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The Magazine of  
The National Parks  
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Association

SEPTEMBER/OCTOBER 1998

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**Desert Bighorn Sheep**

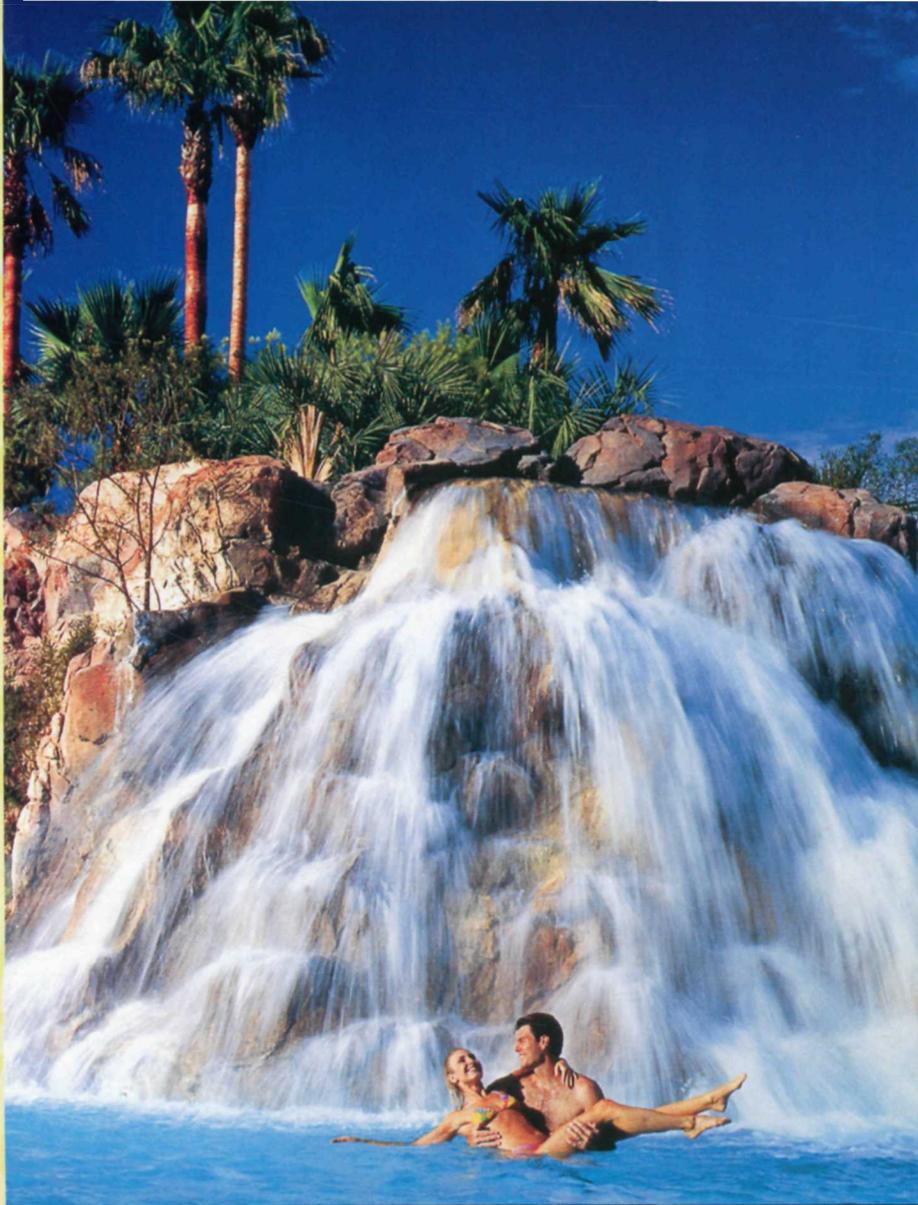
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# National parks

Vol. 72, No. 9-10  
September/October 1998

The Magazine of the National Parks  
and Conservation Association

## FEATURES

### 22 Panning Yellowstone's Pools for Profit and Science

Private enterprises will be allowed to collect thousands of different micro-organisms that thrive in Yellowstone's geothermal pools under the terms of a novel scientific contract. The agreement allows the federal government to license "bio-prospecting" rights in return for information and royalties.

By **Todd Wilkinson**

### 26 Back Where They Belong

An ambitious Park Service program seeks to return desert bighorn to their historic range in more than a dozen parks. Unlike their Rocky Mountain cousins, this subspecies has adapted to hot, dry conditions.

By **David N.B. Lee**

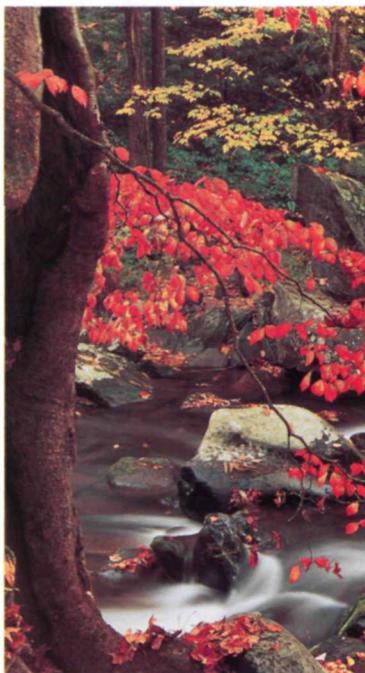
### 30 Long Road to Andersonville

This past spring, the Park Service fulfilled the mission of Andersonville National Historic Site, one of the most notorious prisoner of war camps in U.S. history, by dedicating the National Prisoner of War Museum. The historic site will serve as a memorial to all the nation's POWs.

By **Chris Fordney**



**COVER:** A hot pool at Yellowstone National Park. Through a novel agreement, private enterprises will be allowed to collect micro-organisms that thrive in the park's geothermal pools. Photograph by Scott T. Smith.



WILLARD CLAY

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NPCA and its nearly 500,000 members must come together to define and refine an agenda for action.

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# A Bold Agenda

NPCA and its nearly 500,000 members must come together to define and refine an agenda for action.

**W**ITH THE threats to our parks and a growing feeling among the American public that our parks' resources and values will be in worse shape 25 years from now than they are today, NPCA's mission is increasingly relevant and critical. As I shared in my interview on pages 40 and 42, we are launching a bold agenda to unite Americans to protect and restore the natural and cultural heritage in our National Park System.

But that agenda must not just be mine or NPCA's; it must be an agenda we share with all of our members and all Americans. There is only one way for that to happen. We—nearly 500,000 members of NPCA—must come together to define and refine an agenda for action.

In the past, we have asked our members to write to Congress, to protest the "management plan" devised by the National Park Service for bison at Yellowstone, and to comment on a plan to restore the valley at Yosemite National Park after buildings and other visitor facilities were destroyed by flooding.

More than 1,000 of you wrote to the superintendent of Yellowstone to let him know how you felt about the whining noise of snowmobiles piercing the winter silence of our first national park. More than 400 of you wrote to park officials in Yosemite on the new



SCOTT SUCHMAN

development plan—more than the park had ever received from one organization. Many others wrote to the Acadia National Park superintendent to support a ban on personal watercraft on the park's lakes. All of these actions made a difference.

To ensure the success of our new agenda, we need your continued help. To understand and to know what you think about this new approach, I need to hear from you. What do you think of the agenda I have briefly outlined on pages 40 and 42? How should we approach it differently? What will it take to expand your involvement and commitment to our agenda?

Your thoughts, feelings, and guidance are critical. Just as America's national parks are yours, so too is NPCA. As with a democracy, the benefits of ownership are accompanied by the responsibility of involvement. The actions of one person can and do make a difference. The united actions of many can spark a revolution. So please give me, NPCA, and our national parks the benefit of your guidance.

Write to me at NPCA, 1776 Massachusetts Avenue, N.W., Dept. O, Washington, DC 20036. I will not be able to send personal responses to each of you, but I will summarize your comments and respond to them in future editions of this column.

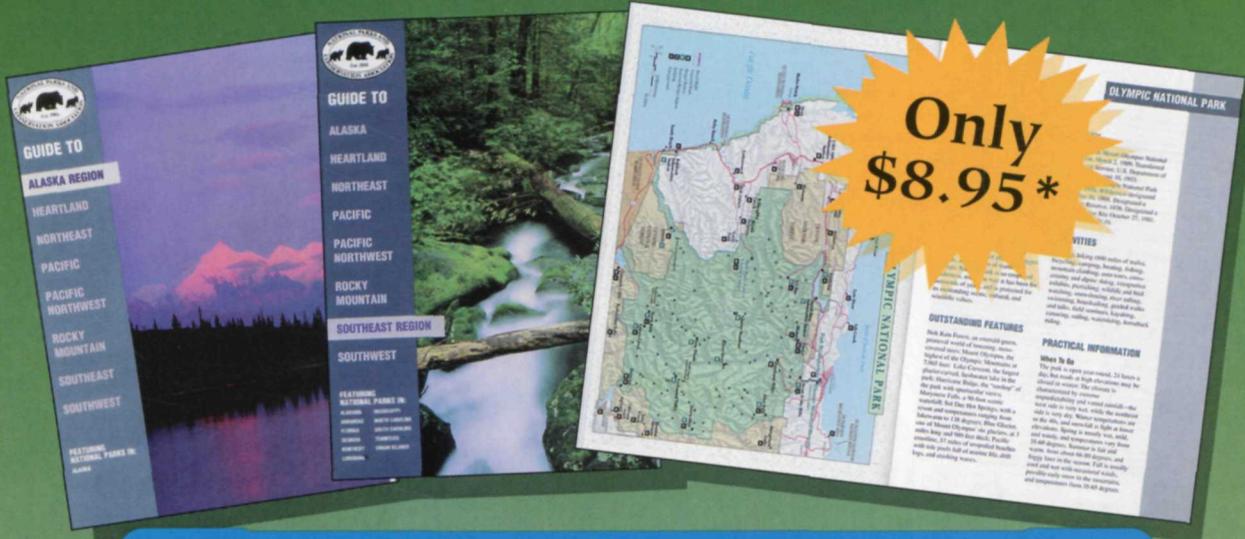
**Thomas C. Kiernan**  
President

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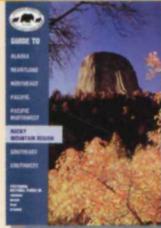


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# National Parks

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## ABOUT NPCA

**WHO WE ARE:** Established in 1919, the National Parks and Conservation Association is America's only private, nonprofit citizen organization dedicated solely to protecting, preserving, and enhancing the U.S. National Park System.

**WHAT WE DO:** NPCA protects national parks by identifying problems and generating support necessary to resolve them. Through its efforts, NPCA has developed a base of grassroots support that has increased effectiveness at local and national levels.

**WHAT WE STAND FOR:** NPCA's mission is to protect and improve the quality of our National Park System and to promote an understanding of, appreciation for, and sense of personal commitment to parklands.

**HOW TO JOIN:** NPCA depends almost entirely on contributions from our members for the resources essential for an effective program. You can become a member by calling our Member Services Department. The bimonthly *National Parks* magazine is among the benefits you will receive. Of the \$25 membership dues, \$3 covers a one-year subscription to the magazine.

**EDITORIAL MISSION:** The magazine is the only national publication focusing solely on national parks. The most important communication vehicle with our members, the magazine creates an awareness of the need to protect and properly manage the resources found within and adjacent to the parks. The magazine

underscores the uniqueness of the national parks and encourages an appreciation for the scenery and the natural and historic treasures found in them, informing and inspiring individuals who have concerns about the parks and want to know how they can help to improve these irreplaceable resources.

**MAKE A DIFFERENCE:** A critical component in NPCA's park protection programs are members who take the lead in defense of America's natural and cultural heritage. Park activists alert Congress and the administration to park threats; comment on park planning and adjacent land-use decisions; assist NPCA in developing partnerships; and educate the public and the media about park issues. For more information on the activist network, contact our Grassroots Department, extension 221.

**HOW TO DONATE:** NPCA's success also depends on the financial support of our members. For more information on special giving opportunities, such as Partners for the Parks (a monthly giving program), Trustees for the Parks (\$1,000 and above), bequests, planned gifts, and matching gifts, call our Development Department, extensions 145 or 146.

**HOW TO REACH US:** We can be reached the following ways: National Parks and Conservation Association, 1776 Massachusetts Avenue, N.W., Washington, DC 20036; by phone: 1-800-NAT-PARK; by e-mail: npca@npca.org; and <http://www.npca.org/> on the World Wide Web.



## Lest We Forget

**M**Y FATHER—STATIONED in the Philippines just after World War II—was among the soldiers assigned to restore utility services in the war-ravaged country. He would, on occasion, speak of the Bataan Death March. As a youngster, I had no idea what those three words really meant.

I had a better idea of war and its inhumanity when, as an adolescent, I watched the nightly broadcasts of the fighting in Vietnam. I remember the body counts, the vivid images of soldiers darting through villages to avoid gun fire, and the occasional scene of an injured soldier being carried from a helicopter. Now and again, a photo of a captured soldier, marine, or airman would be broadcast. As the war dragged on, the images of devastated villages and the horror-hardened eyes of soldiers became more frequent. In the waning days, two initialisms—MIA and POW—also became more common.

Until now, the National Park System has not included a site that recognized the men and women held as prisoners during the nation's wars. This issue of *National Parks* carries a poignant story by Chris Fordney about the new POW museum dedicated by the National Park Service as part of Andersonville National Historic Site in Georgia. NPS has broadened the story of Andersonville to include all the nation's prisoners of war. The museum's importance is obvious. We should never forget the men and women who served our country, and we should never forget the sacrifices they endured and the pain they suffered at the hands of an enemy. One of the most valuable assets of our national parks is their ability to impart an experience through the brilliant interpretation of the Park Service. Let us learn and understand.

**Linda M. Rancourt**  
 Editor-in-Chief

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## Battlefields, Wilderness, and Mining

### Manassas Intersection

U.S. Rep. Frank Wolf's letter ["Letters," May/June] rationalizing his desire for road "improvements" at Manassas National Battlefield Park tells only half the story. Wolf fails to mention that the multilane intersections outside the park have significantly higher accident rates. Some shameless local politicians have even tried to inflate the statistics using accidents some distance from and no relation to the intersection.

The Park Service supports viable alternatives to improve traffic safety at the intersection, but the only acceptable solution to Wolf is turn lanes. Speeding up traffic flow with turn lanes will invite a greater volume of traffic through the park and only increase the potential for accidents.

Wolf claims the road improvements are only temporary until the land can be restored after a bypass is built at some unspecified time in the future. Nonsense! Widening the road will only lessen the demand for a bypass.

Only Congress has the authority to divest federal lands, but Wolf has made no attempt to bring it to the House floor. Wolf's efforts reflect a need to pay homage to his supporters in the development industry, and his urgency is understandable. It is an election year.

**James M. Burgess, Jr.**  
Gainesville, VA

In response to the letter from U.S. Rep. Frank Wolf (R-Va.), the insinuation that any future injuries or fatalities at the intersection of routes 29 and 234 in the Manassas National Battlefield Park are the responsibility of those who oppose expansion of the intersection is despicable. My mother was killed in a traffic accident; the thought of her death or other traffic injuries being exploited as a tool of development interests disgusts me.

The purpose of the proposed modifications is not safety. It is getting more cars through the intersection to make

the routes through the battlefield more convenient for commuters.

If the goal is to reduce the number and severity of accidents, there are better solutions available, such as prohibiting left turns or putting each direction on a separate cycle. With more vehicles traveling through the intersection at faster speeds, the total number of accidents and their severity will only increase.

**Stephen Bechtel**  
Columbus, OH

### Privileged Few?

I'm writing in response to Louise Snyder's letter [March/April] using the phrase, "wilderness experiences that can be enjoyed only by a privileged few." Could we please dispense with this tired lie once and for all?

What manner of privilege is required to enjoy wilderness areas? The ability to walk? I have encountered elderly people, families with small children, and people with various physical disabilities in the backcountry.

The elitist argument against wilderness preservation implies we are privileged to have sufficient free time, as if a week or two of vacation is some rare perk not shared by most working Americans. Many wilderness areas can be enjoyed in a weekend.

Furthermore, many of us cannot afford the expensive hotels, restaurants, and tourist attractions that proliferate the park frontcountry but can easily afford to hike into the wilderness in our decades-old gear and with a minimal cash expenditure. In contrast, developed recreational areas are packed with expensive RVs and SUVs pulling gas-guzzling recreational machinery on trailers that cost more than the modest cars typically seen at hiking trailheads. No wonder wilderness users bitterly resent the irony of being labeled the privileged ones.

**Patricia Corry**  
Helena, MT

### Thinking Ahead

On a visit to Yosemite, we were surprised to learn that the beautiful Awahnee Hotel is constructed of concrete fashioned to look like "rough sawn woods and rugged timber" — another example of eco-friendliness. This majestic hotel probably would not have survived this many years had it been made of wood. Thank heavens the people who designed it so many years ago were so forward thinking.

**Kathy Kemp**  
Kutztown, PA

### Mining

Thank you for publishing the article on mining in the parks ["High Stakes: The Legacy of Mining," July/August]. It was *National Parks* magazine that mobilized the nation to enact tough laws to govern such mining. The cause then, more than 20 years ago, was mining in Death Valley. As your recent article shows, the problem has not gone away and requires constant vigilance.

I spent the last few years of my Park Service career in the newly established or expanded California desert parks. Your article accurately portrays National Park Service mismanagement of proposed and existing mines in two of those parks. Despite the Mining-in-the-Parks Act on the books for 22 years, some park managers seem to be unaware of the law or unwilling to apply its regulations.

**Frank Buono**  
Prineville, OR

Write: Letters, NPCA, 1776 Massachusetts Ave. N.W., Washington, DC 20036. Letters can be sent via e-mail to [npmag@npsa.org](mailto:npmag@npsa.org). Letters should be no longer than 300 words. Please include a telephone number for verification. Letters may be edited for length and clarity.

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# Park News

BY KATURAH MACKAY

## LEGISLATION

### Congress Ramrods Anti-Park Agenda

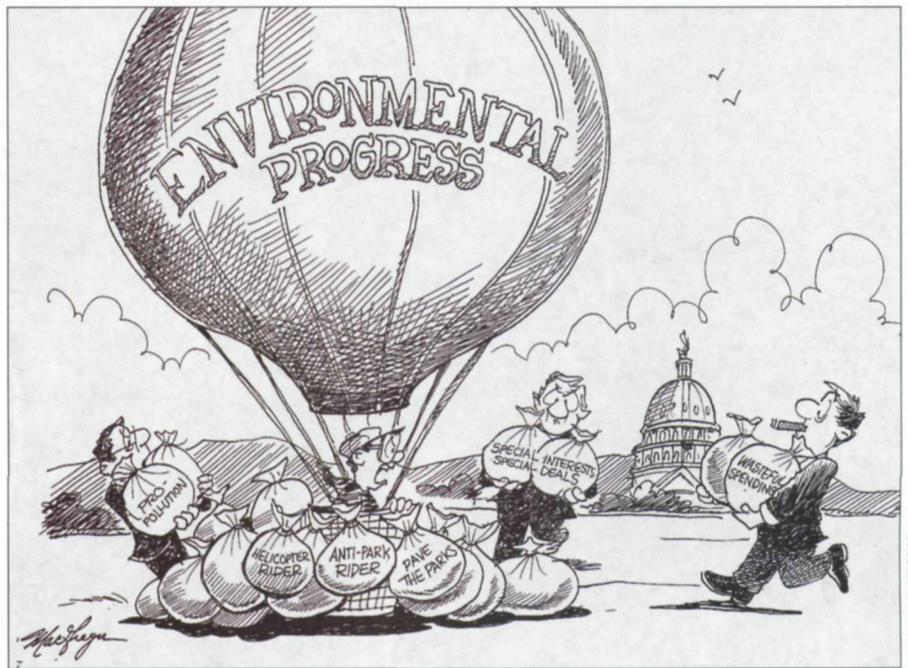
*Interior bill add-ons threaten environment and national parks.*

WASHINGTON, D. C.—Some members of Congress are pulling out all the stops in an effort to turn back environmental progress and open up national parks to development.

These legislators are attaching unrelated proposals—often called “riders”—to the Interior and Environmental Protection Agency bills by the dozens, a technique that a majority of Americans dislikes. Twenty-two riders have been added to the Senate Interior Appropriations bill, and at least another ten have been incorporated into House EPA legislation. Among other things, they aim to open up Alaska’s parks to roads and helicopters, block money to study grizzly bear reintroduction, and create a ban on educating the public about global warming.

The Alaska delegation in particular has been using the technique in the hopes of ramming legislation through. Alaska’s three Republican legislators may use their powerful positions to get the bills approved. Sen. Frank Murkowski chairs the Energy and Natural Resources Committee, and Sen. Ted Stevens chairs the Appropriations Committee. Rep. Don Young chairs the House Resources Committee.

One rider attached to the Transportation Appropriations bill would allow helicopter landings in Alaska’s national parks and wilderness areas. Under the current law, fixed-wing planes may fly into wilderness areas for traditional uses.



The rider would permit helicopters in all wilderness areas, refuges, and parks. No area would be guaranteed respite from overflight noise or human intrusions.

The most egregious measures are on the Interior bill. In addition to opening wilderness to helicopters, a measure directs the National Park Service (NPS) to reopen an airstrip that it has been trying to close inside Denali National Park. The proposal also orders NPS to consider building a jet-capable runway near the park entrance. Runoff from a runway could contaminate natural resources; the thundering noise of jet take-offs and landings would ruin the natural quiet of the park and disturb wildlife.

Meanwhile, language was added that would essentially prohibit NPS from enforcing regulations to phase out commercial fishing in Glacier Bay National Park and Preserve. Fishermen and other stakeholders are close to a resolution that would address the interests of all parties

(see News story March/April).

The House Environmental Protection Agency funding bill includes a provision to delay the reduction of pesticides used in children’s products and a block on action to reduce greenhouse gases.

A national survey conducted for The Wilderness Society found that 75 percent of voters are bothered that Congress is attaching anti-environmental riders to “must pass” spending bills. Despite this evidence, the 105th Congress continues to use the strategy to pass bills that might otherwise fail under public scrutiny.

Citizen opposition to anti-environmental bills has made a difference on some issues. One rider proposed building a 30-mile road through the Izembek National Wildlife Refuge in Alaska. This controversial proposal, if adopted, would have set a precedent as the first permanent road through a wilderness area since the Wilderness Act was passed in 1964. The proposed road would threaten

**NATIVE LANDS**

# Bill Grants Land Inside Park to Miccosukee Tribe

*Legislation grants Indians dwelling rights in fragile Everglades National Park.*

HOMESTEAD, FLA.—A bill currently moving through Congress would give national park land to the Miccosukee tribe of south Florida. The bill would allow 666 acres of hydrologically important land in Everglades National Park to become a fully developed residential community.

The Miccosukee tribe currently resides on a 333-acre special use permit area (SUPA) in the park that was creat-

ed in 1964. The tribe has continued to live on this parcel, although a 74,000-acre reservation was set aside for them north of the park. Because of close cultural ties to the Everglades, the tribe has strongly supported restoration efforts and has consistently pushed for higher water quality standards in the Everglades ecosystem.

Legislation introduced in both the House and Senate doubles the SUPA area to 666 acres and turns control of this land within Everglades National Park over to the Miccosukee people. The bill does not require them to protect all the park's resources to the standards maintained by the National Park Service (NPS). The bill allows development for tribal administration buildings, housing, and cultural activity centers, with most buildings capped at 45 feet in height and one at 75 feet. NPCA believes such development could disturb the visitor experience in this part of the Everglades. Because the Miccosukee tribe is a sovereign entity, the Park

several species that live on or migrate through the area, including most of the world's emperor geese and the entire North American population of the Pacific black brant. Because of public opposition, the measure is being negotiated and could result in a study to determine transportation options.

"If passed, these riders would have a devastating effect on the National Park System in Alaska," says Deborah Williams who serves as Alaskan special assistant to the Interior Secretary.

The Senate may vote on the Interior bill, either independently or as part of a massive omnibus spending bill, shortly after it returns from recess September 8.

—Elizabeth G. Daerr

**TAKE ACTION:** Write to your senators and representatives asking them to support clean appropriations bills and oppose all anti-environmental riders. Urge President Clinton to veto bills that include these riders. Address: The White House, 1600 Pennsylvania Ave., Washington, DC 20500.

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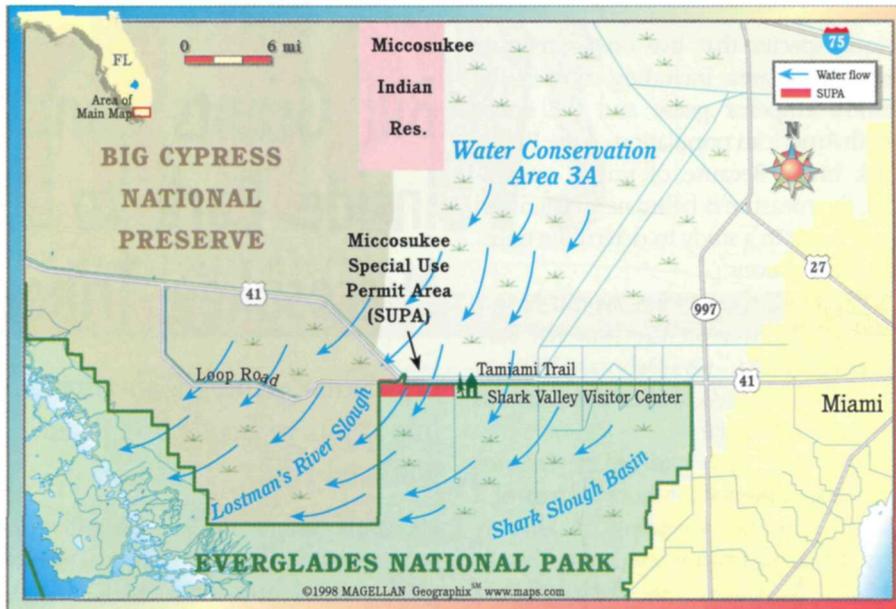
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Service would have no enforcement option but to take the tribe to court if environmental statutes are violated.

“Although the bill under discussion concerns the rights of Native Americans,” says William J. Chandler, NPCA’s vice president for conservation policy, “it is also essential to recognize the right of all American citizens to see their parks fully protected and managed by the National Park Service.” NPCA also is concerned that the Miccosukee legislation could be seen as a precedent by those who want to decrease federal authority over national park land.

The SUPA parcel lies directly in the path of the Shark and Lostman’s River sloughs, critical drainage basins that flow southwest across Everglades National Park. They comprise the major water pathways for the 1.5-million-acre “river of grass,” as conservationist Marjorie Stoneman Douglas referred to the maze of mangrove forests, coastal marshes, freshwater prairies, and endless hidden waterways. According to NPS water analysts, development on the Miccosukee parcel would interfere with this crucial waterflow by restricting freshwater inflows to estuarine areas and threatening habitat for species in the park. By congressional mandate, the Army Corps of Engineers is devising a multibillion-dollar plan to restore the natural waterflows in south Florida. Less than half of the Everglades’ original ecosystem remains today.

The Department of Interior (DOI) and the Miccosukee have been seeking a compromise that will respect the rights of the tribe and meet the needs of the park. In late July, the Miccosukee agreed to allow the National Park Service to select the configuration of the tribe’s new area through a public process. This will permit the park to protect critical habitat and waterflow areas.

“The legislation is improved,” says Kevin Collins, NPCA’s legislative representative for the Southeast. “It assures the tribe that they will be able to live in the Everglades, and, in exchange, they should be willing to assure the American people that they will not seek more parkland in the future.”

The Park Service also is pleased with the agreement. “For obvious reasons, NPS goes to great lengths to separate housing areas, maintenance areas, and other similar facilities from public use areas in an attempt to increase the enjoyment and safety of the visitor,” says Bob Johnson, research director for Everglades National Park.

“The rights of the Miccosukee Indians to live...in Everglades National Park is an environmental justice issue,” says Frank Peterman, an African-American entrepreneur and a member of the governor’s Commission for Sustainable South Florida. “However, that does not mean that the solution is to tamper with the land structure that lies at the very heart of the National Park System.”

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# Plant's Pollution Clouds Canyon

Coal-burning facility annually spews tons of filth into skies.

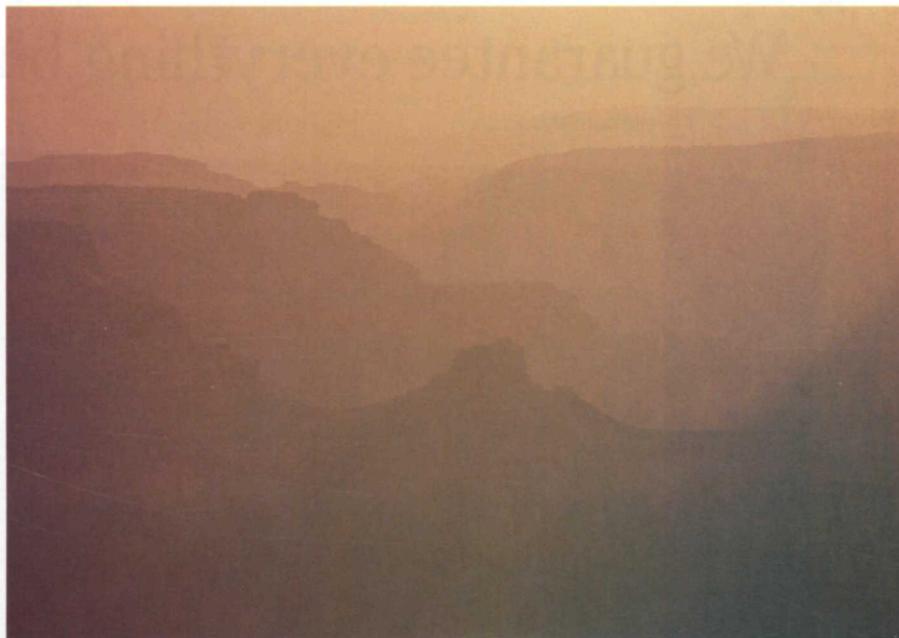
LAUGHLIN, NEV.—NPCA expects to join a lawsuit to enforce pollution controls on the Mohave Generating Station—a coal-fired power plant in southern Nevada—because of its contribution to both local pollution and the decline of visibility at Grand Canyon National Park 60 miles away.

“Protecting visibility is essential to saving the masterpiece landscapes of our national parks,” says Dave Simon, NPCA’s Southwest regional director.

NPCA hopes to join the lawsuit, originally filed by Grand Canyon Trust and the Sierra Club, to halt 25 years of daily violations of the Clean Air Act and Nevada air pollution limits by the Mohave plant. Emissions standards for the Mohave plant are outlined in Nevada’s state implementation plan (SIP), but Nevada has continually avoided compliance for Mohave by relaxing its SIP over the last two decades without Environmental Protection Agency (EPA) approval. Plaintiffs assert that the Clean Air Act becomes useless if states are allowed to alter, at will, their standards for air quality without federal approval.

Amendments to the Clean Air Act in 1977 designated some of the large national parks as Class I areas, meaning any existing or future pollution sources negatively affecting national parks should be regulated and remedied. The pollution from Mohave contributes to the haze that defiles scenic views on 90 percent of the days at Grand Canyon National Park, particularly in the park’s western end. Under some conditions, visitors can see only half the distance as those who toured the South Rim of the canyon in 1919, when the park was dedicated and established.

The plant’s primary owner, Southern California Edison (SCE), has failed to install basic scrubbers and other pollution



**On some days, the Mohave plant, left, may cause as much as 16 percent of the visibility impairment at the park.**

water per year from underground aquifers beneath the Indian lands.

controls on the plant’s smokestacks. No other single coal-fired source in the southwest pumps more sulfur dioxide into the air—approximately 40,000 tons annually—than the Mohave plant. The plant also releases 10,000 tons of microscopic, chemical-coated dust particles into the air every year.

“People aren’t realizing what an impact that plant is having on human health,” says Brian Kerr, a registered nurse at a hospital in nearby Bullhead City, Arizona. “In this area, there’s a high amount of respiratory illnesses and infections afflicting a wide age group—30- to 80-year-olds. I live about a mile or two from the plant, and visually the plume is very prevalent—sometimes blackish—and there’s a large brown cloud over the entire valley.”

Mohave also discharges annually 18 million tons of carbon dioxide, one of the gases responsible for global warming. But air is not the only environmental element to suffer. Mined on Hopi and Navajo reservations, the coal is pumped to the plant through a pipeline that sucks more than 4,000 acre-feet of

Mohave produces power for expanding metropolitan areas such as Las Vegas, Phoenix, and southern California. SCE is the nation’s second largest utility company but claims the cost of installing pollution controls—approximately \$250 million—will force the plant to close, thereby costing local jobs and threatening to halt coal royalty payments to the Hopi and Navajo. Refusing to install scrubbers has saved Mohave owners millions of dollars and allowed them to operate at a competitive advantage over cleaner plants. In its 17 years of operation, Mohave’s owners have gathered combined assets worth \$32 billion and took in nearly \$1 billion in profits in 1996.

No coal-fired plant in the West has ever shut down because of the cost to install pollution control fixtures. In fact, three large plants in the last five years have cleaned up their facilities and will eventually operate at a 90-percent efficiency standard. At the Navajo Generating Station in Page, Arizona, scrubber installation was a significant economic investment for the state, provided jobs, and cleaned up what had been a major source of pollution to the Grand

## Tallgrass Prairie Must Be Priority

*NPS management alternatives for prairie's natural resources are available for public comment.*

COTTONWOOD FALLS, KANS.—National Park Service (NPS) planners are seeking a delicate balance between preservation of the natural landscape and interpretation of cultural activities at the Tallgrass Prairie National Preserve.

Created out of the historic Z Bar/Spring Hill ranch, the nearly 11,000-acre preserve in the Flint Hills of Kansas is the only unit of the National Park System whose primary purpose is to protect and interpret the native tallgrass prairie ecosystem. Resembling a rolling sea of grass, this area was part of what was once called "the Great American Desert." The

preserve alone is home to hundreds of bird, mammal, and reptile species, as well as a diverse and delicate balance of plant life. Of the more than 30 million acres of tallgrass prairie that once blanketed the Great Plains, only between 1 and 4 percent remains today.

With the leadership of former Kansas Sen. Nancy Kassebaum, Congress established the preserve in 1996. In 1997 the Park Service began preparing a general management plan that will guide park operations and decision making for the next ten to 15 years. The NPS mandate is to "preserve, protect, and interpret for the public an example of a tallgrass prairie ecosystem," but it must do the same for the historic and cultural values represented by the Spring Hill ranch. A 19th-century mansion, a stone barn, a one-room schoolhouse, and other historic structures survive on the ranch as emblems of pioneer and ranching life.

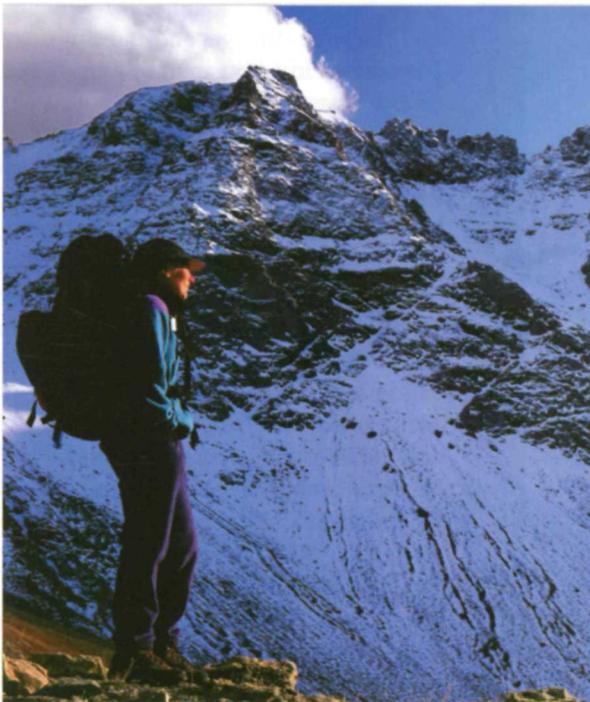
At the core of the management plan, the Park Service must decide how to administer and overlap the cultural history

Canyon and surrounding skies.

A 1998 survey conducted by NPCA and Colorado State University (CSU) found that 87 percent of Americans polled think that companies should clean up their air pollution if it affects park air quality, even if it means higher consumer costs. These results were consistent with a 1996 NPCA/CSU survey in which 88 percent of respondents reached the same consensus.

"The Mohave plant is simply a polluting dinosaur," says NPCA's Simon.

**TAKE ACTION:** Help NPCA urge enforcement of cleaner air quality standards on the Mohave Generating Station to preserve scenic vistas at Grand Canyon National Park. Tell these contacts you want scrubbers installed immediately so that Mohave operates more cleanly. Address: Felicia Marcus, EPA, Region IX, 75 Hawthorne Street, San Francisco, CA 94105; phone: 415-744-1500; or John Bryson, SCE President, 2244 Walnut Grove Ave., Rosemead, CA 91770.



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FRANK OBERLE

**Human-made relics, such as the 19th-century Fox Creek School, are dwarfed by the rolling sea of grass and flowers on Tallgrass Prairie National Preserve.**

of ranching with management of the prairie's natural resources.

NPS will manage the unit through a cooperative agreement with the National Park Trust (NPT), which purchased the property with the assistance of NPCA to preserve the tallgrass prairie as a national park unit. To make the new park possible,

NPT negotiated a leasing agreement on the preserve with Ed Bass, a Fort Worth-based cattle rancher, dedicated environmentalist, and philanthropist. Bass prepaid the 35-year lease, essentially loaning NPT \$2 million, and generously donated an additional \$1 million in unrestricted funds that allowed NPT to purchase the

property and begin operating the preserve for the public. The lease allows Bass to continue grazing cattle on the property for 35 years, but the document also offers buyout provisions that allow NPT to purchase all or part of the grazing lease in the future.

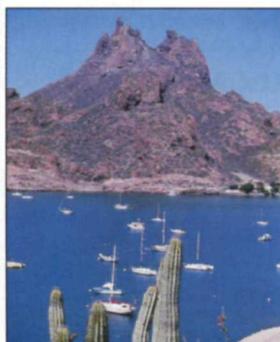
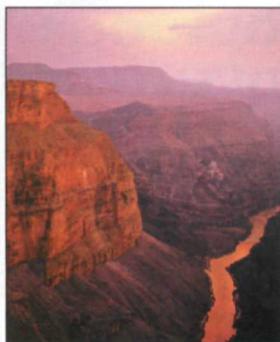
Although the legislation establishing Tallgrass Prairie National Preserve stipulates that cattle grazing is compatible with the preserve's objectives, such use of parkland must be carefully managed. To uphold the Organic Act's mandate to preserve park resources "unimpaired for future generations," the park management plan must reflect historic and modern ranching practices while still allowing natural processes to shape the native tallgrass prairie.

Additional research will be necessary to ensure the ultimate ecological integrity of the tallgrass prairie. Some changes in fire and grazing practices may be necessary to mimic natural cycles inherent in a native prairie ecosystem. For example, cattle may have to be removed from some riparian areas along prairie creek beds where biologists have identified resource damage, and burning may be reduced in some areas to every three to five years—a cycle more consistent with natural processes. An assessment of optimal management practices has been undertaken by biologists and range experts who specialize in maintaining the health of prairie ecosystems.

"NPS must rely on prevailing science to make these decisions," says Lori Nelson, NPCA's Heartland regional director, "and it is incumbent on both NPS and its partners to integrate their management approaches to the park's best interests."

Local and national public support exists for NPS to reintroduce native species, including bison, to their historic range on the Kansas prairie. NPS is grappling with how to manage cattle and bison given the limited space available and their potential resource impacts.

NPS proposed alternatives focus on two distinct zones for interpreting the prairie. A "cultural zone" could encompass the 19th-century ranch buildings and historic cattle operations, and interpret human interaction with the prairie. The rest of the preserve might function



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# NEWS UPDATE

► **LWCF FUNDS MAY BE RELEASED:**

An amendment is being planned to the Senate Interior Appropriations bill that would increase funding for the Land and Water Conservation Fund, which uses royalties from offshore oil and gas drilling to purchase land for conservation and recreation. For years, Congress has been diverting the funds meant for land conservation efforts to pay off the budget deficit. Now, however, the federal government has a budget surplus, and LWCF funds should be used as intended. The additional LWCF funds will be used to protect resources in parks and open spaces around the country. **TAKE ACTION:** Write to your Senators asking them to support an amendment to increase funding for the LWCF. Address: U.S. Senate, Washington, DC 20510; or call 202-224-3121. Or Sen. Slade Gorton, 730 Hart Bldg., Washington, DC 20510; or call 202-224-3441.

► **UGRR BILL BECOMES LAW:**

On July 21, President Clinton signed into law legislation promoted by NPCA to establish the Underground Railroad Network to Freedom. The law creates a framework for extensive cooperation among historic sites, educational institutions, museums, and community organizations that will illuminate the struggles of runaway slaves at each interpretive site. The Park Service will provide technical assistance. The law authorizes \$500,000 for the first year of operation and up to \$1 million for each year thereafter. Among those present at the signing in the Oval Office were: Iantha Gantt-Wright, NPCA's cultural outreach manager; Al Eisenberg, NPCA consultant and reviewer of the legislation; NPS Director Robert Stanton; members of the UGRR Commission; congressional champions for the bill; and Department of Transportation Secretary Rodney Slater.

► **BISON NEED SUPPORT:**

The public has until October 16 to comment on the NPS-State of Montana draft bison management plan for Yellowstone National Park. NPCA fears that adoption of the plan's preferred alternative will not prevent future bison slaughters like the mass killing of nearly 1,100 bison two winters ago (see News story, July/August 1998). NPCA has endorsed a less expensive "Citizens' Plan" that would change cattle grazing allotments to accommodate bison on nearby national forest lands, abolish politically motivated bison herd size limits, require cattle vaccination, and acquire critical winter range. **TAKE ACTION:** Request a free copy of the Citizens' Plan. Call NPCA at 1-800-NAT-PARK. Reject the preferred alternative and endorse the Citizens' Plan and the points above by writing to: Sarah Bransom, DSC-RP, P.O. Box 25287, Denver, CO 80225-0287.

as a "natural zone," with the landscape restored as best as possible to its most biologically diverse condition, giving visitors the opportunity to experience open spaces and native flora and fauna.

"We must highlight the tallgrass prairie as the long-recognized 'missing piece' of the National Park System puzzle and what it means to us as Americans," says Nelson. "Grant-Kohrs Ranch National Historic Site in Montana was created to interpret the history of ranching in America, but there is no other unit whose purpose is to protect and interpret a healthy, native prairie ecosystem. This is our one shot."

**TAKE ACTION:** Comment on how you think the Tallgrass Prairie National Preserve should be managed. Request a copy of the GMP newsletter and read the preliminary alternatives presented thus far. Write: Tallgrass Prairie N.P., NPS Office, P.O. Box 585, 226 Broadway, Cottonwood Falls, KS 66845, or access the NPS web address at: <[www.nps.gov/tapr/home.htm](http://www.nps.gov/tapr/home.htm)>.

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## REGIONAL REPORT

News Briefs from NPCA's Regional Offices

### ALASKA Chip Dennerlein, Regional Director

► Legislation to limit commercial flights and ensure visitors the opportunity to enjoy natural quiet in national parks is moving through Congress. The House and Senate incorporated language from the National Parks Overflights Working Group, which recommended that the undeveloped nature of Alaskan parks specifically warrants special restrictions from air tour overflights. Commercial aircraft fly at low level and intrude on the wildness and solitude of these magnificent parks. The Alaska delegation added language to the bill that would exempt Alaska from any overflight regulation. **TAKE ACTION:** Urge your senators to protect Alaska's parks from overflight noise. Address: The Honorable \_\_\_\_\_, U.S. Senate, Washington, DC 20510; phone: 202-224-3121 (Capitol switchboard).

### HEARTLAND Lori Nelson, Regional Director

► Voyageurs National Park is developing a visitor use and facilities plan that will govern future visitor access, visitor services, and recreation activities in the park, such as snowmobiling and off-road vehicle use. Approximately 98 percent of the park is recommended wilderness. NPCA will encourage the Park Service to remove existing motorized recreation where it negatively affects areas managed as wilderness, and prevent its establishment in new areas where these uses threaten resources and natural quiet. **TAKE ACTION:** Write to Voyageurs National Park and express your support for preventing motorized uses from operating in park wilderness. Address: Supt. Barbara West, 3131 Highway 53, International Falls, MN 56649-8904; or phone: 218-283-9821.

### NORTHEAST Eileen Woodford, Regional Director

► The National Park Service announced that the size of the new visitor center and museum facility at Gettysburg National Military Park will be reduced by nearly 20 percent. Several commercial uses that NPCA considered inappropriate for the park will be eliminated. The draft general management plan and environmental impact statement for the new facilities will be available for comment from NPS in early fall. **TAKE ACTION:** To request the documents for review and comment, write to the park. Address: Superintendent, GNMP, 97 Taneytown Rd., Gettysburg, PA 17325.

### PACIFIC Brian Huse, Regional Director

► Clark County, California, wants to purchase 6,000 acres of land in southern California for the construction of a new commercial airport that will threaten the resources in three nearby national parks, especially Mojave National Preserve. NPCA opposes the airport proposal and associated commercial development because of its potential to degrade the natural quiet, fragile resources, and night sky beauty of these unusual desert parks. Once purchased and in private hands, the land and project will be immune to federal environmental impact evaluations. **TAKE ACTION:** Write to the California senators and urge them to oppose legislation allowing Clark County to buy the BLM land. Address: Sen. Barbara Boxer, 112 Hart Bldg., Washington, DC 20510; or e-mail: senator@boxer.senate.gov. Sen. Dianne Feinstein, 331 Hart Bldg., Washington, DC 20510; or e-mail: senator@feinstein.senate.gov.

*continued*

## LEGISLATION

# Transportation Act Improves Park Access

Reauthorization of major bill will increase park funds for transportation enhancements.

WASHINGTON, D.C.—Formerly called the Intermodal Surface Transportation Efficiency Act (ISTEA), the Transportation Equity Act of the 21st Century (TEA 21) has been signed into law. This new bill provides unprecedented funds and authority to the National Park Service (NPS) for park transportation repair, maintenance, and rehabilitation projects.

TEA 21 increases funding for transportation improvements from \$84 million to \$115 million in the current fiscal year and \$165 million for each year thereafter. The new law also allows greater versatility in the use of these transportation funds. Under TEA 21, the Park Service can flexibly use some of the \$165 million on transportation projects outside park boundaries that will benefit parks internally. For example, NPS could assist states and localities in developing multi-purpose transportation centers that would provide parking lots for cars outside congestion-plagued parks. Shuttles, rail service, or buses would then bring visitors inside and around these parks. Such centers would be state and federal partnerships, to which the Park Service could contribute money from TEA 21 and from general appropriations. The centers would improve park access and benefit transportation alternatives in those communities surrounding parks.

Plans are already under way for improving transportation in the counties around Yosemite National Park and other places that are clogged with automobile gridlock. New authority for mass transit "upgrades," now possible because of TEA 21 funds, will enhance mass transit

connections to parks in urbanized areas through eligible improvements such as bus stops, expanded shelters, and light rail platforms.

"The reauthorization of ISTEA now provides money for significant transportation improvements in parks that otherwise would never be done," says Al Eisenberg, a consultant for NPCA. "The increased flexibility in the use of these funds provides a win-win situation for the parks and nearby communities, protecting resources while aiding visitors."

Despite its positive provisions, TEA 21 also included several harmful anti-environmental riders. Sen. Frank Murkowski (R-Alaska) inserted language to authorize \$1.5 million in funding for the construction of a second access road into Denali National Park and Preserve in Alaska. Although the money was provided, it is not enough to build the road, and the Park Service is not obligated to give up the land to do so. However, now that the project has been authorized, Murkowski may seek additional funding for the road on other congressional appropriations bills. For other attacks on Alaska national parks, see News story on page 10.

Another provision attached to the bill delays the implementation of regional haze regulations for a period of nine years. The delay will extend low standards for emissions controls on power plants and automobiles, allowing their pollution to continue to obscure national park vistas (see story, page 14).

DEVELOPMENT

# Mass. Airport May Expand at Cape Cod

National seashore could be burdened with growing tarmac and increased overflight noise.

WELLFLEET, MASS. —The Federal Aviation Administration (FAA) and the Provincetown Airport Commission are proposing to build a 700-foot extension to the runway and expand the general aviation parking area at Provincetown Municipal Airport, located within Cape Cod National Seashore.

Operating under a special use permit from the National Park Service (NPS), the airport predates the establishment of the seashore and is one of only two airports located within a national park. The special use permit expires in 2016.

NPCA opposes the expansion of the runway because of its detrimental effects to the scenic beauty, fragile ecosystem, and natural quiet of the seashore. The draft environmental impact statement (EIS) for the project, completed by FAA, alleges only a "slight" impact to visual and aesthetic values of the area as a result of the proposed expansion. According to the EIS, the

## LEGISLATIVE ALERT

► **SAVE CUMBERLAND ISLAND:** Legislation introduced by Rep. Jack Kingston (R-Ga.) threatens to undermine the wilderness resources at Cumberland Island National Seashore and return part of the parkland to private ownership on the island. The bill (H.R. 4144) drastically undercuts the intent of Congress when it established the seashore in 1982 by imposing permanent vehicle use within the wilderness area and facilitating a land swap that would privatize public land within the national seashore.

"The bill will establish a dangerous precedent where those with money and influence can purchase private estates within our nation's most treasured public property," says Don Barger, NPCA's Southeast regional director. **TAKE ACTION:** Time is critical! Write to your representatives and House Speaker Newt Gingrich opposing H.R. 4144 and urging them to protect Cumberland Island's wilderness areas for public use. Address: Rep. Newt Gingrich, U.S. House, Washington, DC 20515; or call 202-225-0600.

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REGIONAL REPORT *continued***PACIFIC NORTHWEST**

► The draft plan that will guide management of Glacier National Park for the next 20 years has been released for public comment. NPCA recommends the final plan contain: provisions that would ban personal watercraft and helicopter airtours in order to preserve natural sounds; replace existing outdoor lighting to preserve views of the night sky; develop a public transport system to reduce congestion; and develop a west side visitor center outside park boundaries. NPCA is also requesting that impacts to park resources be carefully considered before promoting additional winter uses such as winterizing Lake McDonald Lodge and plowing more roads. **TAKE ACTION:**

Obtain the draft plan and send comments to: GMP/EIS Project, Glacier National Park, West Glacier, MT 59936-0128, or see <[www.nps.gov/glac](http://www.nps.gov/glac)>.

**ROCKY MOUNTAIN** Mark Peterson, Regional Director

► NPCA is co-sponsoring a conference with the Federation of Fly Fishers titled, "Fish, Fishing, and Fisheries Management in Yellowstone National Park," Oct. 8-9 in Livingston, Montana. Presentations will address history of the fishery, management techniques and issues, and threats to Yellowstone's waters. Cost of the conference is \$30. **TAKE ACTION:** Write: FFF, P.O. Box 1595, Bozeman, MT 59771, or call 406-585-7592.

**SOUTHEAST** Don Barger, Regional Director/Kim Swatland, Field Representative for South Florida

The Everglades Ecosystem Restoration Initial Draft Plan is due for release by the Army Corps of Engineers in October. The plan outlines critical projects for restoration of the Everglades ecosystem, but the land acquisition budget is \$20 million under what is required and funds to create buffer zones around the parks in south Florida have been cut in half. In addition to inadequate funding, NPCA is concerned about water delivery to Biscayne National Park and will closely monitor the plan as it continues to be revised.

**TAKE ACTION:** Urge your congressional leaders to allocate the critical funds to enable Everglades restoration to continue. Address: U.S. Senate, Washington, DC 20510; U.S. House, Washington, DC 20515; or call: 202-224-3121.

**SOUTHWEST** Dave Simon, Regional Director

► At press time, a tentative agreement had been announced that should make possible public acquisitions of the magnificent Baca Ranch property in New Mexico, an important parcel for protecting Bandelier National Monument. The 95,000-acre property, also known as the Valles Caldera, is one of the world's largest resurgent lava domes and is rich in wildlife habitat. The agreement to add the Baca Ranch to the Santa Fe National Forest was announced jointly by the Clinton Administration and New Mexico Sens. Jeff Bingaman (D) and Pete Domenici (R). The senators promised to push for \$40 million in funding for the acquisition during this congressional session and to seek additional funding as needed. Another bill, introduced by Bingaman, has passed the Senate and authorizes NPS to purchase approximately 1,075 acres in the upper watershed of Alamo Canyon. This acquisition would avert development of the proposed Elk Meadows subdivision that threatened water and wilderness resources of the monument.

extended runway would accommodate larger, faster aircraft, and an expanded parking apron would allow 40 private aircraft—projects the FAA says are necessary to serve a predicted growth in travel to the cape.

NPCA asserts that the FAA proposal for the runway extension and parking apron will intrude on the delicate beauty of the area, while noise from increased overflights will diminish visitors' opportunities for a peaceful experience at the seashore—a value clearly articulated in the park's recently completed general management plan. Noise intrusion from commercial overflights has become an alarming and wide-spread problem facing many national parks in the system.

Furthermore, the expanded parking apron is meant to serve private planes flying into the cape, and FAA justifies its construction as necessary to meet peak demands during summer months. The preferred alternatives for these projects, combined with several other building proposals for the airport, would cost nearly \$1.6 million.

"FAA's analysis of demand for future air travel to the cape is extremely shallow, and the results of that analysis are purely speculative," says Eileen Woodford, NPCA's Northeast regional director. "The convenience of pilots to park private planes at the airport on summer weekends is not a justification to degrade the nationally significant resources and values of this exceptional national seashore."

Both NPCA and NPS found that the FAA failed to demonstrate that there are no prudent or feasible alternatives to the proposed runway extension as required by federal law. FAA overlooked the possibilities of improving several other commercial airports on the cape, such as at Hyannis, which is already capable of accommodating larger aircraft. By attempting to complete environmental compliance now—for a runway extension to be built at an unspecified future date—FAA is preventing the full consideration of alternatives that may be available at the time of actual construction.

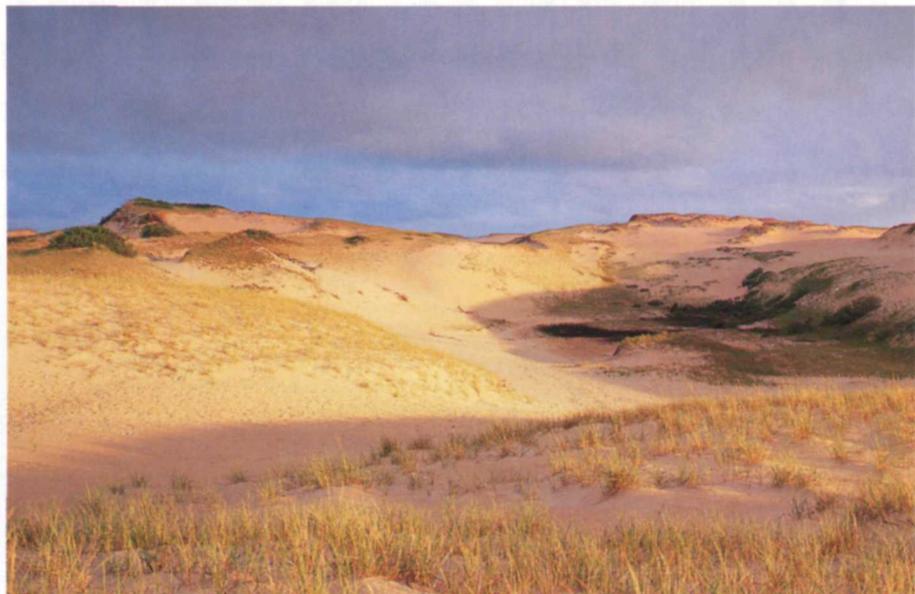
NPCA finds that the draft does not explore all of the environmental impacts of the proposed construction,

such as the potential for volatile chemical or organic compounds to drain from the runway or parking lots into groundwater and adjacent wetlands.

The draft EIS is further flawed in that it uses inappropriate standards to measure the impacts of increased noise from the projected growth in airport use. Federal courts have already recognized that the suburban-based standards used by FAA in determining overflight noise impacts are inadequate when examining their effects on natural quiet in national park units.

The airport has offered to build an earthen berm—up to eight feet in height and with “vegetative screening” to mitigate noise and visual intrusions—but it does not assess the berm’s impact on the dune landscape.

FAA’s proposal is “contrary to the purposes, mission, and goals of the national seashore and as a result, completely unacceptable,” says Woodford. “The fragile environment around the airport indicates that there is an upper limit to the number of general aviation



PAUL REZENDOS

**Noise from commercial jets and a proposed runway extension at a nearby airport will harm the delicate environment found at Cape Cod National Seashore.**

planes that the facility can serve. The FAA and the Provincetown Airport Commission must consider limiting the number of planes using the airport during peak periods and implementing a reservation system for parking.”

**TAKE ACTION:** Oppose the runway extension within Cape Cod National Seashore. Write: John Silva, Manager-Environmental Programs, FAA Airports Division, 12 New England Executive Park, Burlington, MA 01803, or call 781-238-7602/7001.

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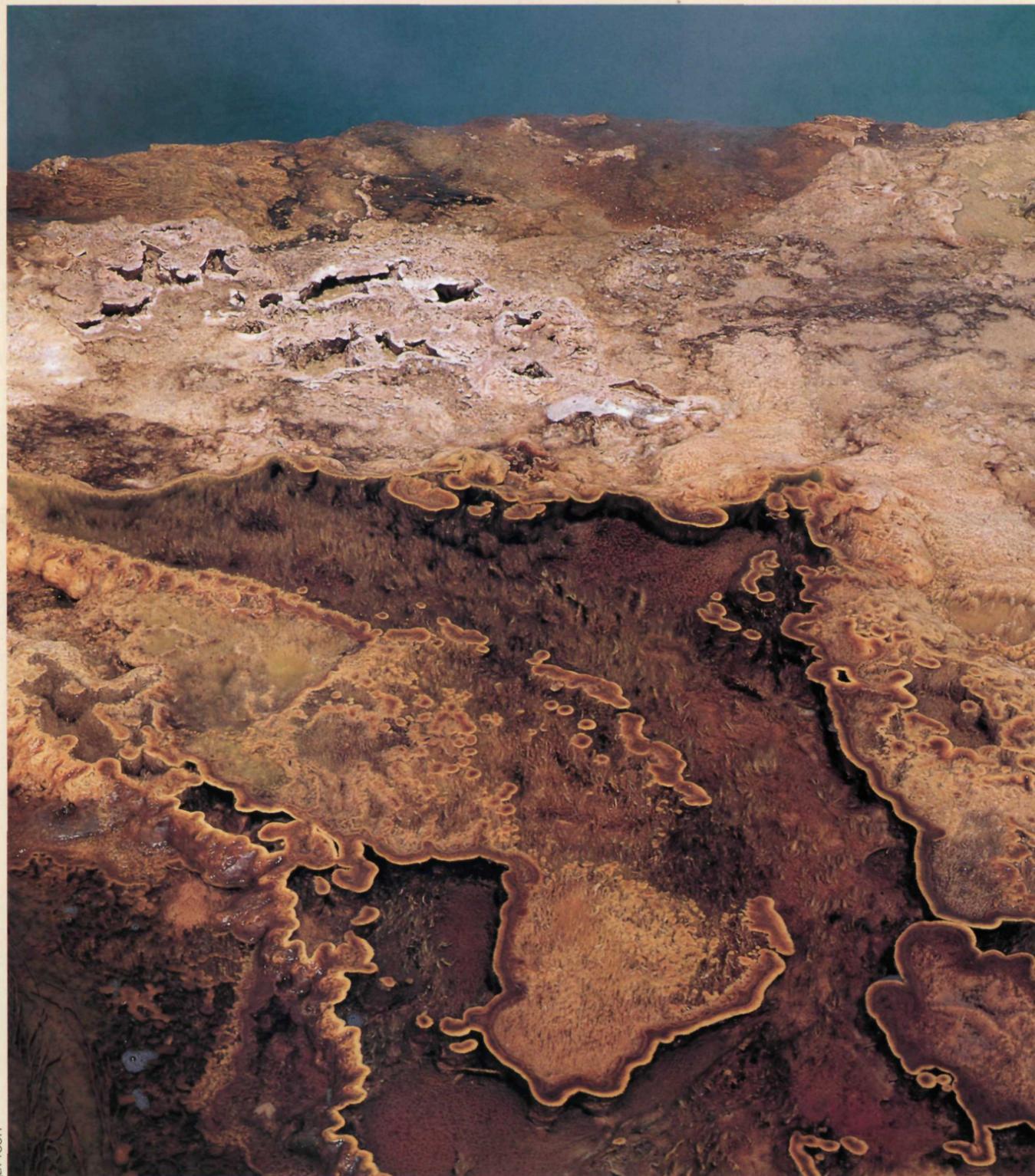


BOYD NORTON

# PANNING YELLOWSTONE'S POOLS

## for SCIENCE and PROFIT

BY TODD WILKINSON



JEFF FOOT

CURES FOR CANCER.

COSMIC PARALLELS WITH THE PLANET MARS.  
EVEN MICROSCOPIC CLUES FOR HOW TO BREW  
A BETTER BEER.

As John Varley, the chief scientist of Yellowstone National Park, watches researchers fill test tubes from a steamy emerald pool in the park interior, he isn't thinking about those important discoveries hovering on the horizon.

Gripping his attention is a paradox—the “happy accident,” he calls it—that has enabled this realm of America's first national park once thought barren to be recognized as one of the richest vaults of biological diversity on earth. “What we have here,” Varley says, “is a panoply of organic life that exists on an order of magnitude greater than anyone could have imagined in the 1870s,” when the park was first explored.

In a teaspoon of mud or water drawn from a single hot spring, recent analysis has shown thousands of different microbial species. Extrapolating that across Yellowstone's array of 10,000 geysers, hot springs, and fumaroles, Varley estimates conservatively that far less than 1 percent of the microbes surviving in park waters have been cataloged.

In the summer of 1997, Varley, Vice President Al Gore, Secretary of the Interior Bruce Babbitt, National Park Service (NPS) Director Robert Stanton, and Yellowstone Superintendent Mike Finley marked the occasion of Yellowstone's 125th birthday with a monumental announcement aimed at narrowing that microbe information gap. Under the terms of a novel scientific contract—officially known as a Cooperative Research and Development Agreement (CRADA)—the federal government

**This photograph captures Yellowstone's geyser and hot spring landscape from ten feet away.**

Private enterprises will be allowed to collect micro-organisms that thrive in Yellowstone's geothermal pools under the terms of a novel scientific contract. The agreement allows the federal government to license “bioprospecting” rights in return for information and royalties.

plans to license “bioprospecting” rights to private companies seeking to conduct research on Yellowstone microbes for commercial applications.

Never before used in a national park, the first CRADA was reached with San Diego-based Diversa Corporation. In exchange, Yellowstone will receive information about endemic organisms it could not afford to inventory, collect about \$20,000 annually over the next five years from Diversa to support research activities, and earn potentially millions of dollars in product royalties in the future.

Consider that just one park micro-organism, *Thermus aquaticus*, was used in the development of DNA fingerprinting that has revolutionized genetic research and produced billions of dollars for the biotech industry. With Yellowstone's innumerable microbes, the potential windfall for the park is tremendous.

Although last summer's agreement has landed the Park Service in hot water with some environmentalists and groups philosophically opposed to bio-engineering, Varley hopes that those agreements will enable the private sector to become a lucrative partner in making limited public research dollars go farther. Other parks that are rich in genetic resources valuable to science could benefit as well.

In fact, although the Yellowstone pact alone holds far-reaching implications, it is actually part of a much larger federal strategy to inventory and preserve the full range of biological diversity in national parks that has, until recently, been largely ignored.

“In 1872, Congress had the foresight to protect Yellowstone based on the aesthetic wonders of its thermal basins,” Varley notes. “Today, we value geysers and hot springs in more profound ways because of the things inside of them

that we cannot see with the naked eye. We've also learned that you cannot protect something effectively unless you know it exists.”

Park Service Director Stanton has taken those words to heart, unveiling an ambitious, multimillion-dollar initiative titled, “Revitalizing Natural Resource Stewardship in the National Park Service.” The centerpiece of Stanton's proposal is an unprecedented survey called the All-Taxa Biodiversity Inventory already under way in Great Smoky Mountains National Park—soon to be applied to other national parks.

The idea is to compile a “living encyclopedia” of organisms in Great Smoky's 500,000 acres to better understand how the ecosystem functions on a macrocosmic and microcosmic scale. Park spokesman Bob Miller says the all-taxa inventory represents a significant shift away from focusing scarce public research dollars solely on large, popular animals.

“Great Smokies has one of the most comprehensive black bear research programs in the world,” Miller says. “We've also contributed significantly to the understanding of deer, but beyond those two species, we don't know much about the rest of our flora and fauna.” Conservationists consequently say the need is urgent because Great Smokies is among the most imperiled wildland preserves in the United States—and also among the most biologically diverse—where species are being lost before they can be cataloged.

Another impetus for more scientific research is the 1997 publication of Park Service historian Richard West Sellars's book, *Preserving Nature in the National Parks: A History* (Yale University Press), which highlighted serious shortcomings in the NPS research agenda. (See Forum, Jan/Feb 1998.)

"The central dilemma of national park management has long been the question of exactly what in a park should be preserved," Sellars writes. "Is it the scenery—the resplendent landscapes of forests, streams, wildflowers, and majestic mammals? Or is it the integrity of each park's entire natural system, including not just the biological and scenic superstars, but also the vast array of less compelling species, such as grasses, lichens, and mice?"

During high-level meetings between members of the Park Service's National Leadership Council and Interior Secretary Bruce Babbitt, Alaska Regional Director Bob Barbee (formerly the superintendent of Yellowstone) has said the foremost threat to park protection is the agency's own ignorance.

Unless resource managers can provide a more compelling picture of what is at stake, how systems are threatened by development pressures, and what holds them together, decision makers who support resource protection are destined to lose political battles. If the superintendent of Great Smoky Mountains, for instance, can show that air pollution is causing species to disappear, he or she can make a more compelling argument for looking at smokestacks upwind.

Ironically, this effort comes at a time when parks are under greater threats than ever before, and Congress continues to trim back public land research budgets. This spring, NPCA called on Congress to authorize \$150 million annually for efforts to promote science-based decision making in the National Park Service.

In related testimony before the Senate Subcommittee on National Parks, Historic Preservation, and Recreation, NPCA praised efforts to bolster research in national parks but said current legislation does not authorize nearly enough to meet its natural resources protection mandate. The subcommittee was debating provisions of the National Parks Restoration Act that would set aside just \$15 million annually for agency research. This is an amount that

"does not come close to approximating what the Park Service needs to become a science-driven and resources stewardship-focused agency," according to William J. Chandler, NPCA vice president for conservation policy.

In the absence of increased congressional funding, supporters of bioprospecting say the CRADA helps ensure that valuable research will not come to a halt.



**In just a teaspoon of water drawn from a park hot spring, a scientist can find thousands of microbial species.**

But in spite of these potential benefits of commercial contracts, what might be the costs? Specifically, what impact might bioprospecting have on Yellowstone's surreal thermal landscape?

"Hikers crossing a thermal basin will have more liquid evaporate off their boots than Diversa, or any other company, will sample," Yellowstone's Varley says emphatically. "For our critics to imply that we are inviting consumptive resource extraction to occur is just plain false. The best way to ensure long-term protection is to know what we have, and the best, most cost-effective way to get that done is by letting private enterprise bear the bulk of the expense. This agreement sets a new standard for how limited use of park resources is compatible with the goals of preservation."

During a typical research expedition,

scientists collect a couple of teaspoons of liquid material from a hot spring and take it back to their lab. There, they try to identify the unique features of a given organism. Debate over intellectual property centers not on the question of whether private companies will "own" a microbe (they cannot) but how the information and genetic material gleaned from park specimens are used commercially.

In some ways, searching for a commercially promising microbe is like panning for microscopic flakes of gold in a mighty stream. Thousands of different Yellowstone microbes, known as "thermophiles," may inhabit a tiny amount of water. Some might have special enzymes that enable them to persist at especially hot or cold temperatures; others might have preservative properties or the ability to strip other materials away, as in detergents or paint thinners.

Dozens of products have already been developed from park microbes. At Lechuguilla Cave in Carlsbad Caverns, microbial research has shown promise in fighting cancer. Even NASA is examining these primitive organisms on the theory that they could be related to life forms able to live in extreme conditions on Mars.

Although the CRADA has been hailed by many as a catalyst to a more enlightened age, critics say it has ushered American parks into a brave but perilous new world of scientific exploration. Two lawsuits have been filed against the U.S. Department of the Interior to nullify the agreement, and watchdogs like Edward Hammond of the Rural Advancement Foundation International say researchers shouldn't be experimenting with the genetic makeup of any species, no matter its size.

Hammond and others such as Mike Bader of the Alliance for the Wild Rockies argue that the CRADA opens the door to the mining of park resources. And they claim that officials at Yellowstone entered into a secret deal with Diversa when it failed to solicit public comment or release the full details of the royalty provisions.

"It's not just a matter of adversaries and who has a right to what intellectual property," wrote Beth Burrows of the

Institute for Agriculture and Trade Policy in the journal *The Boycott Quarterly*. "It's a question of whether intellectual property is an appropriate way to think about life and life forms of any kind. It's a matter of environmental justice at the very deepest level."

However, Preston Scott of the World Foundation for Environment and Development, which brokered the landmark agreement based on similar contracts forged in the tropics and at the National Institutes of Health, says that opposition is based more on emotion than substance. He argues that the CRADA actually affords greater resource protection for Yellowstone, not less.

Before 1997, any company could withdraw microbes from the park free of charge, isolate them in a lab, develop them for their commercial potential, and turn a tidy profit without sharing any proceeds with the public. The best example is the patent for *Thermus aquaticus* owned by the pharmaceutical giant Hoffman-La Roche. The company now takes in more than \$100 million annually from the patent for DNA fingerprinting, but Yellowstone receives nothing.

According to the terms of the CRADA, Diversa and other companies that enter into similar pacts are limited in what they can remove, are obligated to turn over any scientific knowledge they gather to the Park Service, must pay a substantial annual fee, and will return as much as a 10 percent royalty on commercial profits. Diversa's rate, for example, is set on a sliding scale based on the extent of its profits.

Furthermore, Scott asserts that every aspect of the contract has been made public, except for the precise amount of royalties yet to be paid on a given product. Although an advocate of full disclosure, he says that publicly revealing the exact percentage of royalties tips off Diversa's competition on what products it intends to develop. He also argues that it takes away leverage from the government's ability in the future to negotiate better, more generous deals with larger biotech companies that can afford to pay more. If negotiators of those firms know precisely how much Diversa

paid, they could demand to pay less.

Elizabeth Fayad, counsel for NPCA, has scrutinized the CRADA issue. "Our position is that generally speaking, the CRADA seems to be a good agreement," Fayad says, noting that NPCA has chosen not to be a part of lawsuits to stop the CRADA from being implemented. "But we also believe, strongly, that all details of the agreement need to be made public. These are publicly



GLENN OAKLEY

**Knowledge about the park's geysers provides greater impetus for prohibiting geothermal development outside the park.**

owned resources, and the public has a right to know what the government has agreed to."

Mark Peterson, NPCA's Rocky Mountain regional director, sees another advantage to the agreement. He says that expanding knowledge about Yellowstone's thermophiles provides a greater impetus for prohibiting geothermal energy development on the perimeter of the park that could affect nearby geysers and hot springs.

Five years ago, a bill in Congress called the Old Faithful Geothermal Protection Act, drafted to protect Yellowstone's geysers and hot springs, went down in defeat because lawmakers recognized neither a scientific nor economic imperative. Peterson notes that the dividends of bioprospecting add another element to the debate. In the

coming months, NPCA plans to rally support among conservation groups to resurrect the geothermal protection legislation. This time around, he believes legislation will have strong bipartisan support.

Environmentalist Dennis Glick of the Greater Yellowstone Coalition agrees, but based on his work with the World Wildlife Fund in Costa Rica, he says the American public still has not fully recognized the potential of bioprospecting in advancing the value of national parks beyond aesthetics.

Glick says not only are fears that bioprospecting will lead to resource degradation misguided but that the biotech industry provides a strong argument against traditional resource exploitation. He also suggests it is naive for critics to assert that bioprospecting will go away if they succeed in nullifying the CRADA. Bioengineering, from his perspective, is part of the modern world, whether society likes it or not, and now hallowed preserves like Yellowstone have an important role to play in the ongoing philosophical debate.

"There is much we can learn from the lessons of the tropics," he notes. "In Costa Rica, which modeled its parks after Yellowstone, the government and the people realize that they can derive just as many economic benefits by leaving the landscape alone as by developing it in a heavy-handed manner. The average citizen in Costa Rica understands this and appreciates the concept of biodiversity in a way most Americans presently do not. They have taken the idea of Yellowstone and made it better."

In 1870, when members of the famed Hayden Expedition trekked across the same geyser basins to survey park wonders for a special report to Congress, they were oblivious to the "invisible" treasure trove of organic richness. Little did they know that their footsteps on the path to preserving the planet's mother park were leading ultimately into a brave new world.

TODD WILKINSON, author of the new book *Science Under Siege: The Politicians' War on Nature and Truth*, is a regular contributor to National Parks.

# BACK where they BELONG

An ambitious Park Service program seeks to return desert bighorn to their historic range in more than a dozen parks. Unlike their Rocky Mountain cousins, this subspecies has adapted to hot, dry conditions.

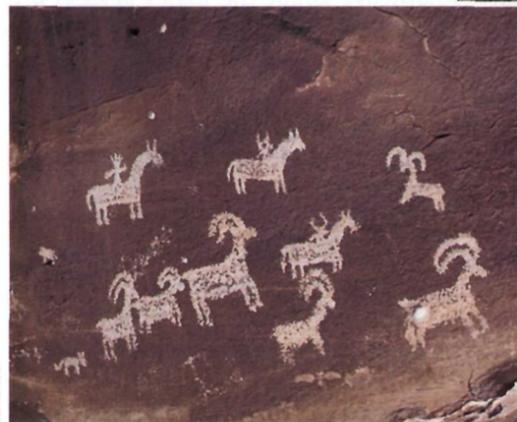
BY DAVID N. B. LEE

**O**N A GLORIOUS spring day in Canyonlands National Park in Utah, volunteer ranger Keni Koreba had a close encounter of the wild kind. "I was sitting on a rock outcrop," she recalls, "when a bighorn ram suddenly appeared about 20 feet away." After her initial shock, Koreba said she was comforted by the presence of the huge animal. "It would have somehow been more lonely and cold without him there," she mused.

Like Koreba, more and more national park visitors are seeing desert bighorn sheep, thanks to a comprehensive reintroduction effort under way in half a dozen Western park units. A key focus of the program, Canyonlands has served as a vital source of individual sheep and of genetic variation for restoration efforts.

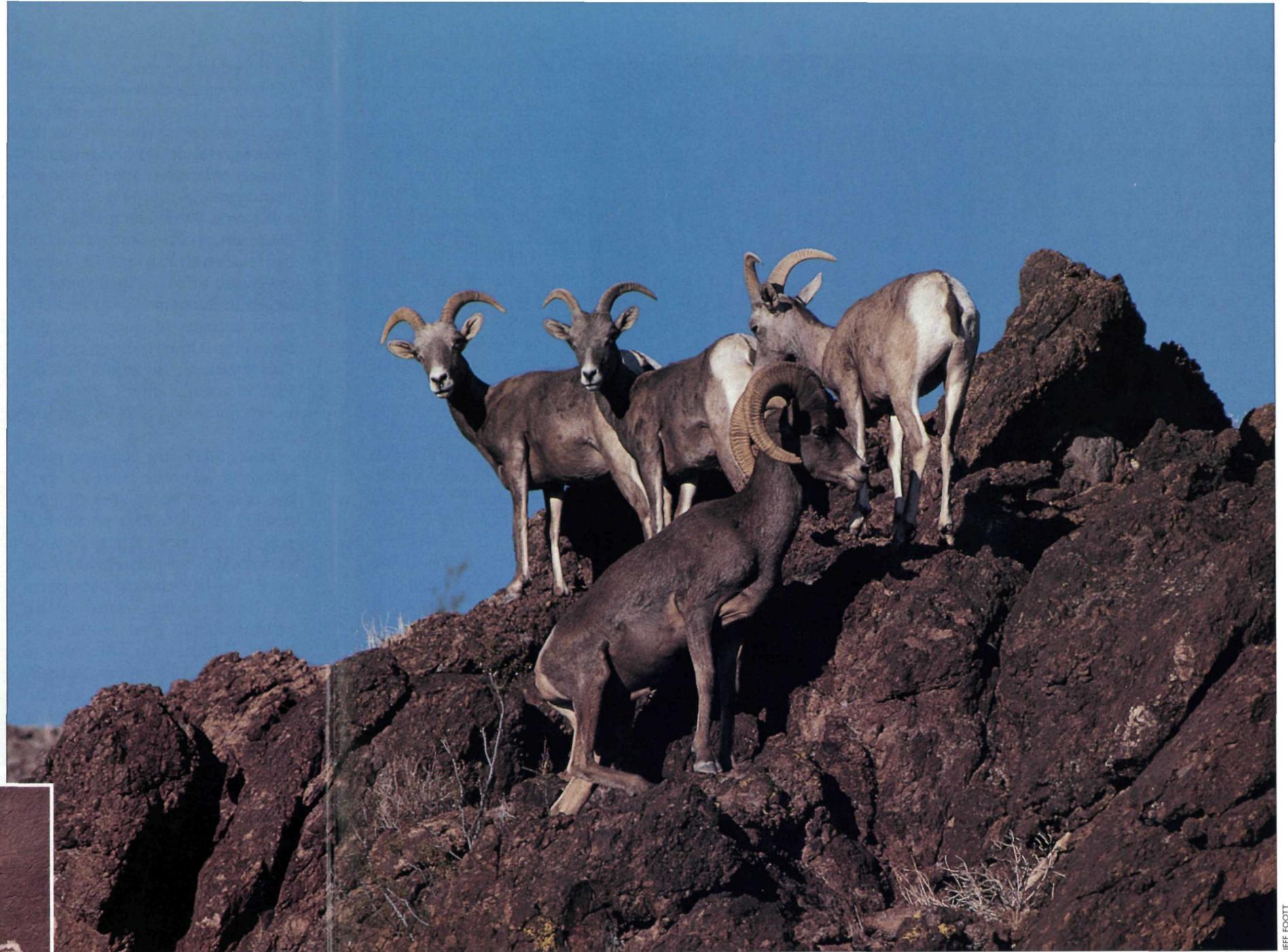
"Canyonlands is unique in that it holds one of the few remaining native populations of desert bighorns. If we had not developed other herds through transplants, this would have been the only herd in the state," says Utah Division of Wildlife Resources biologist Jim Karpowitz. "It's all part of getting bighorns back where they belong."

Although taxonomic changes are under consideration, desert or Nelson's bighorns (*Ovis canadensis nelsoni*) are considered by most biologists to be a separate subspecies. Unlike their Rocky Mountain cousins, desert bighorns have



adapted to life in a hot, dry environment. Compared with other subspecies, desert sheep are small, have a light coat, long legs, and wide horns.

Before European settlement, desert bighorns occupied rocky cliffs throughout the Southwest. Desert sheep are quite common in ancient Anasazi and Fremont Indian pictographs, a sign of the animals' physical presence and their



prominence in the minds of indigenous peoples.

But bighorn populations experienced "catastrophic declines" starting in the mid-1800s, says Francis Singer, a research ecologist with the Biological Resources Division of the U.S. Geological Survey in Fort Collins, Colorado. As settlers and miners moved in, they hunted wild sheep for food and profit. Diseases transmitted from domestic livestock took a major toll as cattle, domestic sheep, and feral burros competed with bighorns for grazing areas and water

sources. Later, the building of towns, roads, fences, dams, and canals fragmented the bighorn habitat and created barriers to their movement. These factors combined to virtually eliminate wild sheep from most of their historic range in Utah and throughout the Southwest.

Today, some 60,000 desert bighorns occupy only a third of their original range. They are "habitat specialists," says Singer, preferring steep, rocky terrain with open visibility and little or no snow in winter. "While there are some large, restored populations, most desert

bighorns now live in small islands of habitat surrounded by flat terrain, forested areas, and human development—all of which they avoid." Cut off from other groups, bighorn herds are in danger of inbreeding, which can cause a diminished ability to adapt to diseases and changing environmental conditions.

Disease transmission and grazing competition from domestic livestock are still a worry, and many bighorn herds suffer losses from highway collisions and predation from mountain lions, coyotes, and golden eagles. Less

**Before European settlement, bighorns lived throughout the Southwest. Now they occupy a third of that range.**

acute threats include loss of grazing lands to encroaching pinion-juniper forests and sagebrush, often the result of fire-suppression policies, along with development activities in critical habitat.

To counter these threats, Park Service biologists have devoted significant effort to returning desert bighorns to their historic ranges or remaining suitable habitat. Starting as early as 1946, but especially in the 1980s, state and

## BIGHORNS Continued

federal biologists began importing, or "translocating," bighorns from established herds in Canyonlands National Park and other areas to found several new herds. "Bighorns are notoriously poor dispersers," says Singer, "so translocations are often the only way to get them back to their historic range."

In 1991, the National Park Service (NPS) and other government agencies launched a major translocation campaign in Utah, Colorado, Wyoming, Montana, and the Dakotas. "The scale, time, effort, cost, and complexity of this approach are, with few exceptions, unprecedented in the history of wildlife restoration efforts in North America," says Singer, who was the initiative's leader.

The goal of the six-year program was to recolonize bighorn habitat in and around more than a dozen park units, explains Singer, eventually rebuilding the original, interconnected "metapopulation." Before the move, biologists surveyed 15 park units for existing bighorns and used geographic information systems (GIS) to identify unoccupied yet suitable habitat. With this information, wild sheep specialists made recommendations to interagency committees, which decided where and how translocations would be carried out.

Between 1994 and 1996, restoration teams used helicopters and net guns to capture and move more than 100 desert bighorns from Canyonlands and other areas into unoccupied habitat in Capitol Reef National Park and Glen Canyon National Recreation Area. Reintroduction also occurred in Badlands National Park in South Dakota, Theodore Roosevelt National Park in North Dakota, and Bighorn Canyon National Recreation Area in Wyoming.



BOB MCKEY/TOM STACK & ASSOCIATES



GALEN ROWELL

**In 1991, NPS launched a program to recolonize bighorn sheep in habitat in and around more than a dozen parks. Scientists used nets and helicopters to capture and move more than 100 bighorns from Canyonlands.**

According to Singer, this effort succeeded by "combining GIS and on-the-ground habitat assessments, careful planning, conservation biology theory, and interagency cooperation." He also attributes the initiative's good results to "vigorously avoiding" areas where domestic sheep graze and gaining the input of each park unit and all nearby agencies in the planning process.

Future restoration plans call for moving another 20 to 30 bighorns to Capitol Reef and at least 140 to Glen Canyon, but managers estimate it will take about \$100,000 to complete the process. With government funding uncertain, the program depends on securing federal budget allocations and grants from such corporations as Canon U.S.A., Inc. Although a research biolo-

gist, Singer and NPS bighorn program coordinator Michelle Gudorf have by necessity become fundraisers, putting in a lot of effort chasing fewer and fewer dollars.

Although bighorn populations in many park units are far better off than they were even 10 years ago, wild sheep still have a long way to go before they are out of danger. Despite the Herculean restoration effort, only nine out of 34 bighorn populations (27 percent) in Park Service units from Utah to North Dakota are considered moderately secure for long-term survival. In Arches, Canyonlands, and Capitol Reef national parks, bighorns live in only a third of their suitable habitat. In Glen Canyon National Recreation Area, they occupy 14 percent of their available range.

"Translocated bighorns tend to be sedentary," explains Singer, "a fact which impedes their discovery of new habitat and increases the risks of disease transmission and predation." Gene flow is also reduced when rams don't move be-

tween herds.

In fact, all bighorn races are susceptible to a variety of diseases, partly because the same network of air pockets, or sinuses, that makes their horns lightweight also acts as a reservoir for infection. The list reads like a public health official's worst nightmare: epizootic hemorrhagic disease and bluetongue (viruses that cause bleeding disorders), moraxella (the bacteria that cause pink-eye and pneumonia), bovine sinusoidal respiratory virus, anaplasmosis (a malaria-like disease), and psoroptic scabies, which infects the skin and ears to such a point it can render bighorns deaf—or dead.

Bighorns contract most of these afflictions by nose-to-nose contact with domestic sheep or through insects and

ticks that carry infecting organisms from livestock. The diseases are usually fatal. "Although die-offs do not occur at every exposure, the near proximity to domestic sheep is considered a high-risk situation," says Singer. The wild sheep that do survive may become carriers and spread the disease to other herds.

Among the most ubiquitous of bighorn diseases is *Pasteurella pneumoniae*. Biologists suspect *Pasteurella* may have been responsible for depleting the North San Juan herd that ranges into the Needles district of Canyonlands, though Craig Hauke, natural resource specialist at the park, says the exact cause has been hard to prove.

Whatever the cause, the decline has been dramatic. "The North San Juan herd is nearly nonexistent," says biologist Karpowitz. "They've pretty much disappeared." He counted only six sheep in the herd during a 1996 aerial survey, whereas in the mid-1970s, biologists had counted 250. "We were finding dead sheep along the Colorado River and saw live ones coughing—a symptom of pneumonia," says Karpowitz.

Like American Indian tribes reeling from European smallpox infections, desert bighorns are slowly rebounding from such microscopic invaders. The Lockhart Basin herd, a subgroup of the San Juan population, occupies cliffs just north of Canyonlands. "They've recovered quite well," says Karpowitz, who counted 53 animals in 1996. "We think the Lockhart bighorns were affected by the same disease that wiped out the North San Juan herd and are now making a comeback."

Desert bighorns dying from diseases may soon get help from a new *Pasteurella* vaccine developed by wildlife veterinarian Michael Miller with the Colorado Division of Wildlife. "This is the first vaccine that has worked on bighorns. It's very safe and stimulates a good antibody response," says Miller. In experimental trials, the shot reduced mortality by 60 percent in wild sheep exposed to *Pasteurella*, and field tests began in February 1998.

To help prevent the spread of disease and reduce competition for resources,



**As more and more people are moving to and recreating in the desert, bighorn sheep become more susceptible to losses from highway collisions.**

domestic sheep and cattle grazing was slowly phased out of Canyonlands National Park by the early 1960s, and the desert bighorn population soared. By law, grazing is still allowed in some areas of Capitol Reef National Park and in Glen Canyon National Recreation Area, however, and officials say they would like to see grazing end in those units as well. Because bighorn die-offs in Park Service units can occur anytime they come in contact with domestic livestock, "the best situation would be to have no livestock grazing anywhere in bighorn habitat," said Hauke.

Increasing human activity and development in wild sheep habitat may necessitate more intensive management along with other conservation measures if remaining herds are to survive. This year, the federal government added 280 Peninsular bighorns living near rapidly growing areas in California's southern desert to the endangered species list. At this point, it's anyone's guess how this designation will affect the management of other bighorn populations, says Singer. But one thing is certain: "More and more people are moving to and recreating in the deserts, and the subse-

quent development is having a negative impact on wild sheep."

Desert bighorns living in Lockhart Basin on the edge of Canyonlands could soon face similar pressures. As this article went to press, the Salt Lake City-based Southern Utah Wilderness Alliance (SUWA) had filed an appeal to stop an exploratory oil well in the basin. SUWA representatives say the Bureau of Land Management should reverse its approval of the well mainly because it would be located within critical bighorn habitat.

With the multitude of management issues involved, some biologists are now expressing their concern with over-handling bighorns. "The biological and aesthetic or moral costs of any degree of domestication can no longer be ignored," writes Paul R. Krausman in *Counting Sheep: 20 Ways of Seeing Desert Bighorn*, edited by Gary Paul Nabhan. A professor of wildlife at the University of Arizona, Krausman says, "If people continue to diminish the habitat

available to mountain sheep, intensive, livestock-style management will become inevitable." In the same anthology, biologist Harley G. Shaw writes, "I worry the helicopter, the dart, and the net may have already begun the process. Sheep are now too easy to catch."

While management activities such as capturing and flying wild bighorns to their former range are necessary and in fact commendable, park biologists and resource managers must decide when too much tinkering threatens the very wildness of the animals. And it's up to society—you and me—to make sure desert sheep and other free-roaming native ungulates will always have vast, wild places to live, inside park boundaries and beyond. In the words of natural history writer David E. Brown, "The bighorn sheep remains the ultimate symbol of the desert's wildness and our longing for identity with it. To those of us who love the desert, the sheep are us and we are them."

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DAVID N.B. LEE specializes in environmental and travel writing. He last wrote for National Parks about kayaking in the parks.

# The Long Road to ANDERSONVILLE

This past spring, the Park Service fulfilled the mission of Andersonville National Historic Site, one of the most notorious prisoner of war camps in U.S. history, by dedicating the National Prisoner of War Museum. The historic site will serve as a memorial to all the nation's POWs.

BY CHRIS FORDNEY

**B**ELOW ATLANTA the land turns flat and the road runs straight through mile after mile of pine forest and red-clay farmland of Georgia.

This was the remote landscape through which nearly 50,000 Civil War prisoners of war passed as they rode in crowded rail cars to Andersonville, the most infamous prison camp in American history. Penned by their Confederate captors like animals under blazing sun and violent storms in a crude, 26-acre stockade, the Union prisoners struggled for survival on scanty rations in conditions of extreme overcrowding, filth, and rampant disease. Nearly 13,000 died.

This past spring, another group of prisoners of war journeyed to Andersonville, although these men came of their own free will to help dedicate a new museum honoring all 800,000 American men and women captured in all the nation's wars. The \$5.8 million National Prisoner of War Museum, a prison-like structure of slate, granite, and steel with three imposing towers, opened April 9 at the Andersonville National Historic Site near the location of the original Civil War stockade.

Many former POWs were in the crowd of 4,000 at the ceremony, and the age of some showed how urgent it was to document the experiences of the World War II generation, which had

more than 100,000 POWs and suffered death rates in the Pacific higher than Andersonville's. The museum includes a library with an oral history archive of nearly 750 interviews with former POWs conducted by National Park Service personnel, now believed to be the



**Union soliders depicted at Andersonville's 26-acre stockade. Nearly 13,000 soldiers died at the camp.**

largest such collection in the nation.

Persuading former POWs to recount their stories, and preserving them for scholars, may be as important an accomplishment as collecting artifacts, photographs, and film clips displayed in the museum. "So many POWs don't want to talk about their experiences," said Bill Fornes, a former POW who,

with his wife, Nancy, was a key organizer and fund raiser for the museum.

Fornes has been telling his story in radio and television interviews about the new museum with reporters as far away as Malaysia. Although each POW's account is different, Fornes' experience contains many of the common elements of isolation, deprivation, and mind-numbing tedium.

A fighter-bomber pilot during the Korean War, Fornes was on his 50th mission, trying to cut a rail line below the Yalu River, when his flight was jumped by MIG fighters. He managed to hit one of the enemy planes but had to eject when the left wing of his plane came off. Parachuting safely, he was captured and slightly wounded when he ventured too close to a village. For nearly a year, he was kept in solitary confinement in a small house, sometimes forced to lie in a hole in the ground, unable to exercise or bathe, and fed only rice, water, and occasionally a stew made with discarded animal parts. One serving contained a chicken's foot; "another time an eyeball looked back at me." To occupy his mind, Fornes said, he built his dream house in his head.

Released after the armistice—the first time his family knew he was alive—Fornes found that the psychological effects of his captivity stayed with him. A shortness of temper and resentment of

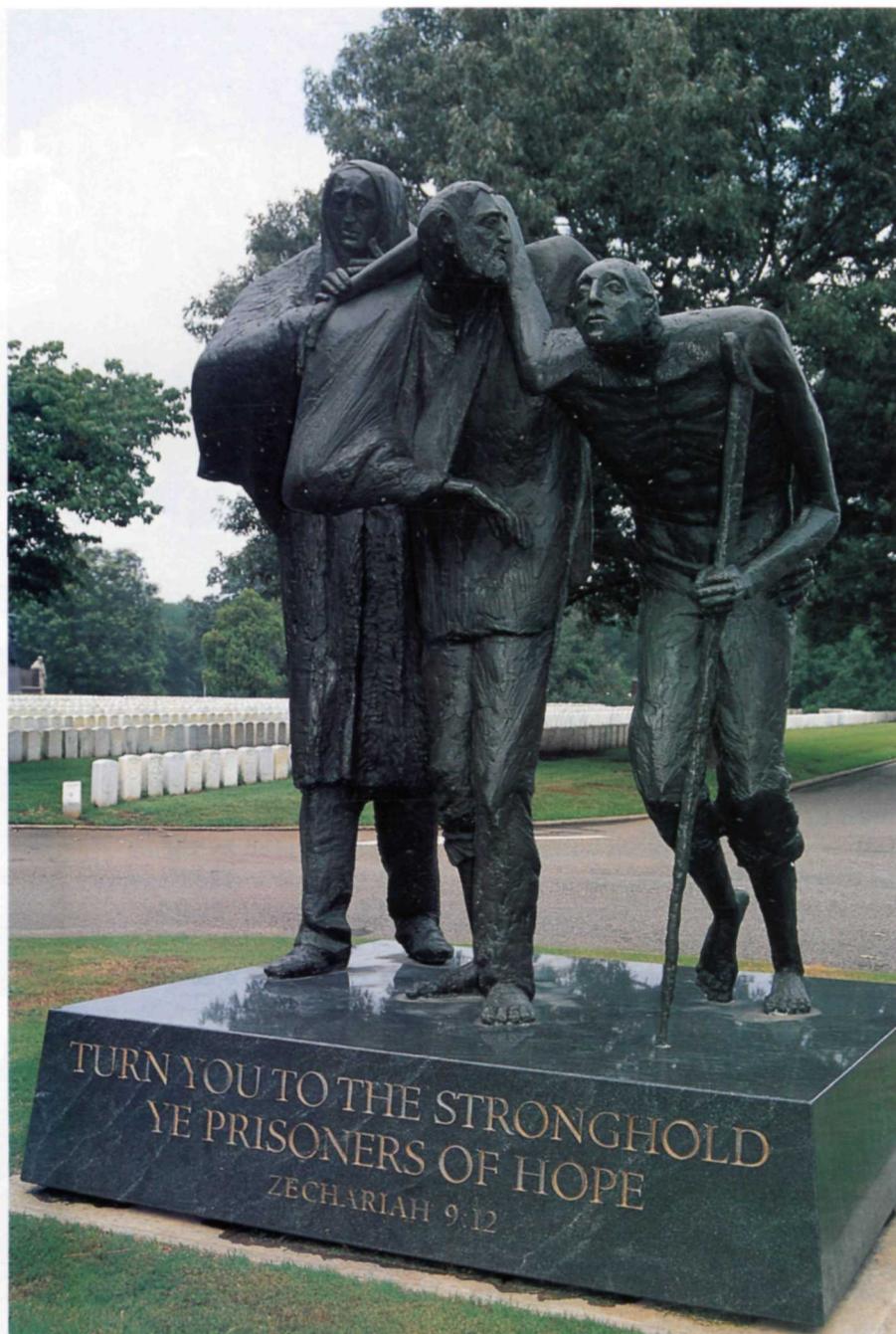
authority hampered his military career and he believes led to an early discharge, although he was later able to reenter the service.

Another former POW who made the pilgrimage to the museum's opening ceremony was Sen. John McCain (R-Ariz.), a former Navy pilot who was held for more than five years at the "Hanoi Hilton," a notorious prison of the Vietnam War. At the dedication ceremony, McCain told the story of Lance Sijan, an Air Force pilot who was shot down over Vietnam in 1967 and died in captivity.

After avoiding capture for six weeks and then overpowering an armed guard and escaping for a short time, Sijan weighed less than 100 pounds and was close to death when he was brought to the prison in Hanoi. "He lived there barely a month," McCain said. "In and out of consciousness, often delirious, he would push on the walls and scratch the floor searching vainly for a way out. When he was lucid, and not consumed with pain, he would quiz his cellmates about the camp's security, and talk with them about escaping again." Even after Sijan's death, McCain recalls, his determination served as an example for other prisoners held in North Vietnam.

For McCain, the museum honors all those like Sijan who were "starved, dirty, sick, injured, suffering, dying... whose God-given dignity could not be destroyed by any human power, no matter how strong and malevolent."

Organized around themes common to all these POWs, the museum is an immersion in their complex range of emotions—the fear and sometimes shame of capture, the privations and sense of abandonment in captivity, and the euphoria and joy of release. Visitors approach the building along a narrow walkway under one of the brooding guard towers. Entering the first room of exhibits, they find themselves staring down the barrels of a wall of rifles, the same sight most POWs faced as their captivity began. Other exhibits recount the endurance and ingenuity of prisoners and their efforts to relieve monotony. Among the items displayed are an intricate model of an 18th-century sailing ship built entirely of tiny soup bones; a concrete cross built by prison-



**A monument to prisoners of war at Andersonville, where a new museum honors all those "who were starved, sick, injured, suffering, and dying."**

ers as a memorial to their dead at Camp O'Donnell in the Philippines during World War II; and accounts of the simple but effective "tap codes" used by Vietnam War prisoners to communicate with each other.

The new museum is the result of a 30-year effort by former POWs, primarily through their largest association, the 33,000-member American Ex-Prisoners of War, founded in 1942 by wives and sisters of POWs. Some members wanted the museum to be on a military

base or in Washington, D.C., but concerns over permanence and expense along with bureaucratic obstacles eventually focused the effort on Andersonville, according to John S. Edwards, a former national chairman of the group who headed its museum committee.

Once the location was decided, it was a long struggle to raise the money and build political support for the museum. "I had to go into Washington and bang on doors," said Edwards, who was shot down over Germany in December

## ANDERSONVILLE *Continued*

1944 after 24 missions as a B-24 bomber crewman in a squadron commanded by actor James Stewart.

In the early 1980s, Edwards's organization connected with the Park Service. Following legislation that had turned the Andersonville National Historic Site over to the agency in 1970, the Park Service was working to fulfill the mission laid down for the site to serve as a memorial to all the nation's POWs. Until then the site had been owned by the Army, which maintained the nearby national cemetery containing the graves of those who died in the prison camp. The military wanted another agency to take over the prison site and cemetery as public pressure for their preservation grew along with the centennial observances of the war and the publication of McKinley Kantor's Pulitzer Prize-winning novel, *Andersonville*, in 1955.

Yet the development of the site has touched on all of the emotions and controversies that inevitably accompany the tragedy of war. Working closely with former POWs, for instance, has meant dealing with some sense of grievance that their sacrifices have not been fully appreciated by the public. "They've never felt the country has given them the recognition they deserve," said Paul Winegar, a spokesman for the southeast region of the Park Service. The new museum is thus "like a shrine to them."

At one point an objection was raised to a sentence in a museum text about American prisoners who collaborated with North Korea, says Fred Boyles, superintendent of the Andersonville National Historic Site (and the Jimmy Carter National Historic Site in Plains, 22 miles away). The controversial subject of collaboration, Boyles says, is not addressed in the new museum. The omission, however, according to Boyles, reflects the difficulty of presenting the complex issue of prisoners' code of conduct, particularly in Korea where Americans were tortured for information, and is not the result of any pressure from former POWs. "I cannot tell you of any compromises that we made to the history of POWs," he said.

The national interest in developing



UPI/CORBIS-BETTMANN

**More than 800,000 men and women have been captured in all of the nation's wars. Clockwise from top, an injured U.S. pilot is led to captivity by North Vietnamese soldiers; soldiers captured by the North Koreans in 1968 aboard the U.S. Navy ship *Pueblo* gather at a press briefing; and three World War II soldiers await release.**

the Andersonville site also collided with a long history of local opposition to any commemoration of the prison, causing Boyles to call it "the most controversial site in the National Park System."

The Confederate officer in charge of the stockade, Captain Henry Wirz, was the only Civil War soldier to be tried and hanged as a war criminal, and some Southerners have viewed him as a martyr who did his best with what was available to him and yet was made a scapegoat for an outraged Northern public. Others have objected to the exclusive focus on Andersonville as the epitome of horrendous Civil War prison camps, pointing out that conditions in Union camps were sometimes as extreme as at Andersonville, even though the North did not face the scarcities of food and supplies that afflicted the South.



UPI/CORBIS-BETTMANN

The decision to tell the story of all American POWs at Andersonville—one that Boyles credits to President Lyndon Johnson—helped overcome local opposition, but that approach has also prompted criticism that the museum glosses over the worst horrors of the Civil War prison. A few artifacts from Andersonville are displayed in the new museum, but the prison camp is not the central focus.

"I have heard that complaint," Boyles said, and some changes have been made around the stockade site to show

more about the prison. But any suggestion that its history has been watered down is “just simply not true,” he said.

In fact, historians today disagree about whether conditions at Andersonville were primarily the result of deliberate Southern mistreatment or were largely a consequence of a lack of resources and ignorance of sanitation conditions. Whatever the cause, the suffering at Andersonville was appalling.

More than 130 years later, the prison site is now a lush meadow with little

When Wirz arrived to take command in April 1864, on the eve of the largest Union offensive of the war, the limited facilities were rapidly being overwhelmed and the death toll had begun to climb. That month 576 men died.

By mid-summer, when the war’s climactic clashes in Virginia brought thousands of prisoners to Andersonville, the stockade enclosed a scene of nearly unimaginable misery. More than 30,000 men struggled to survive on intermittent rations and water from the small, fouled stream that ran through the center of the pen. The creek also served as the prison’s sewer, and a variety of diseases flourished in the noxious bog of excrement and mud, felling men by the thousands from gangrene, diarrhea, and scurvy. In August and September, roughly 100 a day were dying, a toll that would rise to 12,920 over the camp’s 14-month existence.

All those men are buried in the cemetery near the prison site, in many sections packed shoulder to shoulder, their seemingly unending rows of headstones defying attempts to forget what happened there. An important step in local recognition came in 1976, when then-Georgia Gov. Jimmy Carter arranged for the state to erect a monument—a statue of three staggering prisoners—as a memorial to all POWs at the entrance to the cemetery. It was the first monument erected by a Southern state at Andersonville.

In the early 1990s, that local involvement grew with the Friends of the Park under the leadership of former POW Carl Runge, a B-17 navigator who was shot down on a mission against Dresden, Germany, in April 1945. A close friend of media mogul Ted Turner, Runge helped develop national publicity for the museum drive, including a movie about the prison camp by Turner Productions.

The Friends of the Park and the American Ex-Prisoners of War each raised about \$300,000 for the new museum, but the money “just didn’t build up fast enough,” said Bill Rolen, execu-

tive director of the POW group. A boost over the fund-raising obstacle came from former Vietnam POW and Congressman Douglas “Pete” Peterson, now the first U.S. ambassador to Hanoi, who sponsored a bill for a commemorative coin in 1993. Proceeds from sale of the coin brought in \$2.6 million, and a matching appropriation from Congress made up the rest of the cost. The state of Georgia built a new one-mile entrance road into the site.

The American Ex-Prisoners of War was closely involved in the museum’s design, while the Park Service handled many details of exhibits organized around the themes of capture, living conditions, news and communication, the home front, morale and relationships, and escape and freedom. The common experience of POWs is also the theme of *Echoes of Captivity*, a film that includes first-hand accounts by POWs.

One part of the museum was funded completely by former POWs: a brick courtyard with a wall sculpture by Texas artist Donna L. Dobberfuhl. The courtyard—near Dobberfuhl’s bronze figure of an escaped POW reaching for a trickle of water he has found—is designed as an area of contemplation for visitors after their tour of the museum.

The museum has turned the Andersonville National Historic Site into a unique Park Service unit, unusual in being both a full-scale museum rather than a visitor center and a national cemetery that still conducts burials. The way the Park Service and former POWs worked together to develop such a major project is also unusual, Boyles said. “I don’t think there’s a story of a partnership as effective as this one.”

The museum’s inclusion of the greater themes of the endurance and sacrifice of all POWs is another valuable aspect of the site, says Don Barger, NPCA’s Southeast regional director. The National Prisoner of War Museum, he says, “helps us understand that our national historical sites are not just about an event or place, but about the meaning of those events and places.”

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CHRIS FORDNEY lives in Charlottesville, Virginia, and last wrote for National Parks about Disney’s plans to build a theme park near Manassas battlefield.



UPI/CORBIS-BETTMANN

hint of the mass of humanity once kept there. The geography is unmistakable though—two slopes divided by a creek—and photographs around the site show visitors the city of tents that covered the same ground. Portions of the original palisade and a gate have been rebuilt, while white stakes mark the location of the stockade and the deadline, which prisoners could not cross without being shot.

The root of Andersonville’s evils lay in its overcrowding, brought on by the breakdown of the system through which each side exchanged prisoners—partly because the South refused to exchange captured black soldiers. Originally intended as a new prison site for 9,000 federal prisoners being held at Richmond, Andersonville was selected in 1863 because of its remote location, warmer climate, and more abundant food sources of the Deep South.

Initially conditions at the camp were livable for the relatively small number of prisoners, although the officers in charge immediately ran into problems obtaining food and medical supplies.



# Colorful Climbs

Several Eastern national parks offer the best vantage points to view fall foliage.

BY BESS ZARAFONITIS STROH

**W**HEN AUTUMN closes in on the Appalachian Trail, color is everywhere. Besides passing through New England foliage country, the 2,155-mile footpath winds southward into the Blue Ridge and Great Smoky mountain ranges. At this time of year, brilliant hues and other views are awe-inspiring for travelers on the trail and its adjacent national parks.

## Appalachian Trail

Wherever the Appalachian Trail takes autumn hikers along its 654.2 miles in New England, it is sure to provide an unforgettable sight. Color first appears in the cooler climes of Maine and northern New Hampshire in September. By the third or fourth week, White Mountains foliage is usually in full color and northern Vermont is also ablaze. When Columbus Day arrives, southern New England is generally at peak.

Like other parts of the trail, the White Mountains section travels through the variety of trees and elevations that makes foliage viewing spectacular. It includes the Franconia Ridge and the Presidential Range, which boasts Mount Washington, at 6,288 feet the highest peak in the Northeast.

The Appalachian Mountain Club maintains no-frills lodging along 56 miles of this segment, with huts avail-

able every six to eight miles at elevations varying up to 4,500 feet. But the trail is accessible from numerous roadside trailheads, and shorter, less strenuous hikes can be planned. For details and reservations, call 603-466-2727.

Other areas of the Appalachian Trail offer lesser-known perspectives. For colorful valley views, hikers can trek to Hols Ledge, just north of Hanover, New Hampshire, or farther north to Smarts Mountain (3,240 feet), where climbing a refurbished fire tower yields an extraordinary panorama. Northeast of Woodstock, Vermont, a hike through an upland field to Dana Hill provides fall-shaded images of traditional countryside.

In Maine, hikers to Saddleback Mountain's barren 4,116-foot summit

may gaze on surrounding lakes and mountains in the western region. To the north, in Baxter State Park, brown grasses, scrubby trees, and low, colored bushes lead to the top of Mount Katahdin (5,267 feet), the trail's northern terminus.

The Appalachian Trail Conference



MICHAEL PHILIP MANHEIM/INTERNATIONAL STOCK



J. ROBERT STOTTLEMYER/INTERNATIONAL STOCK

Signs mark the Appalachian Trail on Mount Washington, where visitors can stay at the Mount Washington Hotel in New Hampshire.

BESS ZARAFONITIS STROH lives in Gales Ferry, Connecticut, and last wrote for National Parks about Kentucky cave shrimp.

(304-535-6331) manages the trail under an agreement with the National Park Service and can supply information and relevant publications. For details about hiking in Vermont, where the Appalachian Trail follows the historic Long Trail for 103.6 miles, call the Green Mountain Club at 802-244-7037. In Maine, write to the Maine Appalachian Trail Club, P.O. Box 283, Augusta, ME 04330.

Three New England states have hotlines with updates of where color is most brilliant. For Maine, call 888-MAINE-45; New Hampshire, 800-258-3608; and Vermont, 802-828-3239.

For information on in-season lodging, camping, and activities, for Maine, call 800-533-9595; New Hampshire, 800-FUNINNH; and Vermont, 800-VERMONT. New Hampshire also helps travelers find lodging at the height of the season; call 603-271-2666.

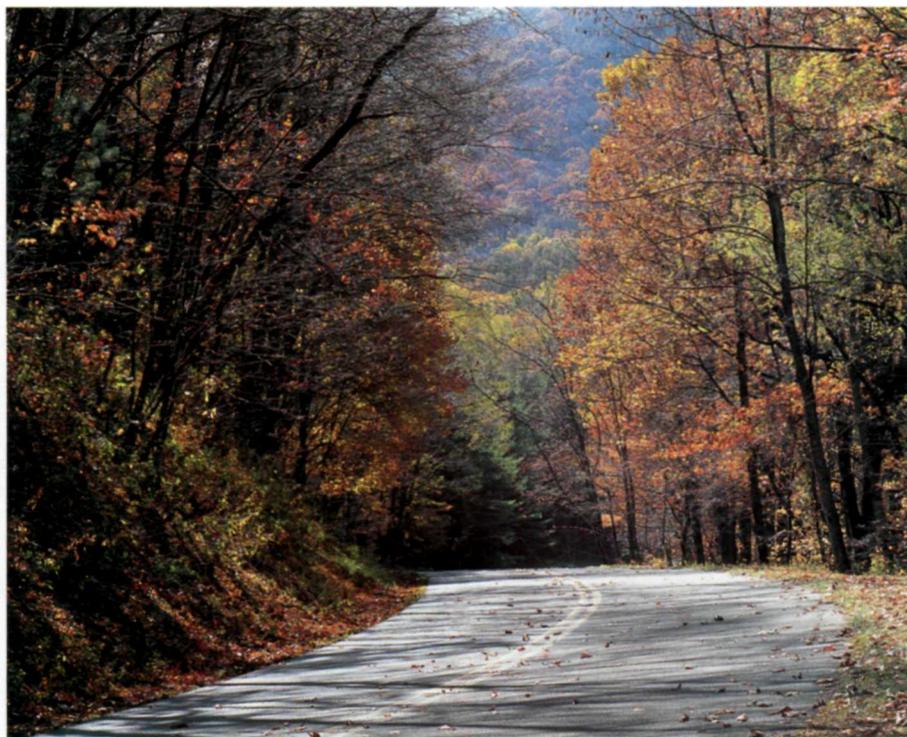
## Shenandoah

Foliage seekers following the autumn chill South would be advised to steer their expeditions to the 300 square miles of forest found in Shenandoah National Park.

Straddling a portion of Virginia's Blue Ridge Mountains in the easternmost Appalachians, the narrow parkland rises from the western Shenandoah Valley to more than 4,000 feet. In the valley is the Shenandoah River and to the east are the rolling Piedmont foothills.

Motoring along the 105-mile Skyline Drive is an efficient way to appreciate the park and vistas made more outstanding as 100 or more species of deciduous trees burst into color from late September through October, peaking between October 5 and 25. Motorists may also see autumn wildflowers, white-tailed deer, and other wildlife. The two-lane, two-way drive follows the Blue Ridge for the length of the park, from U.S. Route 340 south of Front Royal, Virginia, in the north to Rockfish Gap south of Waynesboro in the south.

The drive's 75 overlooks include: Range View (milepost 17.1 from Front Royal, 2,800 feet), with its stunning perspective of the Massanutten and Allegheny mountains; South River (milepost 67.2, 3,000 feet), where early ris-



LAURENCE PARENT

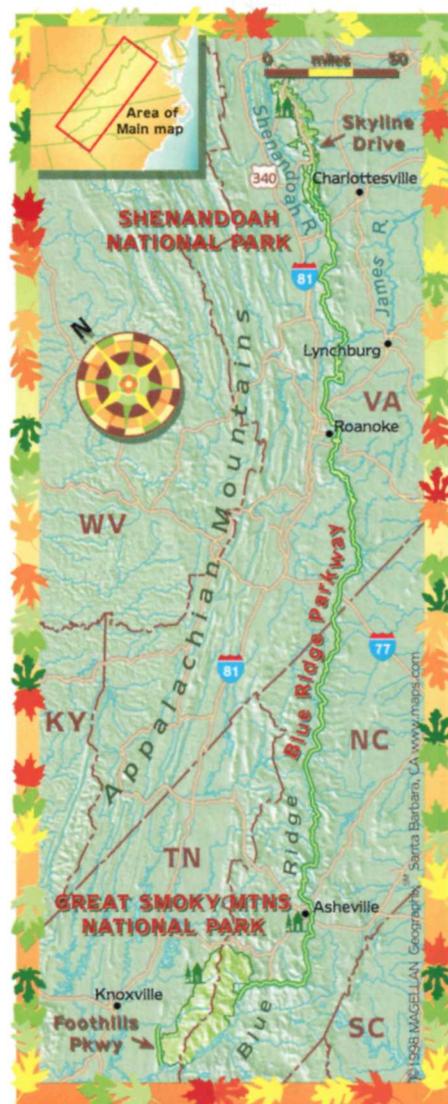
## The Blue Ridge Parkway provides an excellent vantage point from which to view foliage.

ers may watch the sun emerging over mountain forests; and Big Meadows (milepost 51), an unusual mountaintop meadow that has become a 130-acre habitat for more than 270 species of plants and diverse wildlife.

The road also provides access to many hiking areas. (The Appalachian Trail runs roughly parallel for about 100 miles.) Near milepost 41.7 is Skyland Stables, where horses may be rented. Guided horse tours depart daily from May through October.

The Potomac Appalachian Trail Club (703-242-0315) maintains trail cabins, shelters, and huts. Only one of four campgrounds, Big Meadows (800-365-CAMP), requires reservations. Group camping at another park location is reserved at 540-298-9625. For information on concession-operated lodging, call 800-999-4714.

For guidance on camping, lodging, and activities in Shenandoah Valley communities, call the Shenandoah Valley Travel Association at 540-740-3132. The Virginia government (800-934-9184) helps reserve rooms in bed and breakfasts and country inns throughout the state. For a state guide to other lodg-





Stephen Mather (foreground), first National Park Service director and an NPCA founder; and Yellowstone Superintendent Horace Albright (right), c. 1920.

*"The Yosemite, the Yellowstone, the Grand Canyon are National Properties in which Every Citizen has a Vested Interest..."*

—Stephen Mather

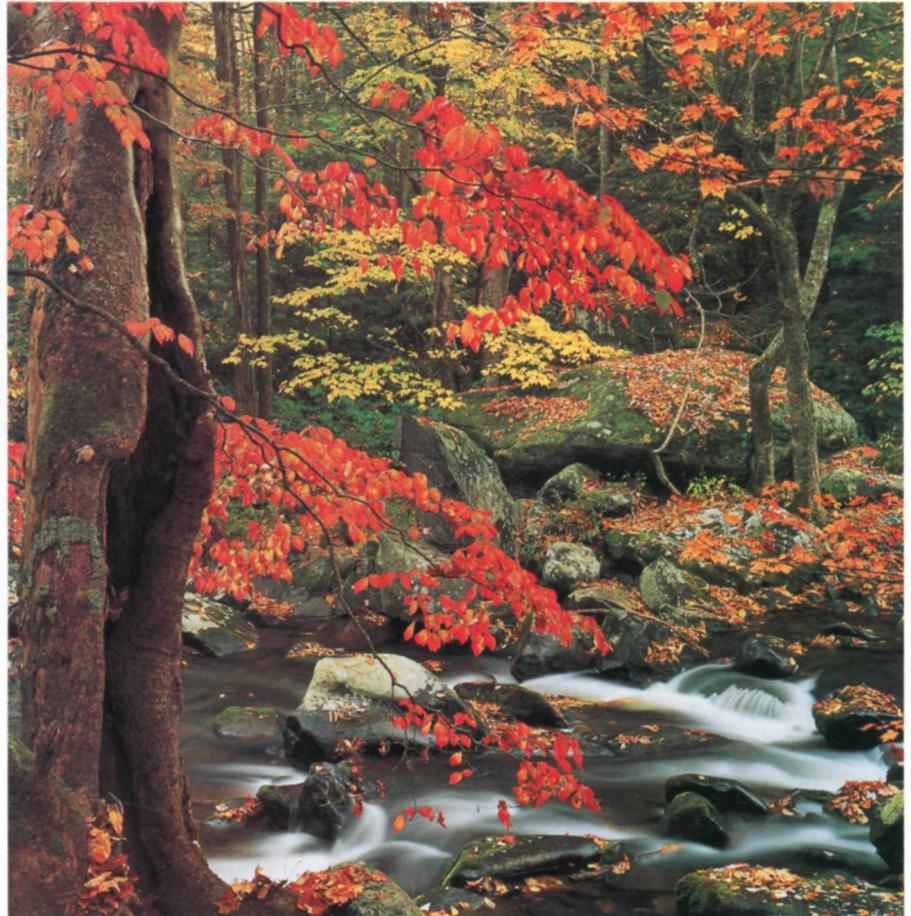
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WILLARD CLAY

**October is a good month to view foliage at Great Smoky Mountains.**

ings, attractions, and events, call 800-847-4882.

### Blue Ridge Parkway

At the southern boundary of the Shenandoah park, Skyline Drive meets the Blue Ridge Parkway, another opportunity for leisurely driving through the Appalachian chain.

Winding for 469 miles and deep into North Carolina, the parkway follows the Blue Ridge for 355 miles and then, skirting the southern end of the Black Mountains, through the Craggies, the Pisgahs, and the Balsams. In two-to-three days' driving time, it ends at Great Smoky Mountains National Park.

Along the way are seemingly endless views of mountains, meadows, split rail fences, old farmsteads, and historic buildings. Motorists can stretch their legs at 250 overlooks or at picnic areas. More than 100 hiking trails are accessible from overlook or recreation loca-

tions. (The Appalachian Trail parallels the parkway for 103 miles.)

The roadway is typically drenched in brilliant color from mid-October through early November. For some local flavor, travelers may stop at Humpback Rocks, Virginia (milepost 5 to 9.3), where weaving and apple butter-making are demonstrated at a historic mountain farm. Fall weekends also bring mountain music and apple butter- and sorghum molasses-making to Mabry Mill, Virginia (milepost 176.1), an early 20th-century gristmill and blacksmith shop. Peaks of Otter recreation area (milepost 84 to 87), also in Virginia, is another favorite stop, offering hiking, fishing, and a shuttle bus up Sharp Top Mountain.

On the North Carolina segment of the parkway, a slight detour at milepost 355.4 (via Route 128 north of Asheville) leads to the highest point east of the Mississippi River. At 6,684 feet,

Mount Mitchell offers incredible views of color-washed lower elevations. The parkway south of Asheville to Great Smoky Mountains National Park is known for its range of elevations. From about 2,500 feet, it gradually rises to 6,047 feet at the parkway's highest point, Richland Balsam Gap, milepost 431, and then descends to just over 2,000 feet, all through the undeveloped beauty of national forest.

For a parkway brochure, including map and campground information, call the park at 828-298-0398. The *Blue Ridge Parkway Directory*, published by an area business group, lists off-parkway restaurants, lodging, and camping locations. Autumn reservations are advised for in-park lodges at Peaks of Otter Lodge, 800-542-5927; Bluff's Lodge, 336-372-4499; and Pisgah Inn, 828-235-8228.

### Great Smoky Mountains

October attracts more visitors—in some years close to a million—to Great Smoky Mountains park than any other month, testimony to the grandeur of the autumn color performance in its 500,000 acres of forest.

One of the largest wilderness areas in the East, the park covers the boundary between North Carolina and Tennessee along Appalachian highlands named for the blue haze hovering around its peaks. Besides its mountain crests, the park offers deep ravines, streams, creeks, and waterfalls. Its range of elevations and moist, moderate climate cultivate rich vegetation, including 120 types of deciduous trees, and abundant animal life. There are 150 hiking trails, and the Appalachian Trail crosses parkland for about 68 miles.

Autumn first appears here in September. Higher elevations break into full color during the first two weeks of

October, while in middle-to-lower elevations, peak comes later in the month. Some trees remain bright into early November. If one color dominates, it's the gold-yellow of the tulip poplar, the Tennessee state tree.

An autumn auto tour must include Newfound Gap Road, which crosses the park, connecting Cherokee, North Carolina, with Gatlinburg, Tennessee. Over these 33 miles, colorful mountains are viewable from every direction as the route ascends about 3,000 feet. The road crosses Newfound Gap, 5,048 feet, and leads to a seven-mile road to the highest peak in the Smokies, Clingmans Dome, 6,643 feet, reached via a half-mile hike from a parking area.

Foothills Parkway, just west of the park in Tennessee, provides pretty views looking up into the mountains from its eastern section. The western end climbs a ridge to about 3,000 feet and makes a stunning drive at sunset.

Within the 270 miles of park roadway are gravel roads that lead to lesser-known locations. One highlight is Cataloochee in the park's eastern section, a secluded valley with open fields and meadows as well as historic buildings.

Tent and RV camp sites are plentiful, but its one lodge on Mount Le Conte (423-429-5704) often is booked a year in advance. Camping reservations are taken through October at Elkmont, Smokemont, and Cades Cove sites; call 800-365-2267. Seven other campgrounds operate first-come, first-served, with a seven-day stay limit in the fall. Group sites are reserved by calling 423-436-1266 in Tennessee or 704-497-1930 in North Carolina.

The main park number (423-436-1200) directs travelers to tourism bureaus with listings of out-of-park accommodations. 🐾

### Viewing Tips

Foliage season is short and draws huge numbers of people to prime areas. To avoid the heaviest traffic, schedule visits on weekdays and early or late in the season rather than at peak. To ensure overnight accommodations, make reservations early.

Arriving early in the day can lower chances of being held up at park entrance points or elsewhere and give you more time to design an itinerary or foliage walk.

If you encounter heavy crowds, consider getting off main roads or hiking into the woods. Park visitor centers have trail maps and details on guided walks.

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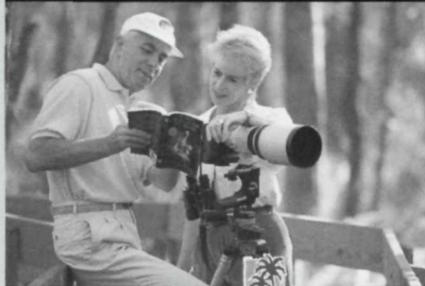
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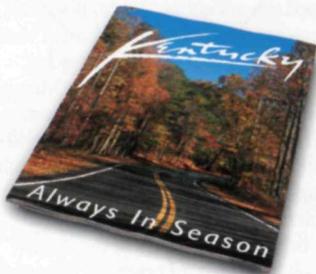
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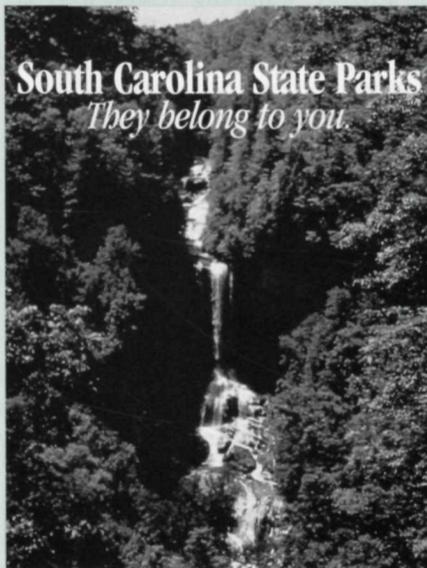
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# Shell Game

White abalone were fished to near extinction 20 years ago. Today, they have yet to recover.

BY YVETTE LA PIERRE

**H**UNTED TO near extinction in the 1970s, the white abalone has not recovered because not enough of the creatures survived.

Abalone have lived along the Pacific Coast of North America for millions of years. Long before the arrival of Europeans, American Indians were using abalone for food, tools, and decoration. Commercial fishing, which began in the mid-19th century, however, has caused abalone numbers to crash. As a result, the white abalone, one of eight species in California, is on the brink of extinction.

Abalone belong to the phylum Mollusca, along with clams, scallops, sea slugs, octopuses, and squids. Molluscs are best known for their beautifully formed and colored shells. The spiral structure common in snail shells is flattened in abalone, earning them the family and genus name Haliotidae *Haliotis*, which means "sea ear."

Abalone are even better known, though, for their tasty, tender meat. After more accessible abalone species were overfished, commercial and sport divers turned to the white abalone species, the deepest dwelling species. (White abalone dwell from 80 to at least 200 feet down.) In the 20 years since the 1970s, and despite the fact



RON MCFEAK

**White abalone is the deepest dwelling of the eight abalone species in California. They live from 80 to 200 feet down.**

that harvesting is now illegal, the white abalone has not recovered.

"The primary problem is that legal fishing reduced densities so low that they can't find each other to reproduce," says Gary Davis of Channel Islands National Park. Abalone release sperm and eggs into the water, and when they mingle, fertilization can occur. But the population is not dense enough for the eggs and sperm to find each other before settling to the bottom.

"If two abalones are more than a meter apart, you don't get fertilization," Davis says. He says that the population may be down to about 1,000 individuals throughout its range from Point Conception, California, to Bahia Tortugas, Baja California. The largest concentration is around the Channel Islands.

Scientists estimate that the white abalone's last successful breeding season was nearly two decades ago in 1969.

"They live for 40 to 50 years," Davis says. "They're coming to the end of a normal lifespan. Unless we gather them up and put them close together, they're not going to make it."

The National Park Service, in cooperation with the California Department of Fish and Game, plans to survey the entire range of the white abalone by submarine and collect as many specimens as possible for a breed-

ing program. After searching 27 acres of prime white abalone habitat on 39 reefs, however, scientists found only 12 live animals. In the 1970s, these same reefs supported more than 100,000 white abalone.

"We found lots of empty shells, but no pockets of survivors," Davis says. Unfortunately, no money is earmarked to survey and collect the abalone. A proposal pending now for the next fiscal year would provide enough money for 21 days of surveying in the submarine. The long-range goal is to establish wild populations of white abalone in protected areas.

"The white abalone is really a poster child for endangerment in the ocean," Davis says. "We've [humanity] found that we can drive an ocean species to the brink of extinction."

YVETTE LA PIERRE lives in Madison, Wisconsin, and last wrote for National Parks about the Lewis and Clark Trail.

# New Leadership

President Thomas C. Kiernan discusses his 1,000-day strategy for strengthening the association and engaging members in efforts to protect the parks.

**T**HIS PAST JANUARY, NPCA culminated a five-month search for a new president by hiring Thomas C. Kiernan, president of the Audubon Society of New Hampshire since 1995.

Over the last eight months, Kiernan has been working with NPCA's staff and Board of Trustees to redirect and reshape the organization to better protect and restore the natural and cultural resources of the National Park System. This spring after a series of planning meetings, Kiernan released a 1,000-day plan that outlines our strategy for refocusing NPCA's protection efforts. A key component of that strategy suggests greater involvement in the association's efforts from NPCA's nearly 500,000 members.

Here, Kiernan explains the thoughts behind this strategy and the important role members will play in implementing it. He also asks for feedback from members in this issue's Outlook column (see page 4).

**Q: Before we talk about the 1,000-day plan, let me ask a few questions about your sense of NPCA. In the time that you have been here, what has impressed you most?**

A: NPCA's staff is truly dedicated to protecting our National Park System. They believe, as I do, that the resources and values in our park system must be protected and restored for the education, enjoyment, and survival of future generations. For instance, at Yosemite National Park our regional staff is advocating greater restoration of the valley in the spirit of the strongest defender John

Muir—after whom my eldest son is named. Their work has yielded a stronger, clearer Valley Implementation Plan (VIP). As part of the VIP, the Park Service is attempting to move non-essential facilities outside of the park.



SCOTT SUCHMAN

The VIP will offer a regional plan to provide mass transportation during the summer. It will eliminate buildings and roads so that a visitor coming to the park will see meadows that had once been under concrete and less development.

We encouraged the park, through 400 letters and a coalition with the Natural Resources Defense Council and The Wilderness Society, to revise and reissue the plan. It is this combination of dedicated, knowledgeable staff, informed and active members, and part-

nerships with other groups that will define NPCA's future direction.

**Q: How do you sense that NPCA has been effective in the past?**

A: NPCA has a long and distinguished history. One of its founders—Stephen T. Mather—was the first director of the Park Service. President Herbert Hoover served as chairman of NPCA before his tenure in the White House, and one of the early leaders and founders of the organization—Robert Sterling Yard—also founded The Wilderness Society. The association has been, and will be again, an extremely influential organization. In the late 1940s, we led efforts to stop a dam at Grand Canyon National Park and dams at Dinosaur National Monument. NPCA's mission has always been to protect the national park concept and serve as a citizen guardian of the parks.

**Q: Given that as context, what attracted you to NPCA?**

A: When I was growing up in Washington, D.C., I did a lot of kayaking at the Great Falls of the Potomac River. Great Falls is part of George Washington Memorial Parkway, a national park unit. In those days, the pollution was so bad that if the river water got in your ears or an open cut, infections were quite likely. Fortunately in the years since then, the water quality in some parks has improved. This is in large part due to the work of groups like NPCA, which over the years has worked to reduce the threats to parks and to educate the public about the importance of protecting parks and their resources.



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Additionally, while I was at the Environmental Protection Agency, I worked with a staff team, the National Park Service, and a group of environmental nonprofits to reduce emissions from a power plant that was impairing visibility at Grand Canyon National Park. I became familiar with NPCA from that project and have followed it since.

But what most attracted me to NPCA was the opportunity to help the organization and work with NPS to overcome these kinds of threats before they grow. I want to help us as Americans truly implement the Organic Act to leave the resources in our parks "unimpaired for future generations."

**Q: Now, tell me about the 1,000-day plan that has been drafted. What are the strategies in it?**

A: Our four strategies are to focus our programs, enhance our regional offices, mobilize our membership, and prepare and launch a national campaign to protect our parks and enhance NPCA's institutional capacity.

**Q: Can you give me an example of why and how we will be focusing NPCA's programs?**

A: The number of threats facing our parks is overwhelming. NPCA needs to focus on only those threats that are the most severe and on those threats that set a precedent for how the natural and cultural resources are protected in all parks. NPCA has historically been effective at responding to on-the-ground, site specific threats that our staff and member activists have overcome. But we must now augment those efforts with focused programs that seek to avoid the creation of these threats.

For example, while we must prevent commuter roads from bisecting sacred lands such as Petroglyph National Monument or stop unnecessary roads from cutting through vital wildlife habitat such as the one proposed for Denali National Park and Preserve, we must also get ahead of the curve by crafting an alternative transportation approach. This should be one that can be adopted by NPS and surrounding communities to fully protect park re-

sources. With the breadth of experience and skill within NPCA, we are poised to make this leadership difference.

Towards this end, we have received additional support to launch an initiative that would create alternative strategies for transportation in Denali and Wrangell-St. Elias. This initiative will yield a manual for activists throughout the country to address other transportation threats before these issues get out of hand.

**Q: Can you say more about why and how we will be enhancing our regional offices?**

A: We will enhance our regional offices to accomplish two goals: to implement the proactive, focused programs I just mentioned, and to better engage and mobilize our members in each region. To accomplish these goals, we will be increasing the number of regional offices and the number of staff in each office. This will take time, but it is essential to our success.

**Q: Why and how do we need to better mobilize the membership?**

A: We need to work with our members to better serve, engage, and mobilize them toward our mission of protecting and restoring the natural and cultural heritage in our National Park System. Clearly, we will win only with greater activism from our members. Members have shown that they want to help us carry out our mission, that parks hold special meaning, which is why they become members of NPCA in the first place. We must offer them more opportunities for involvement and direct them to join our Park Activist Network. Some members may believe that writing a letter does not make a difference, but our members have made a difference!

More than 1,000 members wrote to Yellowstone's superintendent to call for the reduction of snowmobiles in the winter use plan. Writing letters, making your voice heard, does have an impact.

**Q: Now, let's touch on some other topics. What is one of the biggest threats facing parks, and what is NPCA's role in addressing it?**

A: There is a growing trend in the communities surrounding our national parks to seek a greater degree of control in the management of that park. Conceptually, greater communication and coordination between a park and the adjacent community is not only important, but imperative. But those efforts should not undermine, in any way, the integrity of the parks, resources, and values that are the treasures for all Americans, not just those who live nearby. Representing all Americans in advocating for the protection of the parks is one of our critical roles.

**Q: What is the role of membership and the Park Activist Network?**

A: Given our imperative of reducing current and future threats to the parks, we need an expanded and energized Park Activist Network. Politicians tend—appropriately—to follow the lead of their constituents. If their constituents, our park activists, are calling for improved protection, the politicians will work to fulfill that call. Without it, they will not—it is that simple and difficult.

**Q: What is the role of other environmental groups in your vision for NPCA's future?**

A: Partnering with other environmental groups will be critical for NPCA. We will need to rally all the specialized expertise and political power that we can. And that can be accomplished only through genuine, long-lasting partnerships with others in the parks and conservation communities.

**Q: How does rebuilding and refocusing NPCA help the park system?**

A: Our National Park System embodies the natural and cultural heritage of America. NPCA members and staff—for the sake of future generations—must lead the coming together of this country to protect and restore these symbols. Our surveys of the American public show a consensus belief that our parks are in decline, and a new era must be launched to build the political fortitude to prevent that decline. To achieve a civil and sustainable future, we have no choice. 🐾

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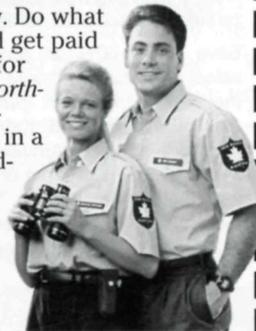
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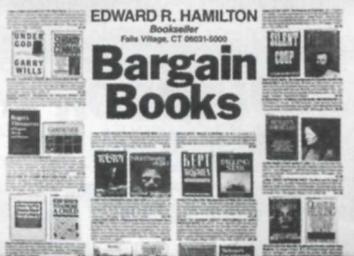
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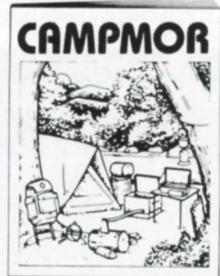
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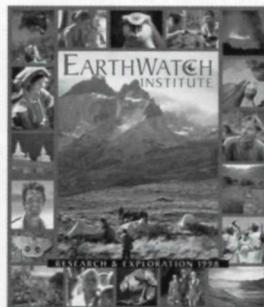
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BY ELIZABETH G. DAERR

## Foundations Finance New NPCA Program

► NPCA has secured funds from three foundations to expand a 1997 pilot project, "The National Parks Business Plan Initiative." The program will help the Park Service conduct budget analyses and create management plans for park units. Goals of the program include enhancing the credibility of the NPS budget process and promoting awareness of the parks' financial condition.

Because of the success of the Yellowstone National Park project last summer, six additional parks are participating this summer. Twelve graduate students who specialize in business, public policy, and natural resources will analyze financial needs and create management plans for the following parks: Canyonlands, Denali, Great Smoky Mountains, and Mount Rainier; and Cape Cod and Point Reyes national seashores. The students arrived in Yellowstone June 1 to participate in a four-day orientation before heading off to their parks. Phil Voorhees, director of national programs for NPCA in Washington, is the project director.

The Yellowstone pilot was funded by The Henry P. Kendall Foundation, which is continuing its support this year. Additional grants were awarded by The Roy A. Hunt Foundation and the Walter & Elise Haas Fund.

## Acadia Bans PWCs on Lakes

► Friends of Acadia and NPCA members are celebrating a victory against personal watercraft. Because of activist efforts and hundreds of letters, Acadia is the first national park to legislatively ban PWCs. In April, Maine Gov. Angus King signed the bill that restricts PWCs from hundreds of the state's ponds and permanently protects seven ponds within Acadia. The bill passed in the legislature with "strong support," said Hank Tyler of the Maine State Planning Office. Current PWCs restrictions in other national parks were made through executive regulations, which are weaker and easier to alter.

"NPCA absolutely did help out," said Friends President Ken Olson, referring to NPCA's call for members to write in support of the ban. "It shows that caring citizens can make a big difference in protecting our most spectacular

natural assets," he said.

Although still savoring the victory as the ban went into effect July 9, Friends isn't about to rest. The group is gearing up for the fight to ban PWCs from neighboring ponds and the park's ocean border. Olson said he will be asking for more NPCA member support for the next round.

## Pissot Named VP for Regional Programs

► Jim Pissot has been named vice president for regional programs, a new position created to support and manage NPCA field operations. He joins NPCA with more than 20 years' experience in grassroots and national-level environmental advocacy. Pissot has a master's in resource management from the Yale School of Forestry and Environmental Studies, where he studied ecology, law, and resource policy.



SCOTT SUCHMAN

## Droitsch Wins Award

► Southeast regional staff member Danielle Droitsch recently won first prize in the Roscoe Hogan Environmental Law Essay Contest. Her essay analyzed the public's right to sue on behalf of the environment after a human-made disaster. Droitsch, who graduated in May from the University of Tennessee College of Law, was awarded her \$3,000 prize at the annual meeting of the American Trial Lawyers Association, where she delivered her paper. The meeting was held in July in Washington, D.C.

At press time, Droitsch was preparing to take the Tennessee bar exam and planning for her new position as associate regional director in the Southeastern office beginning this August. She's returning to NPCA because of a deep-felt commitment to increasing citizen participation in the South. "There's an extreme lack of environmental activism in the Southeast," she said. "And the laws are pretty bad down here."

A native of Arlington, Virginia, Droitsch loves living next to the Great Smoky Mountains in Norris, Tennessee. "This is one of the most beautiful environments in the country."



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WILLARD CLAY

**E**STABLISHED IN 1972, this park is home to the world's largest natural bridge, which spans 275 feet. A lake within the park is named after a one-armed Civil War veteran who explored the region in 1869. One gas station in the park, inaccessible by car, is rumored to pump more gasoline than any other in the state of Utah. Likewise, the park's emergency medical clinic is believed to handle more injuries than any other in the state. Have you visited this park? Which one is it? [ANSWER ON PAGE 8.]

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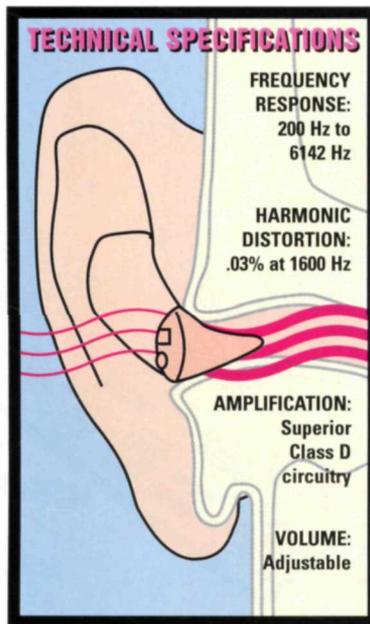
by Harold Sturman

One day a friend asked my wife Jill if I had a hearing aid. "He certainly does," replied Jill, "Me!" After hearing about a remarkable new product, Jill finally got up the nerve to ask me if I'd ever thought about getting a hearing aid. "No way," I said. "It would make me look 20 years older and cost a fortune." "No, no," she replied. "This is entirely different. It's not a hearing aid...it's Crystal Ear!"

**No one will know.** Jill was right. Crystal Ear is different—not the bulky, old-styled body-worn or over-the-ear aid, but an advanced personal sound system so small it's like contacts for your ears. And Crystal Ear is super-sensitive and powerful, too. You may hear sounds your ears have been missing for years. Crystal Ear will make speech louder, and the sound is pure and natural.

I couldn't believe how tiny it is. It is smaller than the tip of my little finger and it's almost invisible when worn. There are no wires, no behind-the-ear devices. Put it in your ear and its ready-to-wear mold fits comfortably. Since it's not too loud or too tight, you may even forget that you're wearing it! Use it at work or at play. And if your hearing problem is worse in certain situations, use Crystal Ear only when you need it.

**A fraction of the price.** Hearing loss is the world's number-one health problem, but in



**Innovative, breakthrough technology solves common problem...**

Hearing loss, which typically begins prior to teenage years, progresses throughout one's lifetime. Many people suffering the type of loss Crystal Ear was designed for choose to leave the problem untreated. Crystal Ear is now available to help these people treat their hearing loss with a small and very affordable Class I in-the-canal hearing amplifier.

most cases it goes completely untreated. For many millions of people, hearing devices are way too expensive, and the retail middlemen want to keep it that way. What's more, treating hearing loss the old retail way can involve numerous office visits, expensive testing and adjustments to fit your ear. Thanks to Crystal Ear, the "sound solution" is now affordable and convenient. Many people with mild hearing loss, and millions more with just a little hearing dropoff, could be dramatically helped with Crystal Ear. Plus, its superior design is energy-efficient, so batteries can last months, not just weeks.

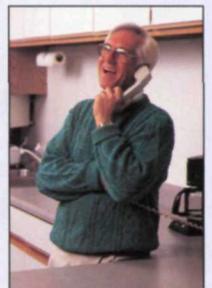
**You'll feel years younger!** Wear Crystal Ear indoors, outdoors, at home and at work. Crystal Ear arrives ready to use, complete with batteries, two different fitting sleeves, a cleaning brush and even a carrying case. Crystal Ear is a breakthrough advance in the hearing device field. It is made in the USA, using state-of-the-art micro-manufacturing techniques that cut costs dramatically—savings that we can

pass on to you. The conventional companies, domestic and foreign, don't like that!

**Don't be fooled by high prices.** No hearing device, no matter how expensive, can eliminate background noise, despite claims by the manufacturers. Crystal Ear does not promise miracles—just an affordable, sound solution to many common hearing problems.

### DON'T TAKE OUR WORD FOR IT...

"My father spent over \$5000 on another brand. I showed him my Crystal Ear, he tried it, and he decided it worked better than his brand, even though it was a small fraction of the cost!"



"It's so easy to put in and out of my ear... I just twist it. It's small and the tone matches my ear, so I can look in my mirror and not even see it in my ear. I'm very happy about that. In fact, no one has ever commented... I don't think anyone realizes."

—Satisfied Crystal Ear users  
Results not typical

**Risk-free.** Try Crystal Ear and hear what you've been missing. It comes with a 90-day manufacturer's limited warranty as well as our risk-free home trial. If you're not satisfied, return it within 30 days for a full refund.

**Crystal Ear®:**

**Three credit-card payments of \$99.95 \$19 S&H** If not purchasing a pair, please specify right or left ear.

Please mention promotional code 4016-13818.

For fastest service, call toll-free 24 hours a day

**800-992-2966**



**comtrad industries**

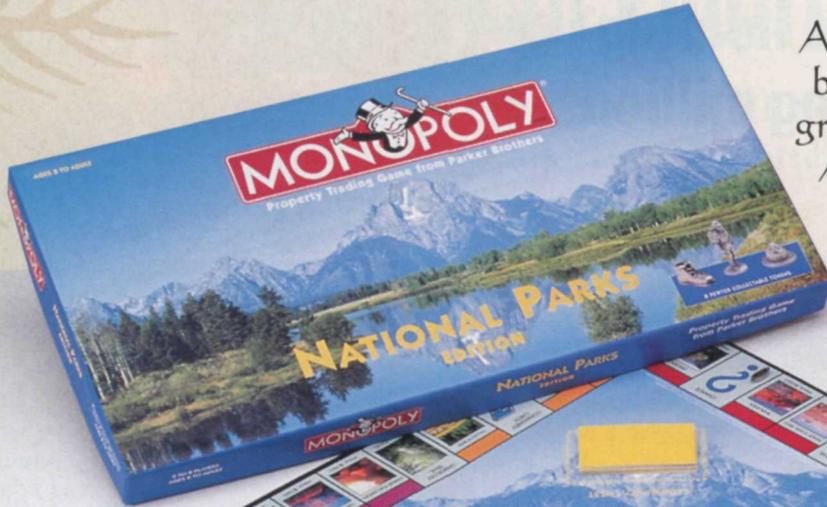
2820 Waterford Lake Dr., Suite 102  
Midlothian, Virginia 23113

### COMPARE CRYSTAL EAR AND SEE THE DIFFERENCE

	MOST IN-CANAL BRANDS	CRYSTAL EAR
Require fitting	Yes	No
Require hearing test	Yes	No
Battery life	160 hours	320 hours
Impact resistance	Average	Excellent
Telephone use	Yes	Yes
Retail price	\$1,000-2,000	\$299.85

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