

\$2.50 July/August 1995

The American Lion **Crowd** Control **Studying Crater Lake March for Parks**



This advertisement is appearing in the Los Angeles Times, The New York Times, San Francisco Chromicle, San Francisco Examiner, USA Today, The Washington Post and other newspapers. OUR NATIONAL PARKS A Living Legacy For All Americans * WE MUST PASS IT ON TO FUTURE GENERATIONS

hat does it mean to be an American? What makes America great? Who are we as a people? Americans can find answers to these questions in 368 places across the United States — the parks, monuments, preserves, historic sites and other areas in the National Park System.

The parks are the crown jewels of a nation without royalty. They symbolize the hard work and boundless sense of the possible that enabled ordinary people to achieve extraordinary things in a land unparalleled in its richness and diversity.

"INALIENABLE FOR ALL TIME"

In the midst of the Civil War, few would have expected President Lincoln and Congress to establish an area that was to become a national park. But they did.

The Act of Congress that Lincoln signed would come to symbolize the signing of a contract for a national park movement between America's leaders and its people.

The Act's language reflected Lincoln's eloquence: special lands were to be preserved "inalienable for all time."

Lincoln's park legacy continues to grow. Since 1872, when our first national park, Yellowstone was created, virtually every National Parks are the best idea we ever had. Absolutely American, absolutely democratic, they reflect us at our best.

Wallace Stegner Author and environmentalist

president and Congress has preserved important lands, added park units,

or enacted legislation strengthening the National Park System.

Americans want today's leaders to continue to fulfill the contract that Lincoln first signed. According to a just-released poll¹:

- 88 percent of Americans believe that providing "an important experience for future generations" is the most important value of the national parks; and
- 90 percent expect the national parks to remain protected in the future, as they have in the past.

MILESTONES IN THE NATIONAL PARKS MOVEMENT

- 1864: Abraham Lincoln signs legislation protecting Yosemite Valley.
- **1872:** First national park created: Yellowstone.
- 1890: Federal preservation of historic sites begins: Chickamauga and Chattanooga National Military Park.
- **1906:** Antiquities Act authorizes presidents to proclaim national monuments. Four are established: Devils Tower (Wyo.), El Morro (N.M.), Montezuma Castle (Ariz.) and Petrified Forest (Ariz.).
- 1916: National Park Service (NPS) created within the Interior Department.
- 1919: National Parks Association (renamed National Parks and Conservation Association) founded.
- 1936: First national recreation area established: Lake Mead (Nev.).
- 1937: First national seashore created: Cape Hatteras (N.C.).
- **1962:** First citizen park advisory commission authorized: Cape Cod National Seashore (Mass.).
- 1980: Alaska National Interest Lands Conservation Act.
- **1991:** Symposium on the 75th anniversary of the National Park Service crafts the Vail Agenda to guide NPS into the 21st Century.
- 1994: California Desert Protection Act. The Presidio of San Francisco transferred to NPS.

ABSOLUTELY AMERICAN

The National Park System has long enjoyed bipartisan support because it embodies the values that make America great.

From Independence Hall to the Martin Luther King birthplace, the National Parks celebrate freedom and democracy.

From Valley Forge to Gettysburg, they enshrine our past.

From Mesa Verde to the Statue of Liberty, they tell us where we came from.

From the Frederick Douglass Home to

the Nez Perce National Historical Park, they honor diversity, dignity and justice.

> From Denali to Cumberland Island, they sustain precious ecosystems and wildlife.

From the Everglades to the Grand Canyon, they exalt natural wonders found nowhere else on Earth.

From Shenandoah to Olympic, they provide peaceful retreats that strengthen families.

Photo by Jeff Gnass. From Mount Rushmore to arks the Washington Monument, they inspire e. as national pride.

From Redwood to Zion, they uplift our spirits.

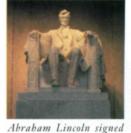
They are absolutely American.

SHOWING OURSELVES AT OUR BEST

Because national parks show America at its best, they attract more and more visitors who want to gain the experience of a lifetime.

Across America, it is estimated that national parks generate more than \$10 billion for local communities² — all at a minimal federal cost of \$1.5 billion, just one-tenth of 1 percent of the entire U.S. budget.

One example is Mount Rainier National Park in Washington state. Last year, it generated an estimated \$194 million in visitor sales for the local economy and created 5,800 jobs for nearby residents.²



legislation on June 30, 1864, protecting what would become Yosemite National Park. The

Lincoln Memorial is visited

by 1.2 million people every

year.

AMERICA'S LIVING CLASSROOMS

Of course, the value of parks is measured in more than dollars. It is seen in the eyes

of our children as they discover America's history, culture and majesty in living, classrooms with tall trees for walls and the sky for a ceiling.

From anthropology to zoology, from geology to oceanography, the parks enrich human knowledge and stimulate the intellect.

OUR HERITAGE AT RISK

But will future generations experience all the magnificence of the parks? The

parks face many pervasive threats: *Loving our parks to deatb*

It's wonderful that Americans love our

parks. Unfortunately, we risk loving some to death. In 1994, there were 269 million visits to national parks. By 2000, that is expected to rise to 308 million.² This strains fragile resources at a time when the National Park Service's budget is not rising to meet new demands.

Park integrity

Too many parks are threatened by encroachment on their borders. One of the most significant dangers and certainly most symbolic — is a proposed gold mine to be located just two miles outside Yellowstone National Park and upstream from its rivers. Tailings from the gold mine could irreparably harm this national treasure's water, wildlife and other resources.

Threat of park closures

Some members of Congress think a number of national park areas should be removed from the National Park System. An analogy between closing military bases and national parks is sometimes made. This is flawed. The end of the Cold War reduced the likelihood of a global superpower <u>military</u> crisis — but at home, most Americans agree our country faces a <u>values</u> crisis. That only *increases* the need for our national parks.

Keeping the contract

Many of these problems can be solved. For example, many businesses that provide food and lodging in the parks pay fees below the market rate. And it costs less for a family of four to visit most national parks than to go to the movies. Congress should authorize parks to charge reason-

able fees to businesses and visitors — and allow the National Park Service to keep these fee revenues, rather than sending them to the Treasury. Such reforms, already implemented in several parks, could generate more than \$100 million annually.

If Congress does its part, the American people are willing to do theirs, according to the recent poll¹:

• 79 percent said they

would support an increase in entry fees — if 100 percent of the revenues are used to maintain the National Park System.

 79 percent said they would be willing to add \$1.00 on their income tax to help fund the National Park System.

OUR LEGACY

Preserving our legacy for future genera-

tions requires new and creative thinking by Congress and the National Park Service in how they manage and finance parks.

A perfect example is The Presidio, a former military base in San Francisco that recently became part of Golden Gate National Recreation Area.

twing museum of try bistory of the tim and Mexico. by David Sanger. tablish a world-renowned environmental

research, education and training center.

Another bill would create a public-private partnership to establish and manage



The vast tallgrass prairie, symbolic of America's westward expansion, bas all but vanished. Photo by Ron Klataske.

the proposed Tallgrass Prairie National Preserve in Kansas.

It would protect ocean-like waves of rolling prairies for our children, and educate visitors about the region's Native Americans and early settlers.

HOW CITIZENS CAN HELP

We have inherited a contract from our parents and past generations to do for future generations what they did for us preserve the best of America for our enjoyment, education and fulfillment.

How can citizens help? By writing and calling members of Congress. By volunteering with a local park support group. And by joining the 76-year-old, 450,000member National Parks and Conservation Association (NPCA).

One of NPCA's most important functions is informing policy-makers and the public about what must be done to fulfill our contract with future generations. Re-



cently, NPCA published Our Endangered Parks, a handbook for citizens seeking an active role in protecting our national heritage.

To find out how you can help and contribute to park protection efforts, to learn more about our national

parks, or to purchase a specially priced copy of *Our Endangered Parks*, please call toll-free:

1-800-951-1070 e-mail: Natparks@aol.com



NATIONAL PARKS AND CONSERVATION ASSOCIATION

1776 Massachusetts Avenue, N.W. Washington, D.C. 20036

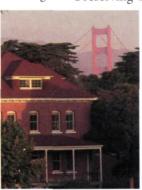
★ This message was inspired by the remarks of Ambassador L.W. "Bill" Lane, Jr., upon receiving the NPCA William Penn Mott, Jr., Conservationist of the Year Award in Washington, D.C. on March 1, 1995, and paid for by funds contributed specifically for this campaign.

¹The poll was conducted by Colorado State University and commissioned by the NPCA.

²Source: National Park Service, Socio-Economic Studies Division.



Park ranger showing turtle shell to school children in Big Cypress National Preserve, Florida. Photo by Connie Toops.



The Presidio is a living museum of 300 years of military history of the United States, Spain and Mexico. Photo by David Sanger.



March for Parks, page 26

EDITOR'S NOTE

In this issue we continue coverage of the current congressional assault on the parks (see "Parks Under Siege," page 24). But there's good news as well: Linda Rancourt reports on the success of the sixth annual March for Parks (page 26), Todd Wilkinson writes about a new visitor management program initiated by the National Park Service (page 36), and in NPCA News we cover victories for the Great Smoky Mountains, Chaco Canyon, and the Everglades.

Other good news: watch for changes in the next issue of *National Parks* magazine. A recent survey revealed that readers are highly satisfied with the magazine, but a redesign is in the works to enhance the magazine's visual appeal and make it more reader-friendly. Join us for our new look in the September/ October issue.

NATIONAL PARKS

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THE MAGAZINE OF THE NATIONAL PARKS AND CONSERVATION ASSOCIATION

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COVER: A mountain lion and kitten by Michael Francis. Subspecies of America's lion rely on the parks and other protected lands for survival.

Established in 1919, the National Parks and Conservation Association (NPCA) is America's only private, nonprofit citizen organization dedicated solely to protecting, preserving, and enhancing the U.S. National Park System.

Life memberships are \$1,000. Annual memberships: \$250 Guarantor, \$100 Supporter, \$50 Defender, \$35 Contributor, \$25 Active, \$22 Library, and \$18 Student. Of membership dues, \$3 covers a one-year subscription to *National Parks*. Dues and donations are deductible from federal taxable incomes; gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, contributions, and correspondence to NPCA, 1776 Mass. Ave., N.W., Washington, DC 20036. When changing address, please allow six weeks' advance notice and send address label from your latest issue plus your new address.

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О U T L O O K

Legacy

HE LEADERS of the 104th Congress are attempting to dismantle a park system that has been called "the best idea America ever had." Bills currently proposed by Congress would close selected parks, open Alaska parks and wilderness areas to development, take away

previously appropriated land acquisition funds, halt endangered species reintroduction programs, shrink the boundaries of Shenandoah National Park, and reduce wilderness protection at Voyageurs National Park.

By presidential proclamation, the last week in May was the second annual National Park Week. NPCA commemorated the occasion by publishing an advertisement in major newspapers and releasing the results of a public opinion survey on the national parks. With both actions, we took advantage of the opportunity to reach millions of Americans as they were thinking about vacations and going to the parks.

The full-page advertisement ran in *The New York Times, The Washington Post, USA Today*, and several other major newspapers, reaching a total combined readership of 15.5 million people. The substance of the ad is printed in this issue of *National Parks* (see pages 2 and 3).

The ad was done with the inspiration and guidance of Ambassador L.W. "Bill" Lane, former publisher of *Sunset Magazine* and recipient of NPCA's 1994 William Penn Mott, Jr., Conservation-



ist of the Year award, and with funds contributed specifically for this purpose—a very generous contribution that allowed us to undertake this exciting public education campaign.

In addition to the ad, we released the results of a public opinion survey conducted by Colorado State

University and commissioned by NPCA. The survey shows that the National Park System continues to enjoy overwhelming public support. Americans clearly cherish their parks and expect them to be preserved for future generations. In fact, when asked how they value several purposes of parks—such as protecting wildlife habitat or providing opportunities to experience natural peace and quiet—87.6 percent of respondents said that the most important purpose of national parks is to "provide an important experience for future generations." (See story on page 13 for details.)

With this survey, the American public has sent a clear message that we must protect and pass on the cultural, historic, and natural treasures that have been set aside since creation of the first national park in 1872. But some of the current Congress, with an anti-parks agenda, shows a flagrant disregard for the wishes of the American people.

The National Park System is at a crossroads. The decisions Congress and other public officials make now will determine whether our generation will pass on the national parks legacy to future generations. We must not fail.

President, NATIONAL PARKS AND CONSERVATION ASSOCIATION

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LETTERS

Park Science

Little mention has been made in *Na*tional Parks or the mainstream press about the impending demise of science in our national parks. Few people know that an initial effort by Interior Secretary Bruce Babbitt to enhance study and protection of wildlife has badly diminished natural resource protection and staffs in national parks.

Early in the Clinton Administration, Babbitt formed the National Biological Survey (NBS). NBS drew much of its staff from the resource management personnel of national park units. But NBS was immediately caught in the conservative property rights and anti-Endangered Species Act backlash. Babbitt changed [the agency's] name to the National Biological Service and its budget has been falling precipitously since.

The consequences for the national parks are immediate and serious. With many top scientists from national park units drawn away by NBS assignments, the parks have lost many of their scientists. The budget cuts, coupled with confusion from the recent Park Service reorganization, have left many parks with little or no money to reestablish their park-based science staff. The whole basis for progressive ecosystem restoration and resource management in the national parks is at risk.

Tom Ribe Los Alamos, NM

A Forum article has been scheduled for the September/October issue to further explore this issue.

-the Editors

Forgotten History

Although "Scenes from the Indian Wars" [Access, January/February 1995] accurately describes some of the history of the struggle between American Indians and the U.S. government, it perpetuates some inaccurate perceptions of that history. Since the article begins with a figure of 600,000 to 900,000 for the native population of the continental United States, it neglects recent scholarly estimates of 10 to 15 million inhabitants, reinforcing the image of an empty wilderness waiting to be "civilized."

Until recently, many U.S. history texts not only cited a figure of 1 million Indians but also started in 1492 or 1607 and dismissed the millennia of Native American history as prehistory. By starting with the arrival of Europeans, these books overlooked thousands of years of Indian history, preserved in a rich oral tradition, as well as the diversity of Indian cultures and their impressive achievements in language, the arts, science, philosophy, medicine, agriculture, tools, trade, and architecture.

The avoidance of the terms "conquest," "genocide," or "holocaust" in describing the Indian experience after 1492 tends to distort that history. Since certain officials or individuals targeted Indian nations for destruction, that policy was genocidal in intent and result. While disease was a major factor, the policy of forced removal deprived tribes of their resource base and contributed directly to their demise. The outcome, therefore, was a holocaust in which some tribes were exterminated altogether and 90 percent of the original Indian population disappeared.

D. Anthony White, Ph.D. Santa Rosa, CA

Cry Wolf

Regarding "A win for wolves" [News Update, January/February 1995], we have two comments.

First, the Alaska Board of Game did not suspend the 1994–95 wolf kill; new Governor Tony Knowles did. The board, made up of individuals with vested interests in commercial use of Alaska's wildlife, is hopping mad over the suspension and is gearing up to pass four new wolf "control" plans.

Second, it is surprising that NPCA even bothered to mention Alaska's wolf debate. Last winter, one of the most valued aspects of Alaska's national parks was erased. The headquarters wolf pack in Denali National Park no longer exists because of private trappers and the state's wolf control program. This pack was the most celebrated and viewed wildlife feature of Denali. Many citizens and groups continue to make calls and write letters to NPS, pleading for better protection of Denali's wolves. We haven't heard a peep out of NPCA.

Sandra Arnold The Alaska Wildlife Alliance Anchorage, AK

We acknowledge that Governor Tony Knowles suspended—and later cancelled—the wolf kill program. But we would also like to point out that NPCA's Alaska Regional Office is working in coalition with The Alaska Wildlife Alliance and other organizations to bring about a better wolf protection program for Denali. Early this summer, the coalition urged Interior Secretary Bruce Babbitt to direct NPS to work with the state of Alaska to develop such a program.

-the Editors

Corrections

In "Congress Takes Aim at National Parks" [News, May/June 1995], Rep. Jim Hansen of Utah was mistakenly said to represent Colorado.

Perseverance Hall is not part of a historic district, as was stated in the article "Crescent City Cadence" [May/June 1995].

Credit for the photo on page 3 of the May/June 1995 issue should have been given to Greg Probst.

Write: Letters, NPCA, 1776 Massachusetts Ave., N.W., Washington, DC 20036. Letters may be sent via e-mail to editorNP@aol.com. Or call 1-900-835-6344. Callers will be charged 89 cents a minute. Instructions will be given at time of call. Letters may be edited for length and clarity.

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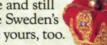
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A SWEDISH OBSESSION

N·P·C·A

LEGISLATORS ADVANCE ANTI-PARK AGENDA

On May 17, the House Committee on Resources passed the National Park System Reform Act by a 32-8 vote, readying what is known as the "park closure bill" for action on the House floor.

Sponsored by Rep. Joel Hefley (R-

Colo.), the bill creates a commission to review parks for potential withdrawal from the National Park System. NPCA had strongly objected to the bill as approved on March 29 by the House subcommittee on national parks, which, among other things, exempted the review process from the analysis required by the National Environmental Policy Act (NEPA).

Yielding to NPCA's recommendations, the committee approved amendments that afford some protections to parks. The bill now exempts all 54 "national parks" from consideration for removal and requires compliance with NEPA. However, hundreds of outstanding parks remain at risk, NPCA says. The bill allows "significant portions" of units to be

considered for removal, potentially affecting sites such as the Presidio in Golden Gate National Recreation Area.

The committee rejected an amendment offered by Rep. Bill Richardson (D-N.Mex.) to strike the commission, which NPCA says is unnecessary, bureaucratic, and costly (requiring up to \$2 million in federal funds). The commission's sole responsibility is to transmit a list of potential park closures to Congress.

"Because Congress already has the authority to remove unworthy units, the money to be spent on the review process and commission will drain resources at a time when budgets are shrinking,"



The park closure bill is just one weapon in the 104th Congress' antipark arsenal, which threatens Voyageurs National Park in Minnesota.

said NPCA President Paul C. Pritchard.

The threat of park closures is aggravated by recent congressional budget resolutions, which call for a nearly 40 percent slash in NPS funding over a seven-year period. According to Interior Secretary Bruce Babbitt, the cuts for fiscal year 1996 alone could force closure of up to 198 of the smallest or least visited units, which include Arches National Park, Mount Rushmore National Memorial, and Ford's Theatre National Historic Site. "Congress will have...achieved what some are attempting to do with a parks closing commission," Babbitt said.

Hefley's bill has helped set the stage

for other attacks on national parks, including Voyageurs National Park in northern Minnesota. Rep. Jim Oberstar (D-Minn.) has introduced legislation that would forbid any wilderness designations for the park and allow for increased motorized recreation at unheard-of levels for a national park. NPCA and others believe this bill is a concession to snowmobile interests that have long advocated fewer restrictions on their activities.

Locals say that the park has not realized its economic potential, which NPCA discounts. Operating on a \$2.3million budget, the park returns \$20 million to the local economy each year, and state data suggest that tourism revenue may drop if Oberstar's bill is adopted.

The legislative history of Voyageurs indicates that the primary purpose for the park's creation was to preserve the wild setting that the French-Canadian voyageurs found centuries ago. Although no designated wilderness currently exists in the park, areas such as the Kabetogama Peninsula have been proposed as wilderness and according to NPS policy must be managed as such, including limiting motorized recreation. In Write to your senators and representative (U.S. Senate, Washington, DC 20510; U.S. House of Representatives, Washington, DC 20515), urging them to vote against Hefley's and Oberstar's bills. Also write to President Clinton, urging him to veto the park closure bill should it reach his desk (1600 Pennsylvania Ave., Washington, DC 20500).

DEAL WILL HELP CONTROL Smokies Air Pollution

An innovative set of agreements has been reached that will help to control air pollution at Great Smoky Mountains National Park.

Last fall, NPCA and the Department of the Interior filed separate appeals of the Tenn Luttrell Company's permits to build and operate two lime kilns near Great Smoky Mountains, along the border of Tennessee and North Carolina. Located in Tennessee about 35 miles north of the park, the kilns would burn coke and coal and could emit 273 tons of nitrates and 67 tons of sulfates per year, which would worsen the air pollution already plaguing the Smokies.

After months of negotiations, NPCA, Interior, Tenn Luttrell, the state of Tennessee, and the National Healthy Air License Exchange (INHALE) have come to several agreements that will allow operation of the kilns while setting in motion a process to protect the the park's air quality. "We hope that this is a first step in stopping the destruction of Great Smoky Mountains by air pollution," said Don Barger, NPCA Southeast regional director.

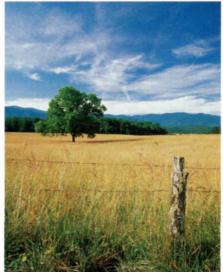
Designated a World Heritage Site, Great Smoky Mountains is also a Class I area under the Clean Air Act, which means that the park should have some of the cleanest air in the country. However, the park suffers from some of the nation's highest levels of sulfur dioxide and nitrogen oxide, which cause or exacerbate acid rain, ground-level ozone, and the degradation of soils, vegetation, surface water, and visibility. Under the new agreements, Tenn Luttrell will donate \$40,000 to IN-HALE, which was designated by NPCA to work to improve the park's air quality through the purchase of emissions offsets. NPCA and the Park Service had recommended throughout the process that no new permits be granted without the source first obtaining offsets. Emissions offsets require that pollution be reduced from one source in exchange for a new permit being granted.

INHALE works to reduce pollution by purchasing the rights of companies to pollute and then permanently retiring them from the marketplace. IN-HALE will work with NPCA to find offsets near the Smokies. "We have a bankroll to provide other pollution sources near the park with the incentives to reduce their emissions," said INHALE Executive Director Dan Jaffe.

"We cannot say yet how much in offsets we will achieve," Barger said. NPCA may seek matching grants to continue the work begun under this deal.

Another important aspect of the settlement will improve the permitting process by establishing procedures for increased consultation among Interior, the Park Service, and the state of Tennessee. These entities have agreed to make all reasonable efforts to protect Class I areas from air pollution.

"You can't always have a 'win-win' situation, but in this case we found a solution that benefited all parties and, most important, air quality at Great Smoky Mountains," Barger said.



may benefit from innovative agreements. NPCA DEMANDS CARE

NPCA DEMANDS CARE OF CHANNEL ISLANDS

After several fruitless attempts to come to an agreement with the National Park Service, NPCA has filed a notice of its intent to sue the agency to compel the careful stewardship of Channel Islands National Park in California.

In April, the Environmental Defense Center in California filed a 60-day notice of its intent to sue on NPCA's behalf. NPCA contends that NPS has repeatedly violated environmental laws in its management of Santa Rosa Island, the second largest of the park's five islands. At issue is a cattle ranching and commercial hunting operation—run under a special-use permit granted to the

NEWSUPDATE

▲ Wolves in jeopardy. Sen. Conrad Burns (R-Mont.) has vowed to stop the reintroduction of wolves into Yellowstone National Park by eliminating future federal funding for the program. The recovery plan calls for capturing 15 wolves a year in Canada and releasing them in the park until ten packs, or about 100 wolves, populate the greater Yellowstone ecosystem. This year, 13 wolves were released in the park. One wolf has already been illegally shot and killed, but another has borne a litter of pups.

Burns has attacked the program as being too costly (about \$12 million). However, surveys show that the presence of wolves will heighten the park's attraction for visitors and result in increased tourism revenue. Vail & Vickers Company—that continually threatens the island's native plants and wildlife.

About 5,000 cattle, along with about 3,000 deer and elk for the hunting operation, forage on Santa Rosa. Because of overgrazing, 19 native plant species, including five found only on Santa Rosa, are candidates for the federal endangered species list. The island is also home to the threatened western snowy plover. In violation of the Endangered Species Act, NPS has not completed the necessary work with the U.S. Fish and Wildlife Service to ensure the bird's protection from cattle and hunting.

NPCA also charges that the Park Service disregarded the Clean Water Act and the National Environmental Policy Act (NEPA). NEPA requires that an environmental impact statement be prepared for major federal actions affecting environmental quality. NPS did not prepare such a document.

NPS also failed to receive the certification required under the Clean Water Act. Since cattle grazing has resulted in fecal deposits in park waters, the regional water quality control board is threatening the park with a compliance order unless serious measures are taken to reverse this degradation.

"NPS has transgressed its mandate to protect Channel Islands," said Brian Huse, NPCA Pacific regional director. "NPS must work to assert its management in order to protect the unique resources of Santa Rosa Island."

EFFORTS REDOUBLED TO PROTECT YELLOWSTONE

Ongoing efforts by NPCA to protect Yellowstone National Park have begun to reap positive rewards, but the proposed New World Mine and a plan to slaughter area wildlife continue to jeopardize the park's exceptional resources.

In February, NPCA brought together 14 conservation groups to request that the World Heritage Committee consider adding Yellowstone to the "World Heritage in Danger" list. As a result, the committee is sending an international team of park experts to Yellowstone



NPCA continues to work to protect the Yellowstone River from the New World Mine.

this summer to investigate the threats posed by the mine. "The world is watching to see if the United States will make sure to preserve our first national park unimpaired," said Terri Martin, NPCA Rocky Mountain regional director.

Widespread opposition from NPCA and others has generated objections to the mine at the highest levels of government. When he visited Montana in May, President Clinton said, "No amount of gain that could come from [the mine] could possibly offset any permanent damage to Yellowstone."

Yellowstone Superintendent Mike Finley has also come out strongly against the mine. "[Noranda does not] have a right to mine in a manner that destroys property owned by the American public," Finley told the *Enterprise*, a Rocky Mountain newspaper.

The project would include a 75-acre tailings impoundment to store an estimated 5.5 million tons of acidic mine waste. If the impoundment were to fail, this waste would spill toward the Clarks Fork of the Yellowstone River, which has been named one of the most endangered rivers in the United States. Calling the impoundment "an environmental disaster waiting to happen," Rep. Bill Richardson (D-N.Mex.) was planning at press time to introduce a bill in mid-June that would safeguard the headwaters of the Yellowstone from the enormous threat posed by the mine.

NPCA is also working to defeat a plan to slaughter thousands of bison and elk in Yellowstone and Grand Teton national parks to eliminate the threat of transmitting brucellosis to area livestock. Brucellosis is a disease that causes cattle to abort their young. Although the transmission of the disease from wildlife to cattle in the wild has never been proven, local ranchers say that the wholesale slaughter of bison is the only solution.

In May Sen. Conrad Burns (R-Mont.) sponsored legislation that calls for rounding up all Yellowstone bison and testing them for brucellosis. If they test positive, they will be killed or neutered, although research has shown that only a fraction of animals that test positive actually has the disease. The Montana Department of Livestock says the plan should include the region's elk as well.

"These unjustifiably extreme proposals constitute an intolerable attack on bison and elk and on our national parks as sanctuaries for wildlife," said Martin. "Reasonable measures exist to guard against any possible risk."

These measures include vaccinating cattle and temporarily keeping them off the winter ranges and calving areas of bison and elk that occur on public lands.

POLL SAYS AMERICANS WANT PARKS PROTECTED

The American public would rather have parks preserved for future generations than managed solely for today's visitors, a recent survey finds.

Commissioned by NPCA and conducted by Colorado State University (CSU), the survey was released in May during National Park Week. It polled citizens nationwide—whether they were regular park visitors or not—to determine their views on the condition of the national parks, threats to resources, the importance of park protection, and future prospects for the National Park System. The survey's overarching conclusion was that Americans support the national parks and feel they should be protected in years to come.

Asked to rate the importance of several reasons for valuing national parks, more than 98 percent of respondents indicated that it was somewhat or very important for parks to provide a meaningful experience for future generations. Other values considered important were air and water quality, wildlife habitat, and natural ecosystems. Very few respondents considered providing income for the tourism industry an important park value.

Similarly, more than 98 percent of respondents thought it highly important that national parks remain the special and protected areas they have been in the past. Even 80 percent of those who had never visited a national park unit thought it was very important that parks continue to be protected.

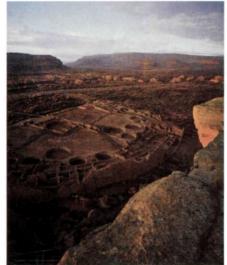
"The support for park protection shown by the American people is a mandate for this country's leaders, who must ensure that the public's confidence is well placed," said NPCA President Paul Pritchard. "A Congress that wants to slash the park budget, close national parks, and consider other anti-park measures is not listening to the people."

The survey showed that citizens are willing to help offset the costs of the parks through tax contributions, such as by subtracting \$1 from tax refunds or adding \$1 to tax payments. A majority of respondents also supported raising park entry fees, but only if the revenue would directly benefit the parks.

Nearly 95 percent of respondents who had visited a national park (85 percent of all respondents had) found them to be in good or excellent condition. This finding differed from a 1994 NPCA-CSU survey of park superintendents, who rated the parks in average condition at best. CSU says the disparity may be because park managers are more likely than the public to understand the impacts of park threats.

Despite their high opinion of park conditions, however, participants did consider park threats serious. The most egregious perceived threats were air and water pollution; mining, logging, and oil exploration; commercial development edging nearer to park boundaries; and large crowds. One in five visitors felt that crowding interfered with the enjoyment of his or her most recent visit to a national park. Three quarters of respondents supported strategies to limit park visitation, especially reducing the number of automobiles in popular parks during peak season.

Threats aside, more than 90 percent said they would be fairly or very likely to visit a national park in the next few years. "People realize that parks aren't costs but investments in the future," Pritchard said.



Ancient roads link Pueblo Bonito at Chaco Canyon to recently protected outlier sites.

CHACO OUTLIER SITES PROTECTED BY NEW LAW

President Clinton has signed a new law that will safeguard archaeological sites around Chaco Culture National Historical Park in New Mexico.

The law amends a 1980 statute that set up a protection system for the network of "outliers"—prehistoric sites on nearby Navajo, public, and private lands—that are linked to the main archaeological complex at Chaco Canyon. On May 18, Clinton signed into law the

MARK U P	
KEY PARK LEGISL	ATION
Purpose	Status
Establishes a management review of the National Park System with a focus on closing selected parks. NPCA opposes.	H.R. 260 was approved by the House Committee on Resource: May 17, and a vote on the House floor is expected soon.
Adds six Anasazi outliers to the archae- ological network at Chaco Culture Na- tional Historical Park. NPCA supported.	Signed into law by Presiden Clinton on May 18, 1995.
Forbids any wilderness designation for Voyageurs National Park and opens the park to increased motorized recreation. NPCA opposes.	H.R. 1310 is before the House subcommittee on national parks
	KEY PARK LEGISI Purpose Establishes a management review of the National Park System with a focus on closing selected parks. NPCA opposes. Adds six Anasazi outliers to the archae- ological network at Chaco Culture Na- tional Historical Park. NPCA supported. Forbids any wilderness designation for Voyageurs National Park and opens the park to increased motorized recreation.

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legislation, authored by Rep. Bill Richardson (D-N.Mex.), which had passed the House by an overwhelming 409-7 vote on March 14. Sen. Pete Domenici (R-N.Mex.) backed the effort in the Senate, which approved the bill by voice vote on April 27.

"This law will forge a new, historic partnership between the National Park Service and the Navajo Nation, and it will help prevent destruction of a whole network of Chacoan sites that are part of the world's common heritage," said Dave Simon, NPCA Southwest regional director. "Rep. Richardson's leadership made the difference." Both Richardson and Domenici have worked since 1986 to amend the Chaco outlier law, and NPCA commended their perseverance.

The law will add six outlier sites to the network, bringing the total area of protected outliers to 74,372 acres within 39 sites, and will formalize a cooperative relationship between NPS and the Navajo to protect and manage sites on Navajo land. The law also directs NPS and the Bureau of Land Management to work jointly to prevent the destruction of outliers that remain on private lands and strengthens their authority to purchase such sites if necessary.

The Chaco area represents the architectural height of the prehistoric Pueblo Indians, also known as the Anasazi. Sophisticated structures of skilled masonry are surrounded by an extensive road system, which leads from the outliers to the geographical, political, economic, and spiritual core of Chacoan culture preserved in the park.

Another Southwestern park, Walnut Canyon National Monument in Arizona, will be better protected if a bill before Congress is approved. Sponsored by Rep. J. D. Hayworth (R-Ariz.) and Sen. Jon Kyl (R-Ariz.), this bill would expand the park by 1,239 acres, adding two significant archaeological sites. Walnut Canyon preserves sites associated with the Sinagua Indians, who inhabited the area about 800 years ago. NPCA supports this expansion.

The House passed the measure on March 14. At press time, the bill was awaiting action before the Senate subcommittee on national parks.

T-SHIRT SALES BANNED AT THE NATIONAL MALL

Consumed in the last year by a "flea market" atmosphere, the National Mall in Washington, D.C., will no longer be cluttered with rows of T-shirt stands.

In May, the National Park Service imposed regulations that will force off the Mall the more than 400 T-shirt vendors who cluster around the Smithsonian Institution, the Washington Monument, and the Lincoln, Jefferson, and Vietnam Veterans memorials. Last July, in comments to NPS on the proposed regulations, NPCA recommended that T-shirt sales be strictly limited. NPCA is pleased that the final rules will implement these recommendations. "We strongly support the efforts of NPS to limit commercialism at these nationally significant areas," said Elizabeth Fayad, NPCA staff counsel.

Vendors had loosely interpreted an NPS rule allowing T-shirt sales on parkland only if they supported a particular cause or demonstration. To obtain a demonstration permit, most vendors stamped "D.C. statehood" on their T-shirts and then sold them alongside shirts with no logo or discernible cause.

Many vendors, however, remain diligent and competitive in their efforts to continue selling at the Mall, popular with tourists in the nation's capital. Some have already filed lawsuits claiming that the regulations infringe on their First Amendment rights, and more are likely to follow. Soon after the regulations went into effect, a federal judge ruled that seven groups that jointly brought suit against NPS can continue to sell T-shirts pending a full hearing. These groups say that they promote legitimate religious, environmental, and other causes.

Other vendors have crowded in front of the National Air and Space Museum because of a court ruling denying NPS jurisdiction over that area. These vendors have lowered prices dramatically, offering up to six T-shirts for \$10.00.

The new regulations will allow the sale of books, pamphlets, buttons, and bumper stickers to continue on the Mall as long as a cause is evident.

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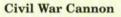
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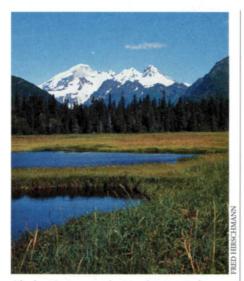
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Alaska Natives are laying claim to Lake Clark National Park's Cook Inlet coast.

Alaska Natives Vie for Lake Clark Coastline

A bill before Congress would transfer nearly all of the marine coastline within Alaska's Lake Clark National Park to a Native corporation.

Rep. Don Young (R-Alaska), influential chair of the House Committee on Resources, introduced legislation in March that would remove most of the Cook Inlet shoreline of the park from National Park Service care. The bill would convey 29,900 acres, or about 90 percent, of the park's coastal lands to Cook Inlet Region, Inc. (CIRI). CIRI, one of Alaska's 13 original Native corporations, would then transfer portions of the lands to other Native village corporations to satisfy their asserted entitlements under the Alaska Native Claims Settlement Act.

NPCA, the National Park Service, and the Bureau of Land Management all oppose this bill, saying that transferring these lands would leave precious resources at risk. "Lake Clark is a unique park that contains all of the ecosystems found in Alaska," said Chip Dennerlein, NPCA Alaska regional director. "If the Cook Inlet area were conveyed out of the park system, it would fundamentally change the nature of the park. Extractive industries would then have increased access to coastal resources."

NPCA and the federal agencies say

CIRI would receive excess lands beyond its entitlement if Young's bill is approved. In a 1976 agreement with Interior that was approved by Congress, CIRI agreed to take title to the coastal lands in question only if it did not receive other available lands set aside in the agreement. These other lands were conveyed to CIRI, but the corporation did not transfer all the land to the Native villages and kept some for itself.

"If CIRI had a clear right to these lands, NPCA would still mourn their loss from the park, but we would live by the agreement," Dennerlein said. "But CIRI's charge that until recently the government was going to transfer the lands is not supported by the agreement or the facts."

A 1981 Interior decision stated that lands not conveyed to CIRI would remain part of Lake Clark. Last December, Interior's chief legal official John Leshy also declared CIRI's request inappropriate. "Interior secretaries as different as James Watt and Bruce Babbitt have come to the same conclusion," Dennerlein said. "It is a sad day when Young puts the interests of corporations over those of national parks."

Former Alaska Gov. Jay Hammond (R) recently expressed concern that the bill would undermine the Alaska National Interest Lands Conservation Act: "If this raid is allowed to occur, I wonder who'll then get a piece of Denali?"

EVERGLADES TO BENEFIT FROM SUGAR REFORM BILL

Legislation to repeal the U.S. sugar program has been introduced in both houses of Congress. South Florida's troubled Everglades ecosystem stands to benefit from the end of what Rep. Dan Miller (R-Fla.) calls "the sugar daddy of all corporate welfare."

Miller and his colleagues—Rep. Charles Schumer (D-N.Y.) and Sens. Judd Gregg (R-N.H.) and Harry Reid (D-Nev.)—are sponsors of identical bills that would terminate a system of quotas and price supports that have subsidized the sugar industry since the 1930s. By limiting production and fix-

WISE USE WATCH

Mational Parks is tracking the activities of the Wise Use Movement, a coalition of groups that is the self-proclaimed enemy of environmental protections.

Recently the Wise Use Movement has been linked to the militia movement, an anti-regulation crusade of the far right. No longer viewed only as bands of zealous patriots who engage in weekend target practice, militias have come under heavy scrutiny since members were connected to the April bombing of a federal building in Oklahoma City.

"A lot of the rhetoric of Wise Use groups is similar to that used by the militia movement—anti-government, anti-environment," said Jeff DeBonis, executive director of Public Employees for Environmental Responsibility (PEER). "The real issue is the rise in violence, regardless of which group it's coming from. People think it's okay to take violent action against federal employees. The rhetoric out of Congress demonizes federal employees. The Wise Use groups feel empowered that they have a hard right movement in Congress."

Calling the militia movement "the largest armed expression of the ultraright since the Ku Klux Klan," author David Helvarg stated in *The Nation* that most militia-related incidents have involved people associated with the environment.

Last July, a Nye County, Nevada, commissioner was backed up by an armed group when U.S. Forest Service officials tried to stop him from illegally bulldozing national forest land. In the last year, Forest Service and Bureau of Land Management facilities in Nevada were bombed.

PEER's DeBonis would like to see a thorough federal investigation into the link between militias and Wise Use groups. "We're also calling on Congress to pass anti-terrorism legislation, and maybe there should be a special section on anti-environmental violence," he said.

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ing prices, the sugar program has kept the domestic price of sugar artificially high, often twice the world market level.

Florida's sugar industry—the nation's leader in cane sugar production has profited from federal programs for generations. In the 1940s, the U.S. Army Corps of Engineers started draining marshes, dredging canals, and building dikes south of Lake Okeechobee to create the Everglades Agricultural Area (EAA). The project alters the flow of water to Everglades National Park, Big Cypress National Preserve, and Florida Bay. Much of the water that reaches the parks is tainted with chemicals.

In the last 20 years, the area within the EAA devoted to sugar production has doubled to 450,000 acres. "Repeal of the sugar program would kill the incentive to increase sugar production in the EAA, relieving the park and the surrounding ecosystem of nutrient runoff and other problems associated with agriculture," said Will Callaway, an NPCA Washington representative.

NPCA and other conservation organizations, the Sweetener Users Association, businesses, and taxpayer groups have formed the Coalition to End Welfare for Big Sugar to encourage broad congressional and public support for repeal of the sugar program. Peter Berle, former president of the National Audubon Society, spoke for the coalition at a recent press conference. "The sugar program has underwritten the destruction of the world-famous Everglades ecosystem," Berle said. "Through this program we are spending money to subsidize damage to a national treasure."

At press time, 93 cosponsors, including Majority Leader Dick Armey (R-Tex.), had signed on to the House version, while the Senate bill had 15 cosponsors. Sen. Bill Bradley (D-N.J.) cited many faults in the sugar program: "It makes no economic sense; it makes no sense for consumers; it makes no sense for...the Everglades."

DWrite to your senators (U.S. Senate, Washington, DC 20510) and to your representative (U.S. House of Representatives, Washington, DC 20515), urging them to cosponsor these bills.

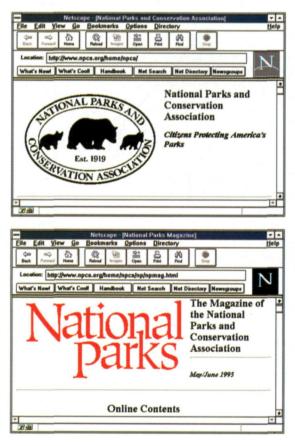
-M. Katherine Heinrich

INTERNATIONAL PROPOSAL Released for Cascades

The Cascades International Alliance has issued its formal proposal for the establishment of an international park in the northern Cascades ecosystem.

Released in June to the public and to elected officials, the proposal outlines the benefits of a Cascades International Park, which would link existing parks and public lands and be jointly managed by the United States and Canada. The northern Cascades ecosystem includes, in Washington State, North Cascades National Park, three recreation areas, and seven wilderness areas and. in British Columbia, Manning and Cathedral provincial parks and two recreation areas. As founder of the alliancea coalition of U.S. and Canadian environmental, recreation, and education organizations-NPCA has worked vigorously to enhance these wild areas.

At a time when the industry of the Pacific Northwest feels threatened by environmental protections, this proposal highlights the economic benefit and



http://www.npca.org/home/npca/

NPCA's Web Site Offers Easy Access to Park Information

NPCA's World Wide Web Site is complete and open for business. The site provides, in one place, extensive access to information on NPCA and the national parks. Information at the site includes:

- Late-breaking park news and alerts on actions affecting the parks;
- Excerpts from *National Parks* magazine and full text of *The ParkWatcher* newsletter;
- Connections to National Park Service and other web sites that provide vast amounts of park information;
- Congressional e-mail addresses that allow you to quickly and easily let your representatives know where you stand on park issues.

The web address for the NPCA site is shown at the top of this announcement. (This is a new address, although the old address will still work.) CompuServe, America Online, and Prodigy all have web browsers available. For information on these services, e-mail us at **natparks@aol.com**. If you access the Internet through a direct connection, contact your site manager about web browsers.

NPCA is maintaining its presence on CompuServe, America Online, and Prodigy. On **CompuServe**, type GO NPCA at any CompuServe prompt. On **America Online**, we have folders in the Network Earth and the Environmental Forum. On **Prodigy**, you can find us in the Conservation topic of the Science BB.

Finally, we're still collecting member e-mail addresses. If you haven't done so already, please send your e-mail address to **natparks@aol.com**.

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The northern Cascades ecosystem merits international protection, a new proposal states.

multiple uses availed by an international park. "Healthy ecosystems are the key to our economic future," the proposal states. "Not only do parks often lead to more local business activity, but economists are finding that the healthiest and most diverse community economies in the [area] are those built around conservation, not overharvest of nature."

NPCA believes the proposal strikes the necessary balance of protecting nature and maintaining the economy. Under the proposal, the park would protect key wildlife and fish habitats while allowing hunting, trapping, and sport fishing to continue where already permitted. The Chilliwack River in British Columbia and Bacon Creek, a tributary of Washington's Skagit River, would be restored, benefiting salmon and those whose incomes depend on the fish.

"Regional economies depend more on tourism and service industries than on commercial extraction activities," said Terri Pauly, projects director in NPCA's Pacific Northwest office.

The Cascades International Alliance also calls for other lands within the ecosystem but outside of the international park to be designated a stewardship area. Within this area, existing land management agencies would retain their jurisdictions while increasing cooperation in management. Although some radical opponents have warned that the park would be run by the United Nations, supplanting U.S. and Canadian sovereignty, the alliance dismisses these assertions as false.

NPCA hopes that the legislative bodies of both countries will act soon to establish the international park.

DTo express support for the park, write to Vice President Al Gore (Old Executive Office Building, Washington, DC 20501) and to your senators and representative (U.S. Senate, Washington, DC 20510; U.S. House of Representatives, Washington, DC 20515).

TRIBAL SELF-GOVERNANCE AFFECTS NATIONAL PARKS

In the future, Native American tribes across the country may have a larger role in the operation of national parks.

Under the Tribal Self-Governance Act of 1994, Native American tribes that receive self-governance status may fulfill myriad functions administered by Interior Department agencies, including the National Park Service. Since the act was signed into law last October, legal experts at Interior have worked to interpret the extent to which tribes may assume various roles. NPCA encourages Interior to apply sufficiently stringent criteria when reviewing contract requests to guarantee that a high priority is placed on preservation.

"NPCA is not opposed to opening parks to greater Native American participation and will continue to support such involvement where sufficiently appropriate, such as in Canyon de Chelly in Arizona, where Navajo live, farm, and serve as tour guides," said Phil Voorhees, an NPCA Washington representative. "Many national parks were originally tribal lands. It is natural that Native American tribes be allowed to assist NPS in areas of special interest."

NPCA is concerned, however, about the broadbrush treatment given to this issue. "The concept of contracting out traditional NPS functions is new and radical enough that NPS should proceed carefully," Voorhees said.

The Interior Department interprets the statute to allow many park management activities to be compacted to selfgovernance tribes, including operating concessions, conducting resource-related work, carrying out construction and maintenance, and collecting research and data. Some contracts may be awarded for functions that are of "special geographic, historical, or cultural significance" to the self-governance tribe without competitive bidding.

The general management of a park in its entirety, however, cannot be contracted, according to Interior. The same holds true for other federal functions, such as promulgating or modifying regulations or issuing special-use permits.

NPS says it is too early to tell exactly what effects self-governance will have on parks. "We think that the self-governance law provides us with the opportunity to make contracting with Indian tribes a priority, and that could be good in many cases," said Pat Parker of the NPS American Indian Liaison Office in Washington, D.C.

Parker maintains that NPS will retain great discretion in approving or disapproving contract requests and that park resources will not be threatened. "The policy is that tribes have to meet the same standards as if the work were done by other parties or by the National Park Service itself," Parker said.



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REGIONAL **R**EPORT

News Briefs from NPCA's Regional Offices

ALASKA

Chip Dennerlein, Regional Director The Alaska departments of transportation and natural resources have signed a cooperative agreement with the National Park Service to plan for the Mc-Carthy Road, the principal route into Wrangell-St. Elias National Park. NPCA, which has been invited to participate in the planning, says the new agreement will allow consideration of the park's scenic values while providing for public use. Also, it is likely that the state will favor building a footbridge-instead of a vehicular bridgeacross the Kennicott River to the town of McCarthy, site of the famous copper mine. NPCA advocated a footbridge.

Katmai National Park officials have been working with various groups, including NPCA, to develop a revised management alternative for the park's Brooks River and Naknek Lake areas, prime brown bear habitat. NPCA had argued that none of the alternatives in a recent park management plan properly balanced protection of wild resources with the unique visitor experience of viewing bears at the Brooks River.

HEARTLAND

Lori Nelson, Regional Director The latest proposal to construct a river crossing near Theodore Roosevelt National Park in North Dakota would still threaten the park's historic and natural values, NPCA says. Two local counties have amended a 1992 proposal that is the final segment of planned improvements to meet the transportation needs of the local oil and gas industry.

The bridge would cross the Little Missouri River within view of the park's Elkhorn Ranch unit. NPCA is concerned that the bridge and adjoining road would increase noise and air pollution and destroy the solitude found at the ranch. The counties may have segmented the project to avoid the analysis required under environmental law. NPCA would like an environmental impact statement to be prepared.

Public comments have been overwhelmingly opposed to an NPS proposal to construct a shoreline drive at Pictured Rocks National Lakeshore in Michigan. NPCA contends that the drive is unnecessary to provide access to the shoreline and recommends an upgrade of a nearby county road with spurs leading into scenic areas.

DWrite to Michigan Rep. Bart Stupak (D) and Sens. Carl Levin (D) and Spencer Abraham (R), urging support for NPCA's suggestion (U.S. House of Representatives, Washington, DC 20515; U.S. Senate, Washington, DC 20510).

NORTHEAST

Eileen Woodford, Regional Director Controversial plans to construct a bridge connecting Ellis Island in New York to Liberty State Park in New Jersey appear to be on hold. The House included the \$15 million for the bridge in its budget rescissions package for fiscal year 1995. The Senate included language in its own rescissions bill that prohibits funds to be spent on the bridge until an environmental impact statement being prepared by NPS is final. At press time, conferees had begun to work out differences in the bill, which President Clinton has vowed to veto because of other provisions.

While awaiting a potential veto, NPCA continues to urge Congress to reject any plans to construct the bridge, which NPCA and others believe would alter the historic character of Ellis Island. More than 1 million visitors a year come by ferry to the island, recreating the immigrants' experience.

PACIFIC

Brian Huse, Regional Director The funds needed by NPS to begin operating the new Mojave National Preserve will not be forthcoming. The House subcommittee on Interior appropriations, chaired by Rep. Ralph Regula (R-Ohio), has denied an NPS request to reprogram \$316,000 from other NPS accounts (not from other parks). NPCA is dismayed that, after establishing the park last fall, Congress would refuse to allot these funds.

Without the money, NPS is left with \$600,000 to operate Mojave this year, which "won't even cover our basic expenses," said Frank Buono, Mojave's assistant superintendent for ecosystem management. "We have two seasonal interpreters. It's going very slowly."

D Write to Regula and to Rep. Jerry Lewis (R-Calif.), urging them to support funding for Mojave National Preserve, at U.S. House of Representatives, Washington, DC 20515.

Yosemite National Park has entered an ambitious period of planning in many areas of management. The park is revising its wilderness management plan and drafting plans for Yosemite Valley and Tuolumne Meadows. A transportation study is due out soon as well. NPCA is urging its members to ask for and comment on these plans.

D Write to Superintendent B. J. Griffin, P.O. Box 577, Yosemite National Park, CA 95389.

PACIFIC NORTHWEST

Dale Crane, Regional Director To protect the native vegetation of Olympic National Park, NPS has decided that its preferred management option is to extirpate the park's nonnative mountain goats. NPS released its conclusions in a long-awaited draft environmental impact statement (EIS) on goat management. NPCA supports the Park Service's decision and commends the agency for thoroughly handling a complex, sensitive issue.

Descended from a dozen goats introduced to Olympic in the 1920s as game animals, about 400 goats now live in the park. Goat disturbances have resulted in decreased numbers of rare and endemic plants. The animals trample fragile areas and upturn large amounts of soil to escape heat and insects. Several plant species are at risk of extinction, including the Olympic milkvetch.

The EIS culminates two decades of research on the goats. NPCA, along with many other conservation groups, believes the preferred option is consistent with the NPS edict to protect the native resources of parks.

ROCKY MOUNTAIN

Terri Martin, Regional Director The Jackson Hole Airport Board has yielded to public opinion somewhat in its plan for the airport's future. But NPCA believes that the plan still falls far short of safeguarding Grand Teton National Park, which surrounds the airport. In its preferred alternative for the airport's draft master plan, the board dropped plans to extend the existing 6,300-foot runway. However, the board has proposed building 637-foot "stopways"-paved emergency platformsat each end of the runway. NPCA says that the stopways could be figured in runway length and used to allow more and bigger planes. Secondly, the entire runway will be shifted 568 feet north, deeper into the park, a move NPCA opposes because it would increase noise and visual impacts on the park. The plan also calls for a control tower, a larger terminal, and a two-tier parking garage. NPCA and NPS have demanded that the board implement measures to limit overflights and the number and type of aircraft using the airport.

NPCA thanks its Utah members who spoke out in support of 5.7 million acres of wilderness for Bureau of Land Management lands at recent public hearings in Utah. Wilderness supporters far outnumbered opponents, showing that the public wants Utah's red rock wildlands protected. Nonetheless, Gov. Mike Leavitt (R) and the Utah congressional delegation will advance instead a bill to protect fewer than 2 million acres.

SOUTHEAST

Don Barger, Regional Director NPCA is encouraging the Mississippi Department of Marine Resources to help enforce a proposed state prohibition of commercial net fishing within one mile of Gulf Islands National Seashore and other barrier islands. NPCA hopes the state ban will mirror exactly a long-standing federal fishing ban for the area. Continued commercial net fishing within the seashore would degrade threatened sea grass beds and other water resources. Because of this, NPCA is also encouraging the state to take steps to protect the resource from all net fishing activities. The state plans to provide a public comment period.

D To urge the state to enforce an effective fishing ban, write to Earl Glade Woods, Director, Mississippi Department of Marine Resources, 2620 Beach Blvd., Biloxi, MS 39531.

SOUTHWEST

Dave Simon, Regional Director NPCA has contributed \$5,000 toward a survey of sensitive plants in the Jemez and Nacimiento mountain ranges near Bandelier National Monument in New Mexico. Although some work is being done in the park, the survey will take place primarily in adjacent Santa Fe National Forest and will provide an overview of unique or uncommon plants and their habitats. Many of these plants are struggling to survive in the region's few riparian zones. The Garden Club of America and the National Fish and Wildlife Foundation are also contributing to the project, along with NPS and the Forest Service. "We're looking for plants that could benefit from enhanced management of their habitats," said Brian Jacobs, Bandelier's vegetation management specialist.



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FORUM

Parks Under Siege

The National Park System faces a precarious future as Congress and special interests attack it on a variety of fronts.

By Tom Adams

NOCTOBER 8, 1994, Sen. Carol Mosley-Braun (D-III.) cast the deciding vote to break a filibuster and pass the landmark California Desert Protection Act. In one of its final acts, the 103rd Congress soundly rejected the notion that there are too many parks.

That sunny October morning is now a memory; on the horizon a storm is approaching: the 104th Congress' agenda for national parks. It could threaten every park unit from Yellowstone to those in the California desert.

Soon after a Republican majority was elected to Congress, Rep. James Hansen (R-Utah), the incoming chairman of the House National Parks, Forests, and Lands Subcommittee, wrote to his constituents to clarify his earlier statements about closing the park. "The question is not whether to close some parks, but how best to accomplish this goal."

Among the avenues chosen to reach that goal is the National Park System Reform Act, one of a number of antipark bills that has been or is expected to be introduced in Congress. Those who love the parks should pay close attention to this bill. Although the original legislation has been tempered, the current version approved by the House Resources Committee has several fatal flaws, including the intent to eliminate some parks from the system.

For example, while units designated

"national parks" are now exempt, the bill allows judgment to be passed on sites, including Independence Hall National Historical Park, Statue of Liberty National Monument, and Golden Gate National Recreation Area, as well as battlefields throughout the system.

Among the reasons given for introducing the bill are streamlining the park system, saving money, and reducing the

A groundswell of support does not exist for creating a layer of bureaucracy to cull the park system.

deficit. But rather than a sustained and concentrated effort to address these issues, the bill will only exacerbate the problems it seeks to solve. The reform act would not "close" parks; instead it would "transfer" them to other federal agencies, state or local governments, or private entities. A transfer would "save" money because management of those units would no longer be the responsibility of the Nationl Park Service (NPS).

But where are the savings? Parks transferred to other federal agencies would only shift budget authority to the agency assuming management; parks transferred to state and local governments might require a federal payment, so as not to create an unfunded mandate; parks transferred to private nonprofit entities (e.g., historical societies) also would most likely include some form of federal compensation—otherwise these private groups would not be able to afford to take on the responsibility. The source of all three payments would be the Park Service budget. Further, once NPS has authority over fewer parks, Congress is likely to reduce the agency's overall operating budget.

When Henry McPherson, a former member of the Defense Department's Base Realignment and Closure Commission (BRAC), testified before Hansen's subcommittee on the reform act, he explained why the BRAC process has been widely accepted by the public. McPherson stated, "The work involved—closing and realigning bases in the aftermath of the Cold War—was universally believed to be necessary, and almost as universally acknowledged to be beyond the capacity of Congress to achieve."

Although the public was behind the process involving military bases, it is not demanding that park units be closed. Some park experts and scholars may debate whether a few of the 368 units are worthy of NPS management, but a groundswell of support does not exist for creating another layer of bureaucracy to cull the park system.

Instead, a small but powerful group of commercial interests is clamoring to open federal lands. The Wise Use Movement and its allies in the timber, oil and gas, and mining industries support the idea of turning over federally owned lands to private enterprises.

The public also is not pushing for a politically appointed commission to review the park system. Congress does not need a new process, because legislators *have* the authority to remove units from the system. Last year, Congress removed the John F. Kennedy Center for the Performing Arts in Washington, D.C., from the National Park System.

Another powerful component of the brewing storm is Don Young (R-Alaska), chairman of the House Resources Committee. Young has made no secret of his intention to convey federal lands to local control, making them more accessible for commercial development or extractive-industry use. Young's intentions became clear during oversight hearings on federal land management, a session that gave anti-park interests the opportunity to vent their views.

Minnesota State Sen. Bob Lessard testified that the establishment of Voyageurs National Park in 1975 caused a collapse of the area's economy. Lessard did not explain that iron-ore deposits provided the foundation for the local economy for most of this century. When the domestic steel industry declined in the 1970s and 1980s, so did the economy along Minnesota's Iron Range.

At the hearing, Anna Sparks, former district supervisor of Humboldt County,

California, said creating Redwood National Park hurt the local economy and the lifestyle it supported.

Lessard did not mention that as a guide and operator of a fishing camp, he has an economic interest in increased commercial activity in and near Voyageurs. And Sparks did not say that she is employed as a spokeswoman for timber giant Louisiana-Pacific.

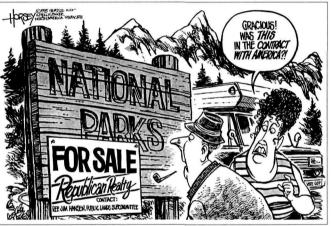
Some people are disenchanted with the federal government, a feeling reflected by these two witnesses, as well as

in the assaults on the national parks. The reform act is just the opening salvo in what promises to be a long siege. Attempts to micro-manage our parks already have begun to emerge in individual legislative initiatives or as riders to more comprehensive bills. Their effect will be to assist those who seek greater commercial use of park system resources.

Rep. James Oberstar (D-Minn.) introduced legislation to revise the master plan of Voyageurs National Park. The revisions include expanding motorized use—primarily snowmobiles, motorboats, and aircraft. The bill also would authorize the operation of not fewer than 200 houseboats in Voyageurs and would explore the construction and maintenance of additional snowmobile trails and overnight ski huts. Rep. Thomas Bliley (R-Va.) has sponsored a bill that would limit the boundaries of Shenandoah National Park and Richmond National Battlefield Park to those lands already owned by NPS. This bill would ignore studies under way to determine what the appropriate boundaries for the two parks should be to protect the resources within the authorized size of the parks.

The financial assault on the parks, through legislation cutting the 1995 budget as well as budgets over the next seven years, will would have a devastating effect on the system.

Legislation dubbed the "rescissions bill" eliminated all unobligated funds for land acquisition in the National Park



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System. These funds had been appropriated by the previous Congress but not yet spent. Property owners, some of whom have waited years to sell their property to the National Park Service, had the plug pulled on real estate transactions that were in progress.

Perhaps the most severe threat from rescissions—a bill the president has threatened to veto—is at Denali National Park in Alaska. Funds to buy mining claims in the historic Kantishna district have been cut. A 1986 court decision prohibited mining at Kantishna. This action, along with development pressure, encouraged NPS to make buying these claims a priority. If the money is not restored, some claim owners may look to other buyers. Developers seeking to build resort lodges already have made offers to claim holders. In addition, Congress' commitment to balance the budget by 2002 will require all federal agencies, including NPS, to share the burden of meeting this goal.

These legislative initiatives are being advanced for short-sighted economic reasons with little regard for our national legacy and the long-term benefits of parks. For instance, the Park Service budget is just one-tenth of 1 percent of the entire federal budget, yet serves more than 260 million visitors annually.

The reform act is a bad omen. What might be dismissed as an isolated attack is actually the foundation for a process that could lead to a more far-reaching assault on our nation's heritage.

> In the middle of the war to preserve the Union, Abraham Lincoln began a movement to preserve our heritage when he set aside Yosemite Valley and Mariposa Big Tree Grove for the benefit of future generations. During World War II, Franklin Roosevelt recognized the value of protecting our heritage when he resisted the pressure to use the natural resources of the National Park System to aid the war effort.

> A long-term effort is needed to reduce the deficit and solve the problems confronting the

National Park Service. In times of crisis, history provides an invaluable lesson. Congress should remember the vision of Lincoln and Roosevelt and look beyond the pressures of the moment. To needlessly purge the park system in the name of deficit reduction only creates another kind of deficit and one we can ill afford.

NPCA invites members to participate in a phone tree to call legislators encouraging them to oppose the National Park System Reform Act and other anti-park legislation. To join, please call 1-800-NAT-PARK, and listen for the "park action" selection to leave your name, phone and fax numbers, and e-mail address.

Tom Adams, an NPCA Washington representative, is working on the association's behalf to defeat the reform act.

Taking Steps for Parks

In 900 communities across the United States and abroad, thousands of people participated in the sixth annual March for Parks.

by Linda M. Rancourt

HETHER THEY MARCH for a 1,000-year-old tree or mountains that have lasted an eternity, people who participate in NPCA's March for Parks care about the lands in their communities.

Fossils, butterflies, live oak trees, Indian burial grounds, rivers, neighborhood playgrounds, and 200-year-old military compounds attracted more than a million marchers, volunteers, and supporters who walked for the Earth the weekend of April 22, the 25th anniversary of Earth Day.

The young and the old participated in 900 marches in all 50 states and the U.S. Virgin Islands, as well as Russia, Saudi Arabia, and Canada, as part of NPCA's sixth annual March for Parks. Among those who marched on Earth Day were Friends of Florissant Fossil Beds National Monument in Colorado, a group that has participated in the event for the past four years.

March for Parks, says Kent Borges, president of the friends group, offers a way to create an awareness of the value of national parks and demonstrates how "fortunate we are in preserving these sacred places. The parks are under a mountain of pressures from all sides, not just from visitors. Political pressures are threatening to close something that's very precious to most Americans."

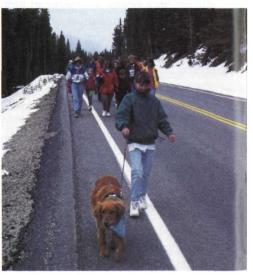
This year, Friends of Florissant Fossil Beds had hoped to raise enough money to build temporary shelters for petrified sequoia stumps, estimated to be more than 35 million years old. Even eight inches of snow could not keep folks from turning out for the march, says Patricia Brown, vice president of the friends group. Both Brown and Borges say they will organize a march next year to continue educating people about Florissant Fossil Beds and the threats it faces.

In St. Cloud, Florida, an estimated 650 students representing four elementary schools walked through the city streets on a day proclaimed by the mayor as "March for Parks Day." Led by fifthgrade teacher Linda Allen, the students, who are part of Allen's Kids Who Care program, took part in the march as a way to learn how to be responsible for their community. "If we teach them early that they can make decisions and they can make choices, they learn they can make a difference," says Allen.

Allen has been an elementary school teacher for 17 years and a March for Parks organizer for three. This year the students raised funds and solicited sponsors for projects that included tree planting and an expansion of a butterfly habitat at Lakeview Elementary School.

In Rockport, Texas, the future of a 1,000-year-old live oak tree drew people out to march near Goose Island State Park in humid and overcast weather. A tourist attraction, the state's champion oak tree is in need of more than \$1,000 each year for its fertilizer treatment.









26



Above, children carrying the "Earth Light" lead the march in Cincinnati, Ohio, one of four flagship marches. The light, which arrived at the march via canoe, represented the Earth and the importance of the children's role in taking care of it. Snow lined the trail at Rocky Mountain National Park in Colorado, far left. The march was a first for Grand Lake Partners for Trails, although the eastern side of the park has had a march for several years. Left, elementary school students in St. Cloud, Florida, plant trees at Lakeview Elementary School as part of their March for Parks project. This year, 650 students from four schools participated.

Karin Magera, who works at Goose Island State Park, knew she had found a solution to the funding problem when a March for Parks flyer appeared in the mail. "In the past, Indians camped under the tree. And because it has lived for more than 1,000 years, it has survived hurricanes, tornadoes, and it's seen a few fires," Magera says. Her group raised more than \$4,000 for fertilizer, cables to support some of the limbs, and lightning protection.

Heavy rains did not deter people from turning out in Dacula, Georgia, to support protection of the sacred Indian burial grounds of Kuwahi, recently a target of developers. Sharon Posey took a personal interest in the burial grounds when she realized they were being bulldozed. She has been working with Preservationists of Native American Sites (PRONAS) to encourage the county to buy the land. "It's quite a power-

ful site. There are 1,800 rock mounds on this 1,000-acre area," says Posey, who is a travel agent and spends most of her vacation time in national parks. The burial grounds are located throughout Dacula and Auburn, Georgia, covering more than 1,000 acres. According to PRONAS, the area was occupied by both Cherokee and Creek Indian tribes. Among the burial sites are several medicine wheels, a ceremonial altar, and a healing mineral spring, all constructed with stones.

Some of the land already has been sold off for homes and a golf course. Posey hopes that educating people will help stop the development. "The developer hasn't been telling people about the burial site. But we have tried to let them know it's here."

In another part of Colorado, people marched on both the western and eastern sides of Rocky Mountain National Park to show solidarity. Although the park is actually one entity, "in the winter it is really two," says Jim Cervenka, whose Grand Lake Partners for Trails organized a march for the first time on the west side of the park. "This is the first time we have ever done anything. We've always been a little bit envious



TONY BELCASTRO

Ellie Kalski and Patricia Martin joined in an American Volkssport Association march, which allows people to complete a walk at their leisure during a set period.

of the east side. We here on the west side said 'we're here too. We also have needs, and we are people who treasure the park and want to help preserve it as best we can.'"

Twenty-nine people walked the mileand-a-half route, raising money for the park's trails. The march on the east side was organized by Rocky Mountain National Association.

In Cincinnati, Ohio, 800 people walked 6.2 miles along the Little Miami National Scenic River Greenway and raised as much as \$6,000 to buy land along the river. NPCA President Paul C. Pritchard was among the marchers in that city.

"March for Parks was born because we care about children and their future," says Pritchard. "It is a way to say you care about the environment. Parks are important, we need more of them, and they need us now more than ever."

Betsy Reid organized the Cincinnati march, one of four flagship marches in the country. The others were held in San Francisco, Washington, D.C., and the U.S. Virgin Islands.

Reid says she got involved in March for Parks for the first time last year because she was invited to take on an environmental project for her son's second grade class. This year, as part of the preliminary activities for the march, Reid says an object called the "Earth Light" was constructed as a way of explaining to students the importance of the Earth and their role in taking care of it. Made of native cherry and containing a symbolic flame, the light "was something the children could relate to. It was used as a teaching tool," says Reid.

Construction of the light began in January, and one month later educators began transferring it to schools located in towns that line the river. Reid also says she got involved in March for Parks because she believes the event is a way of drawing atten-

tion to the value of parks. "I've always enjoyed the natural beauty of this country, and one of the few places set aside for this reason are the national parks. There is nothing better than a great walk in a beautiful place."

Among those who would agree with Betsy Reid are the hundreds of members of the American Volkssport Association. This year, AVA sponsored 152 marches in 50 states. Nancy McCabe, AVA coordinator for March for Parks, has been working out of NPCA's Washington, D.C., office to encourage clubs throughout the country to participate. "It's a perfect match, really," says Mc-Cabe. "Our members support and revere the parks, and we promote walking to encourage physical and mental health."

At least one AVA club has been participating in March for Parks for several years. Bob Kiefert, president of the White River Ramblers in Muncie, Indiana, says one of the main reasons he likes March for Parks is that it allows his group to raise funds for a project that has meaning for them. "We like the fact that the money we raise stays local," he says.

Besides a love of walking, Volks-



sporters share a concern about what's happening to the parks, says Kiefert. "There are budget cuts coming. For example, in Indiana, you have to carry out your own trash; there are no receptacles. That is going to be a trend unless we make people aware of what's happening. All of a sudden we could come up to a park with a closed sign on it."

Members of the National Recreation and Parks Association also organized a number of marches throughout the country and participated in NPCA's Washington, D.C., flagship march, which drew as many as 3,500 people. Neighborhood groups, along with contingents from NPCA and many other groups, participated in the parade that began at Meridian Hill Park on 16th Street, a main city corridor that leads to the White House.

"City parks are vital to their communities," says Steve Coleman, president of the Friends of Meridian Hill, the group that organized the march in cooperation with NPCA's staff. "They can be places of learning; they can be institutions that are just as important to the community as hospitals and schools. They give life in a variety of ways." Top, 3,500 people participated in a March for Parks parade in Washington, D.C., which ended at the National Mall. Bottom, more than 50,000 people toured NPCA's interactive sculpture, a nest woven from twigs and branches to mark the 25th anniversary of Earth Day.

Meridian Hill, where President Clinton made his Earth Day address last year, is a national park unit in the District of Columbia. It has a long, tiered waterfall and formal gardens and, until recently, was considered one of the most dangerous places in the city after dark. The friends group has played a major role in turning the park once again into an enjoyable gathering place.

The march in the form of a parade, the first on Washington's 16th Street in 30 years, ended on the National Mall, where more than 125,000 people gathered for Earth Day. As many as 50,000 people toured NPCA's interactive sculpture, a "nest" woven from twigs and branches. Sculpted by artist Mark Rogers, the nest was created to symbolize the Earth—our collective home. Participants were invited to write pledges to protect the Earth on a piece of fabric made from recycled bottles and donated by Dyersburg Fabrics, Inc.

Corporations involved in supporting NPCA's March for Parks this year were Faultless Starch/Bon Ami, Tom's of Maine, Hi-Tec Sports USA, Clairol Herbal Essences, Foghorn Press, Polaroid Education Project, and Georgia-Pacific. Corporate sponsorships provide the critical support needed on a national basis for the development, printing, and distribution of March for Parks materials.

Steve Coleman echoed the sentiments of many march organizers this year when he said that although the Meridian Hill march was a celebration, "there was also an underlying message of urgency. The parks are getting cut back at both the national and local levels. The message was 'our parks count, and parks have people who really care about them.'"

Linda M. Rancourt is associate editor of National Parks magazine.

Cats of One Color

Constantly threatened by poaching, habitat loss, and a negative public image, subspecies of America's mountain lion are fighting for survival.

By Connie Toops

ONSERVATIONIST ALDO LEOPOLD once wrote that wild things were taken for granted until progress began to do away with them. For the mountain lion, progress nearly won. Within the past few years, some of these secretive cats have been staging a quiet resurgence.

Contempt for Felis concolor, our native lion, is a prevalent theme in the journals of American settlers. Known variously as the catamount, cougar, painter, panther, or wild cat in the East and the cougar, mountain lion, or puma in the West, the cats were considered blood-thirsty animals that killed livestock and stalked humans. Symbols of evil, they were often described as "black panthers," although no specimen of a black mountain lion exists in North America. The Latin name means "cat of one color," and other than dark camouflage spots on kittens, mountain lions are all tawny brown.

In frontier America, little thought was given to ecosystem management and the role of large predators. Although mountain lions once roamed continentwide, they were exterminated from most of the East and Midwest by the early 1900s. A few survived in rugged areas of Texas, southwestern deserts, and western mountains. Changing human attitudes and the animal's low numbers gradually eliminated bounties and widespread slaughter.



A kitten has dark camouflage spots, the only time the lion is a color other than tawny brown. When mature, the animal may weigh as much as 150 pounds.

In 1965, biologist Maurice Hornocker, of the Wildlife Research Institute in Idaho, began radio collaring animals along the border of Idaho and Montana to learn more about them. Adult male mountain lions weigh about 150 pounds. Their bodies are four feet long and have a curving tail that measures another 2.5 to 3 feet. Lions are meat eaters, usually preying on deer and elk, although when food is scarce, they will eat rabbits, raccoons, beavers, porcupines, birds, and small rodents. Lying in ambush along game trails, they bound after prey in a short rush, killing with a bite to the skull or a suffocating death clench on the throat. Mountain lions can eat eight to ten pounds of meat at a time, dragging the remains of a large kill to a protected location and covering it with leaf litter, twigs, and soil. When their bellies are full, they nap contentedly.

Stealthy by nature, mountain lions have survived in part by keeping a low profile. They retreat to rugged landscapes where humans are less likely to venture, and except for females with kittens, they are solitary. One of the most frustrating aspects of lion research is determining how many of these creatures really exist.

"We believe we have about two dozen adults in the park and offspring that account for another third to half that number," says Raymond Skiles, resource management specialist for Big Bend National Park. "Based on prey and habitat, that is about the limit the park can sustain, so we feel the population is stable."

Although attitudes toward the animals have changed, big cats are still hunted in some states. For instance, Texas mountain lions can be hunted with dogs. Once good hounds pick up fresh scent, they nearly always tree or corner their quarry. Skiles knows lions move between the park and surrounding land where hunting is allowed. Even so, he believes the animals are still well protected, "although a threat could occur if commercial hunting of lions takes off," he says. "Twenty-five of anything



is not enough if it's not secure outside the park."

Even though the Texas season has no limit on the number of mountain lions taken, cat numbers seem to be increasing. Arizona also has a yearround season on mountain lions, but the take is limited to one animal per hunter each year. "Cougars are doing extremely well in the Southwest," says Steven Spangle, a U.S. Fish and Wildlife Service (USFWS) regional listing biologist based in Albuquerque, New Mexico. "There are lots of remote, undeveloped areas used by mountain lions," Spangle says. Habitat is not a critical issue, although local shooting is.

Some California politicians would like to return to a time before Proposition 117, which banned hunting of mountain lions and established a \$30million annual fund to buy and preserve habitats for the cats. Although recreational hunting of mountain lions has been illegal in California since the early 1970s, it is legal to kill the animals in self-defense or to protect livestock and pets. The state's lion population is estimated to be between 4,000 and 6,000 compared with a human population of more than 30 million.

Several southern Arizona parks have resident mountain lions, including Organ Pipe Cactus National Monument and Saguaro National Park. Last year, a female denned near the headquarters of Organ Pipe, and the staff frequently observed her with two kittens. Rich Hayes, a veteran park ranger and animal tracker at Saguaro, commonly sees lion signs, including tracks and deer kills. He believes the park has a healthy population that is near capacity for the available habitat. His worry is poachStealthy by nature, mountain lions have survived extermination campaigns, in part, by keeping a low profile.

ing. "We're seeing a few more indications of poaching at Saguaro, which means we may need a more aggressive approach to law enforcement," he says.

Researchers from Maurice Hornocker's Wildlife Research Institute have been studying mountain lions in Yellowstone since 1987. Their research has shown that the animals spread throughout the park in the summer but congregate around resident elk herds in northern sections of the park when winter snows set in. Cat numbers vary from about 16 to 22 as they wander in and out of the park.

Hornocker thinks Western lion populations have increased 20 to 40 percent since the mid-1960s. Observations have increased during the past few years at Western parks including Olympic and Redwood. Some researchers believe the number of sightings has gone up because more people are using remote areas where lions have retreated.

Bruce Moorhead, a wildlife management biologist at Olympic, classifies the lion population in the park as "abundant" for a top predator. "The real challenge," Moorhead stated, "is how to protect cougars and people." He is right to worry. In April 1994, a female jogger was killed by a lion in a California state park near Sacramento. And four years ago, near Idaho Springs, Colorado, a high school boy was killed while jogging by a young male cougar. Although no fatalities have occurred in national parks, six incidents of visitors being knocked down, bitten, or clawed have been documented at Big Bend National Park in Texas and Glacier National Park in Montana since the late 1970s. At Olympic National Park in Washington between 1991 and 1994, 39 unexpected lion-human encounters occurred, as well as seven "near attacks."

Dr. Paul Beier of the University of Northern Arizona has analyzed cougar attacks on humans during the past century. A significant number of the offending cats were underweight yearlings, perhaps recently separated from their mothers and having trouble finding food in unfamiliar or marginal habitats. Many of the human victims were unsupervised children, and running may stimulate attacks.

Beier stressed that fear of cougars should not be overrated. While the cats caused 11 fatalities and four dozen injuries in the past *century*, dogs kill 18 to 20 people and send some 200,000 more for medical attention each year. Nevertheless, Moorhead and Redwood's chief of research and resource management Terry Hofstra are working to disseminate practical advice to park managers and hikers who enter lion territory.

Typically, few visitors see cats. Bryce Canyon National Park's resource management specialist Dan Foster previously worked on mountain lion research with the state of Utah. "In this 35,000acre park," he says, "we could have four

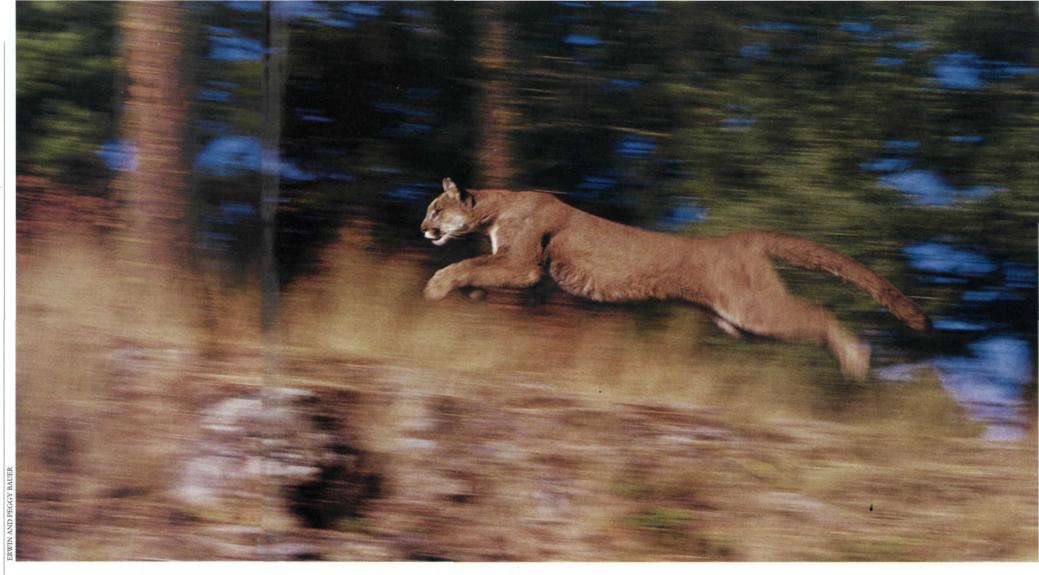
Lying in ambush along game trails, lions bound after prey in a short rush, killing it with a bite to the skull or the throat.

to 12 lions. We have observation reports of at least two females breeding here and moving through the residential and lodge areas." An estimated 1.5 million people frequent this area annually, but said Foster, "the lions are habituated to humans and are so seclusive and private" that visitors have little interaction with them.

Besides reducing the number of encounters between people and cougars. another challenge is curbing attacks on livestock. Department of Agriculture statistics reported in an environmental journal show that ranchers in Graham County, Arizona, lose 25 to 45 percent of their calves annually to lions. Between 1988 and 1990, agents of the U.S. Department of Agriculture's Animal Damage Control bureau shot and trapped about 50 big cats in this area along the New Mexico border. The department's statistics also show that this does not have to be the case if some precautions are taken. Near City of Rocks, Idaho, a cougar has not killed a head of livestock in more than 30 years. The ranchers in this region move cattle ready to calve to a protected area so that cougars cannot get to them.

Research has shown that primarily young lions get into trouble. Lions are fiercely territorial, and experienced cats dominate the richest habitats. As juveniles leave their mothers, they are pushed into marginal areas or wander in search of better conditions. Young animals may experiment with various types of prey, including calves and sheep. When older lions die, youngsters move in. Harley Shaw, a retired Arizona Game and Fish biologist who studies mountain lions, believes that livestock depredation decreases when lion territories stabilize. And instead of shooting lions, he advocates moving cows to safer pastures early in the spring when lion prey is scarce.

Lions in the East also are elusive, so much so that biologists are not sure which cat they are dealing with. Eastern cougars, a separate subspecies from



the Western cougar, are listed as endangered and may be extinct. "We are treating the cougar as though it has been extirpated from the Northeast," says Michael Amaral, a USFWS endangered species specialist. "We have sightings from Vermont, New Hampshire, and Maine, but we don't have genetic evidence to indicate whether these are Felis concolor cougar."

Could there be isolated pockets of habitat where wild Eastern cougars have survived? "That's the million-dollar question," says Cedric Alexander, a wildlife biologist with the Vermont Department of Fish and Wildlife. "It's nice to hold out romantic hope," he says, "like finding the ivory-billed woodpecker in Cuba."

Alexander has followed up on a recent series of Vermont observations of three cougars traveling together. He believes it is a female with two offspring and suspects the voungsters were born in the wild. Their genetic heritage is uncertain. From many sightings in the White and Adirondack mountains, Maine, and New Brunswick, only a few animals either shot or hit by automobiles have vielded physical evidence. In these cases, broken teeth, injured foot pads, and malnutrition suggest the animals were released or had escaped from captivity and were not wild-born Eastern cougars.

Minnesota tallies an average of 60 to 80 cougar reports annually, most from the northern part of the state. Though on the edge of historical Eastern cougar range, state wildlife biologist Bill Berg believes most sightings are of animals that are either released pets or lions wandering in from the West.

Sightings also continue at Shenandoah and Great Smoky Mountains national parks. "For the past 20 years, credible people have been seeking big cats," says Smokies wildlife biologist Kim DeLozier, "but I don't think we have a resident population of Eastern cougar."

Animal dealers maintain an expansive trade network, and in Tennessee, it is legal to raise large felines. Veterinarians contacted by DeLozier estimate at least 100 such cats are in private ownership. Two lions killed outside of the park had been surgically declawed and were missing large teeth. Another killed in South Carolina still had cat food in its stomach. "Released pets and wild cougars look the same," says DeLozier, "but they are as different as daylight and dark. Releases have an unlikely chance of making it out of captivity."

Technically, if released into Eastern ecosystems, Western cougars are exotics. What if a few of these individuals survive and reproduce? "That's a diffi-

cult question," says DeLozier. "It would ultimately come back to our purpose. Is it to protect genetic purity or to manage an ecosystem? I can't answer that."

Yet, for Florida panthers, the question is very timely.

Like the Eastern cougar, Florida panthers are a separate subspecies from Western mountain lions. Differences in outward appearance-such as the swirling cowlick of fur on the Florida panther's neck and the crook at the end of its tail-are slight, but these animals have adapted to habitats and climatic conditions far different from those of their Western U.S. and South American counterparts. All 16 of the mountain lion's subspecies have subtle genetic differences.

Panthers historically ranged along the coastal plain from South Carolina to Louisiana. Decades of zealous hunting and increasing urbanization en-



ERWIN AND PEGGY BAUER

croaching into wilderness habitats signaled their demise. By the 1960s, just one population—estimated at about 50 animals—remained in the Everglades and Big Cypress regions of south Florida. Florida panthers were listed as endangered in 1967, immediately after passage of the first Endangered Species Preservation Act. Despite intensive management efforts by a multi-agency recovery team, they are still in trouble.

"Because of their isolation," explains USFWS Panther Recovery Coordinator Dennis Jordan, "the small population in south Florida is inbred." Only two of the remaining males have testicles that descend normally. Numerous other males have abnormal sperm cells. One dominant breeder has passed the propensity for heart defects to many of his offspring.

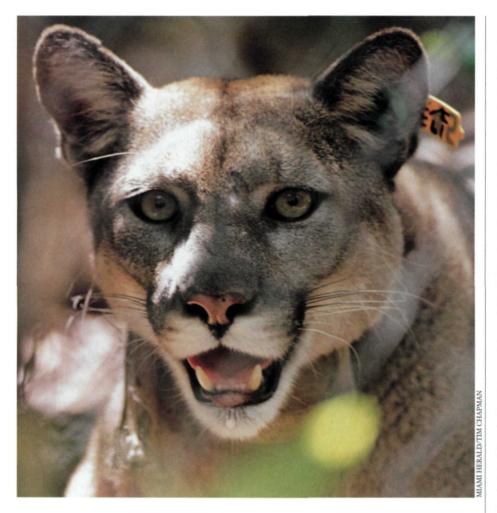
In order to bolster the panthers' gene pool, eight female cougars, captured in southwestern Texas, will be released in Florida. With the aid of \$12,000 from the National Parks and Conservation Association (NPCA), the animals were transported to south Florida. After a short period in holding pens to allow the animals to acclimate, two were released in Fakahatchee Strand State Preserve, and six others are scheduled for release in Everglades National Park, Big Cypress National Preserve, and Florida Panther Wildlife Refuge.

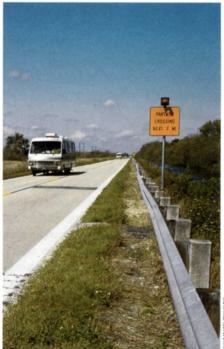
The goal is for each of the Texas females to produce two viable offspring. After several generations, the subspecies mix will result in animals with 80 percent panther and 20 percent mountain lion genes. The Western females "may or may not be recaptured," Jordan says, "depending on their dispersal and how they are reproducing." Eight panthers removed as kittens from the wild population in 1991 and 1992 are now old enough to begin breeding in captivity. Their progeny will also factor into the genetic restoration plan.

Panther gene pools may benefit from

A lioness teaches her kittens the ways of the wild. Juvenile lions are the most likely to run into trouble with people.

the project, but fortified animals will still face daunting challenges. Highway traffic and recreational use of backcountry areas have increased exponentially. Collisions with automobiles are the leading cause of death for panthers. Despite signs and rumble strips to alert drivers, collisions still occur on busy U.S. Route 41 and State Route 29. Improvements have been made along Interstate 75, which uses underpasses to divert panthers away from the busy roadway. A human population explosion is pressing in from both Florida coasts, gobbling up once-wild land for homes and agriculture. A new state university will be opening up outside of Fort Meyers in a couple of years, drawing a tremendous amount of development and encroaching even further into invaluable panther habitat.





Highway collisions are the leading cause of death for Florida panthers, despite warning signs and rumble strips.

Mercury contamination poses another threat. Raccoons and alligators dine on mercury-tainted fish; in turn, they are eaten by some of the cats. Several panthers in the Everglades died from mercury poisoning, and others in the Big Cypress area have alarmingly high levels in their tissues. Water conditions also have changed radically since the mid-1960s. Traditionally, the marshy Everglades underwent wet and dry cycles. Human management of water levels now floods some units while others receive insufficient water flows. Long-time Everglades observers regard panther declines, like the miner's canary, as an early warning that the south Florida ecosystem is in jeopardy.

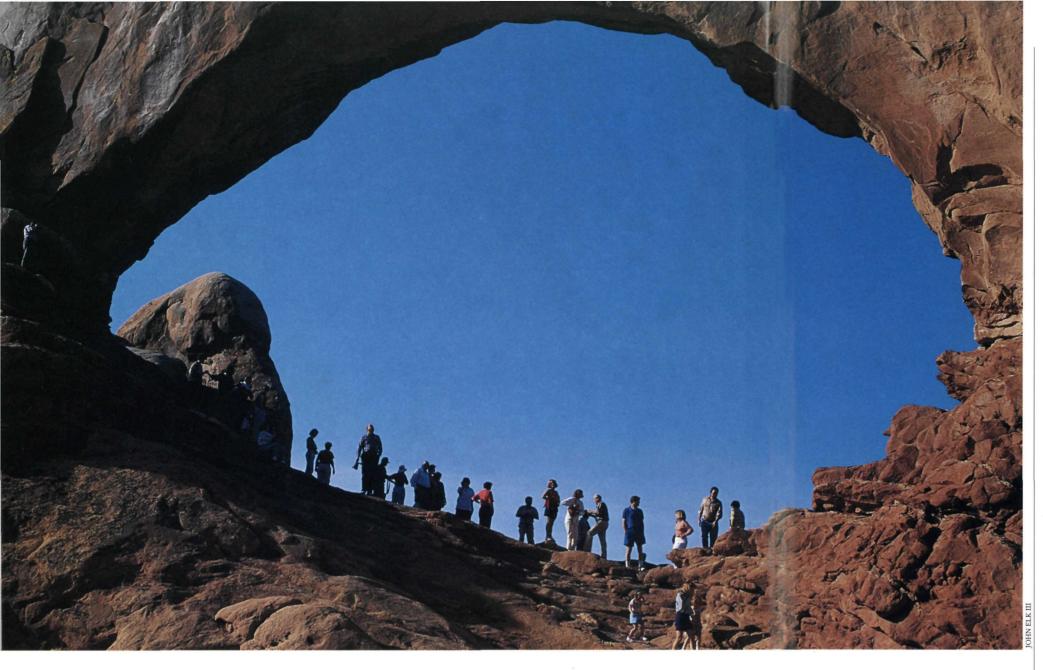
"The Everglades and Big Cypress represent the worst of habitats in terms of general carrying capacity," admits Dennis Jordan. "They are what's left of habitat that panthers could use. The animals weren't wiped out there because humans didn't have as much access to Eight female cougars captured in Texas were transported to Florida, using money provided by NPCA. After a short period in holding pens, the tagged animals will be released in Everglades National Park, Big Cypress National Preserve, and Florida Panther Wildlife Refuge.

hunt. We know panthers do much better in upland hammocks and pine flatwoods." Big Cypress wildlife biologist Deborah Jansen, who monitors the cats, confirms that. Female panthers in the best habitat at the north end of the preserve weigh about 120 pounds. Females of the same age on the Big Cypress-Everglades boundary are half that weight.

The recovery team is not pinning all hope for panthers on south Florida. In 1993 radio-collared Texas cougars were released in the northern part of the state. Six of the animals were females and four were males that had been vasectomized to limit the number of cougar genes added to the panther population. The cougars will test the suitability of habitat in Osceola National Forest and the nearby Okefenokee region as a site for future panther reintroductions. "The animals are doing fine and behaving normally," Jordan reports. There were a few raids on livestock attributed to animals that came from captivity, but the offenders have been recaptured. Wild-caught cougars, says Jordan, "have not been a problem."

Though secretive by nature, panthers and mountain lions have yielded much information about their ecology during the past few decades. We now know they need a certain measure of solitude. Thus the role of parks as wildlife sanctuaries is crucial. Places where the cat of one color survives exhibit a refreshing vitality and wholeness. The presence of the American lion, whether experienced personally or sensed from afar, speaks volumes about the overall health of the ecosystem.

Connie Toops, photojournalist and former park ranger, has crossed paths with one lion in the wild, a panther in Big Cypress.



Crowd Control

With a pilot program at Arches National Park, the National Park Service is charting a promising new course for visitor management.

By Todd Wilkinson

QUARTER CENTURY AGO, a young Utah woman named Jayne Belnap wanted to escape all traces of civilization, so she drove her four-wheeldrive vehicle to the end of a dirt road in Canvonlands National Park. She set out alone into the labyrinth of pink slick rock known as The Maze, one of the most remote wilderness peneplains in the lower 48 states. Over the course of her two-week trek across the Colorado Plateau, she never saw another person.

But when Belnap returned on the anniversary of her soul-searching journey 25 years later, she passed a startling stream of vehicles, encountered 20 people on a trail in the span of an afternoon, and was buzzed by a dozen aircraft making low passes above her campsite. The last straw came when she found evidence of fragile plant communities being trampled by human foot traffic.

"There are places in Canyonlands where, even ten years ago, you wouldn't meet anyone else," says Belnap, a respected park soils biologist stationed with the National Biological Service at Moab. "This is supposed to be one of the most solitude-laden parks we have, and still it is getting trampled."

After decades of ignoring the warning signals, some national park managers are finding the challenges of protecting natural values and park aesthetArches National Park's spectacular sandstone formations, including South Window (left), attract growing numbers of visitors.

ics to be perplexing in the face of evergrowing visitation. The popularity of parks has become an instrument to their own demise.

According to Park Service figures. visitation systemwide increased by 30 percent in the 1970s and climbed another 35 percent in the 1980s. Officials predict that by the end of the century, another 60 to 90 million people, above and beyond today's record 275 million, will descend annually upon the national parks.

Yet there may be hope in sight. In the last four years, at a park just up the road from Canyonlands in southeastern Utah, a quiet revolution has begun to change the way decisionmakers nationwide approach the conundrum of overcrowding. At Arches National Park, a program called Visitor Experience and Resource Protection (VERP) is being pioneered by the Park Service, charting a promising new course for visitor management. Before the decade is out, VERP may be used to save many of America's crown jewel wildlands now buckling under the strain of humanity. Arches was selected as a proving ground because it recorded some of the highest increases in visitation over the last decade and its specialized environment is imminently threatened. "This is a landscape that has to be seen to be believed and even then, confronted directly by the senses, it strains credulity," wrote Edward Abbey. Indeed, Arches is home to the largest collection of natural sandstone arches in the world. some 2,000 in all. Despite its barren. otherworldly appearance, the land is coated by a fragile crust upon which an ancient forest of fungi, bacteria, and moss grow barely an inch tall. Wildlife in the park ecosystem, from insects to deer, has evolved to graze and extract nutrients from the Lilliputian canopy. Although these plant communities have endured scorching sun and erratic rainfall over millennia, they are highly vulnerable to the softest soles of hiking boots.

In the wake of extensive front- and backcountry inventories. Belnap estimates that 80 percent of the native plant communities close to the park's icon arches are deteriorating, and 20 percent may be impaired in the wilderness. miles from the nearest road. Once they are damaged, they can take anywhere from decades to centuries to heal, if they can recover at all.

"The first footprint is what does 80 percent of the damage," Belnap says. "It's the first step that we are trying to avoid because it gives way to the herd."

VERP, Belnap says, is absolutely essential because it is the first sincere attempt the agency has made to channel the flow of the masses. "All the parks should have done this years ago, and we should be chastised for not acting sooner," Belnap says. "What VERP does is decide what is acceptable in terms of visitor impacts on the resource and set out a strategy for measuring and monitoring those impacts. It bases management decisions on science rather than...hunches."

For almost a decade, the National Parks and Conservation Association (NPCA) has pressed the Park Service to address the "carrying capacity" issue. Carrying capacity is an approach to park management that establishes how many people can enjoy a park without harming the very resources that drew them there. VERP is a hybrid of NPCA's model for implementing carrying capacities known as Visitor Impact Management, or VIM, and the U.S. Forest Service's planning initiative called Limits of Acceptable Change, which seeks to protect primitive values in federal wilderness areas, says Marilyn Hof, planner and lead VERP coordinator with the Denver Service Center, the Park Service's official planning arm.

Hof says that VERP does several things: it establishes a range of management zones that are designed to deliver differing degrees of solitude and visitor services; it sets in place inviolate thresholds that protect the physical and scenic environment; and it backs up the words with teeth, although the latter has vet to be tested.

If need be, VERP, in theory at least,



can even turn back the clock on resource degradation and give park managers a chance to correct mistakes of the past. "When we hit the point where thresholds are surpassed, management is required to take action to come back into compliance," she notes. "That could mean any number of things, from implementing a backcountry permit system to shrinking a parking lot so that the number of people visiting a site is limited. Or it might mean allowing only so many people to enter a park at any one time."

Terri Martin, director of NPCA's Rocky Mountain region, has been instrumental in coaxing Western park superintendents to address the issue of people management, and she praises the VERP planning team for taking the initiative. "VERP answers the question of what kinds of activities are appropriate where in the park and at what level," Martin says. "The old way of doing busiBefore VERP, the solution to Arches' overflowing parking lots was to add more asphalt, thus compounding the problem.

ness was simply to expand the infrastructure to accommodate even more people when conditions started getting crowded, which only exacerbated the aesthetic, biological, and social problems."

Hof says there is no certainty that political meddling or lawsuits filed by interests seeking financial gain from park visitation could not usurp the scientific process. However, the consequences of not acting are far more risky. VERP gives managers a basis for making tough decisions.

"Ultimately, the superintendent and the regional Park Service director will take any of the heat," she says. "But they are far better off now than before. In the past, whenever we were taken to task for some kind of decision about visitor use—whether it was to increase it or control it—we were faulted [because] we didn't have a process that we could defend. Now we do."

Until the latter part of the 1980s, the Park Service had a single-minded approach to coping with surging crowds that were inundating parks, Hof says. The asphalt trucks were called out, and millions of dollars were spent building bigger roads and more parking lots. More crowds, more asphalt—it became a self-perpetuating cycle that pressed some resources to the brink of collapse.

Many park superintendents realized that in the face of political pressure to increase visitation, it was far easier, and certainly less risky professionally, to keep a costly construction juggernaut going than to actually address the root of the problem, which was too many people putting too much stress on sensitive resources. Few park managers had the inclination to impose limits, and as park aesthetics suffered, environmental groups threatened to sue the agency for failing to protect its resources.

Belnap says part of the problem is the transitory way that park management operates. Superintendents generally do not stay at a given park longer than a couple of years, and each one comes in vowing to draw a line in the sand. "What they don't realize is that the superintendents before them did the same thing, and each successive manager allows the infrastructure to expand a little more," says Belnap, who has worked in parks for 12 years. "Within the short span of a single superintendent's tenure, the growth may appear small and acceptable, but if you weigh the long-term cumulative impacts and consequences of each new superintendent drawing a new shifting line in the sand, the resource loses out."

Current Arches Superintendent Noel Poe is credited with being the first to take a hard line on carrying capacity by embracing the rather innovative ideas that VERP represents. Brushing aside praise from conservationists such as Martin and fellow managers within his own agency, Poe says he had no choice.

"Often, park managers didn't have firm ground to stand on," Poe says. "If ever we were called to court, the first thing they attack is the process by which you arrived at your conclusions. If you're on the witness stand and testify that your actions were based on a gut feeling that allowing 30 people at Delicate Arch is appropriate, you'd get crucified."

From 1974 to 1984, annual visitation at Arches grew from 238,000 to 345,000, but in the next ten years it more than doubled to 777,000. Poe sees no reason why it might not double again by the end of the century. By the late 1980s, Arches already was bulging at its seams, and the prime remedy proposed by park officials was to again expand parking lots at key trailheads and other



JNIVERSITY OF MINNESOTA/NATIONAL PARK SERVICE



Displaying a series of computer-generated images, VERP planners asked visitors to rate the scenes, which showed varying numbers of people at The Windows and other popular features in the park. By doing so, park officials learned what people expect and at what point the visitor experience begins to deteriorate.

visitor destinations.

"I was appalled," says NPCA's Martin. "They were planning to do what they had always done. Meanwhile, soils and aesthetics were getting trashed, the parking lots were overflowing, and visitors were complaining. I credit Noel Poe with being able to step back and admit that something had to change."

In 1992, VERP's pilot program was initiated without fanfare and on a shoestring budget of just \$400,000 to cover a planning team of six. Jim Hammett, a VERP team planner, says that historically parks have always built their infrastructure and then tried to fill it to capacity with people, having little idea what the consequences would be on the resource or the visitor experience. VERP, he says, begins with three things: first, it re-examines the legislation that created the park to gain a feel for the original intent of Congress; second, it involves the completion of a biological inventory and identifies certain plants or animals to serve as indicators of change; and third, it surveys visitors to gain an accurate reading of what they expect.

Shown photographs of Delicate Arch and other popular destinations with varying numbers of people in each picture, visitors were asked to rate the images on a scale of acceptability. By asking a series of objective questions, VERP planners were able to discern that 30 people at Delicate Arch was the threshold, and any number beyond that began to erode the experience. At the area known as The Windows, 20 people gathering in one place at one time was deemed to be the upper limit,

and Poe intends to draw the line at that number.

Visitors at Arches were also surveyed to see how they felt about various ways to limit visitation. Strong support was shown for such measures as restricting parking to designated spaces and requiring permits for off-trail hiking. A public survey conducted by NPCA and Colorado State University this spring confirmed that people are generally in favor of placing limits on visitation if necessary—even if it means that immediate access to parks may not always be possible.

Martin believes the novel methodology being implemented at Arches will revolutionize park management because it broaches a subject that previously has been taboo—defining how many people can be doing what, when, where, and how; and then, if need be, imposing limits to ensure that the resource and visitor experience are protected.

"The beauty of this process is that it's defensible because it isn't arbitrary, nor is it based upon what some per-



VERP can help officials at popular parks such as Grand Canyon to monitor impacts on park resources and to make decisions about limiting visitation if necessary.

ceive to be the agenda of an elitist conservation group," Martin says. "When a congressman calls a superintendent and says, 'What do you mean you're limiting the number of people at a given site in the park!' you can go to their office on Capitol Hill and spread out these photographs and show them that the management plan is based on what the visitor wants and expects. VERP has given credibility to the management process."

The real test of VERP's strength will come when parking lots fill up, gridlock ensues, and politicians begin demanding that the asphalt trucks be brought out again. "VERP gives [park managers] some rational measures by which they can defend their management actions," says Denis Galvin, the Park Service's associate director for planning and development. "We can assert that the South Rim of the Grand Canyon is crowded and the system is overloaded, but generally we don't have visitors' views to substantiate that, nor do we have a measurement of the resource impact. Ideally, VERP gives us both of those things."

Currently, the Park Service has a \$350-million proposal to overhaul the transportation infrastructure at Grand Canyon, which is unlikely to be approved by a cost-cutting Congress. "My fear is that even in the unlikely event that we get the money, by the time we have everything in place, the visitation may have doubled or quadrupled and we'll be back to where we began," says Galvin. "VERP forces us to be more creative."

Four years after the VERP process began, Arches has amassed the largest data base in the country on visitor attitudes about overcrowding. Poe realizes that parking lots themselves enticed large crowds and had a direct bearing on the condition of biological and aesthetic resources. If you limit the number of vehicles, he says, you can effectively regulate the number of people—

The ultimate aim of VERP is to ensure that natural treasures such as Delicate Arch are unharmed for future generations.

LARRY ULRICH

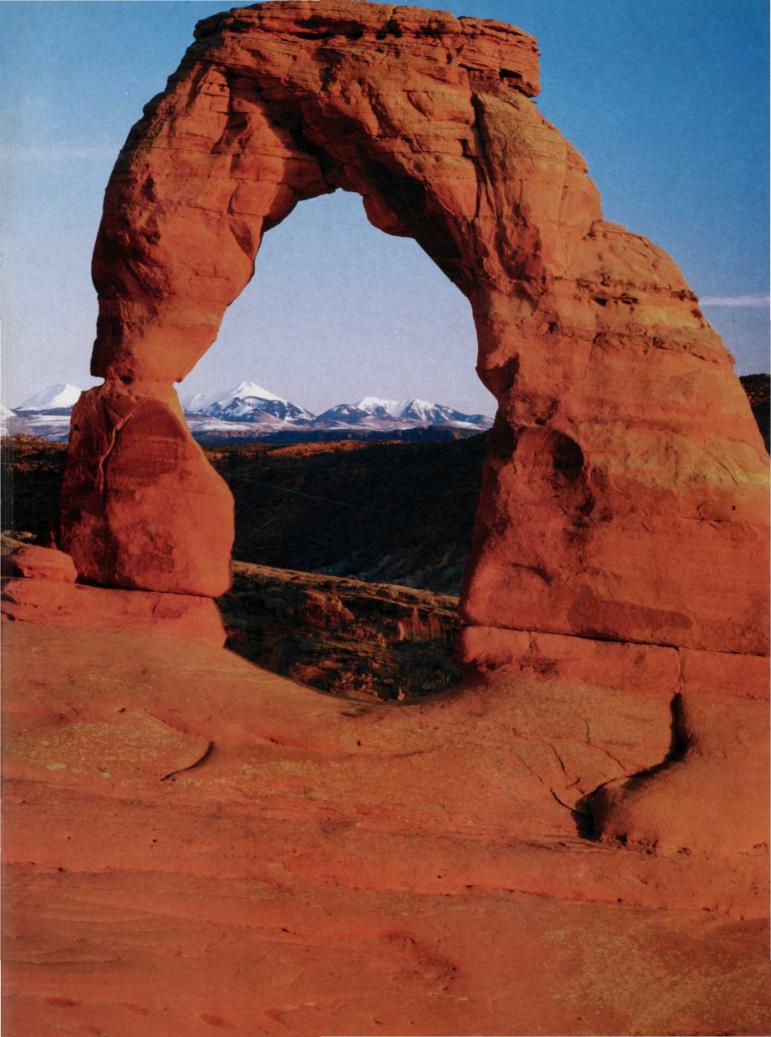
and that doesn't mean necessarily that you limit the number of people entering the park.

"Park visitation is up 13 percent this year over last year's record-breaking pace. I am convinced more than ever that we must come to grips with increasing use of the park if we are to achieve our dual mandate of conserving park resources unimpaired for future generations and providing opportunities for the public to enjoy these resources," Poe wrote in Arches' 1994 newsletter. "The VERP process will help us do this."

Astounding to VERP officials is the demand for their pioneering Arches study. Most of the first press run of 2,000 copies was reserved months before the document was released in June, and Hof has fielded requests for copies from park managers in Europe and Latin America. "Within the planning community, the word is out," she says. " I think park managers everywhere realize that the models we've used for years aren't working in the face of increased visitation."

In 1996, several parks across the country will begin amending portions of their general operating plans and have elected to incorporate the VERP process. Those include Mount Rainier, Yellowstone, Grand Teton, Glacier, Acadia, and Isle Royale. "I think VERP is extremely important because it forces us to think ahead. We need only look at other parks to see what happens if you don't control growth," says Doug Barnard, superintendent at Isle Royale. "If we had done this 80 years ago in Yosemite Valley, we wouldn't be crowing about smog and pollution and resource degradation. That's the advantage that VERP gives me at a place like Isle Royale. We can anticipate the future and take appropriate measures to safeguard what we have."

Todd Wilkinson, based in Montana, last wrote for National Parks about problems caused by snowmobiling in parks.



A Commitment to Clarity

A comprehensive National Park Service study leads to critical discoveries and long-term monitoring at Oregon's Crater Lake.

By Carmi Weingrod

OLCANIC MOUNT MAZAMA used to be one of the tallest mountains in Oregon. But it blew its top 7,000 years ago during a series of violent eruptions that hurled debris in every direction and blanketed the Northwest with ash. The remains of the mountain collapsed inward to form a gigantic caldera six miles wide and 4,000 feet deep, encircled like a fortress with steep rock walls. Pools of rain and melting snow began to accumulate within the caldera, eventually transforming the great hole into a lake. Fed only by precipitation, with no inlets to bring water in or drain out, the lake stayed remarkably clear and blue.

In 1805 Lewis and Clark traveled across the breadth of northern Oregon collecting data for fur traders and map makers. But after reaching the Pacific Ocean, the explorers left Oregon without ever knowing that an extraordinary natural wonder—and the deepest lake in the United States—lay tucked away in the southern part of the state waiting to be discovered.

Ironically, it was the smell of gold and not the spirit of exploration that led the first white people up a long, sloping mountain that guarded over the lake. They were prospectors searching for the Lost Cabin Gold Mine. Although they never found gold at the summit, the color and clarity of the lake they saw in 1853 impressed them nonetheless, and one of the men wrote the name Deep Blue Lake in his notebook. The prospectors shared their discovery with other settlers, but the lake's identity was soon overshadowed by tales of gold and Indians.

But not for long. During the next ten years, many more prospectors passed near the lake en route to and from the gold fields of eastern Oregon, and eventually word of its exact location surfaced in Jacksonville newspapers. This triggered interest in the lake and prompted a few expeditions of herculean proportions, such as one led by newspaper editor Jim Sutton in 1869. What began as a casual family outing turned into an aquatic adventure when Sutton and his friends hauled in lumber to build a boat, lowered the finished vessel into the lake, and paddled around. Sutton, who later wrote about his experience, named Crater Lake.

Five years later, Jacksonville photographer Peter Britt lugged his hefty photographic gear up to the rim of the crater and took the first photos of the lake. He circulated these among national

Crater Lake and Wizard Island, named for its resemblance to a medieval sorcerer's hat, were formed by a volcanic eruption.

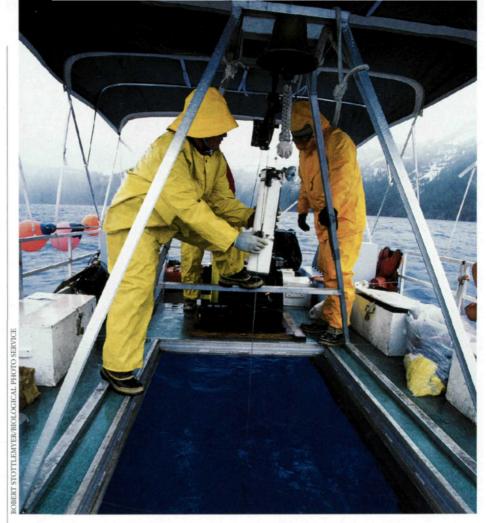


Scientists have examined Crater Lake since the 1800s, but only recently has the lake undergone a comprehensive study.

magazines, and soon images of Crater Lake spread across the nation. These images reached as far as the plains of Kansas, where the description of a dazzling blue lake inside a crater settled in the mind of schoolboy William Gladstone Steel, who would grow up to make the preservation of Crater Lake his lifelong ambition.

Once in Oregon, Steel met Captain Clarence Dutton, who shared his passion for Crater Lake and his desire to see it become a national park. To furnish scientific data to support the lake's importance, the two organized a U.S. Geological Survey party in 1886 in the Cleetwood—a 26-foot, half-ton boat that the crew shouldered in and lowered into the lake. Fitted with a piece of pipe on the end of a spool of piano wire, the Cleetwood sounded the lake at 168 different points to arrive at a reading of 1,996 feet-remarkably close to the precise sonar readings in 1959 that established the lake's deepest point of 1,932 feet. On the same expedition, a topographer surveyed the area for the first map of Crater Lake, and Steel named many of the prominent features, including Wizard Island, the symmetrical cinder cone rising 763 feet out of the water that resembles a medieval wizard's hat.

Steel's efforts succeeded in making Crater Lake the fifth national park in 1902. Though scientific studies of the 1890s explained some of Crater Lake's geological mysteries, the reasons for the lake's remarkable clarity-as well as its normal patterns and processes-went largely unstudied for decades. Then in the late 1960s, graduate students in aquatic biology at Oregon State University studied the lake's phytoplankton and zooplankton (microscopic plants and animals) and conducted tests for clarity. These were accomplished with a photometer, which measures the composition and depth of surface light penetration in the water, and with a Secchi disk. The latter is lowered into the water until no longer visible, at which point its depth is noted; as it is



raised up, a second depth reading is taken, and an average of the two is figured. The Secchi disk yields a more subjective reading and is used for historical purposes. But since the lake had not been monitored regularly, the students had few references for comparing their findings.

Ten years later, Doug Larson, one of the former graduate students involved in the project, returned to Crater Lake to resume testing. When he compared his new readings with those taken ten years previously, Larson was dismayed to find that lake clarity had decreased by 25 percent. Probing further, Larson found that the nutrient level in one particular spring along the caldera wall (later called Spring 42) was elevated. "My concern was that an active sewage drain field for visitor facilities was enriching Spring 42," says Larson, "because it was located just outside the caldera wall in very porous soil."

Crater Lake is oligotrophic, or nutrient poor, because it is deep, and little sediment or organic material flows in the lake—factors which also contribute to its unusual clarity. But with only sporadic readings taken between 1937 and 1969, it was embarrassingly evident that the available data were insufficient to determine whether the lake's clarity varied naturally or was declining. For this reason, Larson's findings, and his subsequent charges that the park was negligent in its handling of sewage, signaled a warning that a comprehensive study of this rare and extremely valuable lake was long overdue.

In 1982, Congress passed Public Law 97-250 authorizing an in-depth, ten-year study of the lake's components and processes—80 years after enlisting Crater Lake into the ranks of our national treasures. The National Park Service (NPS) assembled a team of limnological and oceanographic experts, and the Ten-Year Limnological Study began that fall.

The team outlined five broad objectives it intended to accomplish during the ten-year study. Foremost was the



NATIONAL PARK SERVICE

need to study and understand the physical, chemical, and biological components of the lake. A second objective was to set up a limnological data base to compare present and future lake conditions. "We didn't know how this lake works," explains Gary Larson (no relation to Doug Larson), the project's principal investigator. "We couldn't determine what was or was not a normal condition because we lacked consistently collected data." Therefore, developing a long-term monitoring program to reveal the lake's patterns and fluctuations was the third objective. The fourth was to determine whether the lake had experienced recent changesas Doug Larson's findings suggested; and if so, to assess whether they were related to human activity-as Doug Larson had charged. Identifying the causes and recommending procedures for mitigation was the project's fifth and final objective.

During the ten-year study, the team used an ecosystem approach to develop

the data collection and monitoring programs. After determining the components that affect the lake ecosystem for example, precipitation quantity and chemistry, lake-level fluctuations, thermal properties, solar radiation, intracaldera spring chemistry, lake clarity, color, water chemistry, particle flux, chlorophyll, phytoplankton and zooplankton, and fish—they used conceptual models to guide the research and analyses, assembling a data base for each component.

"We learned right away that Crater Lake is an extremely complex and dynamic system," explains Gary Larson, "with considerable seasonal and annual variability. Its volume responds quickly to changes in precipitation because the basin has no surface outlet and water leaves only through seepage and evaporation." Learning how Crater Lake recycles its nutrients was critical to understanding its overall chemistry, so oceanographers Jack Dymond and Robert Collier—both on the faculty at OrScientists used the submersible *Deep Rover* to explore the depths of Crater Lake, the deepest in the United States.

egon State University—developed a model of the lake's nutrient budget. They determined that the level of dissolved salts in the lake was higher than could be explained by normal lake processes and suggested that another source of salts—hydrothermal, most likely existed within the lake system. This news surprised no one. The existence of thermal features on the lake floor was first suggested in 1968, supported further in the 1980s and confirmed in the early 1990s by geochemical testing and models.

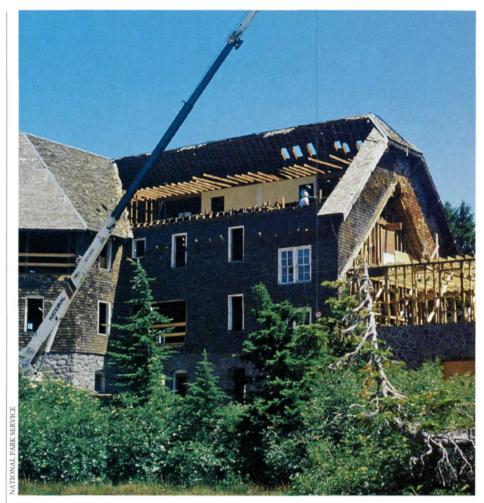
Then part way through the ten-year study, a fortunate event enabled project scientists to explore the effects of hydrothermal inputs on the lake chemistry and sample its deep water biology to a far greater extent than originally planned. In 1988, Congress passed Public Law 100-443, ordering a report on Crater Lodge benefited from a recent \$15million rehabilitation project. Built in the early 1900s, the lodge reopened in May.

the significant thermal features of national parks, legislation that NPCA supported and played a major role in getting passed. At the same time, a geothermal energy company just happened to be drilling exploratory wells adjacent to the park boundary. "Although the objectives of the park's hydrothermal study were unrelated to the exploratory drilling," explains Mark Buktenica, an aquatic biologist at Crater Lake National Park, "the timing provided the political impetus to fund the research." Upon hearing of the park's hydrothermal study, the National Geographic Society and the U.S. Geological Survey spruced up the original National Park Service funding for the hydrothermal study-thus creating a rare opportunity for Buktenica and other scientists to explore the depths of Crater Lake in Deep Rover, a state-of-theart submersible engineered for a single scientist-pilot.

Deep Rover is a scientist's dream. Compact and easily manipulated, it is capable of supporting a six-hour dive to 1,000 meters (3,000 feet). The main compartment is a clear acrylic bubble hinged at the top like a giant clam shell to let the pilot enter and exit, and affording 360-degree visibility with lights.

To furnish the study, more than 30,000 pounds of scientific equipment—including the 7,000-pound submersible—landed on Wizard Island by helicopter. At the insistence of the National Park Service, this was to be a noimpact study on the lake and Wizard Island, where the operation was staged. As a result, all waste products were removed daily from the site.

Though scientists explored only 1 to 2 percent of the lake floor, *Deep Rover* opened a brief and rare window to the geological and biological secrets at the bottom of the lake. "We were able to see and document some extraordinary features on the lake floor," says Crater Lake's Buktenica, "such as the blue saline pools and brilliant bacteria mats associated with hydrothermal venting



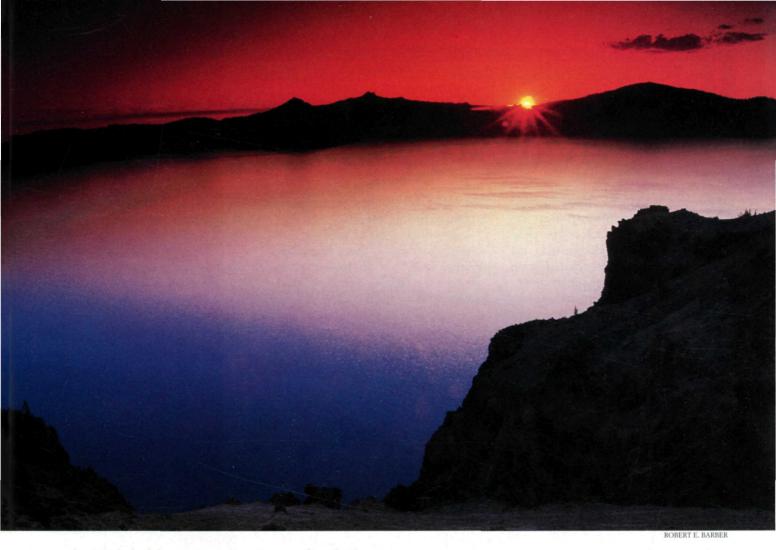
and extensive fields of moss, which up until then had gone unrecorded."

Cruising the bottom of the lake in *Deep Rover* provided scientists with valuable information on the geothermal and biological components of the lake and the pre-eruptive history of Mount Mazama, but unfortunately, it shed no new light on Spring 42. The charge that its elevated nitrate level was the result of the sewer system that served the park's visitor complex continued to haunt the ten-year study, and in 1988 plans to remove the drain field on the rim were initiated.

While an estimated 90 percent of the new nitrogen entering the lake each year comes from the atmosphere, the remaining 10 percent comes from other sources associated with the caldera, including springs flowing from the wall of the caldera into the lake. Nitrogen is an important nutrient for the growth of algae and a component that affects lake clarity. Even though Spring 42 contributes less than 1 percent of the annual input of new nitrate into the lake, the park continued with plans to remove the drain field on the rim.

"It's a small amount relative to the total amount of nitrate in the lake," explains Stan Loeb, a limnologist at the University of Kansas and chair of the peer review committee for the ten-year study, "but the point is to avoid adding more nitrate to the lake." Though water chemistry analyses did not confirm that the drain field on the rim was indeed the source of Spring 42's higher nitrate level, the drain field was removed in 1991 as a precautionary measure. "I think it was impressive they removed it," adds Loeb, "especially since the spring's nitrate levels were the same before and after its removal."

Even with the drain field removed, the mystery of Spring 42 lingers. Located in one of the wettest parts of the caldera, it empties from an orifice in the caldera wall and does not have far



to travel to reach the lake. "It stays very cold, even in summer," reveals Gary Larson, "and it may be a different kind of system than other springs in the caldera." While soils saturated with nitrate from the drain field could be one of the reasons the spring still shows the same nitrate concentrations as before removal, Larson is not sure. "If the numbers drop in a few years, then perhaps the drain field was responsible, but we're not ruling out the possibility that nitrates in Spring 42 may well be a natural phenomenon."

In any case, sewage is now piped into a drain field off the rim and well away from any of the caldera springs. The improved sewage system was tagged on to the \$15-million rehabilitation and reconstruction of Crater Lake Lodge, which reopened in May. Although the lodge opened in 1915, it collapsed twice during the park's typically massive snowfalls and was never completed; the original plans—if there were any—were never found. The new exterior remains largely unchanged from the original, but the interior has been modernized to create the mood of a true mountain lodge.

No doubt the renewal of full accommodations at Crater Lake will increase visitation, forcing the park to tackle perhaps its greatest challenge yet: how to provide an enjoyable and educational experience for more, while affecting the lake less. Now that sewage is no longer a possible threat, other human-related factors such as global warming, air pollution, on-site boat use, and non-native fish (introduced between 1888 and 1941) could be the next to encroach on Crater Lake's pristine condition.

As might be expected, the Ten-Year Limnological Study generated many questions that simply could not be evaluated in a ten-year cycle. But at least it convinced the Department of Interior to apply a segment of Crater Lake National Park's annual operating budget toward long-term limnological moniThe ten-year study of Crater Lake generated questions that can be answered only by continued long-term monitoring.

toring. Gary Larson and his assistants monitor the lake's clarity monthly, between July and October, from a boat housed on Wizard island. In August of 1994, they recorded the highest clarity readings to date.

"While the ten-year study revealed many components that influence the lake's clarity," says Larson, "it's going to take at least two to three decades of data to fully understand how this lake works. We have to sort out the natural changes in the system from any that may be caused by human impact," he adds, "and only long-term monitoring can provide answers about the lake's trends and status."

Carmi Weingrod last wrote for National Parks *about mountain goats at Olympic National Park.*

REVIEWS

Privatizing Public Lands

S COTT LEHMAN'S straightforward approach to privatizing public lands in his book of the same name is a refreshing change from the inflamed rhetoric associated with today's debate about the subject.

An associate professor of philosophy at the University of Connecticut, Lehman demonstrates an understanding of the issues that have brought this debate to a national level.

Management of public lands has become contentious, especially in the West, because of possible restrictions on activities such as grazing, mining, and timbering. Federal lands hold significant reserves of pasture, minerals, and lumber, and many who would like access to these resources have proposed that the lands, including national parks, be sold to private interests.

Lehman's analysis of resource management focuses on three options for America's public lands: status quo management by federal agencies, privatization, or implementing market-based management strategies. Much of the discussion focuses on the arguments of those who believe that private property owners are in the best position to make decisions for land use. The author's conclusions lean toward the status quo with improvements achieved through use of resources based more on market value.

Lehman also describes the elements of the debate, from the Wise Use Movement, which favors use of natural resources, and ranchers and their disputes with federal grazing policies to environmental groups that support wilderness designations.

If the reader is looking for solutions, this analysis may not be satisfactory. This effort examines the arguments for and against privatization. It does not attempt to answer the question: "What is the best use of resources?"

Nonetheless, Lehman's book offers insights into the debate about continued federal management of America's "commons."

Privatizing Public Lands, cloth, hardback, \$45, published by Oxford University Press, New York, as part of the Environmental Ethics and Science Policy Series.

John C. Miles

GUARDIANS OF THE PARKS

-Will Callaway

LEARN THE HISTORY OF THE NATIONAL PARKS AND CONSERVATION ASSOCIATION

Guardians of the Parks: A History of the NPCA

The National Parks and Conservation Association has a history of keeping the National Park Service focused on preserving our nation's natural splendor. Now you can read that 75-year history in **Guardians of the Parks** by John C. Miles, noted environmental professor and scholar. Preservation of our national parks has always been a titanic struggle between those who want to preserve and those who want to exploit. This book chronicles NPCA's efforts — from its founding concurrently with the National Park Service to today — to ensure that the National Park Service remains true to its original purpose: to preserve these wild spaces as "virtually the only places where humans could seek and find answers to questions about nature and their relation to it." **Guardians of the Parks** is a fascinating story of not only that struggle, but the evolution of America's

environmental consciousness. It should be read by everyone with a concern for the future of our national parks.

Available for \$29.95, \$19.95 to NPCA members

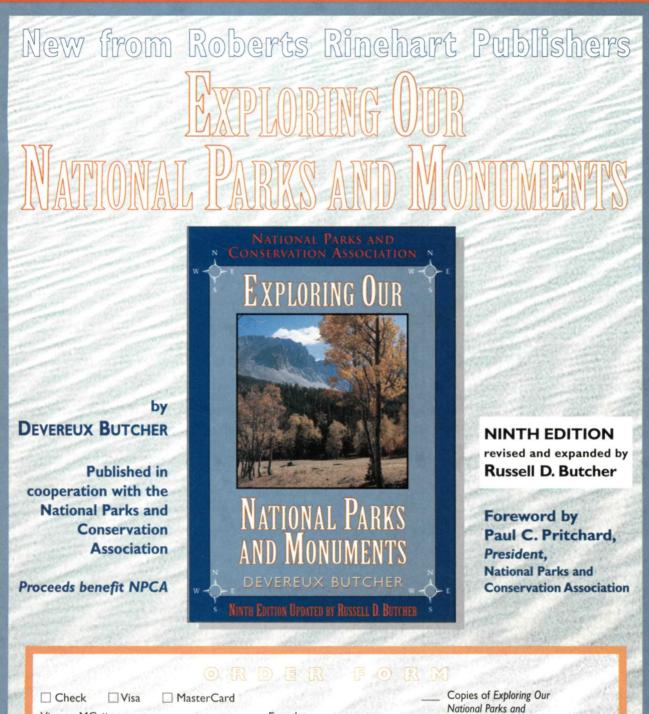


The Birth of the National

Park Service makes an excellent companion piece to **Guardians of the Parks.** It is the story of Horace Albright, one of the National Park Service's key founding fathers, and covers the early history of the National Park Service.

An author-signed copy of the **The Birth of the National Park Service** is available at \$14.95 (hardbound), \$9.95 (softcover).

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MARCH FOR PARKS 1995

The National Parks and Conservation Association thanks the following corporations for helping to make this year's March for Parks a success:

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With their support, the 1995 March for Parks accomplished the following:

• 1.1 million participants

• 900 marches in all 50 states and the U.S. Virgin Islands

• \$2.25 million raised by marchers for their local park projects

NOTICES

Southeast Park Network

Southeastern park activists and National Park Service officials joined NPCA in the first of eight regional gatherings designed to foster grassroots activism on park issues. The Southeast regional forum, held in Atlanta, Georgia, in March, addressed four issues: strengthening partnerships between the Park Service and park support groups, enhancing interaction and information sharing among local groups, increasing technical assistance for park support groups, and broadening and diversifying the parks constituency.

As a result of the Southeast forum, NPCA has hired Vera Guise, former executive director of Friends of the Blue Ridge Parkway, to develop a regional park support group network that will eventually expand nationwide.

Thanks by the Thousands

NPCA would like to thank the thousands of members who took the time to call or write to their members of Congress to voice their objections to H.R. 260, the National Park System Reform Act. Turn to pages 10 and 24 to learn more about this legislation.

Progress on Presidential Sites

As part of its Presidential Sites Initiative, NPCA held its second symposium on interpreting and preserving presidential sites at the Jimmy Carter Library in Atlanta, Georgia, in March. More than 60 site managers and interpreters from NPS presidential park sites and other institutions associated with U.S. presidents gathered to discuss opportunities to enrich the experience of the presidential site visitor. Participants considered the issues of integrating local, regional, and women's history into presidential sites interpretation and opportunities for innovative fund raising and partnerships.

As a followup to the symposium, NPCA has produced a report that describes the role of presidential sites for the future and makes recommendations for adding presidential sites to the National Park System.

Partners at Work

NPCA joins NPS and the National Park Foundation to invite Northeastern park activists and Park Service employees to attend the conference "Partners at Work: Supporting Parks from Maine to Virginia." Acknowledging the political and fiscal challenges facing the parks, the conference offers workshops aimed at strengthening partnerships between the government and private citizens for the benefit of the parks. Topics to be addressed include fund raising, advocacy and image, organizational issues, and entrepreneurial partnerships involving nontraditional partners.

The conference will be held October 19–22 in Tamiment, Pennsylvania, near Delaware Water Gap National Recreation Area. To learn more about "Partners at Work," contact Edie Shean-Hammond at 617-223-5199.

A Lasting Legacy

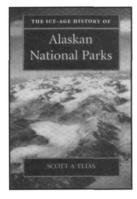
You can extend your concern for our national parks beyond your lifetime. Your children and grandchildren will benefit from the lasting legacy you can help provide by including NPCA in your will. For a copy of NPCA's brochure *How to Make a Will That Works*, call Diane Clifford at 1-800-NAT-PARK, extension 131.

Next Issue...

The September/October issue will feature stories on park novelist Nevada Barr, filming in the parks, and NPS' handling of the National Environmental Policy Act. "Access" will explore wilderness cabins.

Go with the Floe! ICE-AGE HISTORY OF ALASKAN NATIONAL PARKS Scott A. Elias

Reconstructing the period when woolly mammoths, caribou, moose, and large-horned bison strode across Alaska's icy landscape, this guidebook for the general



reader describes the geology, fossils, and human history of Alaskan parks. 18 b&w photographs, 39 line drawings, 22 maps 224 pp. Paper: 1-56098-424-4 \$16.95

Order from SMITHSONIAN INSTITUTION PRESS P.O. Box 960, Herndon, VA 22070-0960 800/782-4612

Getting Too Many Conservation Mailings?

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

If you prefer not to be included with the names we make available, let us know and we will remove your name from the list.

Just attach a current label from *National Parks* magazine and send it to us at the address below.

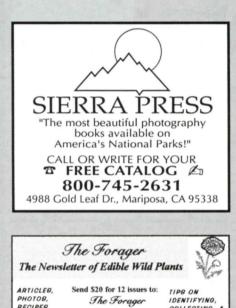
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ECOOPPORTUNITIES



The Formative Years

PARK PURSUIT tests your knowledge of the history and the natural resources represented within the National Park System. Clues can be found in past issues of the magazine, in books, or in literature about the parks.

The July/August quiz focuses on units within the National Park System devoted to important events in the country's early development.

In the decades preceding the Revolutionary War, colonists began to agitate for control over their own destiny. Like an insecure parent who feels threatened by a child's increasing independence, the British tightened the reins. In 1775, colonists rebelled against the Crown, which had come to represent interference in their local affairs. The United States was created in Philadelphia on July 4, 1776, when the Continental Congress approved the final form of the Declaration of Independence. Although most of the fighting stopped when the Americans routed General Charles Cornwallis at Yorktown on October 19, 1781, the Revolutionary War did not officially end for another two years.

The nation's resolve to make its "Great Experiment" work was further tested during the War of 1812, when the fledgling country proved it could, and would, fight to perpetuate itself. During this conflict with the British, the United States proved its naval prowess and inspired Francis Scott Key to draft a poem that would later become the nation's anthem.

These images represented within the park system symbolize freedom, a central theme of American life and one still to be cherished and vigilantly guarded.

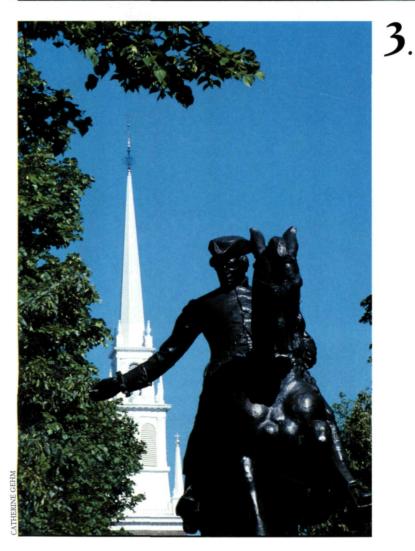
Many sites within the National Park System are devoted to this tumultuous period, as well as the formative years following the war when the foundations of the nation were laid.

If you are unable to wait until the next issue for the answers, call our 900 number from a touch-tone phone (see page 8). Answers to the May/June quiz are: 1. Fishing Bridge, Yellowstone National Park, Wyoming; 2. Arlington Memorial Bridge, Washington, D.C.; and 3. Linn Cove Viaduct, Blue Ridge Parkway, Virginia.

In 1814, the British Navy attacked this Eastern fort. The Americans' successful defense of it inspired Francis Scott Key to write the poem that decades later would become our nation's anthem. What national park site is this?







The events and ideas associated with the **American Revolution** and the founding and growth of the United States provide the common thread linking the sites that constitute this park. In May 1774 British troops occupied this city and patriots prepared to defend their homeland. In the steeple of this church, a signal was given, warning the patriots that the British were crossing the bay. What national park site is this?

Both the Declaration of Independence and the Constitution were adopted in this hall, a shrine to the principles of human rights and selfgovernment. What national park site is this?

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