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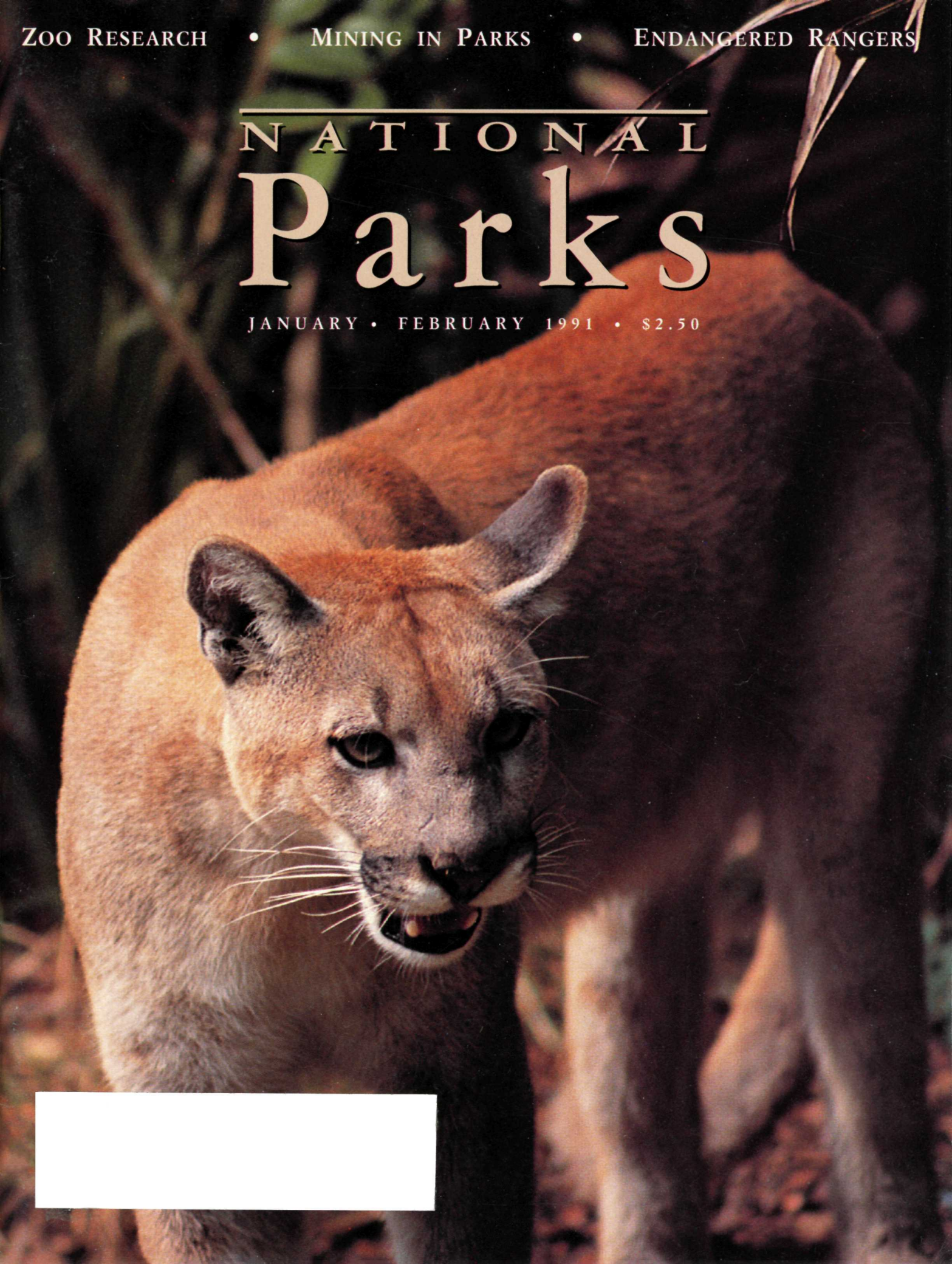

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NATIONAL PARK SERVICE

Mining in Death Valley, page 26

EDITOR'S NOTE

Most people assume that national parks are, if not pristine, at least protected from the overt ravages of industry and exploitation. But a law established more than a century ago has allowed mineral development to occur within many national parks. Today, it's estimated that perhaps two-thirds of all national park units face mining threats either within or near their borders. Besides defacing the landscape, mining pollutes air and water, erodes soils, and disturbs wildlife habitat.

Conservationists see an urgent need for reform of the 1872 mining law. Although a bill restricting mining claims was defeated in the last Congress, there's hope for positive action in the coming year: congressional leaders are planning to reintroduce reform bills, and grassroots support for this issue is steadily building.

NATIONAL PARKS

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NATIONAL
Parks

THE MAGAZINE OF THE NATIONAL PARKS AND CONSERVATION ASSOCIATION

Vol. 65, No. 1–2
January/February 1991
Paul C. Pritchard, Publisher

OUTLOOK

FEATURES

DEPARTMENTS

COVER: *Florida panther, by Profiles West/E. Delaney. Once ranging from Texas to the Atlantic coast and north into Tennessee, Florida panthers now number only 30 to 50 in the wild.*

Established in 1919, The National Parks and Conservation Association is the only national, nonprofit, membership organization that focuses on defending, promoting, and improving our country's National Park System while educating the public about the parks.

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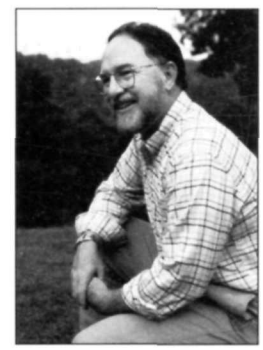

With all the political confusion about our nation's priorities, one important event of 1991 will be the National Park Service's 75th birthday—an opportunity for celebration and self-examination. And the times are right for both.

The 1916 legislation creating the National Park Service (NPS) stated that the agency's management of the parks would be directed toward both "resource preservation" and "public enjoyment." The inherent conflict between these two objectives has meant that NPS's mission over the last 75 years has been occasionally blurred. In fact, many a concessioner or dam builder or paving contractor has satisfied personal greed while claiming to serve the public good.

Fortunately, there have also been park service employees who have seen that if you destroy natural resources, even by "whittling away," eventually there will be nothing left for the public to enjoy. These individuals mirror the truest image of commitment to the Park Service's unique task—to save something that reflects the very essence of the American spirit, be it a battlefield, an Anasazi dwelling, a grizzly, or a great wilderness.

Since 1916, we have had 14 directors with more than 10,000 employees looking after our 357 units of the national park system. We are grateful for their achievement, their dedication.

But what of the future? Will the Service allow itself to be simply the groundskeeper and policeman of the parks, losing its cherished roles of interpreter and resource manager? Is there no visionary leader who sees that the Park Service's role is more akin to that of the Smithsonian than to those of other "multiple-use" agencies of the Department of the Interior? And what about the next generation of national parks—will they be well protected?

NPCA must take a careful look at itself through the same magnifying glass. More and more, decisions affecting the parks are made by state and community governments. We must be there with dedicated citizens and knowledgeable staff.

Yet, Congress will continue to mold the role of NPS. While those in Congress and the Service deal with the public's short-term expectations, we must not allow them to lose sight of the long term. NPCA's vision of the future recognizes the need for inspired NPS scientists to protect natural and cultural resources; the value of a park visitor impressed by a dedicated interpreter; the worth of a ranger's care for a family lost in the backcountry; the inspiration of a superintendent who saves a special view outside of the park.

"Service" is both a noun and a verb. In few other public roles is that dual image so essential. Happy birthday, National Park Service—we're with you all the way.

Paul C. Pritchard

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LETTERS

Rotten to the Corps

Having dealt with the Army Corps of Engineers for more than 20 years on the Passaic River with little good to show for it, I read with interest Vicki Monks' article on the Florida Everglades and Kissimmee River ["Engineering the Everglades," September/October 1990]. Our experience with the Corps since 1969 has been fraught with arguments, false interpretations on environmental matters, and underhanded political manuevers.

After some deep thought, we've decided that the job will be done better, faster, and at less cost if it's done by the State of New Jersey without federal aid.

Go ahead and do it, Florida!

Ella F. Filippone
Executive Administrator
Passaic River Coalition
Passaic, New Jersey

As these areas breathe their last gasps, the Corps is all too willing to turn its hand to environmental do-goodism, too little, too late. The likelihood of the Everglades' salvation seems about as possible as the survival of a fat fish in a tank of alligators.

Kathy Hall
Atlanta, Georgia

Where the Wild Things Are

It's high time that all agencies responsible for the management of America's wildlife ["Control of the Wild," September/October 1990] discard the shoot 'em to save 'em theory for a more innovative and progressive nonlethal and noninjurious approach to dealing with fauna/flora and wildlife/human conflicts.

D.J. Schubert
Silver Spring, Maryland

"Control of the Wild" made my blood boil—the massacre of bison and ground hogs is thoroughly unwarranted. It would seem that NPCA also abhors these annual atrocities until I read, "But NPS deems well-controlled public hunts a relatively humane method of reducing wildlife populations."

Does that mean that, because NPCA is representative of NPS, you support this view?

Robert Breland
Vicksburg, Mississippi

First, NPCA is not always representative of NPS. We are a nonprofit membership organization working to defend, promote, and improve our national parks.

Second, NPCA does not oppose hunting where it has been specifically provided for by Congress and is allowed by law. However, we disagree with NPS policy at Yellowstone NP—the bison should get a winter range; they should not be victims of target practice (see "News" for related story).

—the Editors

On the Road

Doug Fulmer's "Access" piece got me wondering about NPCA's role in solving some of the terrific traffic congestion problems in the parks ["Scenic Drives," September/October 1990].

I have seen the congestion on Trail Ridge Road—and everywhere else in Colorado's Rocky Mountain National Park—get worse and worse. In late July and August, driving on Trail Ridge is little different from driving in Denver's rush hour.

The most significant improvement we could make in Rocky Mountain NP would be to reduce, or even eliminate, the use of private vehicles.

What does NPCA think should be done? What can members do?

John Bliese
Lubbock, Texas

An RV park at Denali! [News, September/October 1990] What a lousy idea!

The area of Wonder Lake in Alaska does not need 200-plus people tromping through and destroying the tranquility and the ecology of the area. Where else can we sit and watch the world go by, hear the beating of wings as birds soar overhead, watch the caribou graze, or the beavers build their homes?

What can I do to prevent this pending disaster to one of our finest national treasures?

Joan L. Hoffman
Athens, Georgia

NPCA supported the shuttle bus system now operating in Rocky Mountain NP, and we will continue to advocate similar public traffic systems for other parks such as Yosemite. Our members should urge NPS to adopt our Visitor Impact Management Study (VIMS) — NPCA's plan to manage park visitation. Copies of this report are available from NPCA. Write to Carrying Capacity Project, 1015 Thirty-first St., NW, Washington, D.C. 20007.

In regard to Denali, you can also write members of Congress asking them to support the purchase of this inholding through the Land and Water Conservation Fund. The fund has contributed more than five million acres to approximately 10,000 areas, including parks and historic sites nationwide.

—the Editors

Write "Letters," National Parks, 1015 Thirty-first St., NW, Washington, D.C. 20007. Letters may be edited for space.

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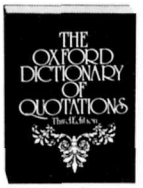

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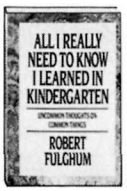

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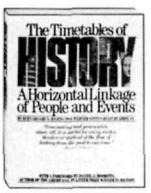

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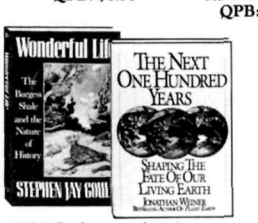

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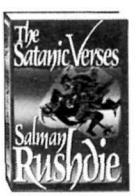

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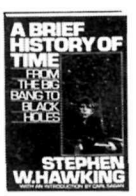

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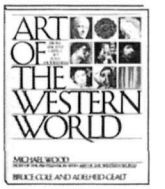

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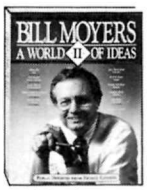

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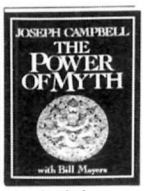

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NEWS

101st Congress Passes Park Bills

Contention, deadlock, and financial woes grabbed the headlines, but when the 101st Congress adjourned this fall, it had also passed some major pieces of environmental legislation.

Bills concerning national parks were some of the first and last items on the 101st Congress's agenda and commanded its attention in between as well. NPCA continued its lobbying efforts through the session's end and applauded improvements to the park system, many of which had been outlined in NPCA's National Park System Plan. Parks also benefited as lawmakers tackled broad issues such as air pollution.

The largest accomplishment was the passage of a new Clean Air Act after ten years of political stalemate. The legislation contains prescriptions for significantly reducing acid rain, urban smog, and toxic industrial emissions.

Acid rain provisions should prove especially beneficial to parks, as should a study of the poor visibility air pollution causes in parks nationwide. The House had included a stronger visibility amendment in its bill. But after last-minute political machinations, the conference committee accepted weaker Senate provisions instead. (See separate story, p. 12.)

Congress passed many bills directly addressing the park system as well. It boosted National Park Service funding for fiscal 1991 to more than $1.3 billion, an increase of $100 million over fiscal 1990 and $320 million over the administration's recommendation.

In 1989 Congress added 107,600 acres of wetlands to Everglades National Park to help restore its natural water flow. Canal projects and water management practices have disrupted normal water movement in the Everglades, leaving the marshy ecosystem and its wildlife struggling to survive.

FLORIDA STATE NEWS BUREAU

Expansion of Everglades may help restore its natural water flow.

A bill passed last summer established a new national park site, Petroglyph National Monument, to preserve ancient Native American rock carvings. Between 15,000 and 17,000 petroglyphs are etched into the 17-mile escarpment bordering Albuquerque, New Mexico.

The bill also expanded Pecos National Monument in New Mexico by 5,500 acres, renaming it Pecos National Historical Park. At Pecos are the remains of prehistoric, Pueblo, Apache, and Spanish settlements. Later Congress designated the Glorieta battlefield, where one of the Civil War's westernmost battles took place, as a unit of Pecos.

Legislators expanded other Civil War sites as well. The boundaries of Gettysburg National Military Park were changed to include 1,900 acres of previously unprotected battlefield.

Congress also expanded Vicksburg National Military Park, Harpers Ferry National Historical Park, and Fredericksburg and Spotsylvania National Military Park.

Finally, Congress authorized a comprehensive study of endangered Civil War sites nationwide. The study will also consider alternatives for preserving battlefields in the Shenandoah Valley.

Historical sites fared well in the 101st Congress. Legislation passed in October established Weir Farm National Historic Site in Connecticut, which was the home of painter J. Alden Weir and a center of American Impressionism.

Earlier in the session Congress created Ulysses S. Grant National Historical Site to preserve the home of the

president and Civil War general.

Congress added new Spanish mission ruins to Tumacacori National Monument in Arizona and re-designated it a national historical park. It added land to Harry S Truman National Historic Site in Missouri and added the house of William Johnson, a freed slave who rose to prominence, to Natchez National Historical Park in Mississippi.

Legislators authorized, and in some cases funded, studies of ways to preserve or commemorate sites along the Underground Railroad; historic Route 66, "the mother road" of westward migration; the route of the 1965 voting rights march from Selma to Montgomery, Alabama; the culture of the Acadian people of Maine; and sites representing the history of jazz.

In other actions, Congress established a national research program on global climate change and passed both a bill and a resolution calling for an international, indefinite ban on mining in Antarctica. It also funded a committee to recommend a plan for reintroducing wolves to Yellowstone.

Congress passed legislation requiring a report from the Park Service every three years on the needs of each unit of the park system in areas such as land acquisition, resource management, interpretation, operations and maintenance, housing, construction, and personnel. The bill also calls on the Park Service to prepare within the next year a set of criteria for evaluating proposed boundary changes to parks.

Attached to the legislation was a provision reauthorizing the National Park System Advisory Board, including a provision reestablishing the National Park System Board Advisory Council.

There were several important bills that did not become law. The American Heritage Trust Act would have reshaped the Land and Water Conservation Fund, a national fund for expanding parks and open space. The House but not the Senate passed a bill to restructure NPS, giving it more independence from political interference. And efforts to protect the California desert also met stiff resistance.

Yellowstone to Help Montana Shoot Bison

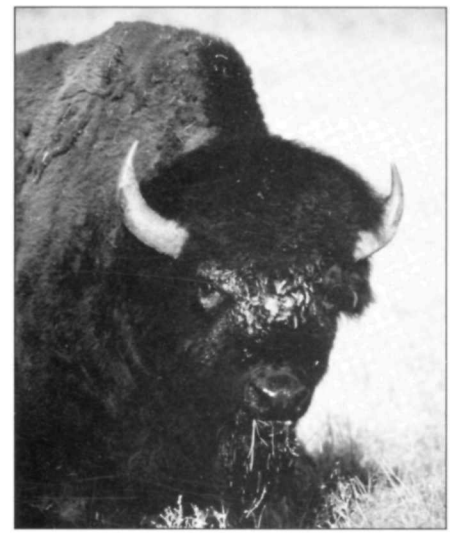
Yellowstone National Park rangers will help Montana state game wardens shoot female bison crossing the park's northern boundary this winter. The agreement has proven highly controversial.

The National Park Service and the state agreed on the plan in September, after Montana requested NPS to take a more active role in countering the threat state officials believe bison pose to domestic cattle. The state is concerned bison will spread *brucellosis abortus*, a disease that causes abortion in cattle, to livestock grazing on nearby public and private lands.

About half of the park's bison are believed to carry brucellosis. Bison-to-cattle transmission of the disease is considered unlikely by biologists, however, and has never been documented.

"Yellowstone needs to find a way to manage bison besides shooting them on the border," said David Simon, NPCA natural resources program manager.

Since 1985, Montana has allowed public hunts of bison that cross the park boundary. The hunt drew national attention in 1989 when unprecedented numbers of bison left the park, and hunters killed a total of 569 animals, slightly more than half the park's northern herd. Simon said that because of the ensuing criticism Montana officials asked the Park Service to help shoot bison.



BRIAN PARKER/TOM STACK AND ASSOC.

In winter, Yellowstone's bison cross over the park's boundary in search of forage.

"This is a Park Service problem, and Montana is the recipient of that problem," said K. L. Cool, director of the Montana Department of Fish, Wildlife, and Parks. "We felt it was fair," he said, that bison control be "a cooperative effort."

Under the agreement, rangers and wardens will shoot female bison, con-

NEWSUPDATE

Threat to Pipe Spring. Members of the Kaibab Pauite in northern Arizona have voted to permit construction of a hazardous waste incinerator on their reservation, which surrounds Pipe Spring National Monument. NPCA is concerned that pumping of underground water for use by the incinerator will dry up the historic spring.

Courier funding cut. Funding for the *Courier*, the National Park Service's in-house magazine, was slashed from the fiscal 1991 budget after a *Courier* columnist made a mocking reference to Congress.

Drilling defeated. The final version of the Defense Authorization Act did not include a Senate-passed amendment that would have allowed the president to open otherwise protected areas to oil and gas drilling whenever U. S. consumption of foreign oil exceeded certain standards. The Arctic National Wildlife Refuge, which for years conservationists have worked to protect from drilling, would have been especially vulnerable.

Fossils. *Park Paleontology* newsletter is available to interested NPS staff. Send an SASE to Vince Santucci, 833 Malvern Road, Pittsburgh, PA 15213.

sidered most likely to transmit the disease, as they leave the park. Calves will be tranquilized, spayed or neutered, and sold at auction. Hunters will still be allowed to shoot male bison.

The bison are the nation's last free-roaming herd, brought back from near-extinction earlier this century. Winter weather drives them down from the park's high meadows to forage in valleys. The herd has grown in recent decades, and the winter range it requires has spilled beyond the park border.

Park officials stress the agreement will be in place for only one year, as NPS, the Forest Service, and the Montana Department of Fish, Wildlife, and Parks prepare a long-range plan for managing Yellowstone's bison.

"The root of the problem is a lack of established winter range for Yellowstone bison," Simon said. "Congress has protected winter range outside the park for Yellowstone elk and antelope, but not yet for bison. The long-range plan should call for the establishment of winter range outside the park, not for stopping bison at the border."

Comments on the current plan or suggestions for the long-term plan may be sent to Superintendent Bob Barbee, Yellowstone National Park, WY 82190.

A New Clean Air Act Becomes Law at Last

The new Clean Air Act that emerged this fall from a decade of political deadlock has been hailed on all sides as an environmental landmark. Industry lobbyists managed to block the most sweeping measures, but the legislation still holds the promise of significantly cleaner air by early next century.

The new act mandates a 40 percent cut in emissions of sulfur dioxide to counter acid rain. It establishes tighter standards for tailpipe emissions, a clean-fueled vehicles program, and new controls on industrial pollution sources in cities whose air violates federal standards. It phases out ozone-depleting chemicals and sets strict regulations for industries that emit toxic air pollution.

The provisions on acid rain will be especially beneficial to parks. Acid rain, which kills lakes and streams and damages forests, forms as power plants spew out sulfur dioxide. The new act caps sulfur dioxide emissions from utilities at 8.9 million tons per year. This goal, set for the year 2000, means 10 million fewer tons emitted than in 1980.

While acid rain legislation was as strong as conservationists hoped it would be, last-minute political machinations blunted efforts to aid parks clouded by air pollution. As negotiations on the final bill neared completion, 24 senators pledged to filibuster the bill if it contained a House provision to enhance visibility in national parks. NPCA had taken the lead in efforts to include specific language protecting and improving park visibility during the Clean Air debate.

"We are disappointed that Congress does not consider the protection of the national parks as high a priority as the public does. We will continue to pursue other avenues so that the American people can truly enjoy the views in these places they have chosen to preserve for future generations," said Elizabeth Fayad, NPCA staff attorney.

While national parks contain many of the clearest, most open vistas left in the country, Park Service studies show human-made pollution obscures these views 90 percent of the time.

The House measure, sponsored by Representative Ron Wyden (D-Ore.), would have given all national parks of 6,000 or more acres created since 1977 the highest level of air quality protection available. All large national parks existing in 1977 gained this protection when the Clean Air Act was revised that year.

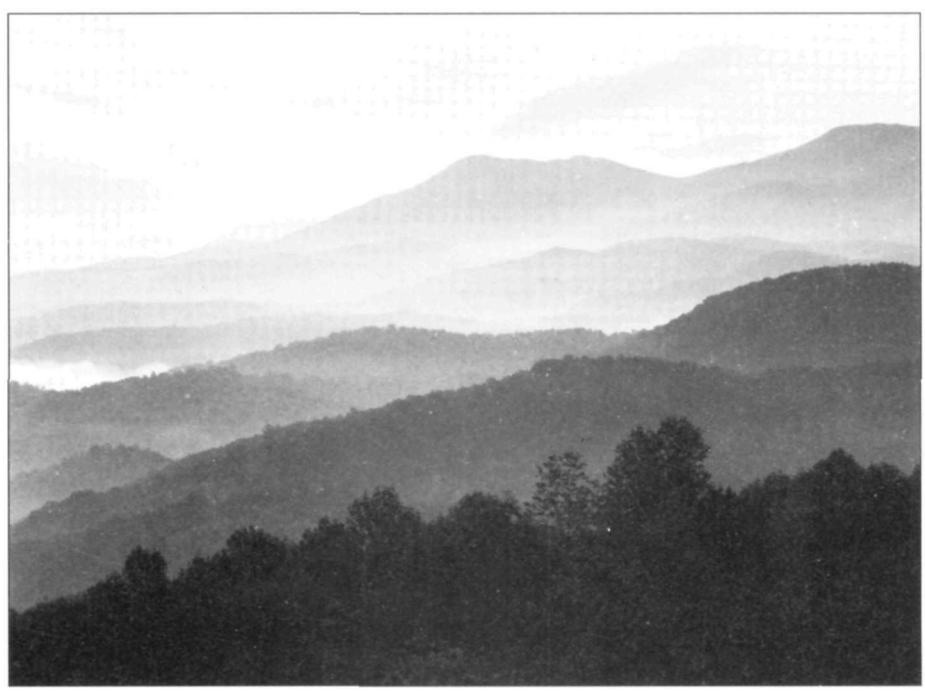
The Wyden provisions would have required EPA to develop within two years new regulations for the West on regional haze, air pollution formed from a variety of sources rather than a single point. These regulations would have protected western parks.

The amendment also would have given federal land management agencies such as NPS new power to counter potential sources of air pollution.

The final Clean Air Act instead contains weaker provisions from the Senate bill. The act establishes a five-year, $40 million study of low visibility and authorizes regional commissions on the issue. Rather than requiring EPA to strengthen regulations on regional haze, it simply gives it the authority to do so.

The 1990 Clean Air Act became law

Air pollution often turns the famous blue mist of Great Smoky Mountains to a white haze.



CARR CLIFTON

in November, but enforcement will be its real test. The act's previous incarnations contained solid provisions for cleaning the skies, but lax enforcement allowed pollution to worsen instead. This time, conservationists are working for a different outcome.

Olympic May See Dams Removed, Fish Return

The fate of two dams which have for decades blocked once-spectacular salmon and trout runs on Olympic National Park's Elwha River is tied into a dispute over bureaucratic control. The outcome could determine whether the Elwha and Glines Canyon dams will be relicensed or whether they will be dismantled, allowing the river and its fish to return to their natural state.

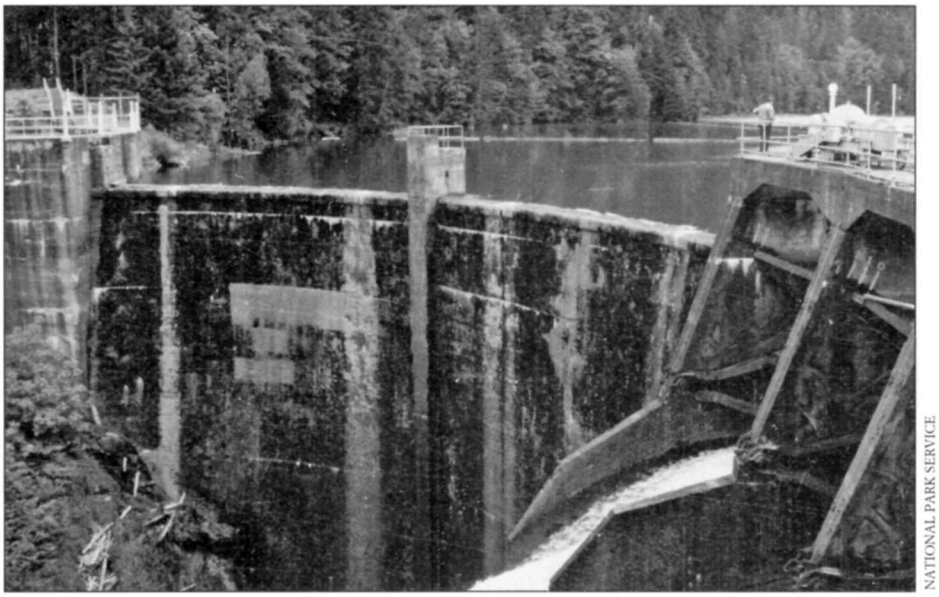
"The dams have devastated the ecology of one of the Olympic Peninsula's most important river systems," said Dale Crane, NPCA Pacific Northwest regional director. "Restoration of its natural diversity is imperative. The only way to do this is to remove the dams."

The Elwha dam, located outside Olympic on the Elwha's course to the Pacific, violated state law when it was constructed in 1913 by including no mechanism allowing fish to pass it. The Glines Canyon Dam, constructed in 1926 and now within park boundaries, blocked fish runs further.

The Elwha previously hosted the largest run of salmon and trout, which swim upstream from the Pacific to spawn, in the Olympic Peninsula. Most spectacular of the river's eight species were the chinook salmon, which attained weights of 80 to 100 pounds. The dams left fish with only five of their original 75 miles of habitat.

The Federal Energy Regulatory Commission has relicensing power over the Elwha Dam. Recently, it has repeatedly asserted the right to relicense Glines Canyon Dam. The dam's license expired in 1976, and FERC has issued temporary licenses for it each year since.

The Department of the Interior disputes FERC's claim, since Glines Canyon Dam is within a national park. Reports issued by the General Accounting Office side with Interior. The National Park Service and the U. S. Fish and Wildlife Service have advocated removal of both dams.



NATIONAL PARK SERVICE

Glines Canyon Dam in Olympic halts the Elwha River's legendary salmon and trout runs.

Writing to Interior Secretary Manuel Lujan, Representative Bruce Vento (D-Minn.), chair of the national parks subcommittee, called FERC's stance "a direct threat to the integrity of the entire National Park System."

Pressure to restore the Elwha's fish runs has mounted from local residents, environmentalists, Native Americans who have traditionally harvested the Elwha's fish, and members of Congress.

Federal studies have repeatedly concluded that the fish runs cannot be restored without removing the dams. In their absence, experts say, the Elwha's salmon and trout runs could return to nearly their historic levels.

The two dams supply electricity to a pulp and paper mill in Port Angeles, Washington, owned by the Japanese firm Daishowa. Conservationists have put forward a plan for making the plant more efficient, eliminating its need for the dams. If accepted by Daishowa, the plan could resolve the issue.

FERC is conducting an environmental impact statement, due December 1990, on the alternatives of relicensing the dams, with some mitigation of their impact, and removing them.

Meanwhile, Interior and other opponents of FERC's claims have asked the agency for a rehearing of their case. FERC can either accept their position, delay the hearing indefinitely, or again assert relicensing power. In the latter case, the issue will likely end in court.

Yellowstone Vision Comes Under Attack

In recent months, commodity interests have attacked the federal government's landmark plans for preserving the Yellowstone area. NPCA and other conservation groups fear the government may now be backing off from its stated commitment to making preservation of the Yellowstone ecosystem's integrity its top priority in the area.

"The plan's opponents have overreacted," said David Simon, NPCA natural resources program manager. "It clearly states the Yellowstone area will continue to support diverse uses. The question is where, when, and how."

The nearly 12-million-acre Yellowstone area is an ecologically seamless fabric of valleys, forests, meadows, and mountains. But on paper it is divided into Yellowstone and Grand Teton national parks, managed by the Park Service, and six surrounding national forests, managed by the Forest Service.

In a remarkable occurrence for two agencies whose approaches often clash, this summer NPS and the Forest Service, through their joint working group, the Greater Yellowstone Coordinating Committee, made plans for the first time to work together to protect an entire ecosystem. NPCA encourages this approach, called ecosystem management.

In the *Vision for the Future of the Greater Yellowstone Area* report, the agencies stated the first consideration in any decision will be its environmental impact. Logging, grazing, mining, and drilling will still continue in the national forests, they stress, but in "ways . . . sensitive to other resource values and uses of the land."

Interests such as the livestock, timber, and mining industries have vehemently objected, however. Several members of Congress and Wyoming Governor Michael Sullivan (D) have leveled their displeasure at the GYCC.

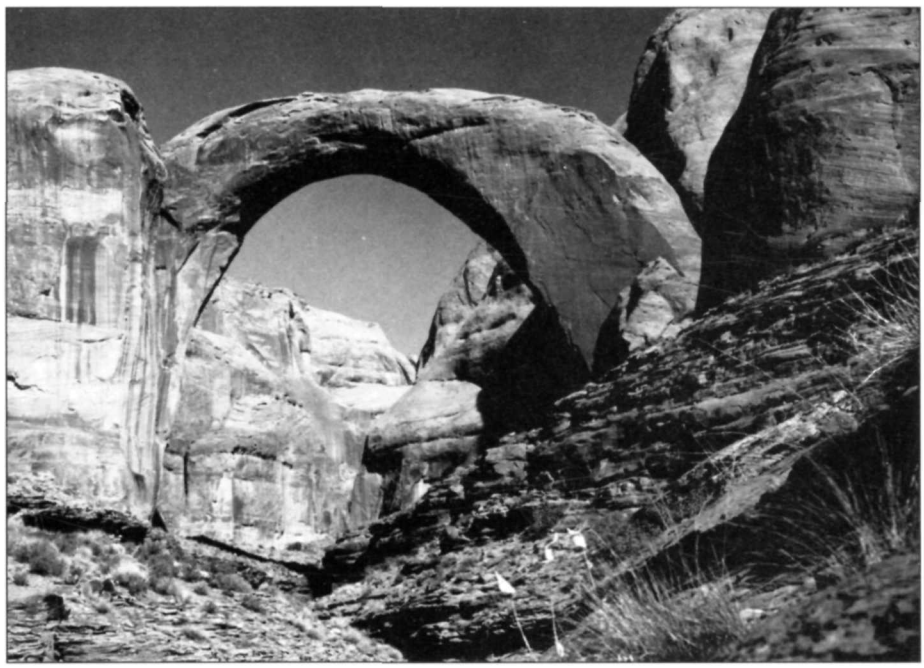
In what appears to be a result of this pressure, NPS and the Forest Service have canceled public meetings on the Vision plan in Denver, Salt Lake City, and Minneapolis. NPCA believes Yellowstone's national constituency is now less able to contribute to the plan. Further, the cancellations may mean the agencies are backing away from releasing a final version of the report or from carrying out their stated goals.

"While NPS and the Forest Service have approached the idea of ecosystem management, they may now be scared off from embracing it," Simon said. "It is so critical to the future of Yellowstone and other parks that it would be a disaster if they did not forge ahead."

The GYCC (Box 2566, Billings, MT 59103) will accept public comment on the plan until January 31.

NPS Overlooks Overuse At Rainbow Bridge

NPCA is criticizing a draft plan in which the National Park Service asserts that Rainbow Bridge National Monument in Utah can accommodate many more visitors than it currently receives. The monument protects the site of Rainbow Bridge, the world's largest natural bridge and a sacred site to many Native Americans.



NATIONAL PARK SERVICE

Rainbow Bridge was accessible only by foot until the construction of Glen Canyon Dam.

"The Park Service has taken a 'how many people can fit in a phone booth' approach," said Terri Martin, NPCA Rocky Mountain regional director. "It treats Rainbow Bridge as a sideshow, not a place of wonder and power."

The number of visitors a park can sustain without damage to its ecology or visitor experience is referred to as its carrying capacity. NPCA recently published a method for assessing carrying capacity to avoid such damage. NPS has begun to use such concepts in making management decisions.

At Rainbow Bridge, however, NPS calculated carrying capacity as the number of people that fit onto its floating dock and trail at once, without assessing the effects of such a high level of use. NPS says the figure, 390 people, would mean 655,200 visitors per year, a 300 percent increase over the approximately 200,000 visits it now receives.

NPS already recognizes problems of overuse at Rainbow Bridge. Among these are graffiti, vandalism of ancient Native American rock art, litter, trampled vegetation, safety and congestion problems caused by large numbers of boats in the canyons leading to the bridge, and high levels of noise.

Rather than reducing visitor numbers, however, NPS proposes controlling crowds by paving the trail, constructing a large paved "congregating area" near the bridge, and installing multiple signs and exhibits. Martin called these developments intrusive and inappropriate. She suggested the park limit visitation to small, guided groups.

NPCA supports a proposed shuttle boat system departing for Rainbow Bridge from a station downstream. NPS proposed constructing the station to regulate boat traffic but said it would establish the shuttle only if traffic exceeds the carrying capacity figure. Martin encouraged use of a shuttle to solve existing congestion problems.

Rainbow Bridge's crowding problems result from its shared border with Glen Canyon National Recreation Area, a short motorboat ride away. Visitors unaware of the distinction between the two sites often bring pleasure boating, rock climbing, and other inappropriate activities into Rainbow Bridge.

Rainbow Bridge was remote and accessible only by foot until the construction of Glen Canyon Dam in 1963. The dam backed up the flow of the Colorado River into Glen Canyon, turning the chasm into an artificial lake.

Lujan Hints at Shift Toward Jetty Permits

After years of standoff with the Army Corps of Engineers over a jetty project for North Carolina's Outer Banks, the Interior Department may have shifted its position. Comments by Secretary of the Interior Manuel Lujan seem to indicate a change from his department's long-time refusal to issue permits for the Oregon Inlet project.

Congress authorized the project in 1970. Interior has never issued the necessary permits, holding that building two 8,000-foot-long jetties on Cape Hatteras National Seashore and Pea Island National Wildlife Refuge, which frame the narrow inlet to the north and south, would severely erode those lands. NPCA has long opposed the jetties.

In an October 31 letter to Governor James Martin (R), however, Lujan said he had requested that the National Park Service and the Fish and Wildlife Service participate in the design of the project. With their participation, Lujan stated, "the natural flow of events will be that . . . the requirements of the FWS and NPS will have been met and the permit can be issued."

Based on Lujan's statement, Senator Jesse Helms (R-N.C.) announced "it can now be said with confidence that the twin jetties will be built." Martin, Senator Terry Sanford (D), and Representative Walter Jones (D) similarly interpreted Lujan's words.

"We have environmental concerns that have to be addressed, and we want to make sure we have a place at the table," Interior Department spokesperson Steve Goldstein said. "As long as everything goes well it would then be anticipated that we would go forward and issue the permits."

Interior has already permitted construction of a 3,200-foot groin for the south jetty, to be completed by December 1990. In 1989 Fish and Wildlife, reversing its long-time position, declared state-funded groin construction compatible with the refuge's mission.

In 1988 Interior stated it had "remained firmly opposed to the stabilization of the Oregon Inlet since 1977" because its scientists have "unanimous[ly]" concluded it "would result in irreversible alteration of the natural balance" of the islands.

In October Interior asked its legal staff to reexamine their opposition to the project. Its lawyers have concluded before that, because of the environmental damage it would cause, placing a jetty on NPS land would violate federal law. By blocking natural sand movement, scientists say, the jetties would accelerate shore erosion at Cape Hatteras and Pea Island, increase the danger of floods, and injure waterlife. The Corps says it has developed a new sand bypass system, but without more evidence conservationists are skeptical.

Supporters hold the jetties would improve safety in the treacherous inlet and point to a recent accident in which a dredge severed a bridge spanning the inlet. Opponents say better dredging of the inlet would improve navigability and could have prevented the accident.

Hydropower Project Threatens Black Canyon

The Bureau of Reclamation has released a statement favoring approval of a water diversion project on the Gunnison River in Colorado immediately above Black Canyon of the Gunnison National Monument. Other federal agencies say the AB Lateral hydropower plant would cause serious environmental damage to the park and to an adjacent proposed wilderness area. NPCA has been a leading opponent of the project.

NPS, the Bureau of Land Management, the Environmental Protection Agency, and members of Congress have all urged Reclamation to scrap the project or at least delay its final decision until an NPS study provides more information about its likely effects.

Black Canyon of the Gunnison National Monument contains 12 miles of the Gunnison River and the sheer, dramatic canyon it has carved. With the AB Lateral hydropower plant, 60 to 70 percent of the Gunnison's annual flow to the park would be diverted.

NPS and BLM say the huge reduction in the Gunnison's flow would cause serious damage to the river's wildlife, its "gold medal" class trout fishery, and its popular whitewater rafting industry.

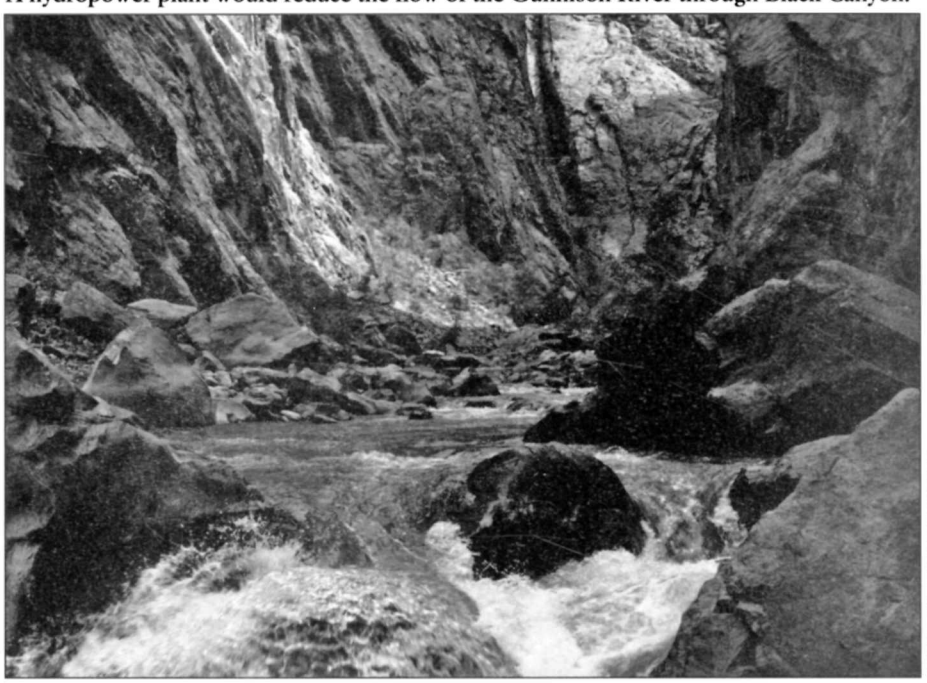
There have been moves in recent years to better preserve the threatened region because of its natural beauty and environmental significance. BLM recommended designating the area below Black Canyon wilderness. Both NPS and BLM have recommended the stretch of the Gunnison through the park and proposed wilderness be declared a wild and scenic river. Representative Ben Campbell (D-Colo.) has introduced legislation to make these designations. NPCA has also recommended the monument be expanded and redesignated as a national park.

NPS and BLM have stated they cannot support the AB Lateral project because of their legal duty to protect these areas. EPA says the project could violate the Clean Water Act.

NPS, which in 1991 will finish assessing the park's water rights in the Gunnison River, had asked Reclamation to wait for those results. Reclamation made its recommendation in August, however, relying on extrapolations from data collected elsewhere.

Reclamation's final decision was pending at press time. NPCA encourages readers to express their views to Interior Secretary Manuel Lujan (Department of the Interior, Washington, D.C. 20240).

A hydropower plant would reduce the flow of the Gunnison River through Black Canyon.



BUREAU OF LAND MANAGEMENT

Giant Movie Theater Planned Next to Zion

The dramatic southern entrance to Zion National Park, where the park's steep canyon walls rise around Springdale, Utah, is now the proposed location for a 55-foot-high movie theater.

Plans developed for the site by the California-based World Odyssey Corporation include a lodge, restaurant, retail shops, parking lots, and a cinema with a 50-foot by 70-foot screen.

"A structure this massive on the doorstep of Zion Canyon is inappropriate and highly intrusive," said Terri Martin, NPCA Rocky Mountain regional director.

The development would be located in what is now a tree-lined meadow directly across the narrow Virgin River from Zion's main campground. Martin said the now-tranquil campground would be permanently altered by the nearness of tall buildings, automobile traffic, and artificial lighting.

Martin said the development would also seriously exacerbate traffic problems visitors already confront at the park's south entrance.

NPCA has urged World Odyssey and the Springdale town council to consider alternative sites for the project.

The National Park Service has also expressed serious concern over the proposal and urged consideration of other sites. In a letter to the mayor of Springdale and the president of World Odyssey, NPS called the project "out of scale with the immediate environment. It would negatively impact the scenic environment and, therefore, the recreational experience of park visitors leaving and entering the park."

Springdale's town council has approval or veto power over the project. The plans may violate town zoning laws, which generally prohibit construction of buildings over 35 feet. NPCA has urged Springdale not to make an exception in the case of this project.

Those concerned about the project can write World Odyssey (4 Main Street, Los Altos, CA 94022) and send copies of the letter to Town Council, Springdale, UT 84767 and to NPCA.

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Nature's Laboratory

To preserve our parks, we need to know more about them

By F. Eugene Hester

THE MISSION of the National Park Service is to protect the many units of the national park system and to manage them unharmed for public enjoyment and understanding. With an area of 80 million acres and natural features ranging from glaciers to volcanoes, mountain peaks to large caves, alpine lakes to deserts and coral reefs, the challenge is great. Facing that challenge takes detailed knowledge of the resources in the parks.

A few years ago we queried superintendents throughout the Park System about the condition of natural resources in each park. When the responses were tabulated and analyzed, we found many examples of changing environments and identified some of the causes.

We found disruptive scars from previous land uses, invasions of exotic and feral plants and animals, erosion, and air and water pollution. We discovered ecological damage from visitors trampling vegetation, from consumptive uses such as poaching and illegal grazing, and from various types of developments outside park boundaries.

But one of the most important things we learned was how little we knew about some of our resources.

For example, we knew too little about how many acres in various parks had been invaded by exotic plants and how quickly these plants had spread.

Many of the issues parks face are the same issues the nation faces. Often actions many miles away that pollute water or air will affect parks downstream or downwind. Sulfates derived from sulfur dioxide emissions, for example, can travel hundreds of miles. Park animals also can travel this far, following migratory paths that may take them outside park boundaries.

It is increasingly apparent, therefore, that remoteness of location and protection from overt destruction do not adequately preserve park resources. Our ability to influence actions outside parks is related to our ability to understand and demonstrate their adverse effects on parks.

Clearly, the time has come when we must know much more about our resources—what we have, what is happening to them over time, and how they fit into the ecosystems of which parks are just a part.

To accomplish this, we need to re-evaluate the research goals of the National Park Service.

The most obvious management responsibility facing the Park Service is protecting resources from overt change or destruction. Often, however, the changes are subtle and their causes elusive. To better detect and document change, we must first know what resources we have. Then we must repeatedly measure them over time to monitor change.

In some places we have very good research and monitoring information, often extending back to the time of the park's establishment, such as at Great Smoky Mountains National Park. In some parks, we have exclosures—areas fenced to exclude certain herbivores—or other specific ways of measuring and understanding changes over time. But in other parks we have only general knowledge of the natural resources, based on observations without any systematic study.

Alternatively, we have detailed information on park resources that are highly visible or problematic but not necessarily priorities within the natural system as a whole. To illustrate, a recent study concludes that 40 percent of all wildlife studies in parks have focused on ten mammals. Species that are charismatic or problematic receive the most attention. Yet little work has been devoted to synthesizing information and discerning how wildlife depends on the interaction of ecological processes.

Many of the issues parks face are the same issues the nation faces.

This requires a knowledge of the ecosystems of which our parks are only a part. For instance, understanding problems such as air and water pollution requires a thorough understanding of air and water chemistry, as well as the impact pollution has on the resources in all parts of the ecosystem.

Our ability to detect changes, to determine causes, and to offer solutions is

dependent on an effective research program.

The Park Service conducts research in several ways. The most fundamental and direct way is with scientists stationed in individual parks. Generally, this is funded from the park's basic budget. Such research, as this arrangement would imply, usually provides information useful in management decisions at that specific park.

Another research method involves Cooperative Park Study Units. These units are established by cooperative agreements, usually between a university and a National Park Service regional office. The research often involves several faculty members and students in addition to any Park Service researchers stationed at the university. It typically includes research in several parks, often over a large geographic area.

This arrangement provides an excellent opportunity to draw on expertise from several departments of a university—expertise that may not be found within the National Park Service.

Universities benefit from this cooperative arrangement through interaction with Park Service scientists and the provision of park sites for research by faculty and students.

Sometimes the National Park Service has researchers stationed in regional offices or other central locations from which they address issues throughout an entire region. Also, a few researchers in national offices coordinate research and monitoring across all regions and parks.

Additional research is conducted by contract, and volunteers assist in research projects in parks. Others—especially academic scientists—function as independent researchers carrying out their studies in parks and sharing their results with us.

An important challenge to any research effort is the interpretation of information in a form useful for making management decisions. A Geographic Information System (GIS) does just that, by storing technical and scientific information in such a way that it can correlate different types of information, such as topography, soil type, and vegetation type.

At Shenandoah National Park, for instance, the park's GIS was used to create a map predicting areas most susceptible to gypsy moth attack by overlapping maps of forest cover types and elevation. Maps of actual defoliation patterns were later used to refine the susceptibility map.

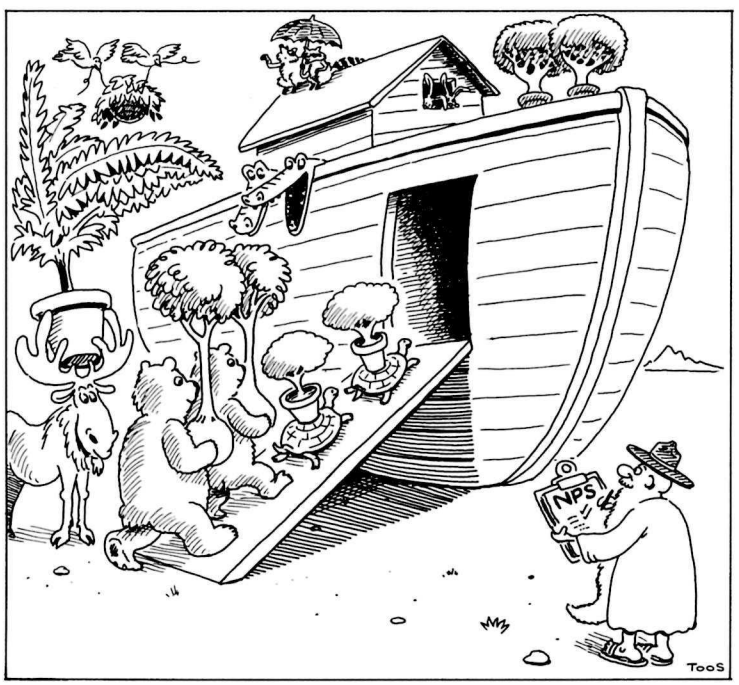


ILLUSTRATION BY A. J. TOOS

The somewhat decentralized way in which the Park Service organizes funds and administers research has sometimes caused confusion about the research and its management within the service. The goals have, in the past, been too broad and general. In addition, critical needs and limited funding have resulted in research that is focused on the most pressing problems of park managers, without the extensive, strategic research needed to answer long-term management questions.

These appear to be among the reasons Congress, in 1988, required the National Park Service to study its research program and make recommendations for the future. That study, by the National Academy of Sciences, is now under way, with a report due in 1991.

Additional studies, including the one conducted by the National Parks and Conservation Association, "National Parks: From Vignettes to a Global View," have made recommendations for improving the research program of the Park Service.

Because many national parks are largely unchanged by humans, they have become outstanding places to study how natural processes work. Isle Royale, especially, has become an invaluable natural laboratory for long-term research on the predator-prey relationships of wolves and moose.

National parks also provide undisturbed sites for measuring broad ecological mutations, such as that caused by global climate change.

To make the most of these rare natural laboratories and meet the needs of the future, we need to clarify management objectives. We also need to learn more about what resources we have and what is happening to them, and we need to better understand how natural systems function and work together.

By understanding the interdependence of natural systems, we will be able to see how various proposals outside park boundaries will affect us. And we will be able to see how we affect our neighbors, too.

With such information, we will be much better prepared to keep our national parks as they are supposed to be—inspiring samples of pure nature.

F. Eugene Hester is Associate Director of Natural Resources at the National Park Service.

The New Breeding Ground

Zoo research programs are rescuing endangered species from extinction.

By Jeffrey P. Cohn

Captive breeding programs may help save the critically endangered Florida panther, whose dwindling numbers are resulting in inbreeding.

PROFILES WEST/E. DELANEY; INSET: RICHARD DAY

AFTER HOURS OF preparation, JoGayle Howard was ready. She had mixed the saline solution and arranged the plastic tubes, syringes, and slides she would need for later laboratory analysis. Quickly she positioned a wire mesh cage to capture the rare black-footed ferret already inside. But, just as quickly, the nimble ferret executed a 180-degree turn in the narrow space, foiling Howard's attempts to catch the animal while it faced the right way.

Not one to give up easily, Howard turned the cage around and then around again when once more the ferret maneuvered itself into the wrong position. Finally, with the ferret beginning to tire, Howard gently grabbed the animal, inserted a syringe into its vagina, and removed it and its precious fluid a few seconds later. Howard, a reproductive physiologist at the National Zoo in Washington, D.C., was working with North America's most endangered mammal. Probably extinct in the wild, black-footed ferrets are known to survive only in captivity. Research by Howard and her colleagues at the National Zoo and in Wyoming helps tell wildlife biologists and zoo managers when males and females are ready to mate. Such knowledge is vital, Howard says, to the continued survival of black-footed ferrets and other rare or endangered species.

Only a few decades ago, too many zoos were little more than prisons for animals. Today, nearly all have replaced sterile concrete cages with large, natural enclosures in which animals can be seen in surroundings that suggest their native habitats. More important, many zoos have created research and conservation

J. H. ROBINSON; OPPOSITE PAGE: TOM & PAT LEESON

Successful breeding programs may result in the return of red wolves to Great Smoky Mountains National Park, one of the wildest areas left in their historic range.

programs that aim to advance our knowledge of wildlife and to breed endangered species in captivity. Because of the role they play in conserving land, national parks often are the last sanctuary for the declining species zoos work with and provide a home for their reintroduction after their numbers have increased.

Take the black-footed ferret. Once found throughout western grasslands from Texas to Canada, it disappeared as ranchers and the U.S. government poisoned its main prey, the prairie dog. As prairie dog towns vanished, so too did North America's only ferret. Fortunately, 18 black-footed ferrets had been caught near Meeteetse by the Wyoming Fish and Game Department in the mid-1980s and brought to a newly created breeding facility in Sybille. There, and more recently at the National Zoo's Conservation and Research Center in Front Royal, Virginia, and at the Omaha zoo, their numbers have grown to 183.

If the captive population surpasses 200 in 1991, as expected given their birth rate in the past couple of years, ferrets will be reintroduced to the wild beginning in August. At least 50 captive-born animals will be released in the Shirley Basin south of Casper, Wyoming. A large prairie dog community still exists there, says Larry Shanks, endangered species chief in the U.S. Fish and Wildlife Service's Denver office. Future possible release sites include Wind Cave and Badlands national parks in South Dakota and Dinosaur National Monument in Colorado.

Before scientists could begin to attempt reintroduction, however, they had to address several questions. One, clearly, was whether captive-born black-footed ferrets could learn to avoid predators and to search several empty prairie dog burrows to find one with food. Wildlife biologist Brian Miller, who had studied ferret behavior in the wild before they were all brought into captivity, sought to answer that question at Front Royal. "We wanted to know if the animals' wild skills were still present and if we could enhance them," Miller says.

Working with Siberian ferrets, a closely related and much more common species, Miller rigged a rope-and-pulley apparatus in 1989 equipped with stuffed badgers and owls. By maneuvering the ropes, he could get the mock predators to "attack" the ferrets.

Next, Miller coordinated the attacks with rubber bands he shot at the ferrets. "Animals learn by close calls," he explains, adding the pain of a hit would likely be remembered and lead to a quicker dive for cover the next time. This year Miller has expanded the training to include a live but immature great horned owl and the biologist's own dog.

To find out if captive ferrets would search for food, Miller and his colleagues at Front Royal filled a 2,000-square-foot outdoor arena with dirt and placed two Siberian ferret families inside. Then he added live prairie dogs and observed as the ferrets got progressively better at finding a meal. As a result, these and other methods may be used to help prepare captive-born black-footed ferrets for release to the wild in 1991.

Meanwhile, Howard and David Wildt, the National Zoo's chief reproductive physiologist, have been study-

Zoos are breeding the last of America's only native ferret, the black-footed ferret, and teaching them to find food and avoid predators before their reintroduction to the wild in Wyoming.

ing ferret reproduction since 1985. They have developed techniques to collect, freeze, and store semen. The semen, most of which remains viable when thawed months or years later, can be used to impregnate females at other zoos and breeding centers without risking injury to animals during transport. It can also be used to diversify the species' gene pool by impregnating females years from now with semen from males long since dead.

Howard and Wildt artificially inseminated ten European ferret females in 1987. Seven became pregnant, and 31 kits were born. Elated, they extended their work to Siberian ferrets in 1989. That year, of seven females inseminated, five became pregnant, and 28 kits were born. Using frozen sperm and artificial insemination, the researchers have also produced Siberian black-footed ferret hybrids, used in research to develop a canine distemper vaccine for ferrets.

So far, however, attempts to transfer the techniques to black-footed ferrets themselves have not worked. Black-footed ferrets produce less viable sperm than European or Siberian ferrets, probably because of inbreeding among the species' few survivors, Howard says. "We're getting closer and closer," she adds with a note of confidence. "This species is one that will have to be genetically managed for years."

FROM THEIR WORK with ferrets, Howard and Wildt have developed similar techniques for collecting, freezing, and storing semen, artificially inseminating females, and even mixing semen and ova in the laboratory to produce live young in domestic cats, tigers, and other wild felines. They hope to use such methods to help save another critically endangered animal, the Florida panther.

A subspecies of the mountain lion or cougar, Florida panthers once ranged from Texas to the Atlantic coast and north into Tennessee. Today, only 30 to 50 of the large cats remain in the wild. All are confined to Florida's cypress swamps south of Lake Okeechobee. A third of them live in the Everglades National Park and adjacent Big Cypress National Preserve. There, the few remaining panthers are threatened by continued development, habitat loss, cars, and inbreeding caused by dwindling numbers.

A team of population biologists led by Ulysses Seal, chairman of the International Union for the Conservation of Nature's captive breeding specialist group, predicted in 1989 that inbreeding could kill off the remaining Florida panthers in 25 to 40 years if nothing were done to save them. In a dramatic example, the only adult female living in Everglades National Park mated with her own son last year because no other males had been around for years.

"We would like to get her pregnant," says Melody Roelke, a veterinarian with the Florida Panther Interagency Committee, a joint federal-state task force trying to save the Florida panther. But they would like to do it by introducing genetic material from panthers elsewhere in Florida, rather than by moving the animals themselves, which destroys their social structure.

In a test of such possibilities, the National Zoo's Howard and Wildt took semen from mountain lions in Texas—males who were about to be sterilized

and released in north Florida in 1988 to see if the habitat there could support translocated Florida panthers—and mixed it with ova from Texas females in the laboratory. Fertilized embryos resulted, but no pregnancies developed when the embryos were placed inside the females.

Nevertheless, Howard thinks the method, called in vitro fertilization, along with artificial insemination may work in Florida panthers. Moreover, Howard and Wildt are working on ways to collect, freeze, store, and later use semen from male Florida panthers killed by cars. If successful, it would be yet another way to preserve genetic stock and keep the species' gene pool as diverse as possible.

JEFF FOOTT/TOM STACK & ASSOCIATES

The Florida Panther Interagency Committee has developed a recovery plan for Florida panthers that includes creating a breeding colony in zoos and other facilities, says Dennis Jordan, the U.S. Fish and Wildlife Service's (FWS) panther coordinator. As part of the committee, the Park Service helped develop the captive breeding program and has funded parts of it. NPS is also involved in the capture of panthers and, if all goes as planned, will receive some of the offspring.

Two Florida panthers, both taken from the wild after being hit by cars, now reside at White Oak Plantation, a private breeding center for rare animals in northeastern Florida. For now, however, all plans to capture Florida panthers for captive breeding are on hold. The committee has to decide whether a full environmental impact statement is necessary. It also may have to fight a legal challenge from animal rights activists who oppose capturing any wild Florida panthers.

ELSEWHERE, more traditional forms of zoo research and captive breeding have saved yet another critically endangered species, the red wolf. A slightly smaller version of the gray wolf once found throughout North America and Europe, red wolves ranged from Texas to the Atlantic coast and north to the Ohio River. By the 1960s, only a few remained in far southwestern Louisiana and southeastern Texas.

Fearing the species would soon be extinct, as red wolves were interbreeding with the more numerous coyotes, FWS biologists captured all the animals they could find in the early 1970s and sent those they thought to be red wolves to the Point Defiance Zoo in Tacoma, Washington. From there, the animals went to a special breeding facility on a mink farm near Graham, Washington.

Thanks to zoo-based captive breeding programs, red wolves and black-footed ferrets have been rescued from extinction and are, or soon will be, back in the wild—including America's national parks.

But, as in the case of the black-footed ferrets, questions remained. Most important, were those animals red wolves or wolf-coyote hybrids? "An animal might look like a red wolf and, God knows, smell like one, but was it?" asked Curtis Carley, a FWS biologist who ran the capture program.

To find out, the 40 animals sent to Graham were allowed to mate. Their pups were then examined, first visually and later by comparing skull X-rays with those of known red wolves and coyotes. If a litter contained hybrids, the pups were killed and their parents separated and mated with known pure red wolves. Researchers then checked their next litters to see whether the male, female, or both were passing on coyote genes. Hybrid animals and their new litters were destroyed and new mates found for animals proven pure red wolves.

Through such painstaking work, 14 of the animals brought to Graham were labeled red wolves. From them, the captive population has grown to 110 in 19 zoos, including 40 at Graham.

Captive breeding has been so successful that some two dozen red wolves are now living in wild or semi-wild conditions. Since 1987, FWS has released more than 20 captive-born red wolves at Alligator River National Wildlife Refuge in northeastern North Carolina. Although more than half have succumbed to disease or car accidents, nine still survive. Those plus at least four and perhaps five pups born at Alligator River in 1989 are cause for optimism, says Warren Parker, a FWS biologist who runs the red wolf recovery program.

Another 11 red wolves now live on four coastal barrier islands off the U.S. Atlantic and Gulf of Mexico coasts. Living semi-wild, these captive-born red wolves and their pups should do better when released to the wild than zoo-raised animals released earlier. In a test of the concept, a captive-born pair and their four young were released this year on Durant Island in Albemarle Sound, a part of the Alligator River ecosystem.

Further, FWS and the National Park Service plan to reintroduce a red wolf pair and any pups they may have to the wild in 1991 in Great Smoky Mountains National Park along the North Carolina-Tennessee border. The adults will likely be animals born in 1989 on one of the coastal islands. If all goes well, another six or seven pairs and their young will be reintroduced into the park in 1992, says Parker.

"Great Smoky is one of the largest and wildest areas left within the red wolf's historic range," adds Joseph Abrell, the park's resource and scientific manager. "Red wolves need to be released to the wild so natural selection can work and they don't become just another domestic breed. We need to test them against the environment."

That, indeed, is just one of the main goals of the zoo-based research and captive breeding programs. Through them, red wolves and black-footed ferrets have been rescued from extinction and are or soon will be back in the wild, including America's national parks. And, with some luck, Florida panthers and a host of other animals will soon be, too.

Jeffrey P. Cohn is a freelance writer based in Washington, D.C., and a self-proclaimed zoo nut.

UNDERMINING THE PARKS

An antiquated mining law endangers national parks and their visitors.

By Todd Wilkinson

Recent exploration roads built by a mining company mar the landscape just outside of Yellowstone. Such activities, both inside and outside national park boundaries, can have disastrous impact on park ecology. Photo by Don Bachman, Greater Yellowstone Coalition.

NPS PHOTO

An open tunnel at an abandoned mine presents a public safety hazard in Arizona's Lake Mead National Recreation Area. About one-third of all national park units have the remnants of abandoned mines within their borders.

WHEN THE WORDS are strung together, the title has a troubling ring of incongruence. Say it once and it sounds like an oxymoron: the National Park Service's Mining and Minerals Branch (MMB). But David Shaver has seen the grim remains—the perilous shafts, radioactive pits, and poisonous rivers eating away at the national parks. If you were to ask Shaver to explain the purpose of the MMB, his response is liable to unearth a new definition of multiple use.

"Most people believe that mineral development doesn't happen, or has never happened, in America's national parks," says Shaver, chief of the special mining division created by the Park Service in 1983. "Frankly, why should they think otherwise? After all, we're talking about parklands that are held in highest esteem. But because of privately held mineral rights, development in the national parks represents a significant public safety and environmental hazard. Since we don't have the dollars to buy the rights, my office attempts to regulate mineral development to mitigate adverse impacts. It may sound absurd, but it's reality."

More than absurd, Shaver says, it's also the law. Of the 357 units in the National Park System, two-thirds are saddled with outstanding mineral rights—mining claims, mineral leases, or privately held resources such as oil and gas. Perhaps one-third have the remnants of 10,000 abandoned mines inside their borders. Two-thirds face mineral development threats either within or around their borders. The universal notion of parks being sacrosanct wildlands has hardly deterred industry and individuals from exercising their legal right to tap the natural payload of minerals lying beneath the earth's surface—be it gold, copper, silver, uranium, oil, natural gas, or a list of metals ranging from antimony to zinc.

The problem of private mineral rights in national park units exists for a variety of reasons; for example, the rights may have been acquired prior to park establishment. But in many cases, the problem has its origin in the General Mining Law of 1872, a law that encouraged settlement of the West by granting almost limitless rights to extract hard-rock ores from public lands. More than 100 years after its passage, conservationists are challenging this antiquated law, as well as other mining laws and regulations, in their bid to strengthen protections for vulnerable parks.

Several provisions built into the 1872 law—ironically passed the same year that Congress established Yellowstone, the first national park—undermine protection of national parks. And because the law's provisions apply to virtually all public lands, including national forests and Bureau of Land Management holdings, the parks are in

double jeopardy from mining activity permitted outside their borders. "Under the 1872 law, park managers cannot say no," said Phil Hocker, executive director of the Mineral Policy Center, a watchdog group based in Washington. "All they can do is stand by and wave their finger."

Here's how the law works: upon discovery of a mineral, individuals and companies can at no cost stake a claim to federal land. At that point, they have an exclusive (unpatented) right to extract the mineral. By merely proving that the ground contains profitable hard-rock minerals and paying a $2.50 per acre fee, they can acquire a patent. Once a patent is secured, ownership of the land is transferred from public into private hands, and the right of the landowners to develop the property—even for nonmining purposes—is paramount to all other uses. "The 1872 mining law eliminates a park manager's ability to make intelligent decisions," said Hocker. "I call it the law with no brain."

Impacts inflicted by mining under the law—both inside and outside the national parks—include erosion, sedimentation, air and water pollution, disturbance of wildlife habitat, and scarring of landscapes. Besides this aesthetic and physical harm, there persists a nagging philosophical question involving the taking of federal land for development purposes. Once a claim is staked and successfully patented, the landowner can use the land for any development activity. If the government opposes the plan or argues that it would harm other resources, park managers must then buy out the claim, often at values astronomically inflated over the original net worth of the supposed minerals lying beneath the ground. "It makes little sense to allow individuals to acquire mining claims for $2.50 per acre when the Park Service has to turn around and buy them back for millions of dollars," said MMB Chief Shaver.

"We have witnessed several instances of claims being taken to patent clearly with the intent of using them for nonmining purposes," said Floyd Sharrock, chief of the Minerals Management Division for the Alaska region of the National Park Service. The branch that Sharrock oversees has more active claims in the national parks than any other region in the country. Last summer a landowner in the Kantishna section of Denali National Park submitted a plan to develop a major tourist resort on lands that were finagled through mining claims. In other parts of Denali, resort consortiums and even Japanese investors have expressed an interest in buying patented land to build large resorts. More than 30,000 acres of private property acquired under the 1872 law are encompassed by national parks in Alaska, and the purchase price of the property—not including the cost of reclamation—is estimated at between $33 million and $46 million for 1,531 claims.

NPS PHOTO

Talc, a soft mineral, is currently mined within Death Valley National Monument.

Today, all units of the National Park System are closed to additional claim filing (the 1976 Mining in the Parks Act closed the last six parks that had remained open to new claims), but at least 25 park units contain valid mining claims that predate creation of the park or passage of the 1976 law. These units include such revered places as Death Valley National Monument, Organ Pipe Cactus National Monument, Crater Lake National Park, and several national parks in Alaska. Great Basin National Park, designated the nation's 49th national park in 1986, included approximately 400 existing mining claims. Overall, NPS estimates that approximately 752 patented and 1,346 unpatented claims that were grand-fathered into the parks still remain. "These claims are like a guillotine hanging over the head of the national parks," said David Simon, NPCA natural resources coordinator. "But I believe the American public is willing to support a rescue—in fact, that's one of the main reasons we need to pass the American Heritage Trust legislation."

WHILE MINING RIGHTS grandfathered into the parks represent a formidable resource problem, abandoned mines pose a staggering public health hazard. One of the most egregious points of the 1872 law is that it requires no reclamation or clean-up of despoiled lands after mining has occurred. The 1976 Mining in the Parks Act gave managers the au-

thority to demand reclamation for new mines, but it does nothing for cleaning up abandoned sites.

For the families of Douglas Jeffery and Bill Eimer, the failures of the law are permanently imprinted on their lives. In 1970, while visiting Lake Mead National Recreation Area, Jeffery fell 165 feet to his death in the abandoned Treasure Vault Mine. In 1984, Eimer died while exploring a tunnel at the abandoned Keene Wonder Mine at Death Valley National Monument in California.

In a special report prepared in 1989, the National Park Service chronicled the problem of abandoned mine sites in national parks, which not only pose human health hazards but impact wildlife habitat as well. At Wrangell-St. Elias National Park, for example, park staff surveyed 17 of the park's abandoned mining sites and found debris scattered over 30 acres—including 1,163 gallons of petroleum distillates, solvents, and miscellaneous fuels; 142 pounds of calcium carbide and litharge (an assay powder containing large amounts of lead); and 310 pounds of dynamite.

The report detailed problems at other national park units as well. Among them:

- In Grand Canyon National Park, the Orphan Mine that produced uranium in the 1950s and 1960s today emanates dangerous radiation levels. The mine site, located only a few yards off the West Rim Drive and next to a footpath, includes contamination of several acres that are barricaded by only a chain-link fence.
- In Joshua Tree National Monument east of Los Angeles, there are an estimated 2,000 dangerous openings sprinkled across the desert.
- In Saguaro National Monument, there are more than 100 shafts that need to be reclaimed at a cost of at least $300,000. Besides a serious lack of funding, a new twist has arisen: park officials suspect that mammals and endangered bats may now inhabit the abandoned shafts.
- At Utah's Canyonlands and Capitol Reef National Parks, emergency funds were allocated by NPS to seal several

NPS PHOTO

mine openings after it was determined that exposure to the openings for as little as eight hours would yield a year's worth of radioactivity.

Park Service mining engineer Philip Cloues has surveyed the problem of abandoned mines from Alaska to the outskirts of Washington, D.C. "The West has a legacy of abandoned hard-rock mines because they're so easy to see, but you can go back to the East where there are just as many," Cloues said. "It's like playing Russian roulette with park visitors." These public health hazards and risks to park resources have gone largely unrecognized. This year, some 270 million visitors will enter national parks, some of which are laden with booby traps. Cloues estimates that, all told, it would take an average of $5,000 to neutralize each of the 10,000 abandoned mines in national parks for a total minimum expense of $50 million. This does not include the high cost of removing the hazardous wastes that remain at most of the larger abandoned sites.

NPS PHOTO

A polluted stream flows from an abandoned coal mine in Big South Fork National Rivers, Kentucky. The yellow color is caused by an iron precipitate that coats the stream bottom.

HARD-ROCK MINING reform continues to be one of the most volatile issues of the public lands debate. Although reform has been discussed for several decades, little progress has been made. Time and again, the politically powerful mining industry has turned back proposed changes to the 1872 law that would recognize environmental concerns. Just as there are efforts to strike the law from the books, the mining industry has been recalcitrant, bankrolling campaigns to keep the existing law in place. Joe Snyder, communications coordinator for a group called the Western States Public Lands Coalition, says the right to mine should transcend all public lands, even the national parks. "In my opinion, the 1872 law was never meant to be an environmental law. At the time it was created, Congress determined that mining was the best use of the public domain," Snyder said. Conservationists agree with Snyder on the original intent of the law but argue that environmental changes over the last century make the law obsolete.

Late in the 101st Congress, reformers tried to push through an amendment to the Interior Appropriations bill that would have imposed a one-year moratorium on all issuance of patents during 1991. The rationale behind the measure was that with reform looming, there will be a frantic rush by persons holding unpatented claims to file for patent and seize land ownership. If the patent rush occurs, experts say it would take the federal government more than $1 billion to buy out the claims in the national parks, national forests, and BLM lands.

Nevertheless, opposed by strong pro-development forces, the bill lost by a vote of 50 to 48 after a three-hour debate on the Senate floor. Hocker considers this but a prelude to a frontal attack on the deficiencies of the mining law, a fight that will be fueled by growing support at the grassroots level. "The gauntlet was flung in the 101st Congress," Hocker said. "In both the House and Senate there were opening skirmishes, but we expect the 102nd Congress to take up the battle."

Indeed, Rep. Nick Joe Rahall (D-W.Va.) and Sen. Dale Bumpers (D-Ark.), who have shown great leadership on this issue, plan to reintroduce hard-rock mining reform bills with the upcoming Congress. Conservationists say 1991 will be a year of reckoning for America's elected leaders. While the cost of reform will be high, the cost of losing the national parks to contamination and development caused by an outdated law could be far greater.

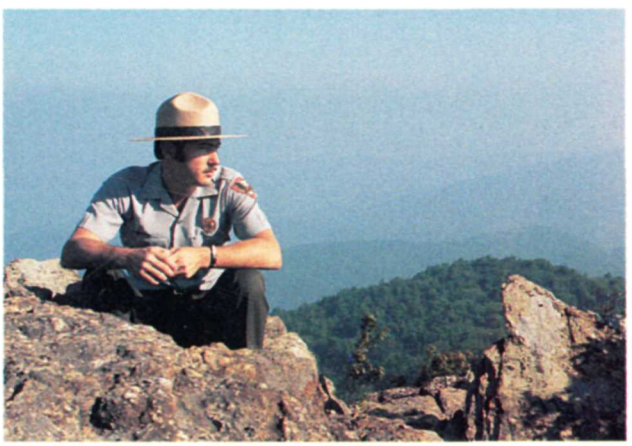
Mineral developers search for gold along Caribou Creek in Alaska's Denali National Park and Preserve. Located in the Kantishna Hills area, this claim is one of many within Denali's borders.

Todd Wilkinson lives in Bozeman, Montana. He writes frequently for national magazines on conservation and recreation topics in the West.

The Endangered Ranger

Despite the romantic myth, today's park ranger faces poor conditions and limited opportunities.

By Bernard Shanks



The men and women who protect our national parks are themselves endangered by low pay, limited career advancement, and inadequate housing. For the first time in years, the Park Service is having trouble recruiting and retaining good rangers.

MYTHS HAVE A ROLE in every society, even modern America. They inspire the young and provide comfortable dreams for the old. They give any organization an ideal model as a bright contrast to daily reality. But when myth and reality are so distant, so estranged, frustration and despair take command. This is the fate of park rangers today. "I believe in the National Park Service with my heart and mind," says one Park Service ranger. "But I can't say that I believe in the direction we are going. We are losing good employees to other agencies because of better pay and more job freedom."

Horace Albright, one of the key figures in the establishment of an NPS ranger corps, wrote in *The Birth of the National Park Service* that both he and Stephen Mather regarded rangers as "the key to the success of the National Park Service." Mather, the first director of NPS, wanted higher education standards for rangers, the promise of promotion within for a secure career in the agency, and an end to political patronage in the parks. Albright wrote that Mather had a special vision of what the rangers should be, and that he recognized the importance of an "esprit de corps" and used every means at his disposal to build it. For two generations, the Mather system fostered a ranger force equal to the best field staff among the federal agencies and superior to nearly every state park system.

Former Army scouts and the U.S. Cavalry troops had protected Yellowstone, Yosemite, and other early parks prior to the establishment of the Park Service in 1916. They became the core of the new ranger force and its lore. One of these early-day rangers, Harry Trischman, tracked down a lone outlaw who had robbed nearly 20 stagecoaches loaded with tourists headed for Old Faithful. After several days in pursuit over the rugged pine-covered Pitchstone Plateau and down into Idaho, Trischman found his man. He patiently waited until the bandit left the shelter of his cabin to pay a morning visit to the outhouse. When the stagecoach robber, relieved but vulnerable, stepped out, Trischman was waiting in the morning sunlight to make his arrest and add to the ranger mythology.

A young ranger in Yellowstone and other large parks during the 1950s and 1960s often worked for and heard the tales of the first rangers. Though ranger work was often boring and the housing poor, there remained some truth at the core of the ranger myth. Every park had accounts of rangers performing hazardous mountain rescues, encountering poachers in the wilderness, or surviving a winter storm while on patrol. Nearly all rangers were college educated, skilled in handling people, and knowledgeable regarding natural systems, wildlife, and ecology. Like today's rangers, they were viewed as Renaissance conservationists.

CONNIE TOOPS; FACING PAGE: FRED HIRSCHMANN

FRANK S. BALTHIS

The Park Service was a family, with rangers the elite core. But at the same time, the Park Service was growing larger, more diverse, and more urban. Staffs in the Washington and regional offices grew faster than those at the field level. During the past decade, it became clear that the Park Service was neither isolated from the modern world nor immune from larger social and economic trends. The ranger was to become an anomaly within the federal government's employee classification system and the bureaucratic system, both of which undermined the professionalism and economic security of the rangers and led to the present-day crisis.

The problem began in 1970 when the Washington office consolidated all rangers into two categories. One, the GS-025, was to be professional; the other, GS-026, was technical and not necessarily intended to move into the "ranger" ranks. Combined into the GS-025 series were formerly distinct series, such as the park naturalist series that required college degrees and other series that required no education beyond high school. That change eliminated the "professional" requirements for interpretive naturalists and many of the resource managers.

One intent of creating a technician series, according to Walt Dabney, NPS chief ranger, was to hire local people who didn't necessarily have college degrees for these jobs. In the 1970s, however, these positions were being filled by over-qualified people with high aspirations who sought to compete with 025-rangers for advancement. Many grew frustrated after years of low pay and few opportunities. Those with better opportunities left. The ranger decline had begun.

With a heritage resting on the colorful model of the U.S. Cavalry, any uniformed group of natural resource guardians has a tendency toward law enforcement. But in the 1970s law enforcement became the major mission for many rangers. Previously, rangers protected people from dangers in the parks, such as mountain storms, cold waters, or hungry bears; and rangers protected resources like historic sites, archaeological artifacts, and wildlife from people. The ranger of the 1970s and 1980s protected people from people. The land, wildlife, ecology, and history became secondary in many cases.

Simultaneously, good rangers began to leave the Park Service. "It was practically unheard of during the first years of the 1970s for an employee to leave a career as a park ranger," NPS Director James Ridenour recently said. "By the end of the 1980s, park units in proximity to large urban areas were often losing 20 percent and more of their permanent rangers each year."

Most of this turnover is in the lower-grade positions. Only 30 to 40 GS-9 level employees leave each year, which is about half the government-wide attrition rate. "Most of the people don't want to leave the Park Service," Dabney says. "They want to make things better."

Left: Rangers aid in the rescue of a visitor at Yellowstone. Because they are the ambulance and fire service in many parks, many rangers have emergency medical training. Below: Both in and out of parks, rangers face substandard housing, such as this trailer at Grand Canyon, and rents that are taxing their finances. Right: Rangers' increasing law enforcement duties range from minor traffic violations to serious crimes such as poaching, assault, and homicide.

NATIONAL PARK SERVICE

FRANK S. BALTHIS

Although the two-tier ranger class has been eliminated in order to give all rangers an opportunity for advancement, statistics reveal that last year, of the 3,180 permanent rangers in the Park Service, more than half were still classified as GS-8 or lower. Ranger entry level salaries are approximately $1,000 a month, and the bottom step of the common GS-7 rank brings a salary of about $20,000 a year, much below the average American worker. (The recently passed Pay Reform Act will increase pay levels by 4.1 percent in January.) Given present attrition rates, a GS-5 ranger today has only a one in 15 chance to be a GS-9 in 15 years. This log jam at lower levels is causing much of the turnover and morale problems among rangers.

In the vernacular of today's personnel managers, rangers do not have to meet a "positive educational requirement." In other words, a college education is not required to be a ranger. "At a time when park and natural resource management has grown increasingly complex, I've seen the educational level of park rangers decline," one career employee says. Above GS-9, however, at least 90 percent of the rangers have four-year degrees. "Management of the Park Service is in the hands of people who are college-educated," Dabney says.

Due to low pay and limited career-growth opportunities, the Park Service is losing its ability to compete for the shrinking pool of young, highly qualified college graduates. In April, Ridenour testified before a Congressional subcommittee that in 1989 the Park Service hired 250 new rangers, more than a third of whom lacked a four-year college degree. Additionally, only half of the employees who held degrees earned their education in disciplines related to park resources, such as park management, history, or the natural and biological sciences.

Nor are the rangers young; 60 percent of last year's new hires were over the age of 30. According to Ridenour, 50 percent of all rangers today are over 40. At a time when the educational level of rangers is in decline, the age is increasing, leaving the Park Service with aging staff with few if any career choices. One former ranger who joined the Bureau of Land Management as a recreation planner says, "Talented rangers usually find opportunities elsewhere, in one of the better state park systems or with another more progressive federal agency."

Housing also has long been a concern for rangers and their families. In the past, remote parks held at least the hope for a cozy cabin and the pleasures of living in some of the nation's most spectacular scenery. Chris Andress, a ranger who began his career in the Grand Teton and Yosemite parks, tells of living with his wife and three kids in a two-room tent in Yosemite. "We heated the place with a wood stove and had running water with two temperatures—cold and colder."

One ranger's wife in Grand Teton vividly remembers the many moves from winter park housing to summer ranger stations and back. "In Yellowstone, I moved 28 times in the first 15 years of marriage," she says.

Almost any ranger's family has vivid stories of moving into run-down trailers, metal Quonset huts, or rat-infested cabins. Encounters with skunks, squirrels, bears, and other park wildlife are part of the price paid by a ranger's family. Moves to Alaska parks seemed to occur during the winter, and transfers to the desert regions often happened during the heat of the summer. But these were common problems shared by most traditional rangers, and the future held the hope of higher pay and better housing.

As the Park Service acquired urban parks and seashores and recreation areas, the housing difficulties of rangers increased. In recent years not only did the cost of housing in urban areas soar but so did housing and land in such desirable places as Jackson Hole, Wyoming, and Estes Park, Colorado. Rangers in almost any of California's many parks now face rents that can exceed their monthly pay. Steve Wolfe, a district ranger in Point Reyes National Seashore located in exclusive Marin County, has seen several talented rangers leave the Park Service because of the high housing costs. Reductions in budgets have further cut his staff from seven rangers to three. "It is hard to keep a good ranger," Wolfe says. "If they can count, they go to another agency." When asked how he survives in Marin County, he jokes, "My wife is a teacher; otherwise I might not eat sometimes." Recently, the Park Service instituted special salary rates at five major metropolitan areas to offset some of the cost-of-living and pay problems. In addition, NPS and Congress have begun providing funds to deal with the more than $250 million needed to repair existing housing and provide new housing.

While much of middle America has adjusted to dual careers and the necessity of two incomes, the government personnel policies have made little accommodation for those rangers who are married and must consider the careers of their spouses. Transfers are offered to remote regions, which become dead-end sinks for one family member or the other. While private industry and other agencies encourage and promote dual careers and transfers, the ranger must adjust without the help of the regional or Washington office.

PROFILES WEST; WILEY/WALES

The Park Service classifies a wide range of jobs, from fee collectors to resource managers, into one ranger series.

Hardships facing rangers and their families include poor schools and busing children sometimes two hours or more to high school. Rangers tell of dwelling with the criminal elements in the poorest inner city neighborhoods with no hope for the middle-class dream of home ownership. Another ranger remembers moving his new bride into a desert park and finding their "apartment" a sun-baked hut with eight months' accumulation of dust and insects. "It even had its own ecology with the scorpions controlling the cracks in the bedroom's concrete floor, the cockroaches dominating the kitchen cabinets, and a handsome black widow spider keeping one corner of the living room free of flies."

A survey of rangers completed by the Association of National Park Rangers in 1989 details a bleak story of ranger life in the modern world. Rangers reported the grubby details of life on the edge—shopping in thrift stores, living on food stamps and welfare. It is a picture of an underclass of park guardians, victims of poor leadership and a bureaucratic maze—an issue the Park Service is working on. Since 1985, NPS has upgraded more than 500 ranger positions. Managers are being encouraged to hire locally when appropriate and to match an employee's education, responsibility, and ambitions to the job, especially in the lower grade positions.

To help recruit and advance the most qualified future park managers, the Park Service is instituting an intake program that will intensively train and promote GS-5 employees to GS-9 positions within two years. Candidates for the program will be selected both from within the Service and from outside sources. Certainly our parks, monuments, and historic sites—the most exceptional resources our nation protects for the future—require the highest standards for their management and conservation.

Iconoclastic to the end, writer Edward Abbey often worked as a ranger. The essence of western desert park life was captured in his classic *Desert Solitaire.* His bones now lie on the desert he brought so vividly into print. Despite the anger and cynicism he projected, near the end of his life Abbey confessed he savored his work as a park ranger. Our national parks and the people who protect them remain a special vision for all Americans. For Abbey and many others, the core of the ranger myth persists and is essential to inspire the next generation. But today's reality demands that Congress and the top leadership in the Department of the Interior recognize the critical link between parks and their managers.

Bernard Shanks, a former park ranger who worked in six western parks, has been involved with National Park policy issues for about 30 years.

Black History In the Parks

National parks increasingly reflect the heritage of African-Americans

By William W. Gwaltney

IT IS YEARS NOW since the days of slavery, sharecropping, and Jim Crow segregation, but for African-Americans the struggle to achieve equality continues. Today much of the history behind this struggle remains poorly documented. As more national park sites begin to reflect this history, the winds of truth may finally clear away the clouds and shadows that have obscured the story of African-Americans in the United States.

The following park sites, which highlight our country's African-American heritage, are some good places to visit this February in celebration of Black History Month.

Boston African-American NHS

In Massachusetts, the saga of blacks in the struggle for independence and citizenship is presented at Boston African-American National Historic Site. The park focuses on the political, social, and educational aspects of black life in Boston. Featured here are the African-American Meeting House—the oldest existing black church in the United States—and the Phillips School, integrated in 1855.

Southern Sites

In Washington, D.C., several sites reflect African-American history.

A statue dedicated to the legacy of African-American educator, presidential advisor, college founder, and human rights activist Mary McLeod Bethune stands in Lincoln Park on Washington's Capitol Hill. Bethune's legacy of hope, dignity, and self-determination remains an inspiration to all Americans in the equal rights struggle for women and minorities.

Nineteenth century editor, orator, statesman, and diplomat Frederick Douglass is the focus of a National Historic Site in Washington's Anacostia neighborhood. The site was Douglass' home from 1877 until his death in 1895.

Cedar Hill is a 21-room mansion overlooking the nation's capital from atop the Anacostia encampment. Ironically, the house was originally owned by a slave-holding land developer, while the area surrounding the house was subdivided as a white-only neighborhood. Douglass purchased the house after coming to Washington and, in doing so, became one of the city's first "block breakers."

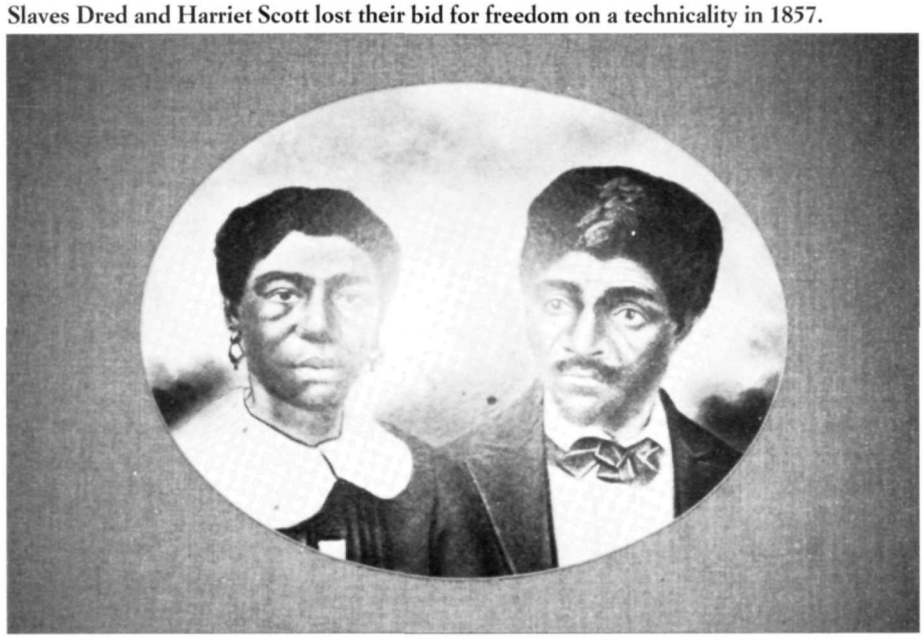
The boyhood home of Martin Luther King is preserved in Sweet Auburn, Georgia, another southern neighborhood still rich in history and African-American culture. Related sites in Atlanta's Martin Luther King, Jr., National Historic Site include the Ebenezer Baptist Church and the monument and gravesite that mark the memory and achievements of King.

Washington and Carver

The contributions of Booker T. Washington, a significant leader and educator in the black community, are most visible at Tuskegee Institute National Historic Site in Alabama. The Institute has produced black college graduates in the arts and sciences since the "Washington Machine" opened its doors in 1881.

Part of Washington's genius was his

Slaves Dred and Harriet Scott lost their bid for freedom on a technicality in 1857.



RICHARD DAY

ability to recognize and encourage talent. A close associate of Washington, scientist George Washington Carver, conducted extensive research on plants that were crucial to the southern agribusiness. His study of the peanut helped to boost the regional economy and future of black farmers. One of the earliest parks to highlight a black American, the George Washington Carver National Historic Site in Missouri, includes Carver's birthplace and family cemetery.

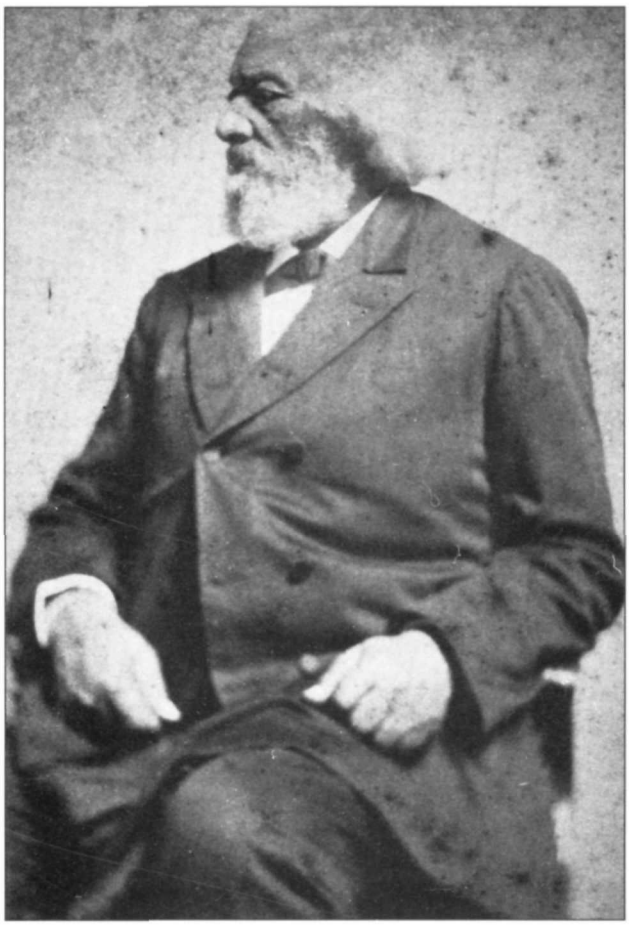
Military Legacies

Many national parks have hidden legacies that deal with African-Americans, such as Ft. Scott National Historic Site in Kansas, a recruiting location for early black Civil War soldiers. Ft. Larned National Historic Site in Kansas was home to companies of the 10th U.S. Cavalry. This African-American combat regiment was stationed across the West during the Indian Wars.

Ft. Davis National Historic Site in Texas was home to all four regiments of black soldiers during the Indian campaigns.

Just a few miles south and east of Richmond, Virginia, lies an extensive line of earthworks and trenches from the American Civil War. The battles of Richmond are well known to many Civil War enthusiasts. Less recognized, however, are the contributions of thousands of soldiers of African descent at the battles known collectively as the Battle of Chaffin's Farm. In the repeated assaults at New Market Heights, 14 black soldiers fought in a fashion so conspicuous that they were later awarded the Congressional Medal of Honor. An exhibit at the Fort Harrison unit of the Richmond National Battlefield depicts the contributions of these men during the Civil War.

Years earlier, on the eighth of January, 1814, a large force of British regular soldiers met a racially mixed force of American soldiers a few miles east of New Orleans. The War of 1812 was technically over, but communication was slow on both sides.



NATIONAL PARK SERVICE

Frederick Douglass, abolitionist.

Prominent in this fight were two battalions of "free men of color." Those blacks had responded to their country's call and were credited by General Andrew Jackson with the shot that killed the British commander, General Pakenham. The Chalmette Unit of Jean Lafitte National Historical Park in Louisiana has preserved the battlefield of that fateful day.

At Harpers Ferry National Historical Park in West Virginia, a wide variety of historical themes is represented, including John Brown's raid on Harpers Ferry, which was to begin a slave revolt in 1859. The park also examines the role of slaves and free blacks in the local economy, the impact of slavery on the lives of Harpers Ferry residents, and the formation of historically black Storer College, founded after the Civil War and closed in 1955.

Interpreting Slavery

The role of slavery has often been ignored, and the lives of millions of Americans went uninterpreted. But times have changed, and as the history of African-Americans is researched further, NPS will continue to address the different faces of slavery.

At the old St. Louis Courthouse in Missouri, Dred Scott, a slave suing for his emancipation based on a technicality, lost his bid for freedom in an 1857 court decision. The greater reversal suffered in this legal battle was contained in the ruling, which stated that blacks had no legal rights. Today, the old courthouse is part of the Jefferson National Expansion Memorial.

Authorized in 1988, the Natchez National Historical Park in Mississippi was established to interpret a number of aspects of regional history, including urban slavery. But until recently, the park did not include the historically significant William Johnson House. It is from the 2,000-page diary of William Johnson, a freed African-American slave, that we have one of the most complete chronicles of black life in the pre-Civil War South.

Other new park sites that will examine black history are the Underground Railroad National Historic Trail and the Selma–to–Montgomery Trail, which commemorates the historic 1965 voting rights march. In order to better address African-American issues, NPS also is instituting training courses for interpreters, park managers, historians, and curators on black history and historiography.

For more information, contact the individual parks or the NPS Office of Public Inquiries at (202) 208-4747.

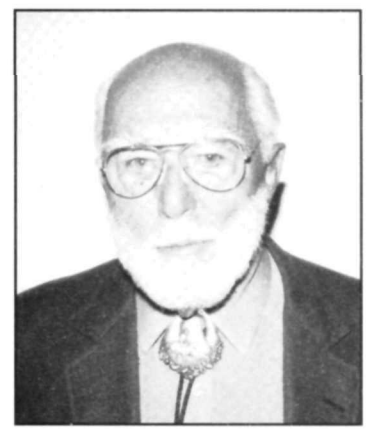
William W. Gwaltney is an interpretive specialist with the National Park Service at the National Capitol Region in Washington, D.C.

TRIBUTE TO EXCELLENCE

Marjory Stoneman Douglas Award

Presented by NPCA and the Faultless Starch/Bon Ami Co., this award recognizes outstanding efforts resulting in protection of a unit or a proposed unit of the National Park System. The award is named in honor of Marjory Stoneman Douglas, who devoted many years to preserving the fragile ecosystem of the Florida Everglades.

FRANK E. MASLAND, JR. , the 1990 recipient, has been a leader in preserving national and state parklands for more than 50 years. His tireless efforts helped establish many parks, including Gulf Islands, Padre Island, Canyonlands, and the Everglades, as units in the National Park System.

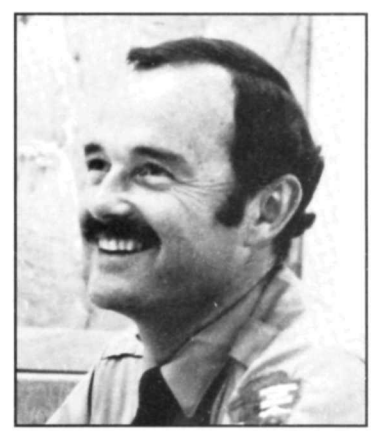


Frank E. Masland, Jr.

Stephen Tyng Mather Award

The Stephen Tyng Mather Award, named for the first director of the National Park Service, is presented by NPCA and the Faultless Starch/Bon Ami Co. in recognition of a Park Service employee who has risked his or her job or career for the principles and practices of good stewardship.

The 1990 recipient is **BOYD EVISON**, regional director of the National Park Service in Alaska. As the Exxon Valdez oil spill of 1989 threatened Alaska's fragile coastline, he took immediate action to minimize damage despite political pressures to avoid involvement.



LORETTA NEUMANN/NPS PHOTO

Boyd Evison

The Faultless Starch/Bon Ami Company wishes to congratulate the recipients of these awards and thank them for the excellent contribution they have made to the protection of our environment.

The Faultless Starch/Bon Ami Company has actively supported the efforts of organizations such as NPCA for more than 100 years and will continue to work toward the goal of preserving our natural resources for future generations.

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Occasionally, on a limited and selective basis, NPCA makes its membership list available to other organizations whose goals and programs might interest you.

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1990 Annual Report

NPCA ushered in the environmental decade in 1990 with the establishment of two more national park units, new educational programs such as March for Parks, and a stronger membership base. NPCA's Annual Report for fiscal year 1989-90, now available, provides a detailed review of NPCA's year-long agenda to protect, defend, and enhance the national parks.

We would like to thank members, contributors, volunteers, and friends for helping to make 1990 another successful year. Some highlights of NPCA's achievements are listed below.

Yellowstone and Yosemite. NPCA played a major role at Yellowstone by calling for an ecosystem approach in managing the park and surrounding public forests. At Yosemite, NPCA is working with the park to reduce congestion by removing unneeded facilities and expanding the shuttle bus system in Yosemite Valley.

Clean Air. NPCA was one of the Clean Air Coalition's leaders in the hard-won fight to get acid rain recognized as a national problem, one that the 1990 Clean Air Act recognizes and attempts to mitigate.

New Parks. Our efforts helped create Petroglyph National Monument in New Mexico, the first park area dedicated to ancient Indian rock carvings (petroglyphs). In addition, we worked on the successful campaign to include Weir Farm in the park system. The Connecticut farm—once home to J. Alden Weir (1852-1919), the "father" of American Impressionism—is the first to honor America's artistic legacy.

Wolves and Other Wildlife. NPCA has been a leading advocate of legislation and other efforts to reintroduce grey wolves to Yellowstone National Park. We have helped the National Park Service with its educational program, explaining the wolf's plight and the need for such predators in order to maintain healthy ecosystems.

In southern Florida we won a victory this year with expansion of Everglades National Park. By reinstating the natural flow of water throughout the Everglades, it is hoped that near-extinct wading bird populations will be revived. In addition, the Everglades expansion and the recent expansion of nearby Big Cypress National Preserve—another NPCA victory—ensure more protected territory for the endangered Florida panther.

Civil War and Civil Rights. Historic Civil War battlefields are being squeezed on all sides by urban development. Fortunately, NPCA's work at Gettysburg and Fredericksburg-Spotsylvania National Military Parks expanded those parks to include important battle areas left out of the original park boundaries. At NPCA's urging, Congress has directed NPS to study two other subjects to identify significant Civil War resources in the Shenandoah Valley and along the "Underground Railroad"—the route slaves took to freedom in the North. NPCA also led the way in designating the Civil Rights March Route from Selma to Montgomery, Alabama, as a national historic trail. The trail's designation took place on the 25th anniversary of the historic march.

Membership. Membership at the National Parks and Conservation Association reached an all-time high of 200,000 last year, vastly increasing our ability to protect and defend our national parks.

One of the most telling statistics is that 73 percent of our members have visited a national park within the last three years. Statistics also say that 56 percent of our members are between

the ages of 22–54, with the majority of that group in the 35–44 age bracket. With more membership support, NPCA is better able to anticipate and halt threats to our parks.

Public Education. The pages of award-winning *National Parks* magazine bring home triumphs and crises in our parks through both words and pictures, as well as the latest information on park legislation and how members can get involved in environmental issues.

This year NPCA completed its Visitor Impact Management study. The two-volume document, researched and written for NPCA by experts in the field of recreation and environmental management, will serve as the standard for the national parks.

In addition, NPCA's first annual March for Parks—a kickoff event for Earth Day—drew nationwide attention and 15,000 marchers across the nation.

Members are encouraged to review the 1990 Annual Report, which is available on request. To obtain a copy, please contact Elliot Gruber, 1015 Thirty-first St., NW, Washington, D.C. 20007 or call (202)944-8530.

Annual Dinner

NPCA held its eleventh annual reception and dinner in November at the Westin Hotel in Washington, D.C. More than 300 guests were on hand to enjoy the event and the awards ceremony that followed.

Florida Governor Bob Martinez received NPCA's Conservationist of the Year Award for his landmark state-wide environmental programs. The Marjory Stoneman Douglas Award was presented to Frank E. Masland, Jr., for his lifetime commitment to the national parks and his involvement in the Everglades backcountry trail system.

March Update

Don't forget about the 2nd Annual March for Parks—National Celebration of the Outdoors on May 4–6. Join a nationwide walk for the environment and raise money for local and national parks. For more information call 1-800-NAT-PARK.

Experiencing Places

IN HIS EXTRAORDINARY NEW BOOK, *The Experience of Place,* Tony Hiss, *New Yorker* staff environmental writer, seeks to broaden the focus of concern for the environment from beyond our parks and wilderness areas—places we like to visit—to the landscapes in our own communities—places we live and work. So often, claims Hiss, we perceive ourselves merely "as observers of our environment." But our surroundings "have an immediate and continuing effect on the way we feel and act, and on our health and intelligence."

The author shows how urban sprawl and other development pressures damage our lives as much as they damage our cities and countryside. Often these changes occur so incrementally that we fail to recognize deterioration and view a "damaged place" as the original.

The last place on earth we expect to experience this is in our national parks. Yet this "fading and discoloration of place," as Hiss terms it, has occurred for generations in parks and is one of the major threats to our national parks. For example, due to air pollution, today's visitors to the Grand Canyon periodically cannot see vivid colors and details of different rock formations as they gaze across the Canyon. Visibility *ad infinitum,* which 20 years ago was so much a part of the Grand Canyon visitor experience, is all too often lost on the visitor of the 1990s. Due to incremental degradation, few visitors recognize that the Canyon is different.

This is an idea book. Hiss introduces a concept of landscape awareness he calls "simultaneous perception," a system of awareness that each of us can apply to more effectively experience our own surroundings.

In addition to experiencing our surroundings, Hiss maintains that we all have a role to play in safeguarding, repairing, and enriching each of our own "experiences of place." Through a series of case studies he illustrates several successful community-based approaches to the problems posed by preservation.

This book will be especially appreciated by preservation, environmental, and landscape enthusiasts. And, for the general reader interested in learning something about the relatively new "science of place," *The Experience of Place* is a good place to start.

The Experience of Place, by Tony Hiss, Alfred A. Knopf, New York, 1990, 233 pages, $19.95.

—Bruce Craig, NPCA cultural resources program manager

PARK PUBLICATIONS

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[ ]Antietam National Battlefield, G101
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[ ]Custer Battlefield National Monument, C110
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[ ]Gettysburg National Military Park, G108
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[ ]Richmond National Battlefield, G120
$5.50 (Members, $4.95)

[ ]Vicksburg National Military Park, F118
$5.50 (Members, $4.95)

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[ ]Natural History Essays; Henry D. Thoreau, X102
$9.95 (Members, $8.95)

[ ]Wilderness Essays; John Muir, X103
$9.95 (Members, $8.95)

[ ]Words from the Land: Encounters with Natural History Writing; Stephen Trimble, X104
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[ ]**BONUS:** Buy all THREE books, X105, $24.95

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[ ]Enemy Ancestors: The Anasazi World with a Guide to Sites, D147
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[ ]Land of the Cliff Dwellers, D198
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[ ]Pecos - Gateway to Pueblos & Plains, D145
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[ ]Those Who Came Before: Southwestern Archaeology in the National Park System, D126
$12.95 (Members, $11.65)

[ ]Voices in the Canyon, D127
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[ ]Grand Teton National Park, P132
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[ ]Canyon Dreams (Grand Canyon), P114

[ ]Desert Vision (Southwest region), P115

[ ]Natural States (Pacific Northwest), P116
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[ ]Touring America's National Parks, P108
$29.95 (Members, $26.95)

[ ]Touring Civil War Battlefields, P109
$29.95 (Members, $26.95)

[ ]Yellowstone Fire, P125
$14.95 (Members, $13.45)

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[ ]Civil War, G130
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[ ]Desert Hiking, K120
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[ ]Everglades Wildguide, F104
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Camera-ready materials must be received by an issue's closing date. (March/April closes January 2nd for space; May/June closes March 1st.)

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Effective with the March/April 1991 issue, this section will feature display classifieds only. Please see rate notice below for details.

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Miscellaneous

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Discount vitamin catalog includes cholesterol fighters, weight program, stop smoking—32 pages. Free gift! $1 (refundable) Rita Del Valle, Box 16140, Long Beach, CA 90806.

"I never imagined a child so far away could bring me so much joy!"

Soffia Polhemus
Save the Children Sponsor
Kearney, Nebraska

"For years my husband and I were touched by the faces of these children on TV. They looked sad and hungry — bewildered by so much deprivation. One day we simply decided it was time.

"I wrote to Save the Children, asking to sponsor a little girl. Now little Ana's photo is where it belongs, with our other family pictures.

"When I wrote to Ana, she wrote back. Five years' worth of her letters is proof enough for me that we've made a real difference in her life!

"We like how Save the Children makes our contributions work with other sponsors' rather than just giving handouts directly to individual children. The field reports *show* us how we've helped Ana's own village give her the things she needs.

"When you think of it, a contribution of $20 a month comes to just 65¢ a day. It takes so little from us to make their lives a lot better."

Do what Soffia Polhemus did. Give a needy child your loving help. Just say...

☐ **YES,** I want to become a Save the Children sponsor. My first monthly contribution of $20 is enclosed. I prefer to sponsor a ☐boy ☐girl ☐either in the area I've checked below.

- ☐ **Where the need is greatest**
- ☐ Africa
- ☐ American Indian
- ☐ Asia
- ☐ Caribbean
- ☐ Himalayas
- ☐ Central America
- ☐ Middle East
- ☐ South America
- ☐ United States

☐ Instead of becoming a sponsor at this time, I am enclosing a contribution of $_____.

☐ Please send me more information.

Name _____ (please print)

Address _____ Apt. #

City _____ State _____ Zip _____

Mail to:

Save the Children®
50 Wilton Road, Westport, CT 06880

NT 1/1

Established 1932. The original child sponsorship agency.

YOUR CONTRIBUTIONS ARE U.S. INCOME TAX DEDUCTIBLE. Annual report available upon request.

Trains, Trails, & Tin Lizzies

GLACIER National Park, located at the point where the Rocky Mountains cross into Canada, is a land of glacier-carved multi-colored mountain ranges, deep forested valleys, and a profusion of turquoise lakes.

Its first illustrator was James Alden, who did watercolors of the area while the United States–Canadian International Boundary was being surveyed in 1860.

Glacier, seemingly an artist's paradise, has been "laid claim to" by an almost unbroken chain of professional photographers from the time it was a reserve of the young U. S. Forest Service until the present. The financial security of these photographers rested upon their ability to produce photographs that would result in immediate print sales to the visiting public, local and national publications, or to the Great Northern Railroad for advertising purposes.

A new era of illustration for Glacier National Park began when George Grant arrived in July of 1932. Grant was the first photographer for the National Park Service and his life was dedicated to building up a file of negatives and prints that would document not only the geography, but also the historical changes taking place in the national parks.

Excerpted from Trains, Trails, & Tin Lizzies, *photographic plates from the George A. Grant collection; Glacier Natural History Assoc. Available from NPCA Park Education Center, 1015 31st St., NW, Washington, DC 20007; 72 pp, hb, quadtone, $34.95.*

Clockwise from top left: ice cave on the Boulder Glacier; waitress at Two Medicine Chalet; lunchtime on Piegan Pass in Glacier.

The wild places are where we began.

When they end, so do we.

David Brower

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