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80th 1919 National Parks and Conservation Association 1999
Citizens Protecting America's Parks

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National Parks
Vol. 73, No. 1-2
January/February 1999
The Magazine of the National Parks and Conservation Association

FEATURES

COVER: Encroaching development at three national parks makes controlling wild populations of Rocky Mountain elk a challenge for the National Park Service. Photograph by Jeff Foott.

JOHN D. BROOKS

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DEPARTMENTS

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Citizen Action

NPCA was founded to defend the national park ideal—a vision that has withstood the test of time.

STEPHEN MATHER—the first director of the National Park Service—was one of NPCA's founders. His vision for an independent citizens group that would refine, maintain, and defend the ideals of a National Park System has been proven increasingly relevant and essential. The clarity of that vision was borne out this fall in two important dimensions.

SCOTT SUCHMAN

Mather believed citizen involvement was a key element of an advocacy group, and this was reflected in the extent and sincerity of members' responses to the 1,000-Day Plan as outlined in the September/October 1998 issue of the magazine. The plan encompasses four strategies to extend NPCA's influence: focus programs, enhance regional offices, mobilize membership, and prepare for a national campaign for parks.

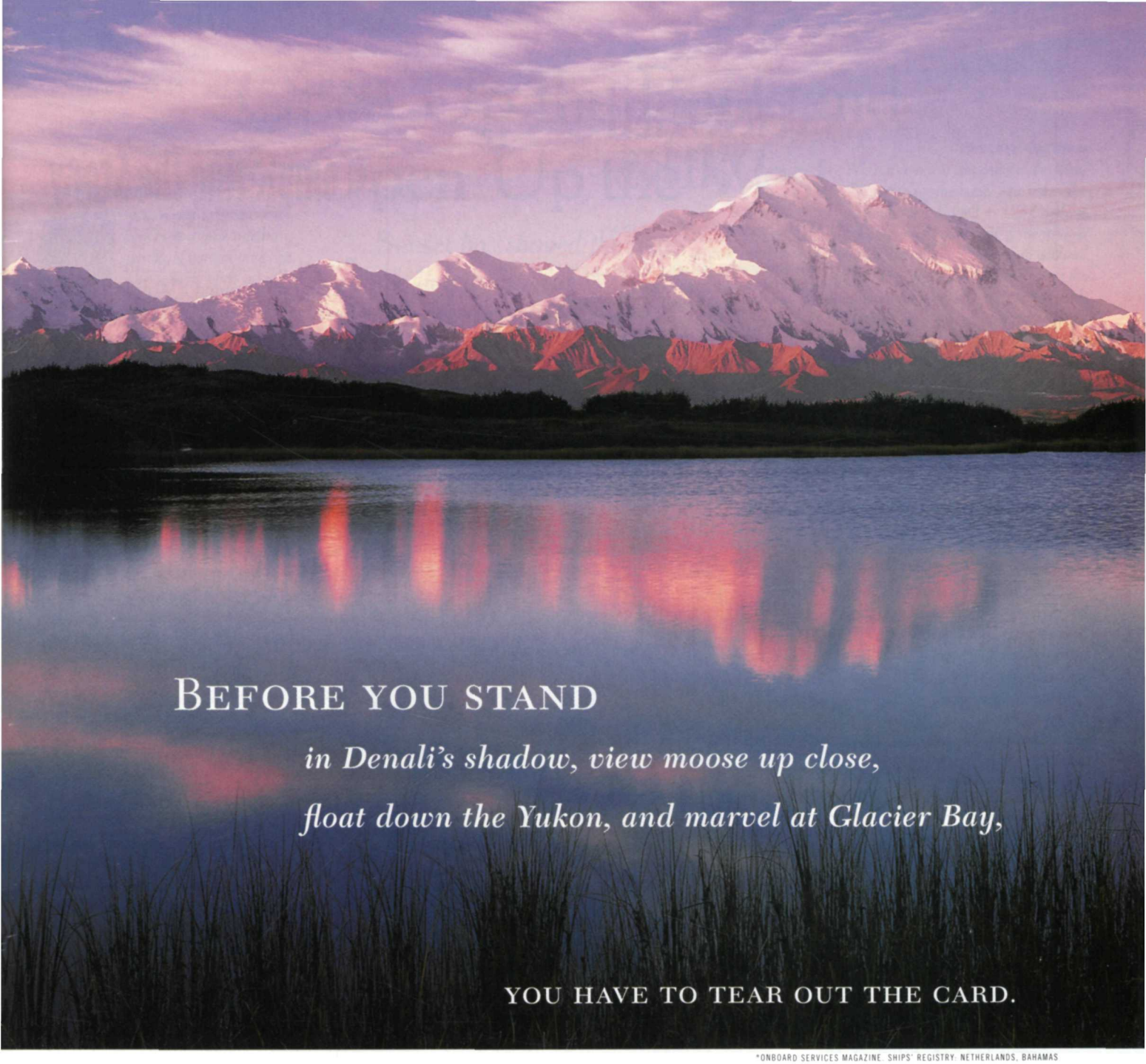
I received scores of letters that were both inspirational and instructive. The responses support the four basic strategies outlined in the plan, but they all recommend improvements or suggest ideas on how to implement them. We will succeed only with that kind of assistance, guidance, and encouragement. And when NPCA misses opportunities, we must also hear from you. NPCA is as much yours as the national parks we were founded to protect.

The second way that Mather's vision was in focus was his realization that only an independent group could protect the parks from misguided politics—a process NPS cannot, by law, influence. During this past session of Congress, the parks faced a number of threats, several of which NPCA was able to thwart. Congratulations to you, our members, to the limited number of park-loving leaders in Congress, and to NPCA staff and Trustees. NPCA was a lead advocate for a bill sponsored by Sen. Craig Thomas (R-Wyo.), which requires concessioners to return more financial support to the parks, puts greater emphasis on science as the underpinning of park management, and clarifies the process of adding new park units. NPCA stopped a bill that would have declassified some park wilderness areas and threatened to undercut the president's authority to designate national monuments. We defeated anti-park amendments attached to the appropriations and other bills that would have—among other things—allowed helicopters to land in wilderness areas and commercial fishing to continue in Glacier Bay.

These victories are necessary to our mission of "protecting and enhancing America's National Park System for present and future generations," but not sufficient. We must craft and launch programs—such as our diversity program highlighted on page 47—that will lead to additional victories.

We must create initiatives to restore the parks, increase their funding, and expand the system. The parks belong to us, and our actions will determine their future. I could not be more hopeful.

Thomas C. Kiernan
President



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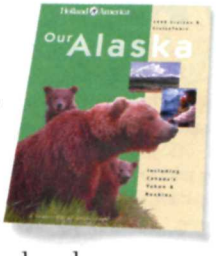

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ABOUT NPCA

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

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

WHAT WE STAND FOR: The mission of NPCA is to protect and enhance America's National Park System for present and future generations.

HOW TO JOIN: NPCA depends almost entirely on contributions from our members for the resources essential for an effective program. You can become a member by calling our Member Services Department, extension 215. The bimonthly *National Parks* magazine is among the benefits you will receive. Of the $25 membership dues, $3 covers a one-year subscription to the magazine.

EDITORIAL MISSION: The magazine is the only national publication focusing solely on national parks. The most important communication vehicle with our members, the magazine creates an awareness of the need to protect and properly manage the resources found within and adjacent to the parks. The magazine underscores the uniqueness of the national parks and encourages an appreciation for the scenery and the natural and historic treasures found in them, informing and inspiring individuals who have concerns about the parks and want to know how they can help to improve these irreplaceable resources.

MAKE A DIFFERENCE: A critical component in NPCA's park protection programs is members who take the lead in defense of America's natural and cultural heritage. Park activists alert Congress and the administration to park threats; comment on park planning and adjacent land-use decisions; assist NPCA in developing partnerships; and educate the public and the media about park issues. For more information on the activist network, contact our grassroots coordinator, extension 222.

HOW TO DONATE: NPCA's success also depends on the financial support of our members. For more information on special giving opportunities, such as Partners for the Parks (a monthly giving program), contact our Membership Department, extension 215. For information about Trustees for the Parks ($1,000 and above), bequests, planned gifts, and matching gifts, call our Development Department, extensions 145 or 146.

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

EDITOR'S NOTE

Completing the Story

Several years ago, the Smithsonian Institution presented a World War II-era exhibit depicting West Coast streets lined with shops owned by Asian-Americans. Some of the shops had signs declaring the owners to be Chinese, an attempt to fend off vandals who might mistake them for Japanese. Other scenes showed automobiles and piles of personal items being sold at fire-sale prices.

The exhibit was about the forced relocation of 110,000 Japanese-Americans who lived along the West Coast. Believing that this population presented a danger to the war effort, the United States relocated the people—70 percent of whom were born in this country—to internment camps. Although debate continues about whether the relocation was a racist act or a misguided maneuver to remove a targeted people from harm's way, the fact remains that the story is part of our history and one that must be told.

On page 47, NPCA's Iantha Gantt-Wright discusses the importance of telling these stories within the park system. Manzanar National Historic Site—one of ten relocation camps—became a park unit in February 1992. Since then, other sites have been added that help to complete our story, including the Selma to Montgomery National Historic Trail, and Tuskegee Airmen National Historic Site (page 46). Including these sites in the system helps to tell our national story and make clear to those Americans who are not of European descent that the parks are as much theirs as any Americans'.

In January, NPCA hosts a diversity conference: *America's Parks—America's People: A Mosaic in Motion*. The goal of the conference, January 13-16, is to break down racial and other barriers that prevent greater minority participation and support of our national parks. Through this conference, NPCA and others hope to begin the processes that will allow this multicultural mosaic to take shape.

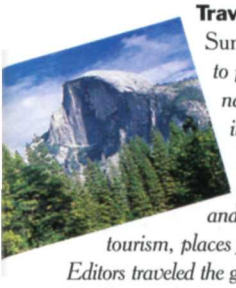
Linda M. Rancourt
Editor-in-Chief

Open Up the Book and Open Up the West

"...Sunset *has shaped the way people live in the Far West ...*"
– Dr. Kevin Starr in his introduction to this volume

The Great Outdoors

Sunset *was an early advocate for the environment and the way Westerners experience and protect their region's wealth of natural resources. This volume offers access to a century of perspectives on the study and conservation of Western flora and fauna; water use and land planning; alternative forms of energy; national, state, and local parks; outdoor recreation; and more.*

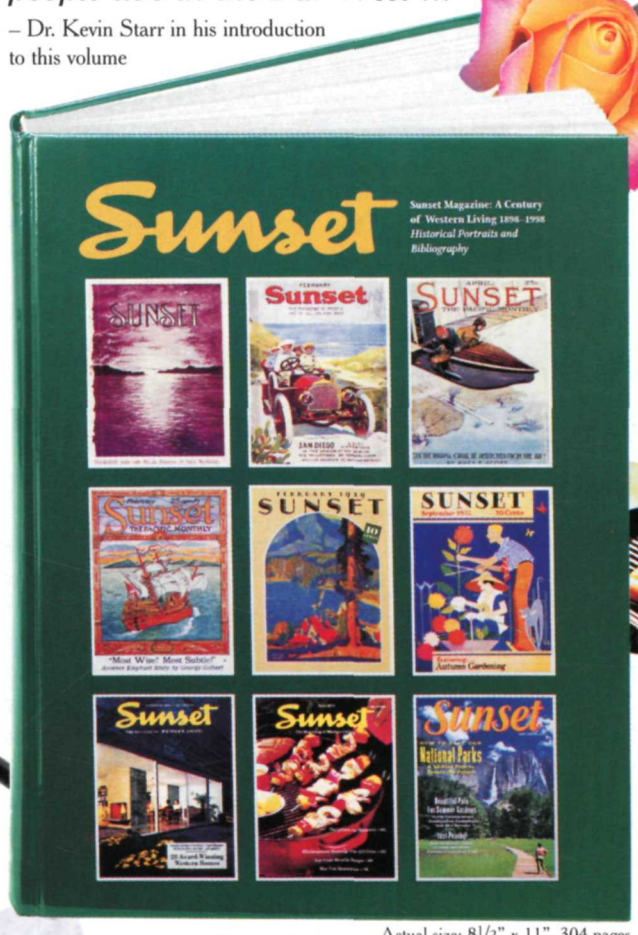


Travel Near and Far

Sunset *was first published to promote Western destinations. For a century, it has featured exciting big-city attractions, scenic resort areas, and, as a pioneer in eco-tourism, places far from the crowds. Editors traveled the globe, but focused on the Far West, including Alaska, Hawaii, British Columbia, Mexico, and the Pacific Rim.*

A Comprehensive Resource

Since 1898, Sunset *has published more than 18,000 articles, columns, poems, and works of fiction. The chronological bibliography in this book cites 9,400 major* Sunset *articles, and lists more than 900* Sunset Books *titles, editions, and reprints. Entries providing author, title, volume and page number, and publication date are arranged chronologically in 10 categories and many subcategories. Use this resource to explore the* Sunset *collection in your personal or local library, or to order through the document delivery service identified in the book.*



Actual size: 8½" x 11", 304 pages

Homes of Character

Respected architects and landscape designers have introduced the world to a distinctive aesthetic that merges the Western home and garden with the greater environment. Here cited are the visions of the long-established AIA/Sunset Western Homes Awards, plus tips for building and remodeling in ways that embody the relaxed Western lifestyle.

Western Gardens

When it comes to gardening in the West, Sunset *wrote the book. The magazine broke new ground in 1932 with its first regional editions for gardeners—a tradition that continues across all editorial topics. The* Western Garden Book *is the authority for amateurs and professionals alike. Now you can peruse* Sunset's *heritage plus horticultural advice on garden design, landscaping, and caring for plants—whether you're nurturing roses, native perennials, or drought-resistant plants.*

Cooking Indoors and Out

Sunset *lets Westerners bring new ideas into their homes and kitchens. Now, via the bibliography, you can trace the evolution of the* Sunset *recipes that defined artful Western cookery long before its contemporary incarnation as "California cuisine." Live the outdoor life of barbecuing and grilling, patio dining, picnics, and back-country cooking. Peruse decades of homemaking tips, workshop and craft projects, ideas for entertaining, and holiday festivities that epitomize Western living.*

Colorful History

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As *Sunset* continues strong in its second century, this book reveals to legions of loyal readers a truly historic publishing achievement matched by very few magazines—100 uninterrupted years. It also celebrates the long, overlapping histories of *Sunset* and Stanford University—established by the same drive and entrepreneurial spirit that opened the West.

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Pollution, Roads, and Airports

Grand Canyon Air Pollution

I was most interested in Aline D. Manzi's remarks about the answer she got from Southern California Edison regarding their air pollution [November/December 1998, Letters]. I too wrote them some time ago and received the same response. They preach environmental protection, but their actions speak otherwise. It's time someone took these people to task. Grand Canyon is sacred and fragile.

Pete Rasey
Manitowish Waters, WI

We just returned from a trip to the Grand Canyon and were shocked to see the air quality there. I'm certain that polluted air does blow in from elsewhere, but I think that point is overstated. We appreciated the shuttle buses that service the west rim, but I was shocked at the constant black fumes that accompanies them. Given the frequency of the buses, there has to be a lot of pollution created there. We talked with European visitors who were shocked by the visible pollution.

We read about electric buses but did not see any. The cost must be huge but it would surely be a better way to serve the area. There would not be the black fumes that made my lungs burn.

Seeing the Grand Canyon was a truly grand experience. I sincerely hope that we can protect it from air pollution.

Mrs. O.C. Daily
Logansport, IN

Wilderness Position Extreme

I have contributed to your association in the past and continue to receive literature and solicitations as well as the issues of *National Parks*. What caught my eye in the November/December 1998 issue was the statement that "NPCA ...believes the entire Colorado River corridor should be protected as wilderness."

That nonsense alone could discourage me from further support: the raft experience I had three years ago (as a senior citizen) was one of the highlights of a lifetime of outdoor activity in many countries. In five days I saw nothing from any of the trippers—ours or others—that led me to believe the environment was being despoiled. The guides and travelers were extremely careful and I felt then, and now, those who had this experience came away even more appreciative of the need to conserve and protect our parks so that we could continue to enjoy experiences such as this.

Your extreme position will discourage more NPCA supporters than attract.

Ray H. Smith
Wheaton, IL

Bioprospecting in Yellowstone

"Panning Yellowstone's Pools for Science and Profit" [September/October 1998] was excellent! While you point out that "just one micro-organism...was used in the development of DNA fingerprinting...and produced billions of dollars for the biotech industry," you also quote your counsel, "all the details of the agreement need to be made public. The public has the right to know what the government has agreed to."

At a time when NPS is significantly underfunded for the things it wants and needs to do, a major fee under such an agreement would be more than appropriate. If a fee of just 1 percent had been levied on gross revenues, it would have meant an additional tens of millions of dollars from this DNA fingerprinting application alone.

Richard G. Schulze
Greenwich, CT

Blue Ridge Parkway

In reference to rural roads connecting with the Blue Ridge parkway [November/December 1998, News], my husband and I spent some time last year driving the parkway. Although we stayed in motels, we packed our lunch each day so we didn't have to leave the parkway during the day. It was an incredible trip. My husband, a native Northwesterner, couldn't believe there were so many remote areas in the East. I think he was expecting a solid line of cities form Boston to Miami. The beauty was enhanced by the quiet and isolation in the places.

Although it isn't as remote as Alaska or parts of the Pacific Northwest, the peace and quiet of this parkway is a major part of its charm. If all the connecting roads were paved and traffic crossed the parkway between the small towns and villages on either side, it would destroy the essential peace of the place. Please do all that you can to prevent this from happening.

Anne S. Armstrong
Bellingham, WA

NPCA's 1,000-Day Plan

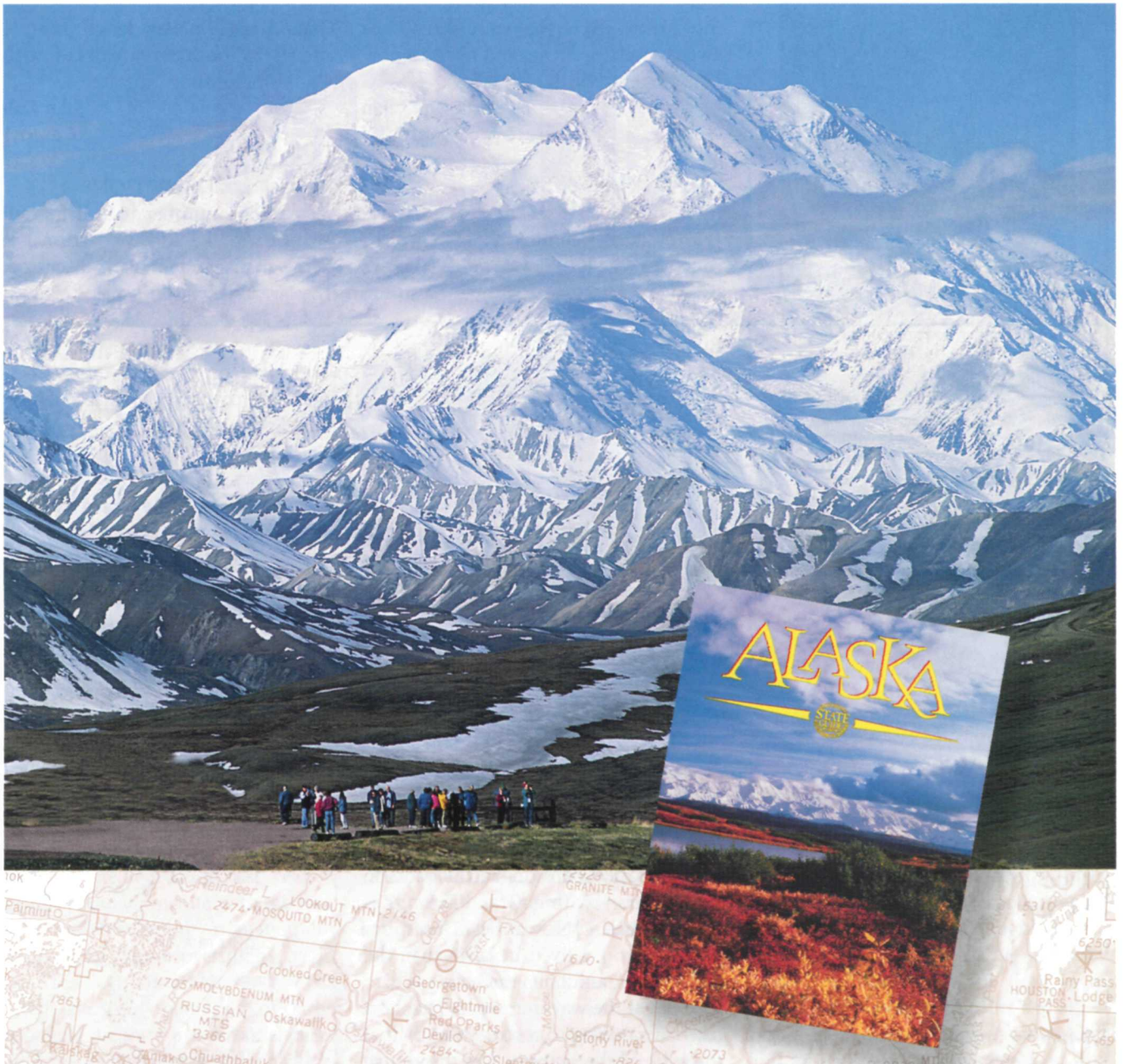
Thank you for presenting your 1,000-Day Plan to your members. Overall, I believe that the rebuilding and refocusing of NPCA will permit the organization and its members to achieve their goals more frequently and effectively.

I am especially encouraged by the vision of partnering with other environmental groups. This could be a significant advantage toward accomplishing real and lasting goals, but caution must be taken that partnerships do not result in a trade-off of NPCA ideals or methods in order to achieve a particular goal.

NPCA must continue to organize efforts to retaliate against site-specific threats, including "non-severe" threats to smaller, less visited parks. Vigilance must be maintained over all park units until the source of these threats is predictable and manageable.

I was especially happy to know the number of letters written regarding Yellowstone bison and snowmobiles and Yosemite restoration, along with the positive response they achieved.

It is inspiring and encouraging to know that NPCA staff care so much about, and work so diligently toward, protecting our parks. Despite my fears that American parks are declining, read-



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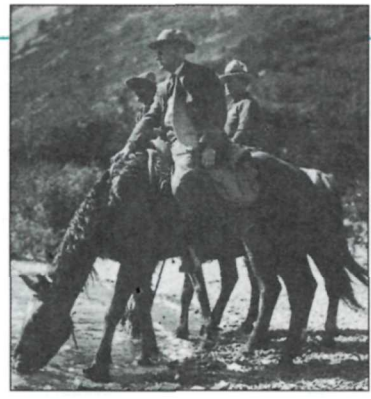

Stephen Mather (foreground), first National Park Service director and an NPCA founder; and Yellowstone Superintendent Horace Albright (right), c. 1920.

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

—Stephen Mather

Stephen Mather was among a handful of visionaries who were the national parks' first trustees. NPCA invites you to advance *your* role in protecting the parks through membership in a growing group:

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Membership in this special society of NPCA supporters is conferred through an annual contribution of $1,000 or greater and offers exclusive privileges. As national parks guardians, Trustees play a key role in NPCA's urgent grassroots, land protection, advocacy, and education initiatives.

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ing *National Parks* magazine keeps me aware, vigilant, active, and most important, hopeful for the future.

Susan Papertsian
Bronx, NY

Ocean Pollution

In response to "Seeking Sanctuaries" [November/December 1998, Forum], much of the pollution in the Earth's oceans can be traced right back to the streets and parking lots where we live. Runoff from our streets is flushed by rain directly into nearby rivers. Many automobiles leak crankcase oil and poisonous anti-freeze into our streets.

The bicycle, on the other hand, is a transportation option that causes no pollution. I ride a bike daily to my job (ten miles roundtrip) and for errands and seldom drive an automobile. Americans can reduce pollution by driving automobiles less and walking and bicycling as often as possible. When gasoline rises to $5 per gallon, perhaps we will finally see the insidious effects of automobile overuse.

Richard Sileski
Bellows Falls, VT

Airport Expansion Needed

I am writing in response to the article on runway expansion at the Jackson Hole Airport within Grand Teton National Park [November/December 1998, News]. I lived in Jackson in the early 1980s, and one year I had to fly to Casper. On the way out, we had to abort take-off, coming to a screeching halt at the end of the runway. On the return flight, we had to abort landing. In both cases, the plane came perilously close to the edge of the runway—there is no prairie at the end but trees and a large hill. It was extremely unnerving, especially knowing that other planes had run off the end and more since then.

I am an advocate for maintaining this and other parks in an undisturbed manner. I don't think the area would benefit aesthetically from more daily flights—it's already the busiest airport in the state. However, safety is an issue, and at the core of the safety issue is the length of the runway. Extending the runway would not be a matter of contention except for the unfortunate fact that it can only be lengthened in the direction of Grand Teton. Runway length is an issue and should be taken care of before there is a major crash.

John Calmes
Casper, WY

CORRECTIONS

The phone number to call for information on the Mojave National Preserve management plan, discussed in the November/December 1998 News section, is 760-255-8841.

The plant on the November/December 1998 cover was misnamed. It is the false Solomon's seal.

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

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ANSWER TO "YOU ARE HERE"

Old San Juan, now San Juan National Historic Site, was founded in 1521 on the island of Puerto Rico to support ships hauling treasure back to Spain from Mexico and South America. Despite repeated attacks, the fort remained in Spanish control until 1898, when it was surrendered to the United States at the end of the Spanish-American War.

NPCA

Park News

BY KATURAH MACKAY

OVERFLIGHTS

Parks Suffer Airport Onslaught

Growth in air travel puts pressure on national park resources.

LARRY ULRICH

The tranquil skies over Bryce Canyon National Park may fall victim to noise from aircraft overflights should a new airport be built in St. George, Utah.

WASHINGTON, D.C.—While NPCA continues its battle against commercial air tours over national parks, the Federal Aviation Administration (FAA) has presented at least seven other proposals to expand or construct major airports near national park units across the country.

NPCA recently worked on an air tour overflights provision that was incorporated in Senate legislation last year. It required FAA to cooperate with the Park Service in developing management plans in parks where overflights could occur. This legislation, however, does not regulate the operations of large commercial airports just outside parks or the large jet overflights they produce, a menace to park wildlife and natural tranquillity. The air tour issue is expected to be addressed in the new Congress.

One of the most contentious of FAA's airport proposals involves Hawaii's Kahului Airport. NPCA recently filed a petition with the 9th Circuit Court of Appeals for review of FAA's approved project to expand Kahului Airport outside Haleakala National Park (see News, July/August 1998). Unlike the threat of noise or adjacent development, non-native plants and insects, reptiles, and viruses are examples of species carried by international planes that have taken a slow, insidious toll on the Hawaiian islands' biodiversity. More native species have been driven to extinction on Hawaiian islands than in any other state in the United States and in most places in the world—as a direct result of alien species introduced by human activity.

In the continental United States, myriad other airport proposals threaten to violate the natural quiet found in national parks and disturb adjacent viewsheds. One new airport alone, the St. George Municipal Airport, proposed for St. George, Utah, has the potential to affect six national park units—Bryce Canyon, Grand Canyon, and Zion national parks, Cedar Breaks and Pipe Spring national monuments, and Lake Mead National Recreation Area.

"All six of these parks are famous for the solitude and tranquillity that visitors can readily find within their borders," says Mark Peterson, NPCA's Rocky Mountain regional director. "But any could be compromised by various approach and departure patterns and altitude parameters permitted by this new airport."

A new airport has been proposed for Hulett, Wyoming, a small town located only seven miles from Devil's Tower National Monument. The monument is used by American Indians regularly as a sacred site. NPCA argues that a nearby airport would increase the number of existing sight-seeing air tours and allow noise from large commercial aircraft and private planes to intrude on the solitude that visitors typically seek in a national park.

NPCA maintains that the draft environmental assessment for the Hulett Airport—completed by FAA—fails to comply with the National Park Service Organic Act, sections of the National Historic Preservation Act, and the spirit and intent of the National Environmental Policy Act.

Other airport proposals threatening national parks include:

▶ a potential legislative proposal for a commercial airport in California's Ivanpah Valley near Death Valley National Park and Mojave National Preserve. FAA and Clark County, Nevada, claim the commercial airport is needed to meet

the population surge around Las Vegas;
▶ an FAA proposal to lengthen the Jackson Hole Airport runway farther into Grand Teton National Park;
▶ a runway extension proposal at Provincetown Airport in Cape Cod National Seashore in Massachusetts, one of only two airports located entirely within a national park unit;
▶ possible redevelopment of Homestead Air Reserve Base—damaged during Hurricane Andrew in 1992—into a major commercial airport directly between fragile Everglades and Biscayne national parks.

TAKE ACTION: One effective way NPCA members can counter these expansion proposals is by writing letters to your senators and congressional representatives. Mention the issues raised above, emphasize the importance of passing strict overflights legislation in the 106th Congress, and urge that any changes in airport operations be designed to protect national park resources. Address: Sen.____, U.S. Senate, Washington, DC 20510; or Rep.____, U.S. House of Representatives, Washington, DC 20515.

PRESERVATION

Erie Canal Steps Out of the Past

NPCA calls for heritage corridor designation for famous waterway.

SYRACUSE, N.Y.—Plans have unfolded within the National Park Service (NPS) to help develop a partnership for restoring, interpreting, and protecting the Erie Canal, one of the most ambitious and consequential public works projects in U.S. history.

Few other waterways have so strongly shaped the American economy, diversified the nation's culture, spread political and social ideas, or transformed the environment from rural to urban as the Erie Canal and its adjacent waterways. By the mid-19th century, the Erie Canal carried to New York City's ports a quarter of the grain grown in the United States. As the upper Midwest began to develop into the nation's granary, the canals accelerated settlement in these areas, bringing people and goods to growing cities.

Canals meant that travel routes to the West became safer, faster, and more reliable. Many immigrants seeking to escape the low-paying toil of Eastern cities initially moved west to help build the Erie Canal. With people came the spread of their ideas, making the canal a communication line for social reform, political ideals, and spiritual movements.

Completion of such a monumental task fostered a keen sense of pride throughout the growing nation. The Erie Canal's great success inspired other public works projects on local and national levels, symbolizing the manifest destiny ideology and hope of westward expansion.

"The National Park Service found the Erie Canalway to be a tremendously significant and extraordinary resource," says Gary Warshefski, superintendent at Fort Stanwix National Monument and a consultant on the project's planning team. "We could not help but be impressed by the enormous possibilities embodied in the New York State Canal System and its adjacent communities."

From three proposed management alternatives, NPCA supports designation of the entire New York State Canal System, including portions of the old Erie Canal, as a national heritage corridor. For a ten-year period, NPS would provide technical assistance and guidance to a grassroots partnership of community leaders and state agencies on the development of a corridor-wide historic interpretation and identity program. A management entity, such as a federal, state, or county agency or a nonprofit organization, would be responsible for disbursing federal funds appropriated to the heritage corridor.

During the ten-year period, NPS would engage in a partnership with this management body to support and direct proper use and preservation of the corridor as a nationally significant resource. NPS could also provide grants for education, interpretive training programs, preservation, recreational trail development, and open space conservation—all mainly dependent on adequate funds from Congress.

"A heritage corridor designation provides the proper level of federal assistance, while allowing the state of New York to be the lead partner in preserving a significant aspect of American history," says Eileen Woodford, NPCA's Northeast regional director.

ERIE CANAL MUSEUM

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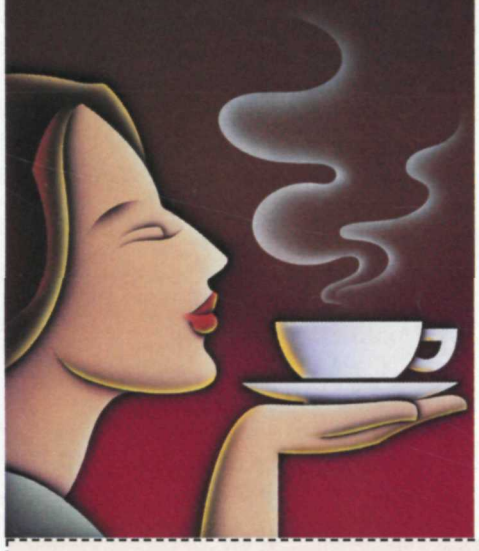

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LEGISLATION

Boundaries Altered at Several Parks

Congress passes handful of park expansion bills.

WASHINGTON, D.C.—Despite a rocky environmental record for the 105th Congress, Bandelier National Monument, Arches and Yellowstone national parks, and several national historic sites benefited from the passage of several park expansion initiatives.

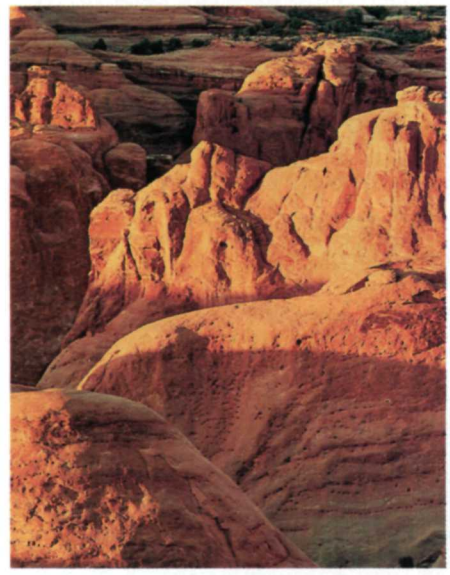
Bandelier National Monument in New Mexico was enlarged by nearly 1,000 acres of land to protect the upper watershed of Alamo Canyon. Introduced by Sen. Jeff Bingaman (D-N. Mex.) last year, the legislation passed as the result of a two-year campaign—led by NPCA—to block a subdivision development and preserve the monument's watershed.

"The passage of this bill protects an 'Achilles heel' of Bandelier," says Dave Simon, NPCA's Southwest regional director. "It's also a victory for environmental activism, since citizens forced it to happen."

In addition, the New Mexico delegation reached an agreement with the White House to allocate $40 million for the down payment to purchase the 95,000-acre Baca Ranch and Valles Caldera—an ecologically spectacular property in the heart of the Jemez Mountains of New Mexico and adjacent to Bandelier.

The agreement proposes to allow a nine-member Baca trust board manage the Valles Caldera as a national preserve and working ranch under a multiple-use and "financially self-sufficient" approach. NPCA is concerned about the implications of this proposal and the lack of protection it may offer this outstanding natural resource.

If the Baca property is acquired, approximately 18,000 acres of other national forest land may eventually be transferred to the National Park Service to expand Bandelier National Monument, completing protection of the monument's other watersheds.



TOM TILL

The curving beauty of Lost Spring Canyon offers hikers a rugged trek.

In Utah, the boundaries of Arches National Park will now encompass Lost Spring Canyon, a 3,140-acre addition that includes ten free-standing arches, plunging canyons, and a maze of irregular redrock formations. Congress passed legislation, introduced by Rep. Chris Cannon (R-Utah) and Sen. Bob Bennett (R-Utah), to extend the park's northeastern boundary to include this unusual landscape and enlarge Arches by 4.3 percent. Lost Spring Canyon offers a more rugged, isolated park experience than what most visitors encounter from the park road or existing trails. It will be managed as wilderness.

Part of NPCA's ongoing campaign to protect Yellowstone's free-roaming bison herd involved urging the federal government to acquire land and purchase conservation easements affecting nearly 8,000 acres outside the northwest boundary of Yellowstone National Park. The land, belonging to the Church Universal and Triumphant (CUT), serves as a crucial year-round migratory corridor for the wildlife that populates Yellowstone's ecosystem and may now provide critical winter range for bison.

Current Montana law allows shooting of bison that roam outside the park because of an inadequately supported claim that they will transfer a disease that causes cattle to abort a fetus. The availability of the CUT property will help prevent the commingling of bison and cattle. CUT lands will be acquired in a two-phase deal and will be managed by the U.S. Forest Service.

Several national historic sites in the National Park System will expand their landscapes and interpretation opportunities, including Weir Farm in Connecticut, Frederick Law Olmsted in Massachusetts, Abraham Lincoln Birthplace in Kentucky, Fort Davis in Texas, and Grant-Kohrs Ranch in Montana.

TAKE ACTION: Write to your senators urging them to support legislation to authorize the approximately $80 million needed to complete acquisition of the Baca Ranch and to protect the ranch as nationally significant public land, free from Domenici's requirement that it be economically self-sufficient. Address: Sen._____, U.S. Senate, Washington, DC 20510.

LEGISLATION

NPCA Stifles Anti-Park Bills

Extraneous provisions hamper park protection efforts.

WASHINGTON, D.C.—In the final days of the 105th Congress, the president's FY 1999 spending bill and the Omnibus National Parks and Public Lands Act became fair game for back-door anti-environmental add-ons, attached at the last minute and difficult to remove.

But the financial outcome for the president's spending bill was relatively positive this year. The bill totaled $14.1 billion for Interior, which includes approximately $1.3 billion for national park operations. It provides $46.2 million toward Park Service recreation and preservation programs and allocates

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THE FRANKLIN MINT

$638 million to Park Service maintenance and construction projects. The federal Land and Water Conservation Fund earmarks $147.4 million for acquiring endangered natural areas.

NPCA rallied to help remove several last-minute provisions from the appropriations bill that would have been detrimental to park resources, management, or the visitor experience. A provision that would have allowed helicopters to land unregulated in Alaska's wilderness areas was defeated by NPCA, as was another add-on that encouraged the Park Service to study the feasibility of a new "jet-capable" runway near the entrance to Denali National Park.

Rep. Jack Kingston (R-Ga.) sponsored a provision to strip parts of Cumberland Island National Seashore in Georgia of their protection under the Wilderness Act. Although this provision was ultimately dropped from the bill, the future of the island's wilderness remains uncertain and under negotiation. Kingston may resurrect a proposed land exchange on the island that would place federal property in private hands and establish a permanent enclave of family owners amidst potential wilderness.

In addition to the president's spending bill, the Omnibus National Parks and Public Lands Act, introduced by Rep. Jim Hansen (R-Utah), contained its own share of environmentally disastrous attachments. NPCA helped force the House to reject the unacceptable bill by a vote of 302 to 123, giving environmentalists their largest vote total on a contested issue in the 105th Congress.

The unwieldy bill comprised more than 20 objectionable provisions affecting parks and public lands around the country. Some measures were struck from the bill before it came to the House floor for a vote, such as an amendment that would have weakened the president's authority to declare national monuments under the Antiquities Act of 1906. The act has been used to establish such outstanding national parks as Grand Canyon, Glacier Bay, Death Valley, and Statue of Liberty National Monument. President Clinton recently used the act to set aside Grand Staircase-Escalante National Monument.

ALIEN SPECIES

Giant Hemlocks Face Predator

A tiny insect from Asia may jeopardize Great Smokies' trees.

GATLINBURG, TENN.—In a park where trees are protected from the logger's ax, some of the largest and oldest hemlock trees in the world now face a more sinister threat: an alien insect transported from Asia will reduce these old-growth trees to bare trunks if it enters the lush hemlock groves found only in Great Smoky Mountains National Park.

The hemlock wooly adelgid feeds exclusively on hemlock trees by inserting its sword-shaped mouth into the base of the trees' needles and draining them of vital fluids. Needles fall prematurely from the branches, leaving the trees dead within a few years. Most of the hemlocks in the park have been

LOCAL COLOR

The Wildlife

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TEXAS

REGIONAL REPORT

News Briefs from NPCA's Regional Offices

ALASKA Chip Dennerlein, Regional Director

▶ Strip mall development before the entrance to Denali National Park has created hazards for vehicles and pedestrians and earned the nickname "Glitter Gulch." The Alaska Department of Transportation (DOT) planned to reconstruct a highway through the commercial area to improve safety, but NPCA proposed relocating the main highway around the hotels and shops instead. This would improve traffic safety, create a low-key commercial services village, allow pedestrian trails, and let visitors enjoy the scenic Nenana River Canyon area. Alaska DOT initially opposed the idea, but after meeting with NPCA and other officials, the department has announced it will terminate the existing design contract and immediately reissue a contract to investigate the alternative proposed by NPCA.

HEARTLAND Lori Nelson, Regional Director

▶ The Doe Run Mining Company has withdrawn its request for a prospecting permit in the Mark Twain National Forest, a major watershed of the Ozark National Scenic Riverways in Missouri (see News, May/June 1998). The company had sought approval for exploratory lead drilling in the forest—a dangerous precedent for public lands and a threatening activity given the unstable and porous geology beneath the riverway and its many headwater springs. NPCA and its allies will file a petition to urge the Interior secretary to withdraw the entire national forest area within the park's watershed from further consideration of mining activities.

NORTHEAST Eileen Woodford, Regional Director

▶ The National Park Service has released its conceptual alternatives for the management of Boston Harbor Islands National Recreation Area. The 30 islands shelter historic structures, such as Fort Andrews (1900) and the Boston Light (1716), and provide natural sanctuaries for birding and camping. **TAKE ACTION:** Help NPCA urge the Park Service to select the alternative that preserves the natural character of the islands and allows only minimal commercial development. Address: National Park Service, 15 State St., Boston, MA 02109, Attn: Boston Harbor Islands Plan; or e-mail: <BOHA_Webmaster@nps.gov>.

PACIFIC Brian Huse, Regional Director

▶ The National Park Service has allowed the unregulated operation of several private horse stables to continue in Golden Gate National Recreation Area (NRA). The stables allow concentrated drainage to flow into nearby stream systems in the park, which are home to at least four endangered species including the California red-legged frog, coho salmon, steelhead trout, and the tidewater goby fish. NPCA argues the stables are operating in violation of the Clean Water Act, the Endangered Species Act, and Park Service policies. **TAKE ACTION:** Write letters to the park pointing out their non-compliance, and demand that these polluting sources be closed immediately. Address: Superintendent, Golden Gate NRA, Bldg. 201, Fort Mason, San Francisco, CA 94123; or e-mail: <brian_o'neill@nps.gov>.

continued

MARK MCCLURE

The egg masses of the hemlock woolly adelgid resemble bunches of cotton.

growing undisturbed for more than 400 years and are the only eastern trees left that predate European settlement. When the hemlock adelgid enters the park, most if not all 4,000 acres of colossal hemlocks could be killed, a loss that will jeopardize the survival of a multitude of forest creatures. Great Smoky Mountains National Park protects the largest concentration of plant and animal biodiversity remaining on the East Coast of the United States.

"We've lost so many trees here to exotic pests—chestnuts, Dutch elms, dogwoods, beech, firs, and now potentially the hemlocks. It's a real tragedy," says Charles Parker, an entomologist in Great Smoky Mountains National Park.

Most likely the adelgid arrived in the eastern United States in the 1950s via trees imported from Asia. Unchecked by natural predators, the non-native adelgid spread quickly up and down the forested coast. The insect travels on wind currents or in the fur and feathers of animals and birds. Currently rampant in central North Carolina, the insect has already killed trees in 11 states. A close cousin of the hemlock adelgid, the balsam woolly adelgid has consumed 90 percent of the red-spruce Fraser fir trees found in the southern Appalachian Mountains, including those in Shenandoah National Park. The trail to Clingman's Dome—the highest peak in the Great Smokies—bears testimony to the insects' rapacious appetite for firs. Hundreds of dead trees, ashen gray and bare,

stand in stark contrast against the otherwise verdant forest canopy.

Biologists have been working since 1992 to find an effective enemy of the adelgid. Dr. Mark McClure, with the Connecticut Agricultural Experiment Station, found a minute beetle—a member of the ladybug family—in Japan and is now evaluating its effectiveness against the adelgid in eastern North America. So far, the beetle has been released and tested in forests of Connecticut and Virginia, killing 45 to 90 percent of the adelgids at five test sites during the year of release. If the beetle can successfully reproduce and spread throughout the 521,000-acre park, the ancient hemlocks stand a chance for survival.

"Although the beetle has significantly reduced adelgid numbers during the year of release," says McClure, "studies during the next two years will determine if the beetle can control adelgids from year to year and be a lasting solution to the problem."

MANAGEMENT

River of Grass Ready to Heal

Plan proposes to rechannel nearly one trillion gallons of water.

HOMESTEAD, FLA.—The U.S. Army Corps of Engineers has presented a long overdue plan to rebalance the delicate freshwater ecosystem of south Florida that includes Everglades National Park, among the most debilitated and vulnerable parks in the nation.

Projected to span 20 years, the corps' multi-billion-dollar plan has been praised by members of the Everglades Coalition, including NPCA. However, much improvement is needed before Everglades National Park can be restored to even a fraction of its original health.

A main component of the corps' plan entails trying to reestablish south Florida's historic rainwater sheetflow—a critical process of slow, shallow drainage down the peninsula that naturally regulates water levels in the Everglades ecosystem. The process was severely disrupted when the corps altered Lake Okeechobee and built a system of canals, dikes, and levees to drain agricultural areas and provide drinking water for residents of south Florida. The region's population is expected to reach 11 million by the year 2050.

The corps' restoration plan takes the predicted population explosion into account by endorsing an untested proposal to pump most of the nearly one trillion gallons of fresh water—currently redirected out to sea—into vast underground aquifers. According to the corps, the restoration plan meets 97 percent of the region's urban water needs but satisfies only basic environmental requirements for the Everglades ecosystem at 70 to 80 percent.

Other proposals in the plan:

▶ remove 72 miles of canals and 124 miles of levees—structures that now usher water away from life-sustaining marl prairies and sawgrass rivers;

▶ reconstruct the Tamiami Trail—possibly elevating it—to allow water to flow potentially unimpeded southward;

▶ restrict development and purchase drained land for restoration purposes as soon as it becomes available;

▶ preserve buffer areas on the eastern boundary of the park to protect water quality and wildlife.

Still, some Everglades experts remain skeptical about the plan. Some areas could be kept continually dry for the benefit of deer hunters while an adjacent parcel would be flooded with the surplus water. One state agency has refused to fill in canals so that fishermen may continue to use them for recreational purposes.

"The proposed plan falls short of meeting restoration targets for the central and southern Everglades, including Everglades National Park and the estuaries of Shark Slough and Florida Bay," says Dr. Thomas Van Lent, research scientist at Everglades National Park. "Water volumes are well below what are needed, and management objectives remain spatially fragmented, making consistent hydrologic releases difficult."

Dr. Stuart Pimm, professor of ecology at the University of Tennessee, agrees: "The plan should be reviewed by external, independent biologists and hydrologists who are impartial to the Everglades ecosystem and to south Florida's urban water demands." Pimm is the foremost expert on the endangered Cape Sable seaside sparrow in the Everglades.

NEWS UPDATE

▶ **CONCESSIONS REFORM VICTORY:** A bipartisan agreement in Congress has capped an eight-year-long NPCA endeavor to improve the way concessioners establish and operate businesses in the national parks. The resulting legislation will significantly increase competition for contracts and boost park revenues.

Concessions reforms were part of legislation introduced by Sen. Craig Thomas (R-Wyo.) in the Vison 2020 National Parks Restoration Act, which provides open bidding on nearly all business contracts of more than $500,000. Over time, the bill will increase the amount of franchise fees that concessioners pay back to the federal government for the right to operate in the parks. Concessioners currently gross $714 million but pay the National Park Service only 2.5 percent of that figure. The legislation also shortens the length of concessions contracts to ten years, which will quicken the turnover rate, allow other concessioners to compete, and improve service to visitors.

"Sen. Thomas was able to craft an acceptable compromise with Sens. Dale Bumpers (D-Ark.) and Robert Bennett (R-Utah), and with Interior Secretary Bruce Babbitt," says Bill Chandler, NPCA's vice president for conservation policy. "This legislation begins to close loopholes for businesses that have been profiting unfairly off our national parks."

REGIONAL REPORT *continued*

PACIFIC NORTHWEST

▶ Crystal Mountain Ski Area, adjacent to Mount Rainier National Park, is planning a major expansion that will more than double its capacity. The expansion would include new ski lifts, expand ski terrain by 50 percent, introduce night skiing, and increase overnight lodging. This project could degrade Mount Rainier's air and water quality and cause light pollution to the night sky beauty of the park. NPCA is concerned that the project could negatively impact both the resources and visitor experience at this majestic mountain park. **TAKE ACTION:** For more information on the expansion, call Larry Donovan with the U.S. Forest Service at 425-744-3403. For the opportunity to comment on the project, visit the Web at <www.skicrystal.com>.

ROCKY MOUNTAIN **Mark Peterson, Regional Director**

▶ The nation's newest national monument, Grand Staircase-Escalante in Utah, protects an outstanding labyrinth of natural land forms, archaeological remains, and paleontological resources in the heart of Utah's canyon country. The Bureau of Land Management presents five management alternatives addressing protection, enjoyment, and varied use of the monument. NPCA believes development should occur outside the monument in gateway communities and is pressing for wilderness areas, unpaved roads, and development of a resource monitoring program. The public is invited to comment on alternatives until February 12. **TAKE ACTION:** Access the monument's Web page to download and print the documents at <www.ut.blm.gov/monument>; call the monument and request a paper copy or CD-ROM version at 435-865-5100. To be kept abreast of future developments, place your name on NPCA's Grand Staircase mailing list by calling 1-800-NAT-PARK, ext. 229.

SOUTHEAST **Don Barger, Regional Director**

▶ Although federal funds have been appropriated to begin movement of Cape Hatteras lighthouse away from the encroaching Atlantic, the North Carolina state legislature passed a bill that could accelerate Cape Hatteras shoreline erosion. The legislation allows the transfer of public land along Oregon Inlet to the seafood industry, which wants to build jetties into the inlet. Lighthouse conservationists fought the construction of jetties because their cost was exorbitant, they manipulated the natural shape of the seashore, and their effect is ultimately useless against the pull of the sea. NPCA will carefully monitor this 20-year dispute between federal and state authorities to ensure the safe relocation of Cape Hatteras lighthouse.

SOUTHWEST **Dave Simon, Regional Director**

▶ Big Thicket National Preserve in East Texas, a park renowned for its diverse plant and animal life, was spared recently from potential damage. A "flood control district," planned for an area adjacent to the park, was rejected by three surrounding counties. Residents and real estate interests were hoping for the construction of storm water controls, which would have hindered vital waterflows in a region where heavy rainfall is part of a natural, seasonal cycle. NPCA and a diverse coalition of activists fought the proposed district, arguing against the exorbitant cost, infeasibility, and damaging effect flood controls would have had on Big Thicket's ecosystem.

MANAGEMENT

NPCA Supports Fishing Terms

Compromise charts course for marine preservation in Alaska.

GUSTAVUS, ALASKA—NPCA recently supported the National Park Service (NPS) in resolving a lingering dispute with the state of Alaska over commercial fishing in Glacier Bay National Park and Preserve (NPP).

Ongoing resource extraction in the bay has thwarted the chance to preserve and study one of the largest unexploited, naturally functioning marine ecosystems in the world. Sen. Frank Murkowski (R-Alaska) added a provision to the FY 1999 Omnibus Appropriations bill to prohibit NPS from enforcing any new fishing restrictions. Following strong opposition from NPCA and others, Murkowski's language was dropped. Instead, a provision negotiated by Sen. Ted Stevens (R-Alaska) and administration officials passed Congress and was signed into law by President Clinton. The compromise does the following:

▶ directs the immediate closure of all designated wilderness waters and provides funds to buyout crab fishermen;

▶ phases out commercial fishing in the remaining areas of Glacier Bay proper. NPS must issue non-transferable, lifetime permits to eligible fishermen;

▶ authorizes continued commercial fishing in park waters outside Glacier Bay proper; and

▶ directs the state of Alaska and the federal government to jointly develop a management plan for the outer waters to protect park resources and promote marine research.

TAKE ACTION: Write letters to Glacier Bay NPP and help NPCA support implementation of the compromise points listed above. Comments will be accepted until January 15. Address: Superintendent Tomie Lee, Glacier Bay NPP, Box 140, Gustavus, AK 99826-0140; call 907-697-2232; or e-mail: <glaba_superintendent @nps. gov>.

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J/F 99

HENRY H. HOLDSWORTH

What to do about ELK

Park Service management guidelines call for allowing nature to control wildlife populations, but intense development makes implementing that policy at three national parks in the same ecosystem more difficult than it might seem.

BY MICHAEL TENNESSEN

LEE KLINE

A BULL ELK, WEIGHING more than 1,000 pounds, stands on a low mound. He points his snout at an approaching male and begins to bugle—a sound that reverberates across the meadow in Colorado's Rocky Mountain National Park. The challenger, intent on contesting the bull's reign over 15 female elk nearby, bugles back, brandishing his enormous rack of antlers. Both bulls tear up grass and shrubs, then suddenly veer, charge one another, and lock antlers.

The match continues, each struggling to gain momentum, moving back and forth like sumo wrestlers. Soon the challenger tires, disengages, and runs away, and the winner bugles again to announce his victory.

BUTCH DILL

Bull elk spar for the right to mate with females. Each fall, the elk migrate from Rocky Mountain National Park to lower elevations to mate and survive the winter.

This scene is repeated each fall, when elk in Rocky Mountain National Park migrate eastward from the high mountains to lower elevations and out into Estes Valley, where they will mate, survive the winter, and bear their young.

A larger confrontation, however, is brewing, for elk populations are expanding in the park, growing from 1,000 in the late 1960s to about 3,200 today. One indication of this population increase is the number of complaints involving the ungulates coming into the office of Rick Spowart, who is with the Colorado Division of Wildlife. Spowart, who handles complaints against elk, says he has received irate calls at 1 a.m. threatening class action suits because of the elk's damage to property. And some of the confrontations involved more than property damage. One cow elk chased down a roller skater and then "did a tap dance on her," said Spowart. Elk chase golfers off a local fairway and have broken into stables, where the animals have eaten hay and even gored horses. One resident was killed when his car ran into an elk on the highway.

Besides confrontations with people, the increase in the number of elk is having an ecological effect in the park. Biologists there fear that elk are contributing to a decline in willow and aspen within the park's boundaries. The result may be a decline in beavers, which use willow for their dams, as well as a decline in songbirds, butterflies, and amphibians, all part of the riparian habitat.

Park Service management guidelines allow nature to control wildlife populations, but an increase in development next to parks sometimes makes implementing that policy difficult. Three parks in the Greater Yellowstone Ecosystem—Rocky Mountain, Yellowstone, Grand Teton—have chosen different methods of handling these populations.

Elk management is controversial even within the biological community. At a meeting of scientists brought to the park to assess current conditions and provide some thoughts on vegetation management objectives, disagreements were plentiful. According to Therese Johnson, elk management biologist for the park, "When we got out into the field, a huge battle broke out over whether it was okay to lose aspen on the elk winter range, a small portion of the total park." According to Mark Peterson, NPCA's Rocky Mountain regional director, "It's possible the public will have to choose between wanting beavers and willows or having lots of elk. We may not be able to have it all."

Once abundant throughout temperate North America, the North American elk, or wapiti, were slaughtered for food, leather, and sport when European explorers set out to conquer America. Elk were wiped out in the area of Rocky Mountain National Park in the late 1800s, but in 1913 and 1914, 28 animals were transplanted there from Yellowstone National Park, just before Rocky Mountain was established as a park in 1915.

Today, three types of elk are found in and around the Rocky Mountains from Central Alberta to Northern Mexico, with large populations in Rocky Mountain, Yellowstone, and Grand Teton national parks. But, as similar as those mountain parks may be, each one has its own unique elk management approach.

When Yellowstone National Park was established in 1872, for instance, park officials pursued an active management philosophy. To increase numbers, they sought out and killed predators—the last wolves were eliminated in 1926. Elk populations, not surprisingly, blossomed. In the 1950s and early 1960s, elk were intensively managed. In some cases, the animals were fed to keep them alive through the winter months. In others, they were rounded up and shipped across the country or slaughtered.

But in 1963, the Leopold Report—principally authored by biologist A. Starker Leopold—recommended that park wildlife be controlled by natural forces. As a result, during the summer in Yellowstone, elk numbers now rise to 30,000, while winter numbers range closer to 17,000 as animals migrate to

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But then the harsh winters, which make it difficult for the grazers to find food, limit elk numbers. Consider that only 246 elk died in the great Yellowstone fires of 1988, but an estimated 3,000 to 5,700 died that winter from starvation caused by the loss of vegetation from fire and drought.

Currently, 120,000 elk live in the Greater Yellowstone Ecosystem, and one of the most contentious issues is whether elk are overgrazing the area. Critics have challenged Yellowstone officials for their natural regulation policy. One particularly vociferous critic, Charles Kay, is a professor of political science at Utah State University and a wildlife ecologist. He contends that elk have overgrazed the park. In an appearance before Congress, he criticized Yellowstone wildlife managers for allowing unnaturally large numbers of elk to occur. He claims that beaver are ecologically extinct in the park because of a lack of willow, aspen, and cottonwood—prime beaver food and dam-building material.

Kay likes to brandish photos of Yellowstone National Park taken in 1872 when elk were few and parklands thickly forested. He also likes to point to experimental "exclosures" on Yellowstone's Northern Range. Outside these fences are knee-high grasses and foot-high willow shoots, but inside the fence is a densely forested island in the middle of a meadow.

According to Roy Renkin, management biologist at Yellowstone National Park, however, the exclosures are an artificial environment used as a control to look at browsing influences. He says holding up an unbrowsed piece of land as a standard in an area where browsing has always occurred is misguided.

Bob Crabtree, founder and science director of Yellowstone Ecosystem Studies, also says the photos are misleading. They come from a period when the army was called in to stop poachers who had wiped out populations in the wintering grounds to the north and had moved into Yellowstone despite its designation as a park. Crabtree says he's "still waiting for a better justification that there are too many elk. At this point, most scientists can't agree with Dr. Kay."

Renkin also says that the idea that Yellowstone biologists simply "let things happen" is misguided. Yellowstone National Park is part of the Northern Yellowstone Cooperative Wildlife Working Group, an interagency consortium of biologists and managers from Montana Game and Fish, the U.S. Forest Service, the Park Service, and the Biological Resources Division of the U.S. Geological Survey. The group monitors elk population numbers, distribution, and hunting outside the park, as well as encourages active research and dialogue, all within the park's natural regulation mandate.

Quite the opposite management approach is followed at Grand Teton National Park, located south of Yellowstone. Within Grand Teton's boundaries are from 3,000 to 5,000

HENRY H. HOLDSWORTH

LEE KLINE

Growing populations and declining habitat have forced elk to seek food from untraditional sources such as lodgepole pine needles in Yellowstone (top) and *front yards of Estes Park residents outside Rocky Mountain NP (below).*

elk, but within the extended environment, there are nearly 18,000 animals. During the winter, many of the Grand Teton elk migrate onto the adjacent National Elk Refuge, which is run by the U.S. Fish and Wildlife Service. Development has enveloped most of the elks' former winter range, and the animals come to the refuge to be fed.

The refuge was created in the early days by ranchers who wanted to keep the elk out of their haystacks but did not want the animals to starve to death. Now condominiums have replaced ranches, and the state of Wyoming has added 22 winter feed lots of its own to compensate for the loss of habitat. Says Barry Reiswig, project leader for the National Elk Refuge, "We are now stuck with the situation where we either feed them, or we are going to have a huge loss of elk."

Bob Schiller, chief of the Science and Resource Management Division, believes that Grand Teton suffers fewer of the problems elk face in the northern Yellowstone range simply because the park is mostly summer habitat. Says Schiller, "They are somebody else's problem in the winter."

Bob Crabtree feels that concentrating elk in artificial feed lots in winter is a situation ripe for the spread of brucellosis, tuberculosis, and a variety of other diseases that affect ungulates. Though ranchers do not seem to get as upset about the possible spread of brucellosis from elk to cattle, Renkin feels that the possibilities of transmission are even higher than they are for bison to cattle simply because of the number and distribution of elk in the Yellowstone area.

Part of that acceptance is because communities surrounding the parks make money off the elk, either from tourists who come to see them or from hunters who come to take them. And part of that is because the Animal and Plant Health Inspection Service (APHIS), which has blown the whistle so shrilly for bison, simply does not appear that interested in elk—yet.

While some question the Park Service's variation in following natural regulation policy, park biologists claim cooperation exists among the different parks. And Yellowstone's Renkin says it is a good thing for managers to have flexibility in dealing with elk populations. "If everybody did things the same way, what opportunity would we have to learn?" Johnson at Rocky Mountain National Park agrees. She feels Park Service management philosophies are purposely broad, allowing individual managers to adjust for local situations.

An example of individual approaches is the reintroduction of wolves. In Yellowstone, wolf reintroduction has gone well, providing an effective yet natural tool that may affect elk numbers and distribution. But Johnson claims that alternative is unlikely to occur in Rocky Mountain National Park because of its size (only about 1/10th the size of Yellowstone) and because of the proximity of dense development.

THOMAS D. MANGELSEN

During winter months, elk are fed at the National Elk Wildlife Refuge and at feed lots maintained by Wyoming.

In fact, one reason the elk population at Rocky Mountain National Park has expanded so fast is the growth in Estes Park, a community directly to the east of the park. When Estes Valley was less developed, hunters had easier access to wintering elk, so hunting was used as a tool for keeping the elk population in check in the absence of predators such as wolves and grizzly bears.

With park biologists no longer feeling that they can rely on hunting outside park boundaries to control elk populations, the park is considering a number of elk and vegetation management options. These include fertility control, reduction through shooting, actively managing vegetation, and excluding elk from certain areas. "We are looking at the whole range of scenarios," says Johnson, "including a no-action scenario."

So how to decide what to do? Since 1969, Rocky Mountain National Park has been able to maintain a hands-off approach to the animals. But whether that approach continues once the research is in remains to be seen. The final report—on elk populations and the environment surrounding them—begun in 1994 by park and U.S. Geological Survey scientists, is due out in August of this year. Park managers expect to draft an elk and vegetation management plan and environmental impact statement based on the findings.

Crabtree thinks that making intelligent decisions about elk in any of the parks requires long-term, large-scale cooperative research projects on an ecosystem scale. And those studies must look at the availability of forage, human impact, climate, predators, and migrational patterns. He criticizes previous studies that have been too short and too narrowly focused.

According to Crabtree, "We need more research dollars, but those dollars seem to come only when a crisis arises and don't continue after the crisis abates. But short-term and crisis management only perpetuates the problems. We need to look at the big picture. We need to get back on track with long-term, large-scale research, or these problems are going to become epidemic. We can't preserve and protect what we don't understand."

MICHAEL TENNESSEN, *who lives in Lomita, California, last wrote for* National Parks *about Elderhostels.*

CORBIS-BETTMAN

FROM WHERE THE SUN NOW STANDS

Nez Perce National Historical Park shows how a war nobody wanted changed a people's long history forever.

BY SALLY-JO BOWMAN

KNOLLS AND RIDGES of golden grass shimmer in summer heat, dark green cottonwoods far below along Idaho's White Bird Creek. Otis Halfmoon, Idaho unit manager of Nez Perce National Historical Park (NPNHP) and a Nez Perce himself, sweeps his arm across the landscape.

"This was our country for generation upon generation, so long ago there are stories of hunting mammoth," he says. "And then, this valley

White Bird Battlefield is the site of the only Nez Perce victory against the U.S. Cavalry. Chief Joseph, inset, surrendered four months later.

JOHN ELK III

was the beginning of the war."

About 60 vastly outnumbered Nez Perce warriors beat the U.S. Cavalry in the Battle of White Bird Canyon on June 17, 1877. "A great victory," Otis says. "But they knew they couldn't win a war. For every soldier killed, a hundred would take his place. For every Nez Perce warrior killed, none."

From that day, the Nez Perce War became four months of history with more than a century of consequences for the Nez Perce, Nimiipuu, The People. The war dominates Nez Perce National Historical Park—38 ancient and more recent sites in four states, cooperatively administered with federal, state, and local governments, historical societies, and the Nez Perce tribe.

Frank Walker, NPNHP superintendent from 1990 to 1998, considers the sites "pearls" on the necklace of the Nez Perce National Historic Trail, the 1,500 miles some 700 Indians took in vain flight from Gen. Oliver O. Howard in 1877. The route winds from Oregon's stunning Wallowa Mountains into the Clearwater River forests of Idaho, then through Yellowstone Park and the short-grass prairie of Montana to Bear Paw Battlefield. It was here on a snowy, blustery October 5 that Chief Joseph ended his surrender with the now-famous words: "From where the sun now stands, I will fight no more forever."

"NPNHP is an idea as much as it is a park," says Walker. "It's not just a pretty place to hike. The Nez Perce touch your heart and you are changed forever."

OTIS HALFMOON, 45, was born to politics and history. His father, Richard, served 33 years on the tribal council in Lapwai, Idaho. His mother, Nancy, knew Yellow Wolf, a war veteran who collaborated with Lucullus Virgil McWhorter in the 1930s to write *Yellow Wolf, His Own Story*, an account of the war. Before he was 12, Halfmoon had studied both thick volumes.

"In the Nez Perce War," he says, "Both sides lost. We lost our lives. The soldiers lost their honor."

The Treaty of 1855 defined most of the Nez Perce homelands as reservation. But in 1860, white men struck gold within the boundaries, and the new Treaty of 1863—which a number of chiefs refused to sign—reduced the reservation by about 90 percent. In May 1877, General Howard ordered the dissenting bands of Nez Perce to move to the reservation or face his army.

The five hold-out bands—perhaps a quarter of the Nez Perce—opted to move. In early June, they gathered at Tolo Lake, Idaho, to march onto the reservation on the deadline, June 14. The morning of June 13, three young Nez Perce rode from camp, angry at events and seeking revenge for the murder of one of their fathers. Initially they killed four white settlers, then about ten more on June 14.

Howard, of course, would retaliate. Early on June 17, the U.S. First Cavalry charged over the golden hills. Arthur Chapman, a white settler volunteer, fired two shots at Nez Perce approaching under a white flag, headed for their traditional camp at Lamata, White Bird Canyon. Then a warrior shot cavalry bugler John Jones.

The war was on.

SALLY-JO BOWMAN

Otis Halfmoon, an interpreter at the park, encourages Angel McFarland to keep their history alive by passing it on to younger generations.

ENORMOUS rock cairns mark the summit of the Lolo Trail at 6,966 feet. Subalpine fir grow arrow-straight from a forest floor of huckleberry and heather, beargrass and dwarf lupine. On this rare-air blue-sky day, Otis Halfmoon shares this ancestral place with a young Nez Perce, Angel McFarland, who recently moved home after ten years in Seattle. There she earned a general degree focusing on Indian Studies and Public Relations at the University of Washington and then became a counselor of urban Indian youth. Now she works on the reservation coaching youngsters in the Nez Perce language and performing arts. For these few days with Otis, the goal is on-the-ground history. For a century or more, Nez Perce hunters used this and two other trails to Montana's buffalo country.

After the White Bird battle, Howard's beefed-up forces engaged the Nez Perce again at Clearwater, fighting to a draw. Under Chief Looking Glass, the Nez

Perce took the Lolo Trail—with 3,000 head of horses—seeking their friends, the Crow.

"Imagine it here," Otis says to Angel. "Seven hundred Nez Perce. Old folks, kids, pregnant women." A wry smile plays on Otis's face. "And no McDonald's."

THE CROW failed them. So they headed south into Montana's Bitteroot Valley. On August 7 Looking Glass called for a rest at an old camping ground on the Big Hole River where he thought they'd be safe.

Now it's Big Hole National Battlefield, where Otis spent his first three years with the National Park Service starting in 1989. He guides Angel along the interpretive path.

"This is a cemetery," he says. "The hundred Nez Perce killed and the soldier dead, they're probably all still here. It should never have happened."

Some Nez Perce counseled against stopping. Some spoke of dreaming of the river red with blood. Foremost among them was Wottolen, Angel's great-great grandfather, known for his weyekin, or spiritual power.

Otis's great-grandfather, Five Wounds, "got in a big argument with Looking Glass," Otis says. "Maybe that's where I get my argumentative nature."

THE NORTH FORK of the Big Hole River horseshoes through willows at the foot of a steep bald hill backed by lodgepole pine. Across the river, a grassy flat stretches toward sage plains baking in relentless sun.

But it's high here—6,320 feet—and the nights are chill. And they're full of ancestral memories.

"Indian people feel things more readily here," Otis tells Angel. "I've heard women and children crying. I see something move, but nothing's there. Even white people say, 'They're still here.' And they are, especially in the evening. One August 9, the anniversary of the battle, your brother Mike and I came to sing honor songs to get them to the other side, but they're still here."

Most of the spirits died the morning of August 9. Two-thirds of the 90-plus Nez Perce lost were women and children shot in their tipis.

WAYNE MUMFORD

JOHN ELK III

Ninety percent of the Nez Perce killed at Big Hole Battlefield were women and children who were shot in their tipis. Frames mark the sites where lodges were located, and wooden hats and feathers mark where soldiers and warriors were killed.

McWhorter and Yellow Wolf surveyed and staked Big Hole and Bear Paw battlefields in 1927 and 1928, and now the bare poles of tipi frames mark some of the Big Hole lodge locations. Wooden feathers mark where Yellow Wolf knew a Nez Perce fought or died. Wooden hats signify soldiers in hand-to-hand combat.

Otis stands among five feathers grouped in a riverside tipi. "This is where childen were." His voice catches. Otis is a tough man, a U.S. Army veteran, a warrior in his way. But he confesses that seldom in his years as a Big Hole ranger was he able to lead an interpretive walk without choking.

The Seventh U.S. Infantry—162 soldiers plus 34 volunteers under Col. John Gibbon—spotted the Nez Perce on August 8. In the pre-dawn dark of August 9, they crept into the willows across the river.

When the tipis lit up with breakfast fires, the soldiers charged. "The orders were to shoot low into the tipis," Otis Halfmoon tells Angel. "Three volleys and move. Three volleys and move. Some say it sounded like rain on canvas. Much death of women and children happened right here. This side fell completely. They talk about screams. . . ." Otis takes a moment to recover himself.

"Women jumped into the water and the soldiers shot at their bobbing heads. It was true, the dreams. The water did run red with the blood of our people."

One of the first to die was Rainbow, a young buffalo hunter who, with Five Wounds, had recently joined their people while returning from the plains.

"They were fearless warriors, like brothers," Otis says. "They grew up together, and told each other secrets. Rainbow told Five Wounds once, 'Forgive me if I turn the other way in the dark, for if I fight at night, I will be killed.'"

And so it was that Rainbow was shot

before dawn at Big Hole. "Five Wounds saw his friend's body, and he wept," Otis says. "And he vowed—as their fathers had before them—to die on the same day."

Otis leads Angel across the river and up the hillside into the pines. Hat markers clump in the depressions of rifle pits where soldiers dug in against an Indian counterattack that killed 29 and wounded 40.

"Now, to be fair," Otis says, "a lot of these fellows were immigrants who didn't know what they were getting into. They had no water, they were crying, scared, and wanted to go home. And here's an irony: a Capt. Browning ordered his men not to shoot women and children. Two generations later, his grandson, Bob Browning, donated Appaloosa horses back to us."

Otis stops at a feather marker near the top of a ravine. "Five Wounds made a suicide charge up this hill," he says. "This is the story I pieced together. He was shot from behind, before noon. In the 1991 archaeological survey, we found the 45-70 slug here, mushroomed open. He must have been right-handed—his weapon flew off his right side as he fell backward. Other warriors tried to recover his body but they had to leave it."

By the time Gen. Howard arrived on August 11, the Nez Perce were gone. "Soldiers wrote about finding an Indian body staked down in the siege area," Otis says. Howard's surgeon also found it. "It was Five Wounds. The doctor cut off his head and sent it to Washington. We're trying for repatriation. Five Wounds is my great-grandfather."

AT BEAR PAW BATTLEFIELD, cattail and willow choke Snake Creek and the wind whispers in the prairie grasses: surrender. After Big Hole, where the Nez Perce lost all their tipis, they headed east through Yellowstone, then north, for the refuge of Canada. But on Snake Creek, just 42 miles from the border, a new army under Col. Nelson Miles struck from the east.

After five bloody days, chiefs Looking Glass, Toohoolhoolzote, and Ollokot, Joseph's brother, lay dead. About 30 more died, with 46 others wounded. Two chiefs remained.

White Bird led nearly 200 of their people into Canada, including Wottolen and his son Many Wounds, who became Yellow Wolf's interpreter with historian McWhorter, and Angel's great-grandfather.

WAYNE HUMFORD

Rock cairns mark the Lolo Trail in Idaho, a path the Nez Perce took while being pursued by the U.S. Cavalry in 1877.

With the rest, Joseph surrendered, "from where the sun now stands." White Bird died later in Canada, and it is Joseph who appears most in history books. In Otis's opinion, "All he did was surrender."

Indeed, Joseph never was a war chief. Indeed, in the Nez Perce loose confederation of "bands" of about 200, no one spoke for all. But more than 400 were exiled with Joseph to Indian Territory in Oklahoma, though Miles promised return to Idaho. More than 150 Nez Perce had died in the war, most of them women and children.

And yet, at Fort Walsh in Saskatchewan, two babies were born. One of them was Hattie Jackson, who would become, in time, grandmother to Otis Halfmoon.

FOR SOME park or trail visitors, the Nez Perce become a hobby, even a passion. For some Nez Perce, the historical park is a way of caring for homelands and sacred sites.

For Otis Halfmoon, the Nez Perce ranger, "It's kind of spooky in some ways. I tell these stories, and I can see them. Sometimes it's like I'm in the stories."

Angel McFarland said little at Big Hole, quietly absorbing all that had happened to her people. And that night, in her hotel room, she could see the stories too.

OTIS HALFMOON has his hopes for Angel. "What if I get killed in a car wreck?" he asks. "I have to pass this on, teach somebody, or it's gone."

He began when he was the first ranger at Bear Paw Battlefield when it was added as a national park site in 1992.

"I had gone to Bear Paw as a child," Angel remembers. "But the significance never really hit me until I went again years later with my nieces." On a tour, Otis showed them a round-headed metal survey stake, one of nearly 150 replacements for McWhorter and Yellow Wolf's 1927 markers. "Stamped on it was 'Wottolen fought here,'" Angel says.

"My great-great-grandfather fought so we could live. Now we fight in other ways so that we may all live. It is true, I am descended from him and other warriors and chiefs. But I gain strength from what all the people did back then. And [gain] even more pride in being Nez Perce."

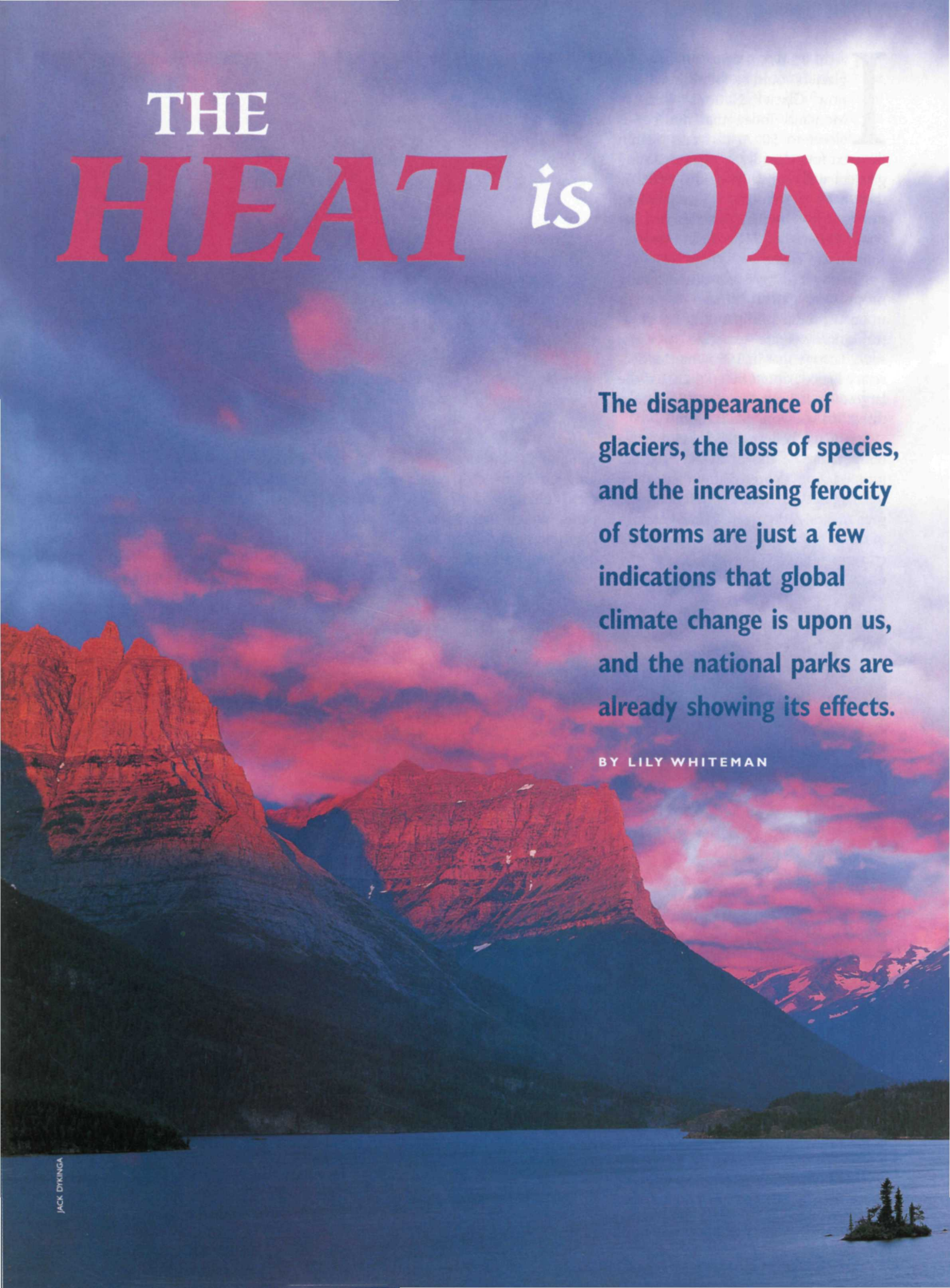
And that is how it is, for Talaltlilpt and Five Wounds—Angel McFarland and Otis Halfmoon—from where the sun now stands.

SALLY-JO BOWMAN *is a writer who divides her time between her residence in Oregon and her homeland, Hawaii. Her last piece for* National Parks *focused on parks that have formed partnerships with native peoples.*

THE HEAT *is* ON

The disappearance of glaciers, the loss of species, and the increasing ferocity of storms are just a few indications that global climate change is upon us, and the national parks are already showing its effects.

BY LILY WHITEMAN



JACK DYKINGA

In 1850, more than 150 glaciers could be found in what is now Glacier National Park in Montana. Today, that number is closer to 50. At this rate, within the next four decades, all 50 remaining glaciers will vanish from the park. By then, as Vice President Al Gore predicts, this harbor of ancient icefields will become known as "The Park Formerly Known as Glacier."

No longer just grist for disconcerting prophecies, global climate change is upon us. Indeed, impending temperature increases are expected to cause such damage that in 1997 Interior Secretary Bruce Babbitt billed them as "the largest, most pervasive and ominous threat" to confront civilization.

Scientists believe that the average temperature of the Earth's surface has jumped one degree Fahrenheit since the 1800s. And what a difference a degree makes! A deceptively small change in mean global temperature can lead to extremes in weather, such as the droughts in Florida, searing heat in Texas, and rainfall and flooding in Wisconsin and elsewhere witnessed this past year. Such processes could ultimately turn the Earth topsy-turvy—with the planet's poles tossing off their ice caps and some temperate regions experiencing freezes. It can also have the greatest initial effect on the smallest links in the food chain: plankton and invertebrates.

National Park System units are already showing that one degree in varied ways. Scientists, for example, believe that global warming helped completely melt Glacier Bay, a 65-mile-long inlet in Glacier Bay National Park and Preserve in Alaska, which was frozen shut only 200 years ago. Glaciers are particularly good barometers of global warming because they are too stable to manifest ephemeral, annual, or even decade-long variations; they reflect only long-term changes. And these glaciated parks, which include North Cascades, Olympic, and Mount Rainier national parks, will lose more than their famous icefields.

As glaciers disappear, their flow of frigid meltwater into streams ceases, and the temperature of the stream water consequently rises. These temperature changes, in turn, affect the plants and invertebrates that support amphibians, fish, and waterfowl. Some high alpine invertebrates, such as Glacier National Park's caddisfly, could be lost if water temperatures rise too high or if reduced water availability results in intermittent flow of streams.

The melting of glaciers and polar ice, together with the expansion of warming waters, has already raised sea level by four to eight inches since the mid-1800s. Scientists expect another increase of up to three feet by 2100. Such a sea change could inundate a number of national park units, including Dry Tortugas and Everglades national parks in Florida and Padre Island, Cape Hatteras, Assateague Island, Fire Island, and Cape Cod national seashores, which line the gulf and east coasts from Texas to Massachusetts.

Sea level rise threatens more than the

STEVE MULLIGAN

Scientists have measured an increase in sea level of four to eight inches since the 1800s and expect an increase of three feet by the year 2100. Many national parks will be inundated, including Everglades (above).

TOM BEAN

Glaciers are good indicators of climate change because they withstand short-term fluctuations. Muir Glacier in Glacier Bay shows a dramatic change from 1978 to 1993.

TOM BEAN

lighthouses and historic buildings found at these seashore parks. The increased water level would eliminate crucial habitat for endangered birds such as the piping plover and least tern. It could also inundate marshes, which are important marine nurseries and migratory bird stopovers, such as Nauset Marsh at Cape Cod National Seashore.

Some scientists, in addition, suspect that the unusual strength of several recent storms, such as Hurricane Andrew, reflected the influence of global warming. Although scientists generally refrain from attributing short-term weather to long-term warming that varies geographically and temporally, computer models predict that rising temperatures do increase the frequency of such catastrophes.

Also under surveillance as a possible result of a changing climate are the unusually hot summers of the past two decades. According to worldwide temperature readings from varied locations, including many national park units, the ten warmest years on record all occurred since 1980, and four of them since 1990. Once analyzed, data for 1998 will likely reflect another record-breaker.

With this ongoing heat wave, summers in the United States have become particularly hot and dry, and regional fire hazards have been aggravated. If this potential symptom of global warming continues for just another 50 years, most whitebark pines in Yellowstone National Park could wither in water shortages. The disappearance of these trees could affect grizzly bears, which feed on the pines' nuts.

Some food chains have already proved capable of magnifying even small temperature changes with particular speed and penetration. A case in point: During the 1950s, surface layers of the waters off Point Reyes National Seashore began warming by several degrees. In response, some plankton populations declined by as much as 80 percent. Marine creatures of all sizes, from squid and rockfish to whales, feed on plankton and are affected by its loss.

Consequently, several seabird species, for which Channel Islands and Point Reyes national parks are renowned, appear to be declining. For instance, the sooty shearwater, a gull-like seabird that annually migrates from Antarctica to the Northern Pacific, has declined by an alarming 90 percent.

On the Atlantic side, computer models predict that additional, though somewhat still undefined, warming could dull forces propelling the Gulf Stream, a current which has a tremendous effect on the weather in the northern latitudes. Evidence is mounting, for example, that spring in the Northern Hemisphere is arriving a week or more earlier than it used to, birds are migrating sooner, and trees are leafing earlier. What this shift may mean for the hundreds of parks along the eastern seaboard, a majority of which are historic or cultural, remains unclear.

"As temperature zones creep north-

ward, some landscapes will die off, and an increase in sea level will have a significant effect on the migratory bird population as marshes and other havens disappear," says Eileen Woodford, NPCA's Northeast regional director. "What will happen to cultural sites is less clear. We know what effect acid rain has on cultural sites. But we do not know what effect a sustained temperature increase will have on humidity levels, for instance, and what those humidity levels will do to historic buildings and artifacts."

What is driving global climate change? While not ignoring the plausibility of natural contributions, the Intergovernmental Panel on Climate Change (IPCC) points its authoritative finger toward human sources such as deforestation and the burning of fossil fuels, which includes coal and petroleum products that release so-called greenhouse gases like carbon dioxide. Emissions from automobiles and power plants—such as the Mohave Generating Station near Grand Canyon National Park—are among the biggest offenders. Just as the glass of a greenhouse traps incoming heat within the structure, so do these gases trap heat within the Earth's atmosphere. At current rates, a doubling of carbon dioxide levels will hike global temperatures another 3.5 degrees by 2100, according to IPCC.

Not only do human activities promote global warming, many of our activities cripple natural mechanisms for neutralizing its damage. Land use changes and pollution, for example, have limited the ability of many animals to evolve with changing conditions, even in the relatively rare cases when the warming onslaught would allow for such gradual accommodations.

Global warming could compel some native species to abandon stricken park units altogether, but such migrants would not necessarily find sanctuary elsewhere. Many would likely be stumped by such obstacles as sprawling agricultural and urban areas separating relatively small protected areas. "Few animals or plants would be able to cross Los Angeles on the way to a new habitat," says former World Wildlife Fund biologist Robert Peters, giving just one example. Populations that can neither adapt nor outrun changing conditions—as have survivors of earlier, slower climatic shifts—remain primed for extinction. And species that already have been reduced in great number, such as the endangered Florida panther and piping plover, would be even less likely to adapt.

BILL SILLKER JR.

Rising sea level would eliminate shoreline critical to the migratory patterns of some birds, such as the semipalmated sandpipers, above.

Everyone agrees, more information is needed. Researchers from the Biological Resources Division (BRD) of the U.S. Geological Survey are thus inventorying ecosystem characteristics, such as stream temperatures, glacial movements, and fire vulnerability, in about 80 parks. These study areas were selected for their ecological health, which reduces confusion from unrelated damage; the availability of historical records about them, which supports reconstruction of past conditions; and their inclusion of varied ecosystems from tropical to arctic.

By coupling field monitoring with computer analyses, BRD will define warming effects, as reflected in focused comparisons among past, present, and future conditions within many ecosystem types. Ongoing progress is publicized through news media, several Internet sites, pamphlets, and lectures.

After more precisely pinning down warming effects, BRD will recommend park-specific strategies to the National Park Service (NPS) for coping with the impacts of climate change. For example, some parks might be advised to acquire amphibious vehicles to accommodate encroaching ocean; others might be advised to bolster fire suppression to discourage migrations from burned habitats.

Nevertheless, simply designing coping strategies for warming, let alone following them, will burn a hole in the budgets of NPS and USGS's Biological Resources Division. Why? Because additional resources for these important activities have not been allocated to either agency. Warming-related projects just "get in line" for funding behind truckloads of other urgent park needs. Worse still, many BRD researchers complain that long-range issues, such as global warming, are frequently shortchanged in favor of creature comforts for visitors. "We can't compete with asphalt and toilets," says BRD ecologist Tom Stolgrem.

The Park Service has signalled that favoring creature comforts over resource protection may be changing. Although Congress has yet to appropriate necessary funds, Park Service Director Robert Stanton has proposed a draft plan for an ambitious five-year Natural Resources Initiative, a comprehensive strategy to shift the priorities within the Park Service toward resource protection.

Meanwhile, glaciers continue to back away from Glacier Bay without being monitored. The clock is ticking.

LILY WHITEMAN *lives in Washington, D.C., and last wrote for* National Parks *about personal watercraft.*

Global Warming: Accident of Nature or Human-Made Mistake?

Hardly anyone questions that human activities have already stoked the skies with carbon dioxide; that current amounts of circulating carbon dioxide could raise global temperatures; and that global temperatures are rising. But just because coexisting phenomena could have cause-and-effect relationships does not prove that they are so connected. So debate continues over whether temperatures are being raised by pollution, natural processes, or some combination.

Currently, this debate remains largely irrelevant to National Park Service (NPS) management activities. A bridge damaged by flood waters would be repaired regardless of what caused the problem overflow, and the U.S. Geological Survey research on warming effects will proceed no matter how the debate is ultimately resolved. Even definitive proof that warming is a purely natural phenomenon would not necessarily compel NPS to adopt a "hands-off" policy toward its effects. After all, the ability of many populations to successfully migrate and evolve with changes—even nature's own changes—has already been handicapped by humans. If such handicaps were to compound the severity even of natural warming, compensating management efforts might be warranted.

But to the extent that the debate will define approaches to reducing warming effects, its resolution holds sway over the long-term integrity of park units. Here's why: The theory that global climate change is a natural phenomenon, promoted primarily by political conservatives, is grounded in the climatic ups and downs that have come and gone over the ages without human interference. Ongoing warming, this perspective goes, similarly warrants a do-nothing approach without any contingency for possible human influences.

ERIC SANFORD/INTERNATIONAL STOCK

There has been a documented rise in global temperatures that coincides with the use of manufactured gases. Temperatures are rising fastest in northern latitudes.

By contrast, the theory that a changing global climate is a human-made phenomenon, promoted primarily by environmentalists, is grounded in the synchrony between climate creep and the Industrial Revolution. This theory is supported by matches between simulations of manufactured gases and actual warming patterns. As predicted, for example, temperatures are rising fastest in northern latitudes. To environmentalists, such correlations implicate warming as at least partly a human-made juggernaut begging for legislative brakes. Strengthening the cause-and-effect relationship between people and warming thus improves prospects for controls.

Doing just that was an unprecedented and pivotal declaration in the mid-1990s of the existence of "a discernible human influence on global climate" from the Intergovernmental Panel on Climate Change (IPCC), composed of 2,500 of the world's top scientists. Since then, most scientists have recognized human-caused warming, and dozens of countries signed the Kyoto treaty in 1997 calling for major worldwide emissions controls.

U.S. participation in the treaty still hinges on congressional approval with conservatives criticizing the Kyoto treaty as unfairly burdensome to the United States. This argument, however, flouts the United States' distinction as the world's largest resource user and, not surprisingly, the world's biggest carbon dioxide producer. Conservatives are also pushing legislation that would effectively forbid federal agencies even to discuss the treaty now, and some extremists have stooped to touting warming as beneficial because it may expand farmlands. Such arguments, ignore validation of the cost-effectiveness of controls and the incalculable costs of inaction for protected and unprotected areas alike.

Despite some resistance, the environmental perspective continues to gain support. A 1997 survey found that most Americans want greenhouse gas controls. Even some industrial titans, such as United Technologies, Enron Corp, and 3M, are now lending their names to the same environmental efforts they once considered anathema. Why? To influence impending controls they concede are inevitable, observes Eileen Claussen, executive director of the Pew Center for Global Change, a new nonprofit spearheading corporate efforts. In addition, several major oil companies, such as Shell and BP, recently quit an anti-treaty lobbying group, and Frank Nutter, president of the Reinsurance Association of America, is exhorting his colleagues to consider ways to anticipate damages from the effects of global warming to reduce crushing insurance claims from hurricanes and other potentially related catastrophes. Encouraging signs, though still a long way to go.

—LW

Beneath the Surface

Snorkeling provides an easy, exciting way to view underwater parks and the marine life they support.

BY EBBA HIERTA

NATIONAL parks offer many opportunities to visit diverse environments and observe wildlife close up, but reaching some of those places can require a high level of physical fitness and a hearty constitution. An alternative method of enjoying unusual plants and animals is as comfortable as a warm bath and as effortless as floating.

If that sounds good, consider taking advantage of the warm-water snorkeling opportunities in tropical and subtropical national parks where water is a key resource. No special skills are required, and no exertion is required to stay afloat. Face down in the water and breathing through a snorkel, your body is naturally buoyant. Even non-swimmers can do it safely using a flotation device.

JOHN D. BROOKS

Dry Tortugas, accessible by boat from Florida, has among the most pristine reefs in North America.

As you drift over a coral field, the world you see through your mask is a riot of color and movement. Coral reefs are among the most diverse environments in the world. Multi-hued fish dart among the coral heads, feeding on plants, algae, or each other. Crustaceans plod along the bottom. Soft corals, sea fans, and sponges flutter in the currents.

Although the hard corals that form the structure of the reef often look like lifeless, colored rocks, they are actually living creatures. Ensconced in the calcium "rock" live thousands of tiny polyps —jelly-like creatures that usually show themselves only at night when they feed. The color comes from the algae that live with the reef in a symbiotic relationship.

Reef fish come in an amazing variety of colors and shapes, such as the tube-like trumpet fish, the angular box fish, and the disk-shaped butterfly and angel fish. Many are easy to spot with their bright neon colors, but others are disguised and hard to distinguish from the reef itself. Many are solitary; others travel in schools, such as the clouds of yellowtail snappers or blue tangs that swarm over the reef. To see these wonders during your dive, just be still, hovering for a while over a coral patch and waiting for the shy creatures to show themselves.

Once you are comfortable on the surface, you will be ready to try free diving. Take a deep breath and swim down a few feet to examine the reef and its residents more closely. Make a game of finding the camouflaged creatures that look like part of the reef. Peek, but do not poke, into small holes to look for the wary animals, such as the red squirrel fish, that like to stay hidden.

Among the places offering warm-water snorkeling are the following.

Virgin Islands National Park

One of the best spots in the National Park System for beginners is Virgin Islands National Park on the Caribbean island of St. John, site of one of the world's first underwater snorkel trails. The self-guided trail in Trunk Bay is in well-protected water 15 feet deep or less. Unfortunately, the popularity of the Trunk Bay trail has led to tremendous damage to the reefs by careless snorkelers. So after a little practice in the bay, most new divers will want to venture onto less-visited reefs with healthier coral growth and a greater variety of plant and animal life. A few notable spots accessible from the beach include Waterlemon Cay, Haulover Bay, Saltpond

EBBA HIERTA, *a certified diver, lives in Atlanta, Georgia, and last wrote for* National Parks *about windjammer cruises.*

JOHN D. BROOKS, NATIONAL PARK SERVICE

The National Park Service offers guided underwater trails at both Virgin Islands National Park, St. John, Virgin Islands, and Buck Island Reef National Monument off St. Croix, Virgin Islands. Snorkelers may see sea turtles, Caribbean lobsters, and schools of brilliantly colored fish as well as coral and sponges. Besides offering information about the creatures snorkelers may see, the Park Service provides tips on ways to protect these invaluable resources.

JOHN D. BROOKS, NATIONAL PARK SERVICE

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JOHN D. BROOKS

Bay, and Tektite. Concessioners at the park offer boat trips to outer reefs where the human presence is even less evident. For information, contact park headquarters at 809-776-6201.

Sadly, the rapid pace of development on St. John outside of the park boundaries also poses a continuing threat to the health of the reefs. The island is steeply sloped, and construction exposes soil to the effects of erosion. Silt smothers the reefs and grass beds that serve as breeding habitat for many fish, crustaceans, and other sea creatures. The park is also a popular stop for boats, from small sailboats to huge cruise ships, and careless anchoring practices have destroyed many acres of reef.

Buck Island Reef

Another great spot not far from St. John is the 880-acre Buck Island Reef National Monument, which is six miles off the island of St. Croix. The reefs surrounding Buck Island feature vast stands of elkhorn coral, branching out and reaching as high as 40 feet in places. Although the reef suffered severe damage in Hurricane Hugo in 1989, the monument still offers plenty to see.

The uninhabited island is an important nesting area for three endangered species of sea turtles—hawksbill, green, and leatherback. Adult and juvenile turtles are frequently spotted grazing around the reefs. Buck Island also offers a marked underwater trail in a sheltered lagoon that is ideal for beginning snorkelers. With the monument accessible only by boat, six concessioners operating out of Christiansted, St. Croix, offer half- and full-day trips. Contact monument headquarters at 809-773-1460 for information.

Dry Tortugas National Park

Closer to the U.S. mainland is Dry Tortugas National Park, composed of seven small islands and 67,000 acres underwater. The park is at the westernmost edge of the Florida Keys about 70 miles from Key West. Because of their remote location, the islands have the most pristine reefs in North America. Although only 40,000 people visit the park each year, park managers are concerned about the growing number of

cruise ships that pay a port call to Key West and organize day trips to the Dry Tortugas.

In addition to the spectacular reefs, the park has a couple of human-made submerged structures that make for exciting snorkeling. A three-masted, iron-hulled sailing ship that wrecked on Loggerhead Reef in 1901 is the first popular spot. The ship has become an artificial reef, attracting a wide variety of marine life. Water depths range from zero, where the wreck breaks the surface, to 20 feet at the deepest point. At the second spot, many snorkelers also enjoy a nighttime dive in the sheltered water of the moat that surrounds the fort. The underwater world changes dramatically when the sun goes down, as nocturnal creatures venture out in search of food. Bring a strong dive light and prepare to enter another world.

Visitors come to the Dry Tortugas by boat and seaplane out of Key West. Day trips and some overnight trips are available by boat. The only accommodations in the park are a small number of primitive campsites. For more information, contact the park at 305-242-7700.

Biscayne National Park

Biscayne National Park, located between the Florida mainland and the northern point of the Florida Keys, is even more accessible for U.S. mainlanders than Dry Tortugas. In addition to some spectacular hard coral formations, the reefs in Biscayne have especially abundant soft corals. Giant sponges and sea fans of many shapes and colors attract a variety of marine life.

The snorkeling sites are accessible only by boat. The concessioner, who leaves from the Convoy Point Visitor Center daily at 1:30 p.m., can be reached at 305-230-1144. Reef trips are conducted only in good weather from May to October. Other times, snorkelers are taken to the mangroves inside Biscayne Bay. Many juvenile fish live in the protection of the entangled underwater roots of the mangroves until they are large enough to venture out to the reefs.

The water quality in Biscayne National Park is quite good, but the heavy boat and ship traffic in the area poses a constant threat to the reefs. A small boat going aground can do tremendous damage to a coral reef, and a collision with a large ship, as happens with disturbing frequency, can be devastating.

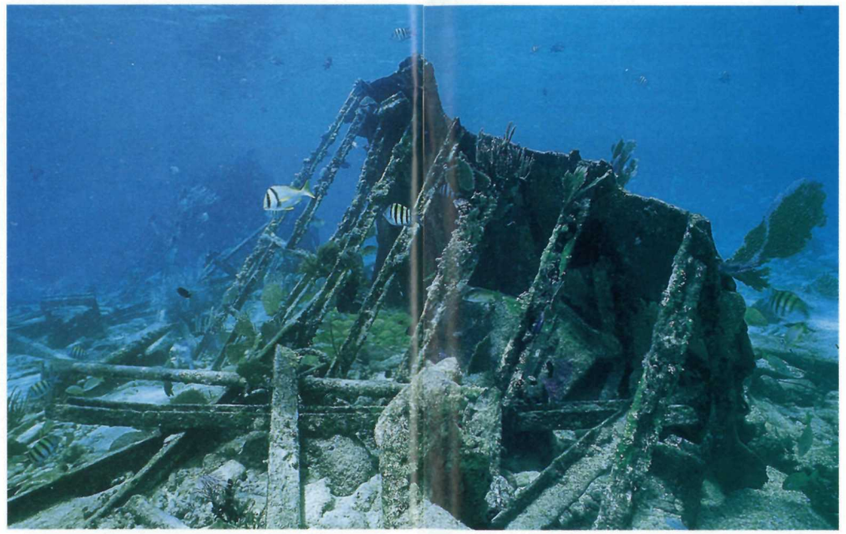
The coral in Biscayne and the Caribbean parks is also subject to bouts of coral "bleaching," a condition that seems related to a rise in water temperature. When the water reaches a certain temperature, the coral expels the colored algae that it depends on for food. Short bleaching incidents do not seem to affect the coral's health, but park biologists worry about the long-term impact as the frequency of bleaching increases.

Daniel Lenihan and John D. Brooks, who work with the National Park Ser-

Snorkelers are cautioned not to touch coral or feed fish.

JOHN D. BROOKS, NATIONAL PARK SERVICE (4)

Neon colors make some fish easy to see; others blend into the coral.



Sunken ships provide artificial reefs for a variety of sea creatures and an interesting place for snorkelers to explore.

SNORKELING TIPS

Underwater Wonders of the National Parks, published last year, is an indispensable resource for anyone considering a snorkeling trip. Written by Daniel Lenihan, director of the NPS Submerged Cultural Resource Unit, and John D. Brooks, an underwater photographer with the unit, the book details the watery wonders of the park system, from the coral reefs of the Caribbean to the icebergs in Alaska.

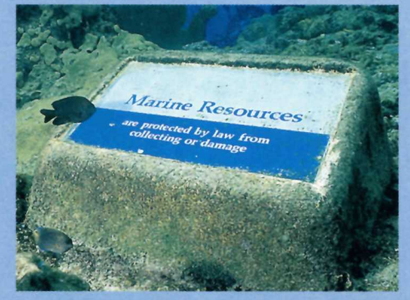
The two have gone snorkeling and scuba diving at every park mentioned in the book and include detailed suggestions on where to go, how to get there, and what you might find. They also have some sound advice for making your snorkeling excursion more enjoyable and helping to protect the fragile reef environment, including these tips:

▶ Do not touch the animals. Even a gentle caress can disturb the mucous coating that helps protects fish from disease.

▶ Do not feed the fish. If fed by humans, after a while they become dependent on handouts and lose the ability to forage. Also, they lose their natural wariness, which makes them easy prey for poachers. Even though harvesting fish for tropical collectors is illegal in the national parks, it still goes on.

▶ Do not touch the coral. The tiny jelly-like polyps that live inside the hard calcium casing are fragile. One swipe of the hand can kill hundreds of them. Many popular shallow reefs have been decimated by careless swimmers who stand on them when they get tired.

▶ Swim gently and avoid kicking up a lot of sand when near a reef. The sediment can eventually smother the coral and block vital sunlight.



▶ Wear a liberal coating of waterproof sunscreen on your back and the backs of your legs. The thin film of water over you acts as a magnifier and because the water keeps your skin cool, you may not realize your skin is burning until it is too late. People who are especially sun-sensitive should wear a covering.

▶ Keep an eye out for stinging organisms like jellyfish and fire coral.

▶ Do not reach into holes or crevices in the reef. They could turn out to be the lair of a moray eel.

▶ Take off your jewelry. While barracuda attacks are almost unheard of, the toothy fish do seem to be attracted to shiny objects.

▶ Shark spottings are rare on the shallow reefs that snorkelers frequent, but if you see a shark, do not panic. Most reef sharks are passive types, not man eaters, and they usually ignore swimmers. If one acts aggressively or pays undue attention to you, calmly and slowly leave the water.

▶ Do not walk in shallow water near the reef; sea urchin spines can cause nasty puncture wounds to the bottom of your feet.

▶ Shuffle your feet across the bottom as you wade through the shallow sandy areas on your way to and from the reef. Stingrays lying on the bottom will swim off if you bump into them but sometimes sting when they are stepped on.

▶ Be aware of currents. Unless you plan to do a "drift dive" where you start in one spot and let the current carry you to an exit point, it's usually best to swim into the current first and then let it carry you back at the end of your dive when you are most tired.

—EH

vice Submerged Cultural Resources Unit and are co-authors of *Underwater Wonders of the National Parks*, also recommend the snorkeling opportunities in a pair of far-flung parks—War in the Pacific National Historical Park on the island of Guam (671-477-9362) and National Park of American Samoa (011-684-633-7082). Both offer excellent snorkeling.

Visitors to any of these parks should remember that coral reefs are extremely fragile environments where human impacts take a heavy toll. Corals exist only in a tight range of environmental conditions and, when the coral is killed, the huge array of other creatures and plants that exist with it lose their habitat. Lenihan, Brooks, and other Park Service officials from these watery parks hope that each visitor will become an advocate for conservation and the stringent controls needed to preserve these underwater wonders.

Getting Too Many Conservation Mailings?

Occasionally, on a limited and selected 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 remove the mailing label from the cover of your *National Parks* magazine and send it with this coupon to us at this address:

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OREGON

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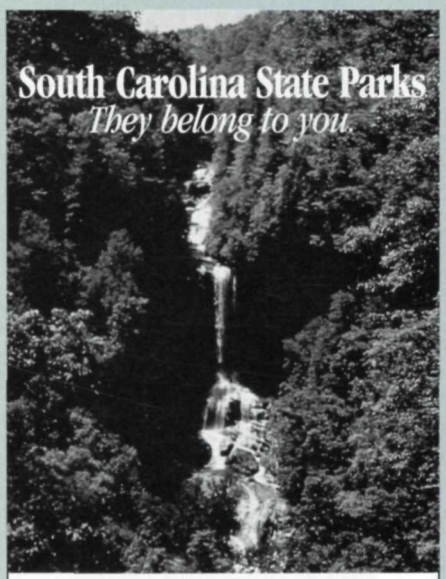

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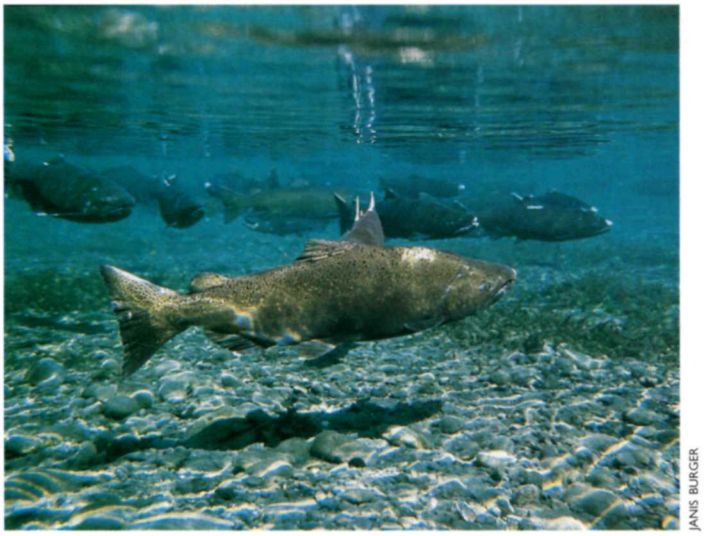
Swimming Upstream

Fifteen distinct species of chinook salmon ply the Pacific, and nearly all are considered threatened.

BY ELIZABETH G. DAERR

FIFTEEN evolutionarily distinct stocks of chinook salmon spawn in waters from southern California to Washington and east into Idaho. While some have fared better than others, the scale continues to tip more heavily toward endangered status—the Puget Sound chinook is the latest casualty and is expected to be listed as threatened under the Endangered Species Act this spring.



JANIS BURGER

Puget Sound chinook salmon face many obstacles and will soon be listed under the Endangered Species Act.

Chinook begin their lives in freshwater streams, moving out into the ocean three months to a year after birth. Up to seven years at sea provide the fish with bountiful food and escape from their many inland predators, which include grizzly bears, birds, river otters, and other fish. Despite their expansive sea-going migrations, the fish return to spawn in the exact stream in which they were born.

The female digs a series of nests, called a redd, by lying sideways and fanning sediment out with her tail. As the female discharges her eggs into the redd, a male releases his sperm, fertilizing them. The process may be repeated several times. All their energy is spent on ensuring future generations; they lay and fertilize thousands of eggs and die.

Problems abound for the chinook, nicknamed the "king salmon" because it is the largest salmon species, often growing to 40 pounds or more. The most visible impediment to its perpetuation is the numerous hydroelectric dams that line the rivers of the Northwest and block migration upriver to its spawning grounds. Fish ladders have been constructed on some of the dams to help them over these impasses, but many juvenile fish die in them.

Two dams along the Elwha River in Washington State, one inside Olympic National Park, have been approved by Congress for removal, but Washington Sen. Slade Gorton, (R-Wash) who opposes the legislation, has held up the funds to complete the project. "We have a solution" to perpetuating chinook around Olympic, says Brian Winter, fishery biologist at Olympic, "but six years later we still have no funding."

Other threats come from agricultural runoff, which fills streams with pollutants, and soil erosion from clear-cut forests and unpaved roads chokes streams with sediment, burying fertilized eggs. Salmon require cold water, but the timber industry's historic practice of taking trees right to the water's edge has eliminated shade trees that keep temperatures cool and oxygen levels high. Logging also removes trees that would normally fall into the water and create protective pools for eggs and young fish. Finally, booming development in Puget Sound steals wetlands, which buffer heavy rainfalls, and replaces them with concrete and rooftops that funnel flood-scale waters into streams.

Even though chinook are threatened, they continue to be harvested by commercial, recreational, and tribal fishermen. Hatcheries intended to augment the dwindling number of chinook have resulted in new problems. The release of hatchery fish elevates harvest rates, threatens genetic integrity of wild stocks, and increases competition for available cover and prey.

John Meyer, the fishery biologist who oversees healthier chinook stocks on the western edge of Olympic believes that the fish can be saved. "But I don't think there are any easy solutions," he said. "Real changes in how we use our watershed are going to have to be made."

ELIZABETH G. DAERR *is editorial assistant for* National Parks *magazine.*

The Redtail Angels

Nearly 1,000 African-American aviators completed training at one of the nation's newest park units.

BY KATURAH MACKAY

"CAN YOU imagine," asks retired Lt. Col. Herbert E. Carter, "with the war clouds as heavy as they were over Europe, a citizen of the United States having to sue his government to be accepted to train so he could fly, fight, and die for his country?"

Carter, who began his military career with the 99th Fighter Squadron as a pilot and maintenance officer, was one of the first African-American men to graduate in 1942 from the Tuskegee Army Airfield, part of Tuskegee Institute, in Alabama. The institute began under the leadership of Booker T. Washington as a vocational school for African Americans in the late 19th century. It is now part of a national historic site managed by the National Park Service.

With the U.S. decision to launch its forces into World War II, the federal government started a civilian pilot training program at colleges across the country. These programs were not initially open to African Americans, until pressure from civil rights groups and the press caused the War Department to announce it would eventually form an all-black flying unit.

The announcement came just one day before Yancy Williams, a student at Howard University in Washington, D.C., sued the government to be accepted as an aviation cadet in the army. Echoing racist beliefs heard during the Civil War era, many believed African Americans lacked the stamina and courage necessary for combat conditions, and the government expected the pilot program for them to fail.

NATIONAL ARCHIVES

Fighter pilots of the 99th squadron talk over a day's mission in the Mediterranean.

Pilot training began at Tuskegee Institute on Moton Field, named after the school's second president, Robert Russa Moton. Selected by the military for its ideal climate, existing facilities, and technical instructors, Tuskegee offered the only primary flight training facility for African Americans during World War II.

Although the 99th Fighter Squadron completed its training by the spring of 1942, it did not deploy until April of 1943, when it began patrolling North Africa and the Mediterranean. In 1944, Allied Forces, including the 99th Fighter Squadron, landed in Anzio, Italy, where the unit garnered 17 confirmed kills and six damaged aircraft against German and Italian forces. The squadron's success brought recognition and praise from home, and military leaders assigned the unit more vital flight missions. Perhaps of more significance, however, the Tuskegee Airmen had earned the respect of the bomber pilots they protected. The airmen came to be known as the "Redtail Angels" for the recognizable coloring on the tips of their aircraft.

Between 1942 and 1945, Tuskegee graduates logged 15,533 missions into the skies over North Africa, Italy, and Germany. Collectively, African-American fighter pilots were honored with 150 distinguished flying crosses, eight purple hearts, 14 bronze stars, and 744 air medals and clusters for their service in World War II.

"We proved that the antidote to racism is excellence in performance," says Col. Carter, whose unit became the catalyst for integrating the nation's Armed Forces.

The National Park Service will honor the memory of these men and their bravery by including Moton Field and its remaining structures in the National Park System as the Tuskegee Airmen National Historic Site. Rep. Bob Riley (R-Ala.) introduced legislation to create the site. The bill was signed into law in November by President Clinton.

As the 378th unit of the park system, Moton Field and its surrounding buildings will be the first site with the primary purpose of interpreting the struggle of African Americans to participate in the U.S. military.

KATURAH MACKAY *is news editor for* National Parks *magazine.*

Breaking Barriers

The park system must reflect the changing face of America and extend an open invitation to all.

BY IANTHA GANTT-WRIGHT

FOUR YEARS AGO this past summer, I was invited to join several colleagues for a work retreat in California. At the time, I was working in Washington, D.C., for an environmental group called Clean Water Action.

We planned to camp in the Sierra Nevada Mountains—a first for me. We chose to pitch our tents next to a tree-lined spot just below a valley tucked away next to a stream. It was the perfect place to reflect on the work my colleagues and I had been doing to enhance protections for the Chesapeake Bay as well as major issues regarding the Clean Water Act.

I was the only African American on the trip. This was something I noticed but not something that really bothered me. I was used to it. I had worked for Clean Water Action for more than nine years and had become accustomed to the fact that I was one of very few people of color working in environmental advocacy, let alone serving in a management role.

The next morning, I woke up at the crack of dawn to take a walk in the clear mountain air. I set out into the hills and trudged toward the top of a mountain. All I could see was mountains, trees, and blue sky. Being able to step away from the city into this natural beauty was spiritually and mentally rejuvenating. As I walked, I found myself reflecting on the beauty and was consumed by the idea that some power greater than I had created this and that I was a part of that creation.

Once I reached the top of the winding road that led from the campsite to the main roadway, a different sort of feeling enveloped me. Suddenly, I looked around and realized that I was the only woman—and only African American—on this isolated road. I noticed several vehicles passing me on the roadway, and with a gripping fear I realized most of them were pickup trucks with gun racks driven by white men. I felt like the proverbial stranger in a strange land. I felt fear, and I felt shame for having that fear. I tried to quell the feeling that welled up inside me, tried to be rational about it, but I was overcome by a rising tide of panic. I tried to walk a little farther, hoping I would walk through the fear, but it became so overwhelming that eventually I was forced to walk back down the mountain, feeling ashamed for my own bias, and a little sorry that people like me could not fully enjoy places like this. Although this may not be an experience shared by every person of color, it may offer at least a partial explanation for why the national parks traditionally have drawn a white constituency.

DOUGLAS MACGREGOR

I believe many reasons exist for this: the perception that the parks are not important to day-to-day living, issues of accessibility, and the old culture and traditions of the National Park Service. No matter the barrier, we as a country must begin to acknowledge that any long-term protection of our parks and public lands will depend on all of us. Not one class of people, not one race of people.

America's face is changing. By the year 2010 in many of America's largest cities, the minority will become the majority. As these changes begin to take hold, it will become crucial for the National Park Service and organizations like NPCA to incorporate the history, culture, and values of all Americans into their programs. It will be just as important for all Americans to understand and develop an appreciation for the many fabrics that make up our country. Our National Park System has the enormous responsibility of reflecting the true colors of these many fabrics. The system encompasses a storehouse of knowledge that should extend an open invitation to all Americans.

How do we accomplish such a laudable goal? I would like to share a story

IANTHA GANTT-WRIGHT *is cultural diversity manager for NPCA.*

about one of my favorite parks: Manzanar National Historic Site in Owens Valley, California.

Manzanar presents not only a story of the horrors of racism, but also a tale of a country coming to grips with its mistakes. Between 1942 and 1945, more than 110,000 Americans of Japanese descent were held against their will, without a hearing, at ten relocation camps. An estimated 10,000 of these were housed at Manzanar. Although the federal government had passed a law in 1942 allowing this forced "evacuation," 70 percent of the people held in these camps were born in this country. The remainder were prevented by law from becoming citizens. At first labor leaders and politicians welcomed the influx of Japanese at the end of the 19th and beginning of the 20th centuries. But by 1924, the United States passed a law prohibiting Japanese immigration entirely and barred any Japanese who had entered the country before that time from becoming a citizen—a prohibition that was not lifted until 1952.

The forced relocation of Japanese-Americans had few critics in the 1940s, but those who did criticize it argued that the constitutional rights of American citizens were clearly violated because of racial fears and cultural misunderstandings. (The War Department did not, for instance, forcibly relocate thousands of Americans of German or Italian descent.) The decision to tell this story through the National Park System was nearly as controversial as the law forcing relocation. Many believed Manzanar did not belong in the park system because it represented a shameful episode in our history. Others, including NPCA, pushed to include the site, believing to do anything less would fall short of the national park ideal.

As the park system takes on the many faces of America, we must confront the task of coming to terms with shameful events in our history as well as those we can celebrate. If we allow ourselves to brush the real stories into a place of cultural amnesia, we create for ourselves an unreal world in which ignorance and hate are allowed to fester.

In January, the National Parks and Conservation Association will join the National Park Service and several partner organizations including the National Hispanic Environmental Council, the Roundtable Associates (an African-American parks, recreation, and conservation association), Earthwise Productions, and the Student Conservation Association for a three-day training and educational forum called *America's Parks-America's People: A Mosaic in Motion*. The conference will bring together Park Service personnel with a broad array of diverse organizations. Participants will look to address questions such as:

▲ What are the real life challenges and barriers to greater minority participation and support for the national parks?

▲ What changes can the Park Service make to its culture to include a diverse range of community values that make the parks more inviting, attractive, and relevant to multicultural communities?

▲ What roles can educational institutions, and local, state, and national groups and agencies play to support the Park Service in its challenge to provide enhanced service and opportunities to diverse populations, while continuing to protect the resources?

The conference will be held at Golden Gate National Recreation Area, Fort Mason Center, San Francisco, California. We expect more than 450 people to attend who will represent community based organizations, the National Park Service, educational institutions, foundations, and businesses. The ultimate goal is to begin long-term dialogue on the topic that will translate into increased services and opportunities for diverse communities, while making the parks more open and relevant to these same communities.

America is a multicultural, multiracial society. This is both our uniqueness and our challenge. We have a park system that has been hailed as the best in the world. Making it the most inclusive system is our next challenge.

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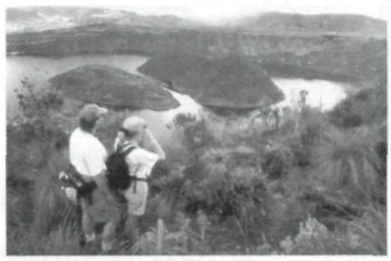

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NPCA Notes

BY ELIZABETH G. DAERR

Record Number Of Comments On Bison Plan

▶ The National Park Service (NPS) has received a record number of comments—more than 65,000—on its general management plan for bison in Yellowstone. Rocky Mountain Regional Director Mark Peterson reported that more than 3,000 postcards were generated from an information booth NPCA hosted in the park this summer.

The plan will regulate the management of bison that wander outside the park in winter to search for food. Because of an outcry from Western ranchers who fear the spread of brucellosis, a disease that causes cattle to abort fetuses, bison are being shot once they leave the park.

NPCA supports a plan that would: incorporate additional land outside the park to create safe winter habitat, re-commend vaccination for cattle that graze adjacent to the park, and reduce the number of bison if populations rise above a set limit that has yet to be determined. The Park Service will release results of the comments in January.

Thanks to all the NPCA members who sent in comments on the issue.

NPCA Wants You To Write

▶ NPCA members' letters provide a powerful tool for creating positive change or stemming disasters within the National Park System. For your efforts to be as effective as possible, each correspondence should:

▲ Clearly express the purpose for the letter in the first sentence;

▲ Be on personal or business stationery;

▲ Mention the specific legislation you support or oppose and whether you are a constituent;

▲ Use personal experiences from a particular park for more credibility; and

▲ Request a written response from the member of Congress stating his/her stance on the issue.

If you are pressed for time, an e-mail message or phone call can be an immediate way to reach your member of Congress (a listing of each member's address can be found on the Internet at www.senate.gov or www.house.gov). If time allows, however, a written letter sent by mail or fax carries more impact.

A word of caution: preprinted issue postcards are the least effective of any method of communication. Most often these postcards are tossed immediately into the trash or given only mild consideration. Taking two minutes to write a personal postcard is more helpful.

Successful Campaigns

▶ Legislative victories for national parks come with no small effort. To counter a recent attempt by Sen. Frank Murkowski (R-Alaska) to slip in a backdoor amendment to the Alaska National Interest Lands Conservation Act (ANILCA) allowing helicopters to land in Alaska's parks and wilderness areas, NPCA launched a massive, multifaceted campaign to block the amendment. Had Murkowski succeeded in passing his amendment, the wild character of Denali, Katmai, and other national park units would have been undermined (see News, page 14).

Each successful NPCA campaign is composed of many elements. Coalitions are formed by recruiting constituents, environmental organizations, and other groups that would be harmed by new legislation. In addition, NPCA representatives meet with legislators and their staff on Capitol Hill to ask for support—in the form of an opposing vote or a counter amendment. NPCA also contacts Executive Branch staff to seek support from the president. Even before meetings are held, NPCA staff researches congressional documents and laws to bolster its case for or against a congressional proposal.

With daily contacts on Capitol Hill, conservation policy staff play a significant role in the fight to protect the integrity of America's parks by being the first-response team to anti-park legislation. And while citizens are mobilizing at the grassroots level, NPCA conservation staff continue to fight on the frontline.

This approach succeeded in ridding the appropriations bill of the helicopters in parks amendment and after months of meetings, letters from members, and contacts with the media, and under pressure from the Clinton Administration, Murkowski's amendment was withdrawn.

New Day Tours For Members

▶ Members are invited to join NPCA regional directors and National Park Service staff on a variety of one-day tours to parks throughout the country. After an enthusiastic response to a similar tour through Everglades National Park last winter, NPCA has scheduled several new trips to give members an in-depth look at NPCA's work in protecting national parks close to home.

The price of trips range from $60 to $85 per person and include lunch or dinner and staff interpretation.

Invitations will be mailed to local members approximately one month in advance; but, all NPCA members are invited. For more information, call Bill Knight, special events coordinator, at 800-628-7275, ext.134

Center Opens in Grand Teton

▶ NPCA President Tom Kiernan joined conservation leaders at the September opening of The Murie Center, the legacy of renowned biologists Adolf and Olaus Murie. These brothers' conservation efforts throughout the century led to the creation of The Wilderness Society and the Arctic National Wildlife Refuge. The center, located on the historic Murie Ranch within Grand Teton National Park, will provide expertise for those challenged with the escalating conflicts between land and human use issues.

As early advocates of conservation issues, the Muries hosted at their ranch the discussions that led to the 1964 Wilderness Act.

Mardy Murie, 96, Olaus' widow, sold the ranch to the Park Service in the 1960s to ensure its preservation but retained the right to live there. Mardy and Louise Murie-Macleod, Adolf's widow, were both honored at the event for their continuing conservation efforts.

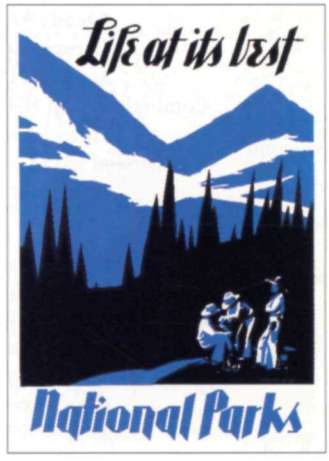
"The center is being set up to continue the great conservation work that has been happening for half a century at the inspirational, but humble, setting within Grand Teton National Park," Kiernan noted.

Freeman Tilden Winner Named

▶ This year's Freeman Tilden Award was presented to Sally Griffin, a ranger at Catoctin Mountain Park, Maryland, for her development of an interactive computer program that teaches students about resource management issues of the Chesapeake Bay watershed. The award is presented each year by NPCA and the National Park Service for the most innovative interpretive or educational program by a park ranger.

Griffin's program allows students to choose among six parks within the Chesapeake watershed and assume the role of resource manager, dealing with issues such as agricultural runoff, erosion, habitat loss, and consumption of resources. In addition, the program lists activities that help the students contribute daily to environmental preservation, ranging from conserving water to writing letters to their government officials. The program disk and guidebook are available free to educators from any of the six national parks.

Griffin is constantly challenged with trying to cover as much ground as possible with few staff. "I was looking for a method that would introduce new topics that aren't normally covered within the park interpretation, focus on resources, and have a low impact on park staff," she said. The program, she notes, also allows students from schools that serve low-income areas to be involved in conservation education even if the school cannot afford a field trip to the park.



NPCA Members Donate Posters

▶ Amid the despair of the Great Depression, President Franklin Roosevelt created the Works Progress Administration (WPA), which provided jobs to thousands of people who built roads, hospitals, and schools. Besides providing construction jobs, the WPA also offered an outlet for artists who designed posters depicting the national parks. The posters encouraged people to rejuvenate their weary spirits through the beauty of the nation's parks.

Those WPA posters are now valuable artwork but were thought to be lost by NPS officials until a recent discovery by two NPCA members. Joe Galliani and Mike Bagetta found two remaining collections at an obscure auction of NPS memorabilia. They bought the posters, estimated to be worth between $5,000 and $10,000, intending to issue reprints to sell through their business venture, The Parks Company, a mail order catalog that sells park merchandise. When they were researching park history at the NPS archives in Harpers Ferry, West Virginia, they learned that the Park Service was interested in getting a set for its collection. "We bought both because we always figured we would give a set away," Galliani said. "It seemed only natural when we found out that the Park Service didn't have them."

The posters depict a variety of simple activities, such as horseback riding, fishing, and camping, meant to lure people into the parks. Galliani says that so few of the posters exist today because they were simply advertisements, made with cheap paper and nailed to trees.

Annual Report Available

▶ NPCA has released its 1998 Annual Report detailing its successes, activities, and financial statement for the fiscal year. For a free copy of the report, write to: NPCA, Member Service-AR, 1776 Massachusetts Ave., N.W., Washington, DC 20036.

NB: National Battlefield
NBP: National Battlefield Park
NHP: National Historical Park
NHS: National Historic Site
NM: National Monument
NMP: National Military Park
NP: National Park
NPres: National Preserve
NPS: National Park Service
NRA: National Recreation Area
NS: National Seashore
NSR: National Scenic Riverway
NST: National Scenic Trail

NOTE: Bold numerals indicate months of issue

Seaside Stronghold

This historic park has been a military post for two nations and was active for more than 300 years.

JOHN WOOD/INDEX STOCK

FROM THE MID-1500s, this national park has served as a strategic military stronghold, affording protection against pirates hoping to steal gems, gold, and silver headed to Europe. This fort was the site of the first cannon blast of a 19th-century war and remained an active base through W.W. II. It is one of 12 U.S. national parks that have been designated a World Heritage Site. Have you visited this park? Do you know which one it is? (ANSWER ON PAGE 10.)

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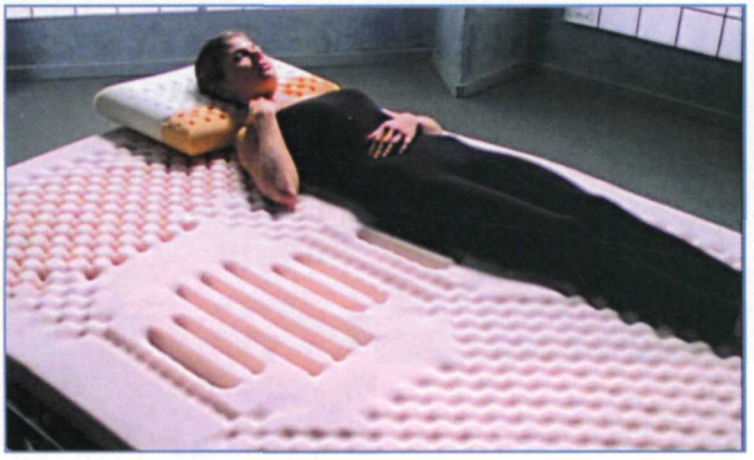
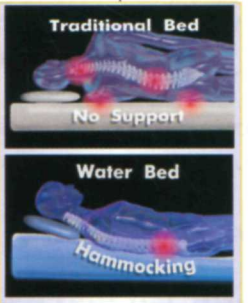


The distinct comfort zones in NatureSleep Platinum have revolutionized the sleep-product industry. They reduce sleep stress—especially strain on the spine—and cradle those areas of the body prone to increased pressure.

by Christine Wolf

I lead a hectic life. Between my part-time job, the kids, after-school activities and sports, my days are filled with things to do, places to go and people to see. This non-stop activity from dawn until dusk can be fulfilling, but it can also be pretty stressful, so at night, I need to relax and recuperate. Nothing helps me rebound like a good night's sleep, and nothing helps to promote restful therapeutic sleep like the proper mattress.

Tossing and turning. Unfortunately, mattresses can range in price from $150 to more than $2,000. Plus, even some expensive mattresses fail to support your body evenly. Traditional mattresses provide a flat sleep surface, supporting your body at the shoulders, the hips and the heels. This leaves your lower back and legs unsupported and hinders proper circulation. Even expensive waterbeds, which are supposed to distribute weight evenly, fail to support the body properly. Your spine arches downward, in a position specialists refer to as "hammocking," causing excessive strain on the back. Scientists and doctors agree that the ideal position is a neutral body posture in which the different parts of the human body are supported individually and evenly. This is the secret behind NatureSleep Platinum, the revolutionary product that turns any bed into the ideal sleep surface.



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