest Service says events leading to its decision to exclude the public included the erection of road blocks to the access road up to Middle Sandbench and finding long metal nails driven into trees.

The Forest Service is offering a reward of up to \$1,000 for information on tree-spiking or other damage on the San Juan National Forest. Similar rewards have been offered by the Archuleta County Sheriff's Department, Stone Forest Industries, and Ancient Forest Rescue, an environmental group which charges that the evidence of tree spiking is fabricated.

Jim Pekerek, a member of the Boulder-based Ancient Forest Rescue,

says the group is organizing a meeting with old-growth forest supporters at Middle Sandbench in late August. This summer, a Pagosa Springs group, Save Our San Juans, joined forces with Ancient Forest Rescue to run two information stations about ancient trees and the Sandbench timber cut at both the Forest Service's Pagosa office and the local supermarket.

Pekerek says protesters also demonstrated at King Soopers in the Denver and Boulder areas because the supermarket chain uses paper products produced by Stone Container Corp. Stone Forest Industries Inc. is a wholly owned subsidiary of Stone Container.

— Susie Waddoups Jones

The writer lives in Pagosa Springs, Colorado.

HOTLINE

Idabo lodge triggers lawsuit

A hunting and fishing lodge owned by the chairman of Idaho's Fish and Game Commission has become the subject of a lawsuit. Filed by two environmental groups in federal court in Missoula, Mont., the suit charges that the lodge, which is on the shore of the Salmon River, violates the Wild and Scenic Rivers Act. Wilderness Watch and Five Valleys Audubon say the U.S. Forest Service broke the law when the lodge received approval in 1988, without adequate public review. The Wild and Scenic Rivers Act requires "watersheds or shorelines (to remain) essentially primitive and waters unpolluted," they point out. The site was originally slated as a seasonal outfitting business based around canvas tents, says Wilderness Watch spokesperson Bobbie Hoe. Wilderness Watch was alerted to the construction three years ago when a member saw a John Deere tractor being ferried past him on the Salmon River. The lodge, owned by Norm Guth, has hot and cold running water, electricity, flush toilets "and an inadequate septic system," says Hoe. The three-building lodge sits next to the historic Smith Cabin, a structure which Guth used as a storage shed during lodge construction, she adds. Officials at the Forest Service and the U.S. Attorney's office were unavailable for comment.

Bat massacre

Five hundred and fifty-five Mexican free-tailed bats roosting under a bridge near Payson, Ariz., were killed or injured by assailants firing .22 caliber rifles through cracks in the bridge in June. Nearly one-third of the bat colony, which consisted of pregnant females and babies, was wiped out in the massacre, the Arizona Republic reported. The harmless, golf-ball-sized bats consume their weight in insects each day and migrate south to Mexico and South America in the winter. The slaughter was discovered by Arizona Game and Fish officers responsible for monitoring local colonies; officials found three boxes of bullets and numerous spent casings at the site. One week after the incident, Michael Ahders, 29, and Richard Dorchuck, 23, of Mesa were arrested on charges of taking protected wildlife out of season, shooting across a roadway, littering and possession of wildlife parts, says Rory Aikens of the Arizona Game and Fish Department. Three other individuals are suspected in the killings; any information should be relayed to Operation Gamethief, 1/800/352-0700.

Agency buys access

To open up blocked public land, the Forest Service purchased 3,500 acres in Montana's Crazy Mountains in June, reports AP. For years, the checkerboard pattern of land ownership there has caused conflict between ranchers and recreationists, including a suit brought by the Montana Wildlife Federation against landowners who blocked public access to the forest. The purchase will help resolve such disputes by providing uncontested access to 20,000 acres of public land. The Forest Service spent \$500,000 on the land and retained options to buy another 35,000 acres in the Crazy Mountains area in 1992 and

S&L scandal bashed environmental values, too

After two years of haggling, the Resolution Trust Corporation has agreed to notify conservation groups before selling environmentally sensitive properties.

When RTC was created in 1989 by Congress to sell off 41,000 properties once owned by now-insolvent savings and loans, it was supposed to flag any property with special recreational, scientific, cultural, archaeological or natural value.

An amendment in the RTC Act sponsored by Sen. Tim Wirth, D-Colo., a member of the Senate Banking Committee, directed the newly formed agency to identify these special properties. But because RTC was established without any in-house expertise to draw such distinctions, environmentalists charge the process has not been done properly.

"What they've done is worthless," said Karen Berky of The Nature Conservancy's Washington, D.C., office. "It's still a mystery to me why this doesn't get done."

During most of last year, RTC officials negotiated a memorandum of understanding with the U.S. Fish and Wildlife Service. The idea was for the Interior Department agency to provide the technical backup needed to review the RTC properties correctly.

After months of talks, an agreement was presented to the five-member RTC oversight board, which includes Treasury Secretary Nicholas Brady, Federal Reserve Board Chairman Alan Greenspan and Jack Kemp, head of the Department of Housing and Urban Development.

But the oversight board vetoed the plan. That left the agency without a way to identify environmentally sensitive properties.

Then in May, an RTC internal memo quietly directed its staffers to begin consulting with the Defenders of Wildlife, The Nature Conservancy, the National Audubon Society and the National Wildlife Federation when sensitive properties are to be liquidated.

As conservation groups have begun to piece together RTC's inventory, it has become obvious that there are many properties that include endangered species habitat, wetlands or paleontological research areas.

Conservationists also confirmed that the only property evaluations made so far were those made by the individual RTC property managers assigned to the many defunct S&Ls.

"They haven't carried it out very aggressively," Wirth said in a recent interview. "These guys don't have the expertise to do it and it's not their mission."

Some local RTC employees haphazardly tried to carry out the spirit of the Wirth amendment, but agency officials acknowledge that there was no uniform process when the classifications were made.

"We have lists for those (Wirth amendment) classifications," said RTC Denver-based spokesman Kevin Shields, "but there is no rhyme or reason to it."

Michelle Johnstad, in RTC's marketing and sales department in Denver's western regional office, said: "Five hundred institutions went under in a year, and we had no way of cataloguing" the properties.

Tens of thousands of properties are in the West, especially Colorado, California and Arizona. RTC's attempt to classify what it owns has been criticized and even lampooned.

Many properties designated as special under Wirth's amendment are not. There is also a growing list of lands that environmentalists believe should have been singled out.

Some examples:

 Nine acres of prime condominium property called Shadow Run in the midst of many other condos in Steamboat Springs, Colo. RTC staffer Ron Bonnett said he classified the property as being "recreationally significant" "on the basis that the Shadow Run property was near a ski area. It's not complicated, just a box on a form."

City planner Ann Mehme said because of the parcel's high-density zoning, RTC's recreational classification "makes no sense." One of the more marketable RTC assets, the Shadow Run

> It's the stuff of political satire, but few are laughing.

land sold for \$156,000.

- Forty wooded acres northwest of Fort Collins, Colo., also designated as "recreationally significant." Because of local zoning, the land cannot be subdivided and the real estate agent listing it said it isn't likely the land will sell anytime soon.
- A total of 3,500 acres near Austin, Texas, known as The Uplands, which includes habitat for at least two federally listed bird species. Berky said the property was never singled out by RTC as being environmentally sensitive. However, the sale has been blocked by environmentalists and could serve as a test case for a lawsuit against RTC by the National Wildlife Federation. Attorneys now are in the midst of settlement negotiations, according to Austin lawyer Bill Bunch, who is working with the National Wildlife Federation. Even if the lawsuit is successful, Bunch pointed out, it deals only with the rather narrow issue of endangered species and not with whether RTC's entire property analysis system should be revamped.
- A 12,000-acre tract at the mouth of the Rio Grande River in Texas, known as Playa del Rio. "That property is not listed on the inventory at all," Berky said, "but we know it's RTC."
- Hundreds of acres within a 25,000acre parcel that now is inside the eastern city limits of Colorado Springs. Up to 693 acres were promised to the city by now-bankrupt developer Frank Aries as part of an annexation agreement. The city has threatened to de-annex all of the 25,000 acres unless RTC follows through on the Aries promise to deed the 693 acres over as a regional park.

Colorado Springs environmentalists are working with the Santa Fe-based Trust for Public Lands in hopes of preserving even more acreage, including a relatively untouched piece of shortgrass prairie, which local environmentalists say should be preserved for educational purposes. Another portion of the old Aries land has been identified by University of Colorado researchers as a rich fossil bed. RTC's marketing plan for the entire 25,000 acres is expected to be made public soon, but none of the land was identified as having special values by RTC's initial flagging process.

Shields, the RTC's Denver regional officer, rejected the notion that the property in Colorado Springs fits the spirit of the Wirth amendment. "There's some trees there and maybe some fossils, but it's just another piece of ground, as far as we're concerned."

Richard Lowerre of the Austinbased Texas Center for Policy Studies said RTC's "special values" inventory system has failed. "Ninety-eight percent of the properties don't belong on the list. It's a joke." Lowerre noted one Texas case in which a shopping center built in the Southwest style was flagged by RTC as being "culturally significant."

It is the stuff of political satire, but few are laughing. Wirth and Sen. Daniel Akaka, D-Hawaii, have introduced a bill that would designate the Interior Department as the agency to review RTC's inventory to determine whether it should be earmarked for preservation.

The proposed legislation also would: authorize RTC to transfer property to other federal land management agencies or nonprofit organizations; allow Interior Secretary Manuel Lujan to direct RTC to transfer property to federal or state agencies; and require RTC to allow conservation groups to have limited first right of refusal for all properties given special designation.

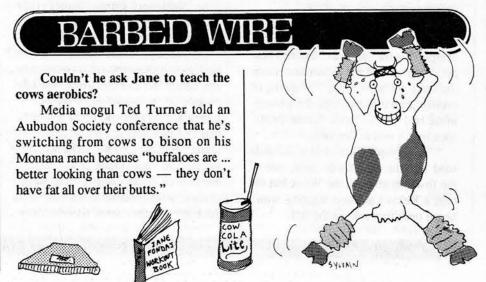
"I believe these procedures would markedly improve the RTC's efforts to dispose of some properties in its portfolio," Wirth said. "Agencies and nonprofits would be better informed of the availability of properties they may wish to protect."

Wirth's amendment to the original RTC Act in 1989 was only approved after being weakened somewhat by opponents. Recalling that, Berky is skeptical that new legislation has much chance of passage. Whether RTC's new internal mandate to scrutinize properties of special significance will work depends on the diligence of RTC's property managers.

The Texas Center for Policy Sudies has prepared a primer for local conservation groups interested in preserving lands once owned by insolvent savings and loan institutions. It is called *The Other Side of the Bailout: A Guide to Protecting Environmentally Significant RTC and FDIC Lands*, and copies are \$10 from the Texas Center for Policy Studies, P.O. Box 2618, Austin, Texas 78768.

- Barry Noreen

The writer works for the Gazette-Telegraph in Colorado Springs.



Washington shows little fear of wolves

Washington's Gov. Booth Gardner has issued a proclamation supporting the reintroduction of wolves to Olympic National Park.

The proclamation, which was requested by the Bellingham, Wash.-based Greater Ecosystem Alliance, is strictly ceremonial, says the organization's executive director, Mitch Friedman. But the governor's support illustrates what Friedman says is a different political climate toward wolves here than exists in the Yellowstone area.

Dave Cameron, for instance, a local county commissioner, is surprisingly nonplused by the idea of adding wolves to a park that is only about five miles from where he raises beef cattle.

"I don't see it as a real threat to domestic livestock," Cameron says.

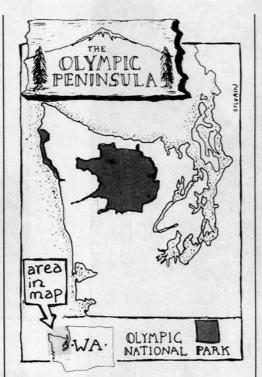
"The 'howls of protest' predicted by newspaper headlines about the proclamation," says Friedman, "never materialized." Instead, he said, his group has heard "almost nothing but applause."

So far, the only public criticism has come from Ann Goos, executive director of Washington Commercial Forest Action Committee, an organization on the Olympic Peninsula. Goos told the Seattle Post Intelligencer that the governor was "being stupid."

But her criticism, she says, was aimed at the way the governor's office handled the proclamation, not at wolf reintroduction.

A host of land-use controversies currently swirl about the park and peninsula, including spotted owl habitat designations, the possible removal of a salmon-blocking dam that supplies electricity to a pulp mill, and a proposal by the Park Service — opposed by some animal rights activists — to shoot nonnative mountain goats that are destroying park vegetation.

Goos says that more research is in order before the governor goes issuing proclamations. But she adds that she doesn't think wolves would pose a risk



to people.

The governor's office seemed to concede Goos' point about the proclamation's timing. A spokesman explained that it "goes a little bit further than (the governor) probably intended" and what Gardner really meant was that he'd support reintroduction after it was "cleared by a host of federal and state agencies in the wake of public hearings."

If initial public reaction to the governor's proclamation is any indication, the wolf is welcome on the peninsula, from which it was extirpated by hunters and trappers in the late 1920s.

About 150 people attending a symposium environmentalists sponsored in Seattle in June cheered when asked if they supported reintroduction. And callers to a radio program on the Seattle NBC affiliate were all supportive.

"Ralph from Brinnon," on the peninsula, said he was "tickled gray about the idea."

Even wolf advocate Friedman says he's a little surprised by the positive response.

"We know there's not as much ranching [in the Olympics] as there is around Yellowstone," said Friedman, "and we suspected that the people here are more rational about wolves. But so far no one has been screaming, and that's a little surprising."

At the Seattle symposium, Olympic National Park Superintendent Maureen Finnerty said that reintroducing wolves would be consistent with Park Service policy to restore native species where adequate habitat exists, where their restoration won't cause a serious threat to people or property in and around the park, where the elimination of that species was caused by human activity and where the same species, or subspecies, can be found elsewhere for transplantation.

Finnerty said that the Park Service first needs to make sure that adequate prey exists and to determine the extent to which wolves would move out of the park and cause problems before it endorses reintroduction.

According to Kathy Jope, the Park Service's Resource Management Specialist for the Pacific Northwest Region, a request for funds to study the prey base for wolves in Olympic National Park will be a part of the region's next budget. Jope said she's optimistic the study will be funded.

"We don't expect reintroduction to be done immediately," says GEA's Friedman. "The Park Service has their homework to do first, and we have ours, enlisting public support and educating people who may have incorrect notions about wolves.

"But if we do it right," Friedman says, "we could see reintroduction to the Olympics go a lot more smoothly than it has in Yellowstone."

- Greg Mills

The writer lives in Sedro-Woolley, Washington.



Group sues for wolf reintroduction

Defenders of Wildlife asked a federal court Aug. 8 for an injunction to force the restoration of wolves to Yellowstone National Park. Defenders director Jim Dougherty charged that Interior Secretary Manuel Lujan violated the Endangered Species Act, which requires the development and execution of plans to recover endangered species. "They did a great job of developing [the 1984 plan], but they've just refused to implement it," Dougherty told AP. Political pressure against restoring gray wolves to the park comes from ranchers who say the predators threaten livestock. Environmentalists insist wolves are essential to the Yellowstone ecosystem and pose little threat to livestock. Besides the Interior Department, the 14page lawsuit names the U.S. Fish and Wildlife Service and National Park Service as defendants.



Goshawk and chicks

On a wing and a lawsuit

With only 87 known breeding pairs of goshawks in Arizona and New Mexico, the Sierra Club Legal Defense Fund filed a lawsuit Aug. 12 to halt logging on an estimated 780,000 acres in those two states. The suit contends that commercial harvesting threatens the biological diversity of the area and is a violation of the National Forest Management Act and the National Environmental Policy Act. Because of extensive cutting, the goshawk's population has dwindled almost to extinction over the last 40 years, says Tom Turner, spokesman for the Sierra Club Legal Defense Fund. As the top predator of its food chain, the goshawk also serves as an indicator species for 100 to 300 other potentially threatened plant and animal species, says Sam Hitt, president of Forest Guardians, a Santa Fe-based group. Hitt says the area is also worth preserving because "it's the only place in the world where you can find a cactus (close to) a Douglas fir." The six national forests named in the lawsuit are the Santa Fe, near the New Mexican capitol, the Carson, near the new Mexico-Colorado border, the Gila, near the New Mexico-Arizona border, the Kaibab, close to Grand Canyon in Arizona, the Coconino, near Flagstaff, and the Apache-Sitgreaves in eastern central Arizona.

LETTERS

WOLF FOES MISLEAD AND MISINFORM

Dear HCN,

The June 3 issue of *High Country News* ran a letter by Bill Phelps that voiced serious concerns about wolf reintroduction to Yellowstone National Park. It is filled with inaccurate information and paints an extremely misleading picture of the issue.

The letter accuses reintroduction advocates of using fancy scientific language to "cover up the genuine uncertainty of their position" and of not thinking of the welfare of the wolves themselves. As an organization that is entirely devoted to the wolf recovery issue, we can tell you that this is simply not the case.

Accepting some uncertainty is part of any wildlife project; no one has tried to deny or hide that. Both the federal government and the conservation community have taken great pains to address the uncertainties related to this issue. In May 1990, the Interior Department published a 600-page report on what the impacts of restoring wolves to the Yellowstone region might be. This is soon to be followed by two more equally exhaustive volumes on the same topic.

Many livestock owners remain concerned over the question of whether wolves will pose a threat to cattle and sheep. To take the sting out of possible economic losses to ranchers, Defenders of Wildlife, a Washington-based conservation group, has established a \$100,000 fund to pay ranchers for losses to wolves in the Rocky Mountain region.

Mr. Phelps accuses scientists of "ass covering" when they say that not all the questions about wolves can be answered until a reintroduction takes place. This is an honest declaration of what anybody who takes the time to write on this issue should know — that all we can do now is make predictions based on the habitat and the prey base in Yellowstone and on data from other areas that have wolves. That information clearly indicates that wolves will have a minimal impact on the Yellowstone region's economy and will be ecologically beneficial to the area.

The most troubling issue Mr. Phelps raises concerns the consequences of reintroduction on the wolves themselves. In what has become the latest ploy by the opposition to appeal to animal rightists, he paints the reintroduction process as inhumane and unethical. It should not go unnoticed that this is one of the recent crusade arguments used by wolf-hater Troy Mader, president of the Common Man Institute. Perhaps this sudden concern about the welfare of wolves should be added to the Common Man Institute's published document, "12 Historically Proven Facts About Wolves," such as "Wolves Desecrate Graves... Wolves are Cruel... and Wolves Kill Everything ... " Amazingly, these types of groundless myths continue to dominate the arguments of those opposed to this project.

The truth is that in order to have wolves in Yellowstone, compromises will have to be made. If particular wolves habituate to killing livestock, those animals may have to be killed. At the outset, some wolves will be radio-collared; however, rarely does this injure or affect the animal. The information scientists glean from watching the movements of the packs will in many cases translate into further protection for the wolf population as a whole.

The wolf is a wild and resilient animal. Brought back to Yellowstone, it will thrive. The Yellowstone region is the largest temperate zone ecosystem left on the planet and provides 11.7 million acres of possible wolf habitat including the park and six surrounding national forests. As far as natural prey, the wolf/ungulate ratio in the Yellowstone region would be 7 to 21 times higher than anywhere else in North America. As wolf expert Dave Mech put it, "Yellowstone is wolf heaven!"

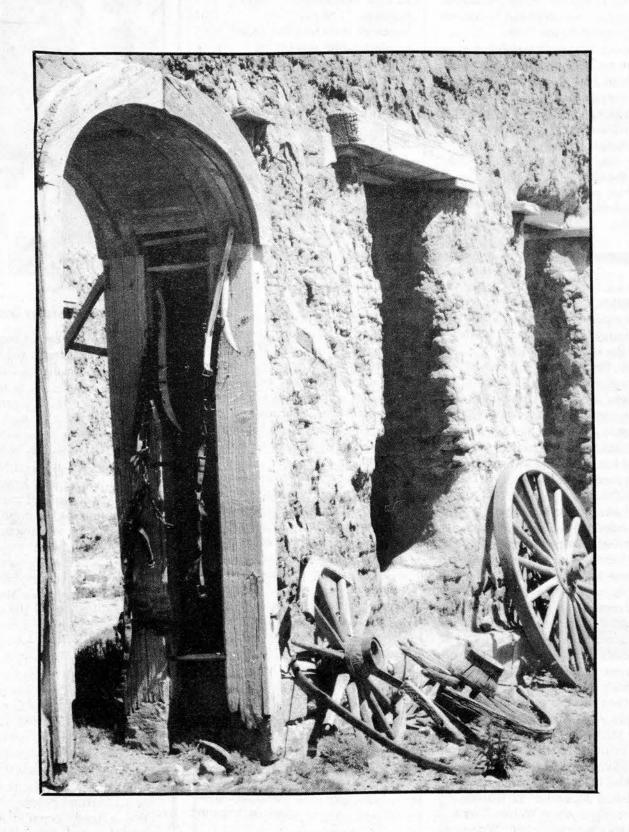
We made a grave error in exterminating wolves from our oldest national park. We owe it to the wolves, and to ourselves, to bring them back.

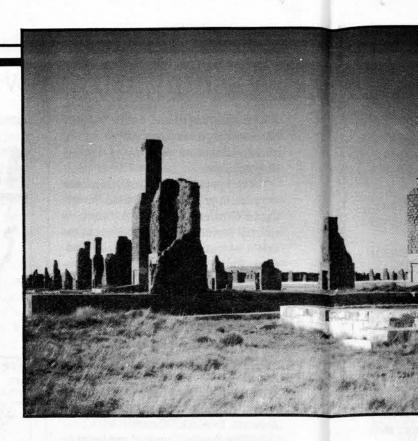
Nicholas Lapham Jackson, Wyoming

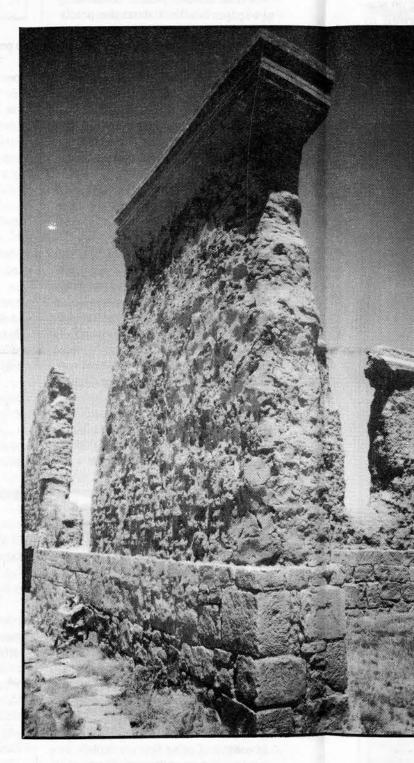
The writer represents The Wolf Fund, Box 471, Moose, WY 83012.



FORT UNION





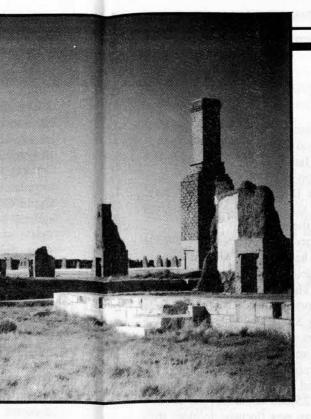


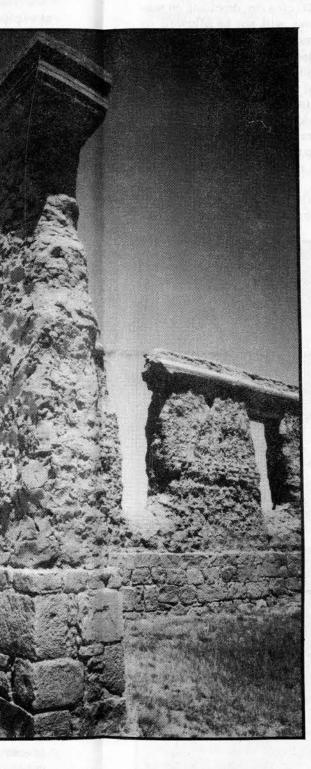
"Many ladies greatly dislike Fort Union. It has alw for severe duststorms. Situated on a barren plain, the tains ... three miles distant, it has the most exposed military fort in New Mexico ... Every eye is said to form Mine was disposed to see much in Fort Union, for I had a — Mrs. Orsemus B. Boyd, 1894, recalling her residence at Fort

Established in 1851 to protect settlers and travelers a Santa Fe Trail, Fort Union went through three building ph sites before its abandonment in 1891. Now the earthworks adobe walls left in this New Mexico valley are protected as a ment. It is a place photographer Dale Schicketanz describes time machine," and he adds, echoing Mrs. Orsemus Boyd, later, "My eye was also disposed to see much in Fort Union."

Clockwise, from upper left: Sundial, Quartermaster's but mander's Quarters; Fort Union Hospital; Mechanics' Corral ty; Supply Stores building; and Mechanics' Corral and Repair

Photographs by Dale Schie

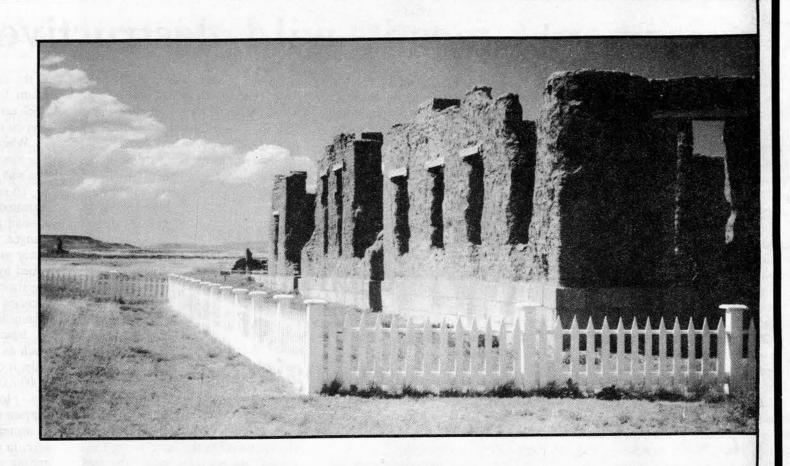


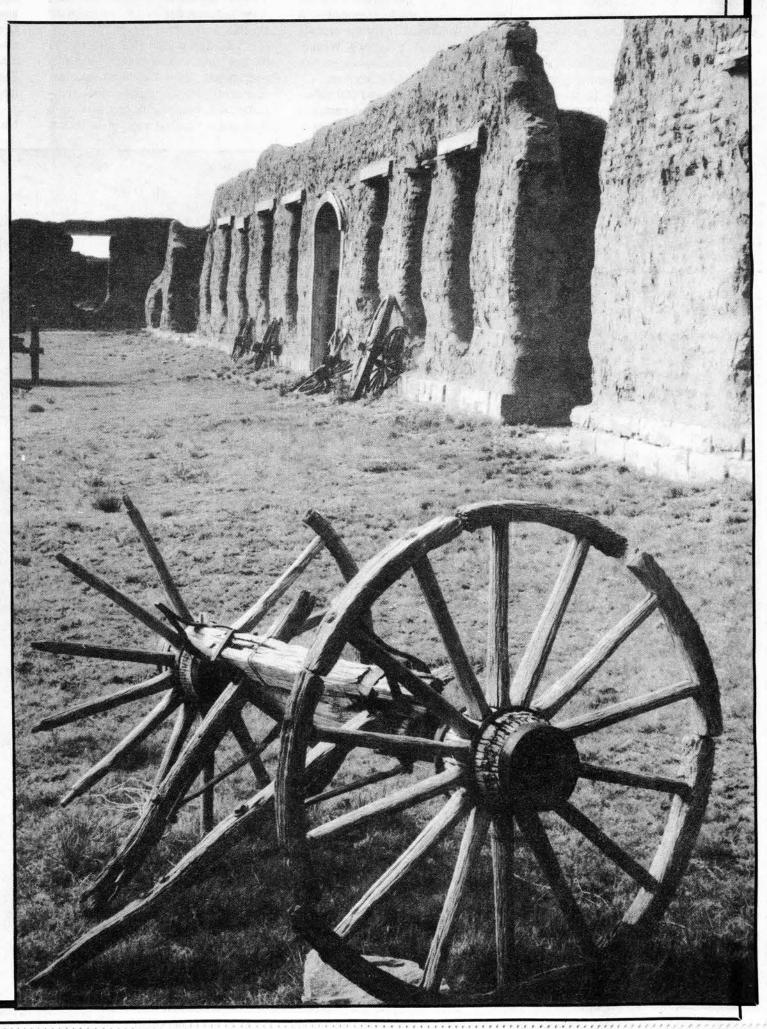


like Fort Union. It has always been noted ted on a barren plain, the nearest mount it has the most exposed position of any ... Every eye is said to form its own beauty. The ch in Fort Union, for I had a home there." recalling her residence at Fort Union in 1872.

otect settlers and travelers along the nearby nt through three building phases at different in 1891. Now the earthworks and crumbling exico valley are protected as a national monuer Dale Schicketanz describes as "magical ... a echoing Mrs. Orsemus Boyd, that, 100 years to see much in Fort Union."
Sundial, Quartermaster's building; Post Com-Hospital; Mechanics' Corral and Repair facili-Mechanics' Corral and Repair facility.







Government tames its wild, destructive dam ...

Dave Wegner

commands

a fleet of

ecologists

(Continued from page 1)

the power flowing," the new constraints on the dam are unwelcome. "We're destroying a hydrological resource," says Lloyd Greiner, WAPA's Salt Lake City manager. Changing the dam operation, he says, is expensive and of questionable benefit.

Greiner says the environmental studies by the Bureau of Reclamation are incomplete. "We have not been able to see any conclusive data," says Greiner. "The scientists had preconceived notions of what they'd find, and they did their studies based on unusual flows." Greiner says WAPA will lobby the Department of Interior to modify the regulations in November, when they will be re-evaluated.

Larry Stevens, an ecologist with the National Park Service, says evidence of the dam's impacts became apparent as early as 1987. "We have a pretty solid handle on the science." Changes to the regulations are more likely to come from political pressure than from new scientific data, he says.

WAPA dislikes the new constraints because they will affect the way the agency runs the entire Colorado River Storage Project, including 12 major dams, says the Bureau's Wegner.

"[Lujan's regulations] mark the Pearl Harbor of the electricity industry," says Wegner. "You'll see a ripple effect throughout the entire upper Colorado basin."

"This will set precedents," agrees

Martha Hahn, conservation director of the Grand Canyon Trust. "This will start a chain reaction of EISes. From now on, any type of dam operation will be up against this kind of scrutiny. This has already changed the way water is looked at in the West, and the Bureau of

Reclamation is realizing this."

The Bureau is indeed changing, and Dave Wegner is partly responsible. A mid-level administrator for the nation's largest dam-building agency, Wegner commands a fleet of ecologists, the like of which the agency has never seen.

With 140 scientists and 500 volunteers, the Glen Canyon Environmental Studies, headquartered in Flagstaff, Ariz., is making history. Dam impacts have never been studied so intensely before. For the first time, researchers are learning why the Grand Canyon's beaches are eroding and how to prevent it.

A report by Wegner's top scientists

last April recom mended changes to the dam's operations based on a year of experimental flows. The scientists found that when the river level dropped quickly, beaches crumbled into the river. Damage increased exponentially with greater

fluctuations. At the same time, Lake Powell, the reservoir behind the dam, traps sediment that used to replenish the beaches during spring floods.

The Grand Canyon's streamside habitat supports 5,000 species of plants and animals. When the river banks disappear, say the scientists, so does vegetation, and, with that, the beginning of a food chain. Vertebrates and invertebrates

eat the algae and other vegetation; fish, in turn, feed on insects. Predatory birds, which eat fish and other small mammals, sit at the top of the chain.

When the banks are swept away, they also take precious archaeological sites with them.

To correct the problem, scientists suggested keeping water levels at a more constant level and making only gradual changes. These recommendations, with minor modifications, mirrored those issued by Secretary Lujan after much negotiation with various federal resource agencies and the Western Area Power Administration.

Instead of the river flow varying as much as 25,000 cubic feet per second daily, it can now fluctuate no more than 5,000-8,000 cfs a day, depending on season. Flows will not be allowed to increase more than 2,500 cfs each hour, or decrease more than 1,500 cfs each hour. In addition, Lujan required a new ceiling of 20,000 cfs rather than the usual 30,000 cfs, eliminating the high flows needed to generate peak power. A new minimum flow of 8,000 cfs from 7 a.m. to 7 p.m. will accommodate boaters. The level can drop to 5,000 cfs during the night.

The flows will be re-examined in November, when more information



U.S. Department of the Interior, Bureau of Recimation, Upper Colorado Region

becomes available on the economic costs of the change.

"Essentially, we got 95 percent of the whole enchilada," says Duncan Patten, the study's senior scientist and an ecologist with Arizona State University. "I'm pleased with the regulations, and was really surprised when it came out."

WAPA has fought hard to maintain its flexibility to produce peak power. Administrators fear the clamp on high flows could cost \$23 million a year. Instead of using the dam's turbines to generate peak power, the agency will have to purchase power from elsewhere to accommodate times of very high demand.

"Now we can produce 1,200 megawatts at 30,000 cfs," says Lloyd Greiner, the Salt Lake City area manager for WAPA. "If we have to operate at 20,000 cfs, they're cutting 400 megawatts out of our capacity. It's going to be expensive."

But last week WAPA scored a small victory. Lujan issued draft "exception criteria," which would allow WAPA to violate the dam restrictions 3 percent of the time, or about 20 hours per month, plus emergencies. The criteria, opposed by resource managers, would save WAPA an estimated \$20 million, according to deputy area manager Kenneth Maxey.

Final criteria will be released in mid-September after further negotiations with the National Park Service and the various wildlife agencies and Indian tribes involved.

The power produced by Glen Canyon Dam is valuable because it can be abruptly changed. By comparison, the power output from coal-fired power plants can only change slowly.

As a result, the coal-fired plants in

Continued on page 12



U.S. Department of the Interior, Bureau of Reclamation, Upper Colorado Region

Workers perform environmental tests near the Glen Canyon Dam

Power plant will stop fouling the skies above Grand Canyon

nvironmentalists scored a double victory in the Grand Canyon this month. In addition to the depths of the canyon receiving protection from wild flows, the skies above the rim will soon be clearer.

On Aug. 8, the U.S. Environmental Protection Agency ruled that the Nava-jo Generating Station, a coal-fired power plant 15 miles from the canyon near Page, Ariz., must reduce its sulfur dioxide emissions 90 percent by 1999.

The ruling followed years of litigation and negotiation by environmental groups and owners of the plant. In order to comply with the agency's requirements, Navajo Generating Station will have to install scrubbers on three smokestacks at an estimated cost of \$430 million.

The EPA order marks a double blow for the Western Aea Power Administration (WAPA), which not only markets power from the newly restricted Glen Canyon Dam, but also from Navajo Generating Station.

"These decisions [by the government] are changing the market we deal in," says Phoenix area manager Tom Hine. "It's harder to keep rates to consumers in this region low."

About 10 percent of WAPA's revenue comes from the power plant. But

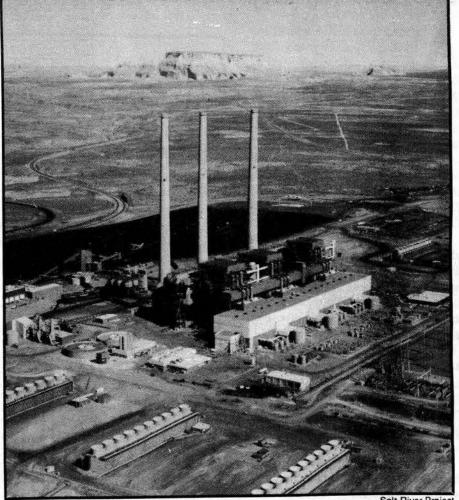
the biggest loser, says Hine, will be the Central Arizona Project, which buys the bulk of power WAPA sells. Water users, such as irrigators and municipalities, can expect to pay up to \$5 more per acre-foot of water, he says

The 2250-megawatt plant provides power for 4 million people in the Southwest. WAPA, a federal agency, markets the electricity for the Bureau of Reclamation, the largest shareholder of the six plant owners. Other owners include the Salt River Project out of Phoenix, the L.A. Department of Water and Power, Arizona Public Service, Nevada Power Co. and Tucson Gas and Electric.

"The cost won't be much," predicts Martha Hahn of the grand Canyon Trust. "We're talking about a dollar per month per customer."

Built in 1974, the power plant contained no pollution controls and spewed 13 tons of sulfur dioxide gas per hour into northeastern Arizona. Studies by the National Park Service found the plant responsible for as much as 65 percent of wintertime haze above the Grand Canyon.

The Environmental Defense Fund (EDF) sued the EPA in 1982 for failing to enforce the Clean Air act. Amendments to the act in 1977 specifically



Salt River Project

The Navajo Generating Station, 15 miles from the Grand Canyon

require the agency to protect visibility in national parks. Since then, EDF and the Grand Canyon Trust have negotiated with the federal government and plant operators to reduce pollution.

"I do not think it would abuse the word to call this agreement truly historic," says Ed Norton, president of the Grand Canyon Trust. It is the first time that the EPA has "acted solely to protect visibility and the paramount aesthetic values of a national park," he adds.

Says an elated Hahn of the Trust: "It's been an incredible week for us. We're trying to plant our feet on the ground again."

-F.W.

Dam ...

(Continued from page 11)

the West are run at a relatively steady, "base-load" rate, with Glen Canyon Dam being turned on and off to follow changes in demand for electricity. The system makes great sense from an economic and electric utility sense: Power from Glen Canyon Dam is cheaper than from anywhere in the country.

The beneficiaries of WAPA's cheap electricity are mostly small municipalities and publicly owned rural cooperatives throughout the West. Serving 16 million people in 15 states, the agency generates \$590 million in annual revenues.

Glen Canyon Dam is the keystone of WAPA's electric empire, producing 80 percent of the power out of the Salt Lake regional office. Under the new regulations, manager Greiner predicts the price of power may increase from 1.4 cents to 1.8 cents per kilowatt. The difference may be enough to drive some of WAPA's customers elsewhere.

"These regulations ignore the responsibility WAPA has to utilities," says Carolyn McNeil, manager of the Intermountain Consumers Power Association, a group representing WAPA's customers.

"We may have to go to more coalburning facilities to get the power we want, and that's not a good environmental tradeoff." Furthermore, says McNeil, "The small utilities may go out of business or will have to sell out."

Environmentalists have argued that the energy is replaceable while the Grand Canyon's ecology is not. "[WAPA's] purpose in life is to supply the cheapest power," says Hahn of the Grand Canyon Trust. "But that's not the



Dugald Bremner

Boaters in the Colorado River want steadier flows and bigger beaches

purpose of the dam, which is to store water. WAPA might have to go back and look at their objectives."

Hahn also says legislation may be introduced to subsidize the power further and protect it from rate increases. "There are ways you can respond to this economically," she says.

Does this mean the Bureau of Reclamation is finally assuming its much-trumpeted role of resource protection agency?

Says rafting outfitter Rob Elliot: "We're cautiously optimistic that this is a step in the right direction. They've

come a long ways. I'll be looking and hoping for other indications."

Florence Williams is staff reporter for *High Country News*.

Indian tribe pushes for a natural river and canyon

ccording to Indian legend, the Hualapai people sprang from the clays, willows and reeds of the banks of the Colorado River. Since the beginning of time, the Hualapai, hunters and gatherers, lived along the river and performed spiritual ceremonies there.

Today, the Hualapai Reservation borders the southern bank of the Colorado for 108 miles below Glen Canyon Dam. Directly across on the north side is Grand Canyon National Park.

The Hualapai have watched their river change. Since 1963, when Lake Powell began storing water, the river water has been cold and clear, instead of warm and muddy. Daily fluctuations replaced the annual floods that once raged through the canyon.

"We have documented evidence that flows from the dam adversely affected our resources," says Clay Bravo, a Hualapai wildlife technician. "Our cultural concerns are of utmost importance to us. We contend that nature is our culture."

Bravo says native species of plants have been driven out, and that cultural artifacts and ancient skeletons have washed away with eroding beaches. The desert bighorn sheep, an animal of both religious and economic value to the tribe, has lost valuable habitat.

The Havasupai, Hopi and Navajo tribes also claim ancestral ties to Grand Canyon and consider it sacred. The National Park Service has placed Hopi salt mines off limits to the public, since the Hopi use the site for religious ceremonies. Other ancient burial and dwelling sites abound. Countless

GLEN CANYON DAI GRAND CANYON NATIONAL PARK **HUALAPAI** HAVASUPAI RESERVATION U·T·A·H! WYO INDIAN RESERVATION VATIONAL PARK area in detail until a flash flood in a side creek exposed a major site, the Furnace Flats, in 1987. But the Park Service barely had time for excavation before releases 13 from the dam washed away the exposed artifacts, according to Martha Hahn, a former park resource manager now with the Grand Canyon Trust. After the flash flood, the Park Ser-

remain unknown.

The extent of the canyon's archaeological riches was only guessed at After the flash flood, the Park Service began cataloguing sites for the Glen Canyon Environmental Studies. So far it has found 470 sites along the river, says Jerry Mitchell, the park's natural resources supervisor.

"I don't think the number of sites is as important as the fact that these sites have a tremendously high value to the tribes," says Mitchell.

The tribes played an integral role in persuading the Bureau of Reclamation and Interior Secretary Manuel Lujan to implement strong flow regulations. Out of Peach Springs, Ariz., six Hualapais work full time on Dave Wegner's Glen Canyon Environmental Studies staff.

"We haven't been very political in the past, but now we are being heard," says the tribe's Bravo. Bravo was among the delegation of Native Americans that met with Secretary Lujan a week before the dam regulations were announced.

"I feel the secretary was very receptive to our pleas," says Bravo. "I don't know how much consideration he gave our efforts, but it was good timing."

The presence of important cultural sites helped sway Lujan's decision, says Mitchell of the Park Service. "There are very clear man-

dates and legislation to protect these resources, as much as the endangered species," he says. "Lujan takes very seriously his trust responsibility to Native Americans."

Meanwhile, says Mitchell, the park and the tribes are working together to inventory as much of the remaining sites as they can. The new flows will go a long way to preserve what is left. "The interim measures are almost everything we asked for," he says. "We're delighted."

-F.W.

NOLS TO HOST BROWER

David Brower will give the keynote address at the National Outdoor Leadership School's third annual wilderness education conference. The Sept. 7-8 gathering at Sinks Canyon near Lander, Wyo., brings together outdoor educators from throughout the country for presentations on environmental ethics, land use issues and an exchange of practical educational ideas. Last year's conference featured authors Roderick Nash and Richard Nelson, country swing dancing, a jam session, and a coup staged by the NOLS staff, who bound executive director Jim Ratz to a chair until he pledged to "wear tacky polyester shirts to all board meetings." For more information contact NOLS, Box AA, Lander, WY 82520 (307/332-6973).

SUMMIT ON RACISM

The Commission for Racial Justice, a national civil rights organization, has announced the first National Minority Environmental Leadership Summit, to be held in Washington, D.C., in October. Invited national and grassroots leaders in the civil rights, minority, environmental, government and corporate communities will probe the issue of "environmental racism": that minorities, despite being disproportionately affected by pollution and hazardous wastes, have long been locked out of the policy debate. In a 1987 study, the commission found that minority communities contain far more toxic dumps than non-minority communities. According to the report, race is the most significant variable in differentiating communities with hazardous waste sites from those without such sites. Organizers hope that participants in the summit can develop a national agenda to combat environmental racism and create a permanent, minority-led organization that will mobilize affected communities. For more information, contact Charles Lee at 212/870-2077 or Roger Rivera at 202/452-0533.

FROM SEWAGE TO WETLAND

When biologists investigating damage caused by a mine's wastewater discovered that a nearby wetland was purifying the refuse instead of being destroyed by it, the concept of bioremediation was born. NASA scientists confirmed the ability of natural organisms to reverse pollution with their discovery that the "living filters" of plants were the best means of purifying sewage and air in artificial environments. In New Mexico, the third annual Seeds of Change conference will explore this concept, offering case studies from innovators in the construction of artificial wetlands for waste treatment. Seeds of Change is a nonprofit, organic farm that promotes ecologically sound farming. Its conference is set for Santa Fe, N.M., from Sept. 20-22. For more information contact Seeds of Change, 621 Old Santa Fe Trail #10, Santa Fe, NM 87501 (505/984-1338).



HOLY BAT DETECTORS

If you think you'd like to hang around abandoned mines looking for bats at night, you can join the Colorado Division of Wildlife's Bat/Inactive Mine Project. Volunteers are trained to locate bat populations in some of Colorado's 10,000 abandoned mines so that special "bat gates" can be installed before the mines are sealed. "We know so little about the habitat of some bats that these data will help us figure what kind of mines have bats and which kind [of bat] they are," says Connie Knapp, project coordinator for the state Division of Wildlife. Volunteers, who need to be over 21 and physically fit, will be trained in mine safety and how to use detectors that pick up the bats' sonar. Mines near Breckenridge and Gunnison will be

investigated in August and September. For information, contact Connie Knapp, Bat/Inactive Mine Project, Colorado Division of Wildlife, 0722 S. Road 1E, Monte Vista, CO 81144 (719/852-4783).

DOWN-HOME **ECO-TOURISM**

Ranchers who want to have paying guests in their homes may want to avoid talking about castration and artificial insemination at the dinner table. At least, that is the advice given in Sharing Your Home on the Range, a handbook for farm and ranch hospitality providers by William L. Bryan, Julie Davies Hitchcock and Elin Spitz. This down-to-earth guidebook tells prospective hosts how to create a successful business in hospitality, which can mean running a dude ranch or a rural bed and breakfast. The writers tell how to get started, how to market and evaluate an operation, and include case studies of successful operations, an appendix of technical resources and an inventory of guest ranches in Montana and Wyoming.

Underhill Foundation, 18 E. 74th St., New York, NY 10021.

Paper: \$9.95. 130 pages. Illustrated with photos and sketches.

ECONEWS

Econews spreads information from "behind the ever-thinning Redwood Curtain" to northwestern California and southwestern Oregon. A monthly newsletter of the Northcoast Environmental Center, Econews has been a leader for 20 years in developing ancient forest awareness. The newspaper carried extensive coverage of efforts to save red-



Revelers at the All Species Costume Ball

woods from the axe, and features include a "life-form of the month" and a page of humorous trivia dubbed "Eco-mania: a monthly melange of salient sillies." The nonprofit coalition of 13 environmental groups that publishes the paper is also renowned for its annual party, Arcata's All Species Costume Ball, held on the fall equinox. Humans are the rarest species at this gathering. Subscriptions are \$18/year and are available from NEC, 879 Ninth St., Arcata, CA 95521. (707/822-6918).

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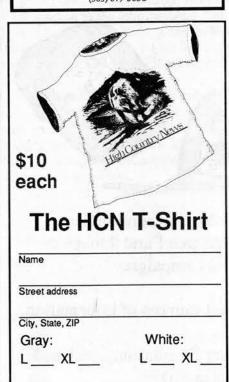
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Electricity's death grip on canyon loosens

by Ed Marston

sually, those who care about the natural world can be grateful for mortality: we won't be here to see a standing-room-only world. We won't see the last vestiges of natural places and wild things casually, thoughtlessly extinguished, as is happening today to the salmon fisheries and old-growth forests of the Pacific Northwest.

But two independent events this summer in the Southwest may change the way environmentalists look at our mortality. Rather than saving us from witnessing additional disasters, it may mean that we won't be here to see strengthened protection of natural places and restoration of areas and species that have been lost.

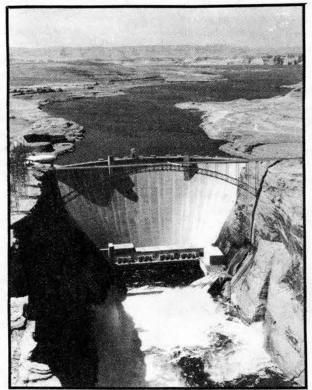
The two hopeful events concern the Grand Canyon. As described in this issue, one agreement will lead to the cleansing of emissions from the huge Navajo Generating Station by the end of the century. And in an almost simultaneous action, the Department of Interior has moved administratively to smooth wildly fluctuating releases from Glen Canyon Dam, upstream of the Grand Canyon. The power plant agreement means air over the canyon will be cleaner. And the decision by Interior Secretary Manuel Lujan means the beaches and wildlife of the canyon will be better protected.

These two actions are significant for themselves and for what they portend. The electric power industry in the West sells immense quantities of electric power and energy at below-market rates. Its cheap prices are made possible by subsidies from the federal treasury and abuse of the environment.

Electric power in the West is the worst kind of socialism. It does not benefit everyone equally. Instead, below-market electricity goes to the politically preferred, creating a powerful alliance between the large federal bureaucracies that run the dams and administer the below-cost power and the private users and municipalities that benefit from the cheap power.

The clout of politically dispensed hydroelectric patronage is strongest in the Northwest, where it is destroying the salmon fisheries. But in hydropower's other stronghold — the Southwest — images of a smog-beshrouded Grand Canyon above and an eroding riverine habitat below have proven more powerful than the Western Area Power Administration, the Salt River Project, Los Angeles, and other subsidized users of hydroelectric power.

The changes at the Grand Canyon are important because they were achieved by a long process against powerful foes. This summer, the logic of ever-intensifying industrialization was defeated by the natural world. These two changes will force the industrialized, man-made world to conform somewhat to the natural world. It is a reversal of past trends. It is especially sig-



Bureau of Reclamation, Upper Colorado Region

Glen Canyon Dam and Lake Powell

nificant because it is not mitigation of a proposed project, but correction of existing activities.

If the decisions stick they will echo through the West. The damping down of Glen Canyon Dam releases means that WAPA's customers must now begin to control how they use electricity. No longer will water flowing through the Grand Canyon rise and fall precipitously to follow the pattern of electric power use.

Instead, electric power use will have to be smoothed out to accommodate the Grand Canyon. Users in Phoenix, Las Vegas, and other places will have to change their behavior or install technology that spreads out and moderates the way in which they use electricity. A link has been forged between the turning of a switch and the flow of the river.

This reverses the old practice, in which the dams were mechanisms that allowed the river to be driven by our wild, anarchistic economy. A former Bureau of Reclamation director - patting his agency on the back - said that the old Colorado River was a destructive son-of-a-bitch. What he did not foresee was that the dams changed the natural wildness of the river into a new, industrial brand of wildness and destructiveness. The new Interior decision should now tame the dam at the same time the Navajo Generating Station is also being civilized.

This is not the first time the Grand Canyon has

been "saved" from development. In 1956, David Brower and the Sierra Club prevented construction of two dams in the Grand Canyon. But the tradeoff was construction of the Navajo Generating Station to replace the dams. That compromise kept water flowing freely through the canyon but drowned the canyon in dirty

It may be that the present victories will also prove hollow. But at this moment, they look solid. They were not achieved by slam-dunk political pressure. Instead, the decisions are backed by hard science. We are all in the debt of those who worked for over a decade to illuminate the effects of the Glen Canyon releases on the river and to find the sources of the canyon's smog.

The events surrounding the Grand Canyon should encourage those in the Northwest who are attempting to transform the Bonneville Power Administration and Army Corps of Engineers from destroyers of the salmon fisheries into its conservers. Up to now, the agencies - allied with utilities and the aluminum industry — seem determined to destroy the fisheries. Their motive: They wish to pay off the debts incurred in the WPPSS nuclear power-plant fiasco without raising rates to market levels. The old socialistic alliance in the Northwest still seems firmly in place.

But the Grand Canyon results mean this arrangement cannot long hold out against both rational economics and environmental restoration. The agencies cannot hold on to an operating system that chews up species and ecosystems to produce cheap power.

The only question is: Will the agencies give way only after all the wild salmon are destroyed, or will they give way soon enough to save the fish and smatterings of their reputations?

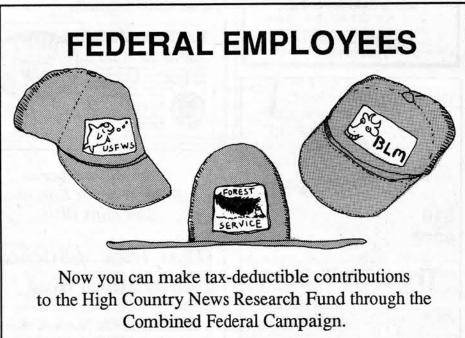
Which brings us to the Bureau of Reclamation. The science that convinced Secretary Lujan to tame Glen Canyon was done by teams of scientists working largely with the Bureau of Reclamation. The bureau is still, in many, many ways, an extraordinarily destructive agency. But its actions at Glen Canyon Dam prove it capable of change.

The bureau is capable of change because society is capable of change. At the Grand Canyon, society is slowly, gingerly backing away from reckless industrialization and all-out consumerism.

It is now conceivable that this evolutionary process may someday lead to the dismantling of Glen Canyon Dam under the direction of the Bureau of Reclamation. It is enough to make one wish for immortality, or for reincarnation as a Colorado River humpback chub. But not yet as a wild salmon.

Ed Marston is publisher of High Country News.





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GUEST ESSAY

The road to extinction is paved with good intentions

Politics can't save endangered species

by Tom Wolf

e proudly say that ours is a government of laws, not of men. But there are times when we expect too much of laws and not enough of women and men. This is the case with the failure of the Endangered Species Act. The statistics are too depressing to detail. Since its passage in 1973, all the Act has done is document our accelerating failure to save species. It is a stunning dud.

Both sides in the West's civil war are to blame. Both environmentalists and our cowboy adversaries expect Uncle Sam to save us and to save endangered species. But Sam cannot and should not do it all.

How did we get into this mess?

Consider the Mexican wolf, or lobo, one of our most endangered animals. There are about 40 left in captivity. Perhaps 10 exist in Mexico in the wild.

Tracking the lobo, I drove south along the Rio Grande Valley, headed toward the former New Mexico home of *Canis lupus baileyi*, a southern race distinct from the larger gray wolf. The spoor led to the Old Town area, where Aldo Leopold, the inventor of wildlife management, lived in the early part of this century, and where Albuquerque now bunches its zoos and museums, as if to redline culture, nature and the past from a new city exploding into the desert.

At the zoo I stalk one of the last lobos, pacing, pacing, pacing behind the walls of a mighty stockade designed to protect us from each other.

My next stop was a museum-sponsored lobo meeting, which stalemated in a fashion all too typical of the general failure of the Act. The Museum of Natural History in Santa Fe, N.M., is one of the those Nintendolike places. Push a button, stuffed wolves howl, mechanized dinosaurs roar. You can buy wolf and dino Tshirts and jewelry in the museum store.

What you can't buy, what Uncle Sam cannot and will not give you, is a lobo worth the name. Thanks to Leopold's pioneering work, wildlife belongs to the state. The zoo-lobo belongs to a captive population that may someday seed "re-introduction" in the wild. But the lobo cannot actually go home again.

The center of its former range, the Gila National Forest Leopold loved, is ringed by heavily armed ranchers who graze their cattle at below-market prices on public lands. "Shoot, shovel, and shutup" is their final solution to the lobo problem. The Gila's old-growth forests are also home to the southern race of the dreaded spotted owl. The Forest Service doesn't relish another endangered species throwing itself in front of the chainsaws.

A heavier federal hand rules over another potential home, the nearby White Sands Missile Range. The base commander sent our pack of wolfers a message. Having perfected the Patriot, the range might have room for an experimental population of wolves. He did not mention the lawsuits.

Back in 1985, the missile range slammed the national security door on re-introduction. That exhausted the patience of a local group called the Mexican Wolf Coalition, which sued the government to force it to obey the Endangered Species Act. Not to be outdone, the cowboys sued the government to force it to give the missile range back to them.

he last lobo in the United States bit the dust around mid-century, when the New Mexico Stock Growers Association decided to get serious about the competition. They evoked a time-honored Western tradition. They "asked" the federal government to

help. Unlike New Mexico's Indians and the Latinos, who had occupied lower territory near the rivers, these Anglo ranchers had marched into lobo land (protected by federal troops), where they felled the forests, shot the deer, and overgrazed. What was not worth taking became public land.

The dust from this disaster has never really settled, since it coincided with a serious drought. The result in the West: National forests became ringed by private ranchers on the better, lower lands. Deals were made, with grazing fees for the perpetual use of public lands set laughably low. A lobo population that never exceeded 1,500 became an easy target, for its highly developed social system made systematic slaughter simple. Taxpayers' strych-

nine, poison gas, traps and guns did the dirty work.

This federal program, now called Animal Damage Control, continues today, targeting whatever ranchers consider a threat to the sacred cow. Such is the genius of our Western way of politics: While one hand of the federal government kills everything wild, the other "recovers" species. Once the lobo was "listed" as an endangered species in 1976, the U.S. Fish and Wildlife Service set a glacial pace in obeying the law. It took the Fish and Wildlife Service until 1982 to produce a recovery plan.

The breeding ground of the Patriot missile has few people, a lot of open space and the deer lobo like to eat. Under a superb new U.S. Fish and Wildlife Service director, John Turner, and under threat of a lawsuit, Uncle Sam began to move. Sort of.

The agency found the money (off-budget) to hire a recovery program coordinator. The missile range found space again for lobos. The New Mexico Cattle Growers Association showed its respect for law and order. Dead set against the lobo, it sent someone from Wyoming to the meeting with lurid tales about man-eating, Red Riding Hood-raping, sodomy-prone, AIDS-infested wolves. Stalemate for environmentalists. Checkmate for the lobo.

Surely there is a better way. Surely politics is not the only way of capturing value, especially when the values are absolute ones like species survival. The recovery of the lobo will never occur on or around public lands until Uncle Sam stops paying ranchers to grow beef in the West.

For ranchers who wish to remain in the West, why not get fair market appraisals and give them the first option to buy their public grazing allotment land? Instead of saying "yes" to everyone and "no" to the lobo, Uncle Sam could tell everyone, including the environmentalists: "Put up or shut up." Aldo Leopold taught us to think and to care about wildlife, not simply to follow him like sheep.

No one ever said that Sam had to own so much of



A Mexican wolf, or lobo, in captivity

the West forever. Put a deadline of the year 2000 on the deals. Use the proceeds to reclaim our damaged public lands. After 2000, unbid lands revert to public ownership, where they will be managed by natural resource professionals instead of politicians, with endangered species as absolute values.

If we truly want a wild West, the solution to the lobo's problem lies elsewhere, out of the political realm. Time is short. If we environmentalists are so concerned about endangered species, then we should buy out the cowboys. Think of the savings in federal taxes. Think of the improvement in local tax bases.

We should also change game laws so that private groups or individuals can own wildlife. We should simply privately buy the habitat for these species and re-introduce them ourselves.

What's the alternative? I'd rather see the lobo die than live hooked up to the Rube Goldberg life-support machine that we call the Endangered Species Act. And dead the lobo may be. Compare what cholera and other European diseases did to the Indians. Our science can never be God-like. Since 1978, the entire American canine population has become infected with parvo virus, a puppy killer that persists in the soil.

The road to extinction is paved with good intentions. Like others who live around dogs, I probably brought it to the zoo-lobo myself.

If we are serious about saving endangered species, we need to make some big changes in the ways public lands are managed. And we need to stop crying for government help. For now, almost any contact with us is bad for the lobo. For the foreseeable future, that means big private preserves where people, dogs and cows keep out.

Tom Wolf writes about the West from Santa Fe, New Mexico.

afield Annual Control

Stalking the elusive elfin-faced owl

spaced intervals. In the Spruce Family, the first young-

ster to emerge from the nest cavity was substantially

larger than the second; perhaps an intermediate sibling

did not survive or an in-between egg did not hatch. Five days passed between the appearances of the first

two owlets, and another three days before I saw the

twilight of late evening and early morning. I never saw

the male adult during daylight hours, and only rarely

the adult female. She did bring food to her offspring in

daytime, but so swift and silent were her flights, and so

unpredictable, that they were easy to miss. The young

birds, however, became increasingly more diurnal as

uvenile saw-whets look like a different species

from their parents, and at one time this was

actually thought to be so. Their heads are dark,

and the silky, hairlike breast feathers are rich

reddish-brown. They are small, bright-eyed

bundles of rusty fluff. My first glimpse of the

three young saw-whets sitting side by side on

a branch was unforgettable. With identical unblinking

expressions they surveyed their world — a row of

I did see moths, butterflies and other insects clasped in

their beaks at times; there were occasional white-footed

mice, and once I identified a white-crowned sparrow in

the talons of one of the adults. But the shrew popula-

tion in the area was abundant, and the owls were obvi-

ously taking advantage of the situation. Countless

shrews, torn in tiny shreds, were delivered to the wait-

There was much grooming among the members of

beak. I could

The diet of the Spruce Family centered on shrews.

gnomes, ludicrous and endearing.

ing, voracious youngsters.

the Spruce Family. The adult

female would sometimes perch

between two of the owlets

and groom their neck

her

feathers gently

with

the days passed, and were fascinating to watch.

My observations were largely confined to the dim

_by Michelle Mara

he dark conifer forests of southern and western Canada and the northern and western United States are home to a small, elfin-faced owl known as Aegolius acadicus, the northern saw-whet. Only about eight inches in length, these diminutive predators are similar in appearance to the slightly larger boreal owl, which ranges farther north.

While doing field studies and paintings of other North American owl species, I had eagerly anticipated observing the saw-whet. I had read about them and had sketched them from museum specimens; I wanted to paint them from life. Books and articles had assured me that they were generally unafraid of human beings and easy to approach.

But I roamed the forests for three years before I even saw a saw-whet! Another year passed before I got my first opportunity to closely watch a nesting pair with young. Although all owls are reclusive creatures, I am convinced that saw-whets are among the most secretive of all. They are almost completely nocturnal, and for the greater part of the year they are not very vocal. While it is true that they show little fear of people, finding them is a major challenge.

So it was especially exciting when, late one spring evening in the mountains of northern Colorado, I heard the low, whistle-like calls of a saw-whet coming from the dense spruce forest. I had camped in a damp, mossy, shadowy place beside a stream, a considerable distance from the nearest road. This, I have since learned, was precisely the kind of habitat saw-whets seem to prefer, especially for nesting. They like being near water; they like moist, boggy and swampy areas and the dark seclusion of thickly set trees and heavy undergrowth.

This first pair of saw-whets, which I dubbed the "Spruce Family," had selected a small cavity in an ancient dead spruce, some 40 feet above the ground. The nest site was probably the former home of a flicker. As with several other owl species, there is no record of saw-whets constructing their own nests or carrying in new material with which to line the cavity. I later discovered a pair utilizing the natural space in a half-decayed pine snag. Investigating it, I found no nesting material whatever. The eggs had simply been

not determine whether this was a display of affection or if it actually aided in the tidiness and cleanliness of the youngsters. deposited on the soft, rotted wood. The two adults also engaged occasionally Saw-whets produce from four to in mutual neck-grooming. seven eggs, though I have never The female was quite fastidious about herself seen more than three live young and bathed regularly in the stream, much as a robin at a nest site. The eggs are bathes in a bird bath. I laid several days apart, caught glimpses of this and since incubation procedure on three begins with the occasions, very first or second early in the the egg, morning when owlets hatch at the first light was creeping rather into the dark widely forest. She would step into the stream where there was no more than an inch or two of water over the sand and pebbles, swish her face back and forth in it, then flap her wings very rapidly. Repeating the action until she was thoroughly drenched, she

I was particularly interested in learning about the sounds of saw-whets, since I had not found much information on this subject. From early summer until about the end of the following February, saw-whets rarely make any sound at all. But I have found that during courtship and nesting they have a surprisingly varied repertoire. The "saw sharpening" sound for which the species is named is not the most common or frequent call, and in fact seems to be reserved mainly for the period of courtship. A single whistled note, endlessly repeated, is the call I have heard most often. From a distance it has a ringing or twanging sound, and could be compared to the sound of a metal object tapped

would fluff her feathers and fly quickly

against a glass bottle.

But there are many other calls, and gradually I became aware of subtle nuances in each type of call. The adult female is quite vocal with her offspring when they begin to venture out of the nesting cavity, and the adults converse frequently with each other in soft whistles. The male has a special whistle when he approaches with food. On entering the nest with morsels of prey, the female makes soft gurgling sounds. Almost all of the calls and utterances have a whistling quality. Sometimes I have heard a single note upslurred at the end, as if a question were being asked. Infrequently, they make sounds which are similar to robins or barred owls, and on one occasion I heard (and saw) one uttering a kind of "wicka wicka" call, reminiscent of various woodpeckers.

I observed the Spruce Family intermittently for two months, often for several days in succession. The young owls grew rapidly in both size and inquisitiveness. Toward the end of the fourth week they were trying to fly, the largest of the three starting first. This was both amusing and nerve-wracking to watch, for they would launch themselves clumsily into space and land haphazardly on the forest duff, but they never seemed to be hurt. Confused, they sat flapping their stubby wings. Mother saw-whet would then appear and perch on a branch above, displaying what seemed to be concern, and admonish them with soft whistle calls. She would continue to sit and stare straight down at the ground as long as the little ones were there.

With more determination than grace, the little "gnomes" struggle-climbed repeatedly back up the trunk of their tree, gaining experience and muscle strength with each trip. After their first few encounters with the ground below, the young owls began to discover that this new part of their world had many interesting things to offer. They started to explore a bit, poking beneath leaves and pine needles and spruce cones. Their attention was attracted by the faintest sound or slightest movement. When a blade of grass or a dry leaf moved in the breeze it was immediately investigated. Even the *shadow* of a plant, barely moving as the plant blew softly in the wind, was pounced upon. They reminded me of kittens at play.

Gradually flight was achieved and the juveniles practiced by flying among the surrounding trees, at first 20 or 30 feet, then 50, then 100. Food was still being provided by the parents at this stage, but I saw one of the youngsters take what was probably its first self-caught prey: a large beetle. The little owl had been gazing down from a branch about 25 feet up, when suddenly it dropped to the ground and returned with the beetle in its talons. Shortly after this incident the entire family left the vicinity of the nest tree, and I no longer heard any of their calls.

n winter, saw-whets may wander to regions beyond their normal range in search of food, but they still much prefer the deep conifer forest. They are fond of sitting on a branch of a conifer very close to the trunk, often with their backs right up against it. This is a frequent habit year-round, but when the snow is deep it enables them to look down into the space around the base of the tree, where mice emerge from beneath the snow.

When the cold months are extremely harsh and there is a dearth of small rodents and small birds, the northern owls must fly south, and saw-whets do not fare very well at these times. There are many records of them perishing in their attempts to make lengthy migrations in search of food.

Because saw-whets are so secretive, it is difficult to determine whether the species is declining or holding steady. They have never been frequently sighted. But perhaps their small size and quiet, reclusive nature have been advantageous to them. My search for them has revealed that they are there, deep in the woods, going silently about their business, with the beauty and dignity all owls possess.

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