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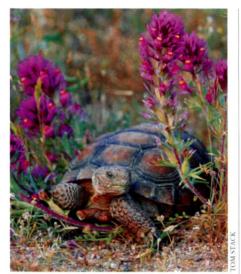
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California desert, page 12

EDITOR'S NOTE

In our first issue in 1995, National Parks looks back at events of late 1994: the wrapup of the 103rd Congress and the 1994 elections. Congress, entangled in partisan bickering and gridlock, passed only one major environmental bill, the California Desert Protection Act (see News, page 12). The 1994 elections reflected a swing to the right and signaled uncertainty for the future of the environmental agenda (see Outlook, page 6, and Forum, page 24).

A second theme-that of national parks' struggle to withstand visitation pressures-emerges with features on Wrangell-St. Elias National Park in Alaska and growing winter visitation at Yellowstone and other national parks.

NATIONAL PARKS

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THE MAGAZINE OF THE NATIONAL PARKS AND CONSERVATION ASSOCIATION

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

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

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A New Order

F THERE IS ANYTHING we can read from the past year, it is that a new order has taken over the national parks.

To begin with, the director of the National Park Service instituted across-theboard reorganization, not unlike that experienced by many private corporations.

This, plus the retirement of more than 500 senior park officials, will surely change the way the parks are managed. No institution can experience a 5 percent loss of personnel—all long-standing employees, mostly managers—without impact.

And Congress seemed to be guided by the shrillest voices rather than by any central principles or pattern of leadership. The only major park bill that passed was the California Desert Protection Act, which created a new million-acre unit and expanded and redesignated Joshua Tree and Death Valley. There could have been other victories for the parks, but Congress was too easily manipulated by those masking profiteering as private property rights, gun-toting as responsible hunting, and hate as the solution.

Most of the park bills that NPCA pushed for in 1994—including legislation that would reform concessions policy in the national parks, place the Presidio under a more effective management structure, protect Old Faithful, and fulfill the needs of the Land and Water Conservation Fund—now await action in the 104th Congress.

And the only thing more frustrating



than the unproductivity of the last Congress is the uncertainty of the next. Because the new Congress is said to favor "smaller government," a tenet which often does not bode well for environmental regulations, the Endangered Species Act and other "green" laws may be in trouble. In this politi-

cal climate, looking to Washington to protect the environment and the parks is even more foolhardy than it was in the past.

The conservation agenda that Aldo Leopold described in his Sand County Almanac still rings true today. He wrote that when his bird dog Gus "couldn't find pheasants, he worked up an enthusiasm for ... meadowlarks" and other "unsatisfactory substitutes....We conservationists are like that. We set out a generation ago to convince the American landowner to control fire, to grow forests, to manage wildlife. He did not respond very well To assuage our inner frustration over this failure, we have found us a meadowlark-the idea that if the private landowner won't practice conservation, let's build a bureau to do it for him."

What will be crucial for us in this new era is to remember that the "federal solution" is more often a meadowlark than a panacea; that there are "ethical and aesthetic premises which underlie the economic system," according to Leopold; and that conservation works only if we each practice it. The role of the citizen activist is more important than ever.

President, NATIONAL PARKS AND CONSERVATION ASSOCIATION



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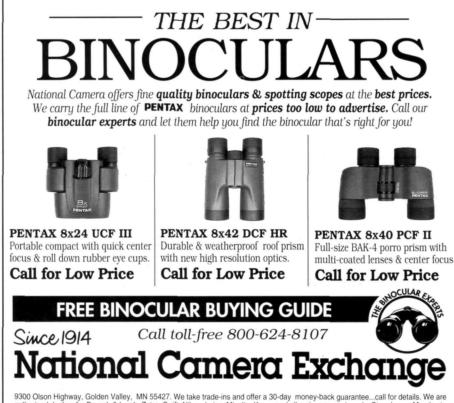
LETTERS

More Debate on Diversity

When the May/June issue of National Parks included the well-researched and timely article by Jack Goldsmith entitled "Designing for Diversity," we were glad to see that such an important topic was featured. Unfortunately, it took the shock of the "Debate on Diversity" letters [September/October 1994] to activate our voices. We had not realized that there were members of NPCA, an organization to which we have belonged for many years, who hold such strong anti-minority views. We have been under the impression, as our mixed-racial family has enjoyed the beauty, serenity, and recreational opportunities that the parks have to offer, that these are *our* parks to enjoy. We are prepared to fight to protect this right for all Americans and to preserve these parks for many generations to come.

But what would happen if those of us from mixed-racial and ethnic minority families should begin to feel that the parks are only for an elite group and not for us? What would happen if nothing is done to encourage those who have not yet had the opportunity to visit the parks to do so? What will happen if, by the year 2000, when one-third of the nation's school-age children are ethnic minorities, these children do not have an opportunity to experience the parks first hand? Is there any guarantee that when they grow up they will want to continue to preserve these parks and safeguard them from exploitation? How can we expect people to respect and protect something they know very little about?

We are both teachers. The majority of our students are fine young people who belong to the ethnic minority popu-



9300 Olson Highway, Golden Valley, MN 55427. We take trade-ins and offer a 30-day money-back guarantee...call for details, We are authorized dealers for Bausch & Lomb, Zeiss, Swift, Nikon, Leica, Minolta, Kowa, and all major camera brands. Store hours: Monday to Friday 9-9, Saturday 10-6, Sunday 12-5 (Central Time). To order by mail, send check/Visa/MasterCard/Discover/AMEX to previously mentioned address. In MN, add 6.5% sales tax. All prices subject to change. For customer service call (612)546-6831. lations that are underrepresented in the parks. We feel that more outreach work must be done to encourage ethnic minorities not only to visit the parks but to choose park-related careers.

Is there any evidence that encouraging ethnic minorities to come to the parks would have disastrous consequences such as increased crime? On the contrary, it seems likely that if more young people from the inner cities had the opportunity to work in and enjoy the parks, overall crime would drop.

Patricia M. Buske-Zainal, Ed.D. Ismet Zainal Laurel, MD

It isn't as though I really need reminding that, despite much effort and considerable progress, ours is still essentially a racist nation. I got the reminder nonetheless in the letters responding to your excellent article on diversity. Our complex problems hardly call for more blaming of the victims or other simpleminded answers. The national parks have a mandate to serve *all* citizens, and they require the support of the entire public and their tax dollars.

It is certainly true that our parks are being overused and trashed—but obviously not by minorities. The prime factors are that, in the "good ol' American way," the parks are outrageously exploited to make a buck and that visitors (mostly white) have little respect for nature. Such letters make me ashamed of and fearful for my country.

Norm Wallen Flagstaff, AZ

As the historian at Lowell National Historical Park, I am writing to thank you for the excellent article by Jack Goldsmith, "Designing for Diversity," and to let you know how troubling I find the response letters.

The United States is becoming a more racially and ethnically diverse nation. The National Park Service welcomes these changes and is striving to make the system accessible and meaningful for all people. According to the NPS report "Humanities and the National Parks—Adapting to Change," to serve today's public, the Park Service At first, you may wonder why anyone would offer such a fine coffeemaker free. But as soon as you open your first package of Gevalia® Kaffe, and smell its freshly roasted fragrance, you'll realize that coffee that smells this rich deserves to be perfectly brewed.

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A SWEDISH OBSESSION

"must develop an array of educational presentations that reflect the many voices, needs, and traditions of America's diverse population." Alternatively, NPS could adopt the racist arguments reflected in the response letters. However, under the leadership of Director Roger Kennedy, NPS is committed to moving aggressively in the direction of inclusion, rather than exclusion.

Martin Blatt Lowell NHP Lowell, MA

As a *Kanaka Maoli* (Native Hawaiian) who practices her religion at Kilauea volcano in Hawaii Volcanoes National Park, [I find that] the attitudes and biases exhibited against minorities in the letters regarding Jack Goldsmith's article belie extremely distorted perspectives of just what these "parks" mean to great numbers of Americans who are not white and middle or upper class.

White Americans who consistently avoid us and try to limit us to ghettos and reservations are those who are truly "intellectually bankrupt," and are just

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I am concerned by the overwhelmingly negative response to the article "Designing for Diversity." In particular, comments alluding to "the problems ethnic minorities create" and the possibility that "bringing in blacks and Latinos from the ghettos will only contribute disproportionately to vandalism and other criminal activities" do injustice to the spirit of the article.

Today I realized just how far off base these statements are. I am a seasonal park ranger, and I had the pleasure of introducing a group of 50 children to the ocean. Many of the fourth graders in this ethnically mixed group came from the inner city and had never had the opportunity to visit a place like Cape Lookout National Seashore. The smiles, laughter, and obvious joy that the entire group shared made me realize that it is the National Park Service's responsibility to ensure that everyone has the chance to reach the parks, regardless of their economic circumstances. Mostly, though, I am grateful to the small fund of money in my park's budget that pays students' ferry fees into the park.

Brian Mitchell Cape Lookout NS Harkers Island, NC

Your letter writers seem to think that having more blacks and Latinos [in the parks] will increase crime. I've got news for them. As one who has worked as a seasonal dispatcher for the law enforcement unit of a major urban national park, I can testify that all the crimes mentioned—robbery, murder, drug trafficking, and gang activity—are already present in many units of the National Park System, courtesy of some elements of the white population.

William M. Pierce Cuyahoga Valley NRA Cleveland, OH

Since men "contribute disproportionately to vandalism, robbery, murder,

habitats and safeguarding vulnerable archeological and historical sites.

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Sincerely, "Betty Bigot" But seriously, NPCA, I can't believe you accept these guys as members! The National Park Service may be required to let them in, but you are a private organization. Do you really need their dollars that much?

I work for a park agency and have posted a copy of those objectionable letters to let my colleagues know what we're up against in trying to make our publicly owned facilities accessible to all Americans.

Cassie Thomas Watertown, MA

Although I do not necessarily disagree with the points of view and concerns expressed in the "Debate on Diversity" letters, they do beg the question. If, at this time, minorities don't make use of the national parks, then who is responsible for the problems that currently plague the parks? Who is responsible for the litter, vandalism, graffiti carved in trees, pollution, overcrowding, erosion caused by taking short cuts on trails, and exploitation of the parks for economic reasons?

Jan Baas Berthoud, CO

Studies performed by the National Park Service have identified the overt discrimination that exists in the national parks. Fortunately, the agency is taking initial steps to combat this. Former Director William Penn Mott, in a 1987 address to NPS urban superintendents, stated, "We must avoid the temptation to become an insular agency focused on a simpler past....We must reach out in order to ensure that [the] values of the NPS will remain a vital part of our national agenda into the 21st century." The values Mott spoke of do not include the preservation of private oases for elitist white environmentalists. They do include making parks available and relevant to all Americans, including those with disabilities, the elderly, and people of color.

The claim that people of color are not interested in the environment is false. One only needs note the rise of the environmental justice movement to see that people of color are not only interested in the environment, but are forming activist groups to deal with issues such as toxic dumping, lead poisoning, and safe drinking water.

As Goldsmith's article points out, NPS funding is based on tax dollars and congressional support. If NPS fails to generate support from the growing number of people of color in this country, it will see its supportive constituency shrink along with its funding.

Maria K. Wiseman Washington, DC

It is the attitude of assigning to minorities propensities for "vandalism and other criminal activities, including robbery, murder, drug trafficking, and gang activity" that has opened fertile new ground for anti-environmental groups such as People for the West among ethnic minority communities across the Western United States.

Clearly these writers reflect a tooprevalent attitude among mainstream environmentalists—that minorities rank well below plants, bears, and other living things that need to be preserved and nurtured for the benefit of future generations. ;*Que vergüenza*! (For shame!)

Arturo Sandoval Voces (Voices), Inc. Albuquerque, NM

As a 15-year veteran of the National Park Service, I was extremely pleased to see your magazine [address] multiculturalism in the national parks.

As an African American who has dedicated his life to the national parks, I am truly disappointed in those who believe that Americans "look to the parks as an escape from the problems ethnic minorities create." There are many forces at work that keep minorities from using the parks at a level on par with other visitors, but perhaps as significant as any of the factors is the feeling that people such as those who wrote those unspeakable letters are in the parks waiting to blame minorities for anything wrong with the parks, the country, and their lives.

Are national parks to become the oasis of the racist and the home of intolerance? I want to encourage you in the strongest possible words to not give up on this discussion of what is right, fair, and honorable. If you drop this subject from future issues of your magazine, you will have helped to close the door on minorities developing a greater interest in the resources and values that our national parks represent. The national parks are for all of the people. This is not a "politically correct" idea, it is the law.

I hope that you will soon hear from the millions of Americans who have committed themselves to equal opportunities for all Americans and who believe that, like freedom, the national parks represent one of the best ideas this nation has ever had.

William W. Gwaltney Superintendent, Booker T. Washington NM Hardy, VA

Write: Letters, NPCA, 1776 Massachusetts Ave., N.W., Washington, DC 20036. Or call 1-900-835-6344. Callers will be charged 89 cents a minute. For email addresses, see page 48. Letters may be edited for length and clarity.

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N·P·C·A

GRIDLOCK RULES 103rd Congress

The 103rd Congress has already been called the least effective Congress in decades. In the months before it adjourned last fall, most of the environmental agenda was blocked by Republicans who, after a sweeping mid-term

election, would take over the majority in the new Congress. Nevertheless, some progress was made for national parks.

NPCA and conservationists across the nation are hailing the passage of the California Desert Protection Act, the only major environmental bill to make it through the congressional logjam. The law, signed by President Clinton in October, expands Death Valley and Joshua Tree national monuments and redesignates them as national parks and creates the Mojave National Preserve. Although NPCA had lobbied to give the Mojave national park status, a designation that would disallow hunting, Congress instead created the national preserve as advocated by hunting in-

terests. The act also protects 4 million acres of desert land as wilderness.

The bill was a major achievement for Sen. Dianne Feinstein (D-Calif.), who made good on a 1992 campaign promise to pass the measure. "Sen. Feinstein's vision and persistence have helped create a great legacy for future generations," NPCA President Paul C. Pritchard said. "The vote to protect the California desert is a landmark achievement for America's National Park System and provides new evidence that the environmental agenda is alive and well."

NPCA is also pleased that Congress enacted legislation to add 3,640 acres to Saguaro National Monument in Ari-



A desert tortoise, in a field of owl clover, is among the creatures to receive additional protections through the California desert law.

zona and redesignate it as a national park and created the New Orleans Jazz National Historical Park in Louisiana.

A major achievement for President Clinton in the first year of the 103rd Congress was the passage of the North American Free Trade Agreement, which, in addition to lifting trade barriers, provides for cooperative conservation efforts among the United States, Canada, and Mexico under a side agreement backed by NPCA and others. Clinton also signed into law the Utah Land Exchange Act, which transfers state lands to Arches and Capitol Reef national parks, Glen Canyon National Recreation Area, and Dinosaur National

> Monument through a statefederal exchange. NPCA played a lead role in negotiating the bill.

Carlsbad Caverns National Park in New Mexico won and lost in the 103rd Congress. In 1993, the president signed a law that permanently prohibits oil and gas drilling in an area near the park to protect spectacular Lechuguilla Cave. However, in 1994 Congress prevented the National Park Service (NPS) from removing the park's unnecessary underground lunchroom.

Unfortunately, several park-related bills that had received bipartisan support were stalled or defeated in election-time efforts to thwart the Clinton agenda. Of these, NPCA is most disappointed about the setback

at the compromise stage of concessions reform legislation, which had easily passed both houses by 10 to 1 margins. A top issue for NPCA, concessions reform would have ended costly subsidies to the park concessions industry. By increasing franchise fees and ensuring that at least some fee revenue was returned to the national parks instead of the general treasury, concessions reform could generate \$45 million to \$60 million annually in benefits for the park system when fully implemented. NPCA will continue the fight for concessions reform this year.

Another widely lamented setback was mining reform legislation, which, in a version endorsed by NPCA and other groups, would have stopped the environmental degradation and fiscal irresponsibility allowed mining companies under the 1872 Mining Law. The bill was stalled by Western senators. Although the 104th Congress is likely to be even more hostile to the measure, environmental groups will again endorse mining reform and the reauthorization of the Clean Water Act, which would protect water from mining pollution.

The fate of threatened and endangered plants and animals remains in the balance, since Congress again failed to reauthorize and strengthen the Endangered Species Act. In spite of this, NPCA will continue to work for the recovery of many endangered species, from the gray wolf in Yellowstone to the red wolf in the Great Smoky Mountains. Because Congress stonewalled the Old Faithful Protection Act, as it did in 1992, Yellowstone's famous geyser and other features remain at risk as well.

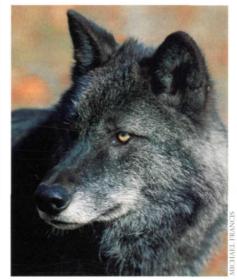
Other bills that appeared likely to pass yet did not: a measure to establish a public corporation to manage and lease the historic buildings of the Presidio, the San Francisco military post now part of the park system; another to create a national park in South Dakota at the site of the 1890 Wounded Knee massacre; and a bill to preserve the New York home and studio of landscape painter Thomas Cole. On the plus side, Congress did pass legislation to expand Connecticut's Weir Farm National Historic Site, the home and studio of American painter J. Alden Weir.

In 1994, the House also considered a bill that would create a new kind of park, to be known as an American Heritage Area. The bill would have designated ten culturally significant heritage areas and established a process to study others. NPCA hopes the bill will be reintroduced and passed early in the new Congress. NPCA is also confident that a bill to protect cultural sites near Chaco Culture National Historical Park in New Mexico, which passed both houses of Congress, will be quickly enacted. NPCA will also push for approval of legislation to establish the Tallgrass Prairie National Preserve in Kansas, which NPCA had helped to protect.

In September, Congress approved a \$1.079-billion NPS budget, a muchneeded 1.7-percent increase over the 1994 budget. It decreased by 22 percent from 1994, however, the amount of money allocated for NPS land purchases in 1995. Congress allocated only \$45.7 million to NPS—a fraction of the \$900 million available annually from the Land and Water Conservation Fund.

The conservatism of the new Congress has NPCA and others considering the ramifications for national parks. Republican legislators who helped to defeat some of the important park bills mentioned above will now take over committee positions that deal with parks (see Alaska regional report, page 22).

For example, Rep. Jim Hansen (R-Utah), likely chair of the House subcommittee for parks, has alarmed some by saying he will consider the forma-



The gray wolf is just one endangered species that NPCA will work to protect.

tion of a "parks closing commission" similar to the base closure commission. NPCA argues that any review of the viability of parks must be bipartisan.

The League of Conservation Voters has said that the new Congress should not ignore the public's desire for effective environmental legislation. NPCA agrees. "We hope the 104th Congress chooses to leave a legacy of preservation rather than one of failure and gridlock," NPCA's Pritchard said.

NEWSUPDATE

▲ A win for wolves. The Alaska Board of Game has suspended a plan to kill wolves to increase populations of their natural prey-caribou and moose-pending a review by the new governor. Intended to benefit the state's sport and subsistence hunters, the plan was being carried out on lands adjacent to Denali and Wrangell-St. Elias national parks and Yukon-Charley Rivers National Preserve. Because wolves roam beyond park boundaries, the plan endangered packs that inhabit parks, NPCA said. Before the suspension, the board had intended to shrink the buffer zone next to Denali.

▲ ;Fantástico! NPCA has received wonderful news from south of the border. On November 4, outgoing Mexico President Carlos Salinas de Gortari signed decrees designating four new wildlife preserves on lands near Big Bend National Park in Texas. Efforts had been under way for 60 years to protect the areas. Totaling 1.6 million acres, the preserves will provide the basis for cross-border ecosystem management. "We commend Mexico for its visionary step for conservation and international cooperation," said NPCA Southwest Regional Director Dave Simon.

Recovery Proceeds for Everglades, Panthers

The beleaguered south Florida ecosystem, including Everglades National Park and the endangered Florida panther, could be on its way to recovery if comprehensive plans are implemented.

The U.S. Army Corps of Engineers has drafted several proposals to restore the Everglades ecosystem and reverse nearly 50 years of resource manipulation. In 1948, Congress sanctioned the Corps to reduce flooding and enhance agricultural production—as well as reclaim wetlands and form water conservation areas—by building dams, levees, canals, and pumping stations to control waterflows in south Florida.

"We've been given the opportunity to look at an ecosystem holistically [and have concluded that] the restoration of south Florida starts with restoration of the hydrologic cycle," said Col. Terry Rice at a public hearing in November.

The Corps' ten proposals aim to restore natural waterflow to the Everglades ecosystem, now bereft of the species diversity and free flows once found there. The options range from a plan that calls for only operational changes, which the Corps admits is inadequate, to the full restoration alternative, or plan 6, endorsed by NPCA and other groups.

"NPCA is pleased that the Corps of Engineers has recognized the need for hydrologic restoration and identified alternatives for action," testified Will Callaway, an NPCA Washington representative, before the Corps. "By selecting plan 6, the Corps will not restrict innovative actions and will ensure the most comprehensive effort is undertaken to restore the Everglades."

Designed to increase the spatial extent of the "River of Grass," plan 6 would reconnect Lake Okeechobee, Florida's great south-central lake, to the Everglades; restore natural, seasonal waterflow from the lake; store water now dumped from the lake and from urban areas; restore sheetflow—waterflows that lack a distinct channel throughout the Everglades ecosystem; and improve water quality standards.

NPCA and others also believe that



Restoring waterflows to the Everglades could reverse 50 years of hydrologic engineering.

plan 6 goes furthest to protect the Everglades from pollution and encroaching development, the latest threat being an amusement park to be built on wetlands next to the park. Conservationists expect that the heaviest polluters of the Everglades—the sugar industry and other agricultural interests—will come out against plan 6.

Although it has not chosen an option yet, the Corps has proceeded to the next step, a feasibility study, which typically takes several years. NPCA is encouraging the Corps to complete the study within a year and a half.

NPCA is similarly urging swift action on an intercross plan that would use Texas cougars to enhance the gene pool of the endangered Florida panther. Inbreeding and habitat loss have driven the Florida predator dangerously close to extinction, with fewer than 50 remaining in the wild.

NPCA has asked the interagency recovery team to introduce the Texas animals to certain areas of Big Cypress National Preserve and the Everglades before late spring, the latest time this year that the panthers are likely to breed.

Because the National Park Service is counting on the Everglades to be viable habitat for panther populations, NPCA will continue to support quick implementation of both recovery plans.

DENALI TASK FORCE COMES TO CONCLUSIONS

The primeval character of Alaska's Denali National Park must precede any proposed land uses, reported the Denali Task Force in October.

In early 1994, Interior Secretary Bruce Babbitt created the Denali Task Force as a special arm of the National Park System Advisory Board to study and report on the conflict-ridden park. For years, park managers have struggled to preserve Denali's natural resources while serving an increasing number of visitors, which has doubled since 1980.

NPCA Alaska Regional Director Chip Dennerlein was invited to participate on the committee, which brought together 16 representatives from business, environmental groups, and state and local governments. "The task force report is significant because 16 people came together and found common ground over a number of critical issues, including preserving wildlife and the primitive character of the park's north side and providing appropriate visitor opportunities along the south side," Dennerlein said. "While it is only a report from a citizen committee, it will definitely have an effect on the way the National Park Service does business."

A top issue for the task force is the

single road that meanders westward to Kantishna from the visitor entrance on the park's east side. Traversing 90 miles along the north slope of the Alaska Range, the road has been at the center of recent debates, including a proposal to overhaul the bus system and a state plan to build another road to Kantishna. Although this new northern route was not recommended by the task force, a minority of committee members did not rule out its future consideration if increased traffic overwhelms the existing road. The full task force recommended that the park road's primitive character be maintained, that limits on private vehicles be enforced, and that improvements be made to the bus system.

The report discusses other divisive Kantishna issues as well. It recommends that NPS expedite the purchase of old mining claims and development rights and private lands that are inconsistent with wilderness values. In response to a specific proposal put forth last summer, the report also states that public or private recreational-vehicle campgrounds must not be developed in Kantishna.

Overflights and subsistence hunting also were addressed by the group. The group agreed that an air access plan should be developed, and a majority believed that the existing Kantishna air strip should be maintained for light use, not to transport large numbers of visitors into the park interior.

The task force report also makes recommendations for recreational-use plans on Denali's south side, to be developed cooperatively with the state of Alaska. The committee suggested the development of a visitor/interpretive center on state parkland that provides outstanding views of Mount McKinley. The formation of a joint state and federal coordinating committee to provide a framework for future planning was also recommended. NPCA is pleased that NPS is considering the report's recommendations as it revisits a south-side development plan that was widely criticized when first released in fall 1993.

The report will now be submitted to Secretary Babbitt through the National Park System Advisory Board.

NPS STUDY RECOMMENDS CURBS ON OVERFLIGHTS

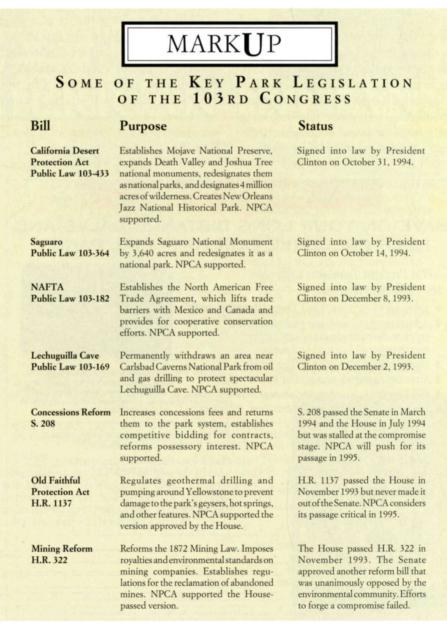
The "very fabric of many national parks" is frayed by aircraft overflights and must be protected, the National Park Service says.

Last October, after a four-year delay, NPS released its report on national park overflights to Congress, which mandated completion of the study—by August 1990—as a provision of the 1987 National Overflights Act. NPCA and other groups had sued the Interior Department and NPS over the delay as a violation of environmental law.

The report examines the nature and

scope of commercial air tours, general aviation, and military flights over national parks. It studies the effects of such air traffic on natural quiet, cultural and historical resources, wildlife, safety, and visitors and makes recommendations for mitigation. Most of the data concern Grand Canyon National Park, which has sometimes logged 10,000 "flightseeing" tours a month.

Last March, NPCA met with NPS and air tour operators to discuss the need for overflights regulations. About the same time, the Federal Aviation Administration (FAA) and NPS announced their intention to jointly develop such regulations, which would de-



termine where and at what time and altitude air tours can take place. The NPS report also recommends the establishment of "very large" no-fly zones and requirements for quieter aircraft. The interagency regulations team has been notified of the report's findings, and draft regulations are expected by February.

According to the study, about 30 percent of all park units have experienced resource and visitor impacts from overflights. Although the Overflights Act has helped to curb peak-period noise levels at some parts of Grand Canyon, many national parks, such as Hawaii's Haleakala and Hawaii Volcanoes, are still experiencing increases.

NPS recommends that it, FAA, and the Department of Defense create interagency working groups to address issues at several parks identified according to priority. Grand Canyon, the Hawaii parks, Great Smoky Mountains, and Glacier were identified as having the most widespread overflights problems and the most obvious impacts; Utah's Zion, Canyonlands, and Arches were named as parks where natural quiet, specifically, must be restored. Other parks were identified as having conflicts related primarily to safety or military operations.

The report states that low-altitude overflights by military aircraft are injurious to park wildlife, causing "reproductive and energy losses, and habitat avoidance and abandonment." In November, NPCA objected to a U.S. Air Force plan to create "military operations areas" for flight training over certain public lands in Alaska, including Yukon-Charley Rivers National Preserve. The Air Force would fly 80,000 "sorties" per year over the park, resulting in more than 20,000 sonic booms.

"Military training flights over Yukon-Charley would be not just an annoyance to people but a real threat to wildlife," said Phil Voorhees, an NPCA Washington representative. "In the past, such military activity, on a much more limited scale, has led to serious accidents and wildfires in Yukon-Charley."

NPCA recently raised similar con-

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WISE USE WATCH

With this issue, *National Parks* will track the activity of the so-called Wise Use Movement (WUM), the self-proclaimed enemy of the environmental movement.

WUM is the umbrella name for both a coalition of groups and an anti-conservation ethic. These groups run the gamut from timber companies to ranchers and developers and often hide behind misleading feelgood names such as Citizens for the Environment, People for the West!, and the Sahara Club.

In the last year, "wise users" have gutted or stalled as much environmental legislation as possible (see page 12). Under the guise of protecting property values, wise users, sounding the "takings" alarm, have urged the removal of any regulations on the abuse of the environment.

Although WUM has fewer than 100,000 members, it has successfully sent its supporters to Congress, as it did in its September Fly-in for Freedom, an annual lobbying effort. Last fall, the Sahara Club published a newsletter on how to attack the environmental movement. The newsletter instructed, "Use dirty tricks to drive 'em nuts....What's a dirty trick? Just about anything that costs the eco-movement time, grief,...and money is worth using."

Wise users pushed the public's panic buttons a few years ago over the threatened spotted owl of the Northwest. This year, their target is the Cascades international park. NPCA and others have been working to create an international park to protect the Cascades of Washington State and British Columbia. In October, a wise user called meetings around Washington to oppose the park. He said that the park is part of a "global plot" to allow the United Nations to take over the state. Although the speaker admitted that he did not have documentation to support his statements, such propaganda, unfortunately, is believed.



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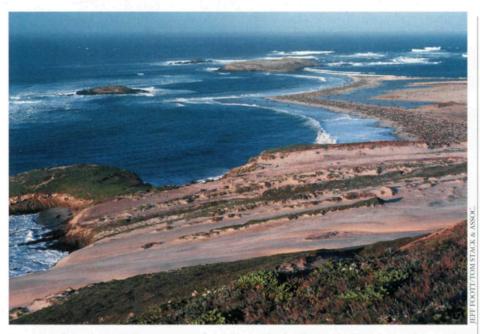
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Because of grazing, 16 plant species of the Channel Islands may be listed as endangered.

cerns about a proposed runway expansion at the Gardiner Airport immediately adjacent to Yellowstone's northern boundary. NPCA criticized the project's environmental assessment for failing to adequately analyze noise and other impacts from increased air traffic, including effects on wildlife such as grizzly bears and bald eagles. The assessment also fails to consider measures—such as restrictions on overflights—that would limit these impacts.

CHANNEL ISLANDS CATTLE HARM NATIVE VEGETATION

Extensive grazing at Channel Islands National Park in California may cause several native plant species to be listed as threatened or endangered.

When it purchased Santa Rosa Island—the second largest of the five Channel Islands off the southern California coast—in 1987, the National Park Service struck an agreement with the owner that will allow grazing until 2012. Under the 25-year permit, the Vail & Vickers Company can continue its cattle ranching and commercial hunting operation, unless these uses prove incompatible with resource protection.

NPCA, the U.S. Fish and Wildlife Service, and several other groups say that this incompatibility has already been proven. "Widespread grazing by non-native animals has seriously denuded native vegetation, disturbed endangered wildlife, and disrupted the unique ecology of Santa Rosa Island," said Brian Huse, NPCA Pacific regional director.

About 85 percent of Santa Rosa is covered by grasslands, which are crisscrossed with trails and heavily grazed by about 5,000 cattle, as well as the deer and elk used for the hunting operation. In addition to feeding on rare plants, these animals disturb topsoil with their hooves, allowing more aggressive plants and weeds to crowd out native vegetation. The Fish and Wildlife Service has concluded that grazing has caused 16 native plant species to become candidates for the endangered species list. Five of the 16 candidates occur only on Santa Rosa Island.

NPS believes it is protecting the resource as well as it can while upholding the agreement with Vail & Vickers. The agency has enclosed some sensitive areas and intends to fence off more. NPS and the Fish and Wildlife Service are also negotiating a conservation agreement to protect endangered and candidate species. "But it is not enough," Huse said, "for NPS to simply prevent further degradation of some natural resources and wait until 2012 to do anything else."

Environmental groups are also concerned about the endangered western snowy plover, one of more than 195 native bird species found on Santa Rosa Island. Although NPS has established several snowy plover nesting sites, many nests have failed. NPS attributes most of the failure to wind and natural predation, but admits that cattle cause between 4 and 6 percent of nest failure.

In November, NPCA, the Sierra Club, and the Environmental Defense Center met with NPS officials to discuss management issues at Santa Rosa Island. The groups contend that NPS is in violation of several environmental laws for, among other things, failing to draft a comprehensive general management plan for the park. NPS still operates under a management plan drafted before Santa Rosa was acquired. The groups also take issue with the environmental assessment of Vail & Vickers' grazing permit for not addressing impacts on candidate species and the snowy ployer.

NPCA and the other groups are urging that a more aggressive range management program be enacted to protect the unique resources at Santa Rosa. "NPS should be seeking commitments from the ranchers now to adopt new forms of progressive grazing technology that allow for restoration of endangered plant species," Huse said. "Under such a plan, plant restoration can begin tomorrow while the number of animals is gradually reduced."

FUEL FOR TOMATO FARM IMPERILS THE SMOKIES

A hydroponic tomato farm would be a boon for a town in east Tennessee but would threaten the Great Smoky Mountains if fueled by a new power plant.

In October, the Tennessee Valley Authority (TVA) announced its endorsement of a joint venture between the Agro Power Development and Cogentrix companies. Agro Power plans to grow tomatoes hydroponically in a 100-acre greenhouse farm in Erwin,

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EALMF



A new power plant could add to the air pollution seen from the Smokies' Forney Ridge.

Tennessee, about 40 miles northeast of the Smokies. The plan would be partially financed by Cogentrix, an electrical engineering firm that has signed a deal with Agro Power to construct a 120-megawatt coal-burning electric plant to fuel the greenhouses. Construction would begin once a purchase agreement is signed by TVA, to which Cogentrix would sell excess electricity.

Although NPCA does not oppose the hydroponics proposal-estimated to bring 1,400 jobs to Erwin-it has grave concerns about emissions from the plant and the resultant exacerbation of the Smokies' already serious air pollution. Sulfates and nitrates create a vellowbrown haze and contribute to acid deposition. "NPCA is convinced that we have passed over a threshold concerning air quality in this region and that new proposals such as this will require very close scrutiny," NPCA Southeast Regional Director Don Barger wrote to TVA Chairman Craven Crowell. NPCA is currently fighting a similar proposal to build two coal-burning lime kilns about 70 miles west of Erwin.

The National Park Service, NPCA, and regional environmentalists agree that any increase in acidification by coalgenerated sulfates and nitrates is unacceptable for the park's plant and animal life. Studies by the Park Service have shown abnormally high levels of heavy metals in red spruce trees, and stream acidification is proving toxic to fish, amphibians, and other underwater creatures.

Some questions have also been raised about TVA's involvement. Regional environmentalists have noted that the tomato farm's power needs are within TVA's capacity and that the power plant is unnecessary. Although TVA has publicly supported the plant, it may be cloaking internal conflict over the issue. Some believe TVA released news of the venture to the public expressly to generate opposition and make it easier to back out of the deal.

NPCA and regional representatives from NPS and the Sierra Club met with TVA's Crowell to discuss the issue. Should the proposal proceed, NPCA is strongly recommending that TVA prepare an environmental impact statement, which would have to consider alternatives to the Cogentrix plant and allow for public input. Unfortunately for the town of Erwin, if the power plant goes, the tomato farm may go elsewhere as well.

"However, the centerpiece of this area's enormous tourism industry should not be further endangered in the name of economic progress," Barger stated. "TVA can and should take a leadership role to ensure that economic development and environmental stewardship are not at cross-purposes." I To urge that TVA oppose the current proposal or prepare an environmental impact statement that considers alternatives to the Cogentrix power plant should the proposal go forward, write to Craven Crowell, Chairman, Tennessee Valley Authority, 400 West Summit Hill, Knoxville, TN 37902.

NPCA NAMES WINNER OF 1994 TILDEN AWARD

NPCA and the National Park Service presented the 1994 Freeman Tilden Award to Kimberly Ann Valentino, chief of interpretation for the Park Service's northwest Alaska areas.

The award, given each year at the National Association for Interpretation Workshop, recognizes park employees for creative efforts in park interpretation and public education. Tilden was known as the "father" of interpretation and wrote several books about national parks.

Valentino, stationed in the Arctic community of Kotzebue, has crafted environmental education and interpretive programs for three park units totaling nearly 10 million acres—Kobuk Valley National Park, Cape Krusenstern National Monument, and Noatak National Preserve. Thanks to Valentino's cooperation with Native corporations that provide air service to the roadless community, nearly all visitors to Kotzebue experience an interpretive program by the Park Service.

Valentino has made the Park Service a vital part of community life by working with three local Native populations and creating a "Kids' Corner," a place in the Park Service information center for latchkey children. Valentino's contributions to the community were acknowledged when she was invited to participate in planning Camp Sivunniigvik, an honor traditionally reserved for elders and Native residents. Programs at the cultural camp, where Valentino serves as a counselor, emphasize the intersection of natural sciences and Native subsistence lifestyles.

-M. Katherine Heinrich

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REGIONAL **R**EPORT

News Briefs from NPCA's Regional Offices

ALASKA

Chip Dennerlein, Regional Director Now that Republicans have majorities in both houses of Congress, NPCA is gearing up to work with the two Alaska Republicans who will take over key positions that affect parks. At press time, it was likely that Rep. Don Young and Sen. Frank Murkowski would chair, respectively, the House and Senate committees for natural resources. Last year, both took positions that were opposed to those of NPCA and other conservationists on some park bills. For example, both voted against concessions reform, which would have increased revenue to parks. Murkowski proposed an amendment, which NPCA helped defeat, on budget legislation that would prohibit any regulation of aircraft over Alaska parks and wildlife refuges. Young has said he is interested in allowing private entities to manage national parks, and Murkowski is a chief proponent of creating an unneeded road through Denali National Park's best wildlife viewing areas. Dennerlein said he intends to work constructively with the committees for the parks' best interests.

HEARTLAND

Lori Nelson, Regional Director A management plan in the works for Niobrara/Missouri National Scenic River in Nebraska must ultimately incorporate sufficient land-use controls, NPCA says. The Niobrara River-30 miles of which are federally protectedskims eastward along northern Nebraska until it meets the Missouri River. Management alternatives under consideration that NPCA opposes include one that emphasizes visitor access over resource protection and a "bank-to-bank" option that essentially leaves adjacent lands open to misuse. Citing the Wild and Scenic Rivers Act, NPCA stated that the Niobrara and Missouri rivers and their immediate environments must be protected and advocated an alternative that allows visitor recreation while limiting use. This alternative also protects the river environment.

D To urge the National Park Service (NPS) to adopt a plan that protects the natural resources and sound recreational uses of the Niobrara, write to Superintendent Warren Hill, Niobrara/Missouri National Scenic Riverways, P.O. Box 591, O'Neill, NE 68763.

NORTHEAST

Eileen Woodford, Regional Director NPCA is working with Minute Man National Historical Park to prevent the Massachusetts Highway Department from widening a portion of the park's historic battle road from two to five lanes. During the American Revolution, American and British armies fought across 20 miles of a winding road from Boston to Concord. Today, except for about five miles within the park, much of the road is urban highway. NPS and NPCA fear that the road expansion will bring unwanted development and traffic to the park. Park Superintendent Nancy Nelson, along with a committee of engineers, has recommended a threelane road as a compromise.

DUrge the Massachusetts Highway Department and the town of Lexington to support the three-lane compromise. Write to Richard White, Manager, Town of Lexington, 1625 Massachusetts Ave., Lexington, MA 02173 and to James J. Karasiotes, Secretary, Executive Office of Transportation and Construction, 10 Park Plaza, Boston, MA 02116.

PACIFIC

Brian Huse, Regional Director Although the Presidio, San Francisco's historic military base, has officially become a national park unit, NPS and the U.S. Army must still resolve one outstanding issue. Several toxic waste sites remain at the park, including underground tanks, landfills, and a decommissioned missile site. The NPS general management plan for the Presidio outlines the potential threats to human health and the environment and the necessary standards for cleanup. However, the Army is not legally bound to the stricter standards of NPS and can clean up the waste to a standard that is inappropriate for a park. NPCA is urging citizens to demand that the clean-up plan adhere to NPS standards.

DWrite to Dave Wilkins, Department of the Army, Headquarters—Presidio of San Francisco, Attn: AFZH-SF-BEC-PSF, Ruger Street, Building 572, Presidio of San Francisco, CA 94129.

Because of opposition from NPCA and local groups, the California Department of Transportation is reviewing its plan to reroute a portion of U.S. Highway 101 through Redwood National Park. The road realignment would involve cutting down 195 old-growth redwood trees. Coastal redwoods—taller, thinner cousins of the giant sequoia—survive up to 2,000 years. NPCA, Friends of California Parks, and other groups are working together to develop a more suitable alternative for the realignment.

PACIFIC NORTHWEST

Dale Crane, Regional Director The Washington-based Park Junction Partners company is planning a fivephase resort near Mount Rainier National Park, to be built over the next ten years. The development includes an 18-hole golf course, a 300-room lodge, nearly 900 other housing units, a 70,000square-foot shopping center, and a train station, among others. NPCA is concerned about the effect of the development on the park's spectacular natural resources. Developers estimate the resort will bring up to 150,000 additional visitors a year to Mount Rainier, and NPS has said it cannot yet assess the impacts of such an increase. NPCA will continue working with the local community and Rural Citizens Against Urban Development to challenge the plan.

ROCKY MOUNTAIN

Terri Martin, Regional Director A year after NPCA and others opposed plans to upgrade a downhill ski area in Yellowstone, NPCA is pleased that NPS has decided to close the area. NPS had planned to build a T-bar ski lift to replace the basic rope tow that has served the Undine Falls ski area for half a century. NPS had already begun to clear the area of trees, including old growth, when opposition forced the agency to postpone its plans pending further review. The upgrade violated NPS policy and would have been inappropriate for a national park, NPCA said.

Legal challenges by ranching interests have delayed the return of the gray wolf to Yellowstone. By late November, the U.S. Fish and Wildlife Service was ready to begin putting collars on wolves in Canada to identify packs to be relocated to Yellowstone and central Idaho. On November 25, the Mountain States Legal Foundation (representing four rancher groups) filed a lawsuit in a Wyoming federal court to block wolf reintroduction. The Fish and Wildlife Service agreed to Mountain States' request to delay relocating wolves until January 1. The court was expected to decide before then whether to grant Mountain States' request for a preliminary injunction against the release of wolves. If it is not granted, 15 wolves should be released in Yellowstone this winter.

SOUTHEAST

Don Barger, Regional Director Last fall, Barger was invited to give input to both President Clinton's interagency task force on ecosystem management and a similar effort undertaken by the General Accounting Office. Ecosystem management is the preservation ethic that encompasses all the symbiotic resources of a region. The groups met with agency, business, and conservation leaders to determine the best ways for the government to implement ecosystem management strategies. "We're in trouble if we believe that ecosystem management means drawing new boundaries and operating in old ways. Ecosystem management resolves jurisdictional questions with an ecological bottom line," Barger said.

SOUTHWEST

Dave Simon, Regional Director Thanks to a team effort involving NPCA, a developer has agreed to guarantee public access to Petroglyph National Monument through his housing subdivision, called Las Marcadas II. NPCA and Friends of the Albuquerque Petroglyphs (FOTAP) were concerned that the subdivision would block the Piedras Marcadas Arrovo, the section of the monument with the highest concentration of rock art. After discussions among NPCA, FOTAP, NPS, the developer, and the city of Albuquerque, all parties agreed to create a 2.1acre area that provides access for visitors and includes a neighborhood park.

NPCA is celebrating the defeat of one referendum on the Arizona ballot and lamenting the defeat of another. In November, voters soundly defeated Proposition 300, the Private Property Rights Protection Act, which would have required the state of Arizona to compensate private interests whenever government regulations diminished the value of their property.

Unfortunately, Arizona voters also defeated a measure that would have helped to protect public lands. Proposition 101 would have restored the state's authority to conduct land exchanges with the federal government. State lands within Saguaro National Park, Organ Pipe Cactus National Monument, and other public areas could have been conveyed to the Department of the Interior and protected.



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FORUM

Restoring the Green Agenda

Conservation groups and park activists must work together to ensure that environmental protection is once again a priority.

By Tom St. Hilaire

E NVIRONMENTALISTS are bracing themselves in anticipation of the 104th Congress. After an ugly election season that catered to the lowest common denominator, Republicans control both the House and the Senate for the first time in 40 years.

The Democrats were prepared to lose the Senate, but they had harbored hopes of keeping their majority in the House. Political pundits blamed the Democrats' defeat on a president out of touch with American mainstream values, but a closer look reveals a lack of vision on the part of incumbent Democratic candidates. The Republican candidates for the House appealed to an angry electorate with plans to downsize government and a ten-point strategy called "Contract With America," designed to balance the budget, reduce crime, and create jobs, while securing more autonomy for individual states.

The contract does not contain specific environmental initiatives, but it does contain veiled attempts to dismantle existing health, safety, and environmental laws. This contract comes after the previous Congress passed only one major environmental bill—the California Desert Protection Act—into law.

Since the early 1970s, the environment has maintained its place in the forefront of the political debate. Whether the discussion concerned the water we drink, the air we breathe, or the extinction of the whooping crane, environmental concerns have held the nation's attention. Environmentalists had taken that status for granted. During this past election, the environment made not a blip on the radar screen of concerns. Jobs and the economy were the top issues. The cost of government and governing is on the voting public's mind. Even so, recent polls show Americans maintain that the environment is a

Washington's environmental groups need to go into the field and get a reality check on how the environmental message is getting across.

priority. More than 80 percent identify themselves as environmentalists.

Yet, the candidates who were swept into office this election are likely to target environmental laws. Among their political mantras was a call for "less government," but what this means for the dozens of laws that protect public lands remains to be seen. Some environmental laws are perceived as vulnerable, however, and among the most vulnerable is the Endangered Species Act. In the years since it was enacted, this law has helped to bolster populations of hundreds of species, including the once-endangered bald eagle and American alligator.

Other laws coming up for reauthorization this year include the Clean Water and Clean Air acts, which have helped to improve the quality of the water and air that sustain us. All three of these laws were passed in the early 1970s, when concern for the environment had reached a peak.

Conservationists in Washington, D.C., are trying to understand the apparent apathy for environmental issues. Why is the concern the American public seems to feel for the environment not being translated into action, legislation, and protection? Legislators seem to be getting the message that the public does not want the government "interfering" in what they perceive as private affairs. The public also may not understand how regulations, such as the Endangered Species Act, affect them directly. Childless taxpayers may complain about contributing their share for public education, but everyone benefits from an educated populace, just as evervone benefits from the healthier ecosystems provided by environmental regulation. But the environmental community has been ineffective in presenting this message.

For years, environmental groups have been on the defensive from the so-called Wise Use Movement, which has manipulated the media into believing that environmental regulations threaten the rights of private property owners. Meanwhile, the environmental community has been slow to respond in demonstrating how environmental law benefits the American public. But activists on the front lines of the environmental movement-those working at the state, regional, and local levels-know all too well why environmental issues that have been widely popular with the American public for decades are not currently striking a chord with Congress.

Sara Hannan, executive director of the Alaska Environmental Lobby, a coalition of 19 state environmental groups that work for strong laws to protect their lands, wildlife, and natural resources, says "Environmentalists need to move beyond the philosophical truths of protecting our public lands and concentrate on educating the public to the economic benefits inherent in environmental legislation."

Taxpayers and voters must understand that communities benefit from the laws promoted by environmentalists and that the conservative agenda does not have a monopoly on concern for the voting public's economic interests.

A good example of connecting environmental laws to economic benefits is NPCA's fight to reform an outdated national park concessions law. The reform legislation would terminate taxpaver subsidies to about 140 concessions operators who run multi-milliondollar businesses-lodges, restaurants, and gift shops-in our national parks. The reform bill would require these monopolies to compete for contracts and to pay higher fees for the luxury of doing business in the most attractive locations in the country. NPCA estimates the parks are losing between \$45 million and \$60 million in concessions fees every year because of the outmoded law that regulates park concessions.

Taxpayers are also being swindled by an outdated mining law. The archaic 1872 law gives companies the right to extract minerals on public lands free of charge and allows them to buy the land under a patenting system for \$2.50 to \$5.00 per acre. Crown Butte, a subsidiary of Noranda Minerals, is taking advantage of this law by proposing to build a massive gold, silver, and copper mine just northeast of Yellowstone National Park in Montana. The mine threatens prime grizzly habitat and has the potential to leak toxic tailings into the greater Yellowstone ecosystem. NPCA is working as part of a coalition to reform the mining law, which is costing taxpayers upwards of \$4 billion annually. Add timber and grazing subsidies to the federal payroll and it appears that the government is pandering to special interest groups. If the American people are tired of wasteful government, why are they not clamoring for an end to these outdated subsidies?

Environmentalists need to do a bet-

ter job of showing taxpayers how many of the laws and regulations promoted as part of the "green agenda" will benefit them. This message has been lost in the din of dissatisfaction emanating from people throughout the country.

Just as constituents have complained that Congress has lost touch with them, some local groups have charged that environmental organizations are not listening to their citizen activists on the front lines. They believe that the national groups, which for decades have played a key role in establishing a force to be reckoned with in Congress, have forgotten their roots. Pat Byington, executive director of The Alabama Conservancy, a 27-year-old private nonprofit environmental education and lobby group, says "Washington's environmental groups need to get outside of the beltway. They need to go out into the field and get a reality check on how the environmental message is getting across to the voters."

Many local resource protection groups have borne the brunt of the battle against extractive industries that have adopted the guise of "grassroots" groups and have seen them co-opt the environmental message. Groups such as People for the West!, which gets most of its funding from large corporations, use their members as poster children in the battle against environmental regulations. They have been very successful in getting the message out that big government is taking over their lives and must be stopped. And environmental groups are perceived as pushing for stronger government intervention.

But Rick McMonagle, president of Friends of the Mississippi River, sees a silver lining in the rhetoric surrounding the downsizing of the government's role in land protection. His recently formed group, which serves as a watchdog for the Mississippi National River and Recreation Area, works with many local landowners, companies, and federal officials to protect this urban waterway. "I'm all for local organizations taking the lead in fighting for our precious natural resources," he says. McMonagle's only worry is that someone needs to come up with the funding to develop

Get Involved!

At the heart of NPCA's park protection programs are thousands of members who take the lead in defense of America's natural and cultural heritage. Park Activist Network members alert Congress and the administration to park threats by writing and phoning them during key legislative debates; comment on park planning and adjacent land use decisions; assist NPCA in developing partnerships with local support groups; and educate the public and the media about park issues. Park Activists are NPCA's "eyes and ears" at the grassroots level.

The Park Activist Network employs a variety of approaches to grassroots activism by organizing those who wish to participate into three different groups: Park Watchers, Park Activists, and Park Support Groups. For more information on the Park Activist Network, contact NPCA's Grassroots Department at 1-800-NAT-PARK, ext. 220.

partnerships that allow a voice to everyone concerned with the river. He wonders if the incoming members of Congress will understand the importance of funding our national park units. National environmental groups need to link up with the citizens at the local level to ensure that congressional action on behalf of national parks continues to protect these valuable resources. Without the support of grassroots groups, Washington-based environmental organizations lose ground in their efforts to lobby for legislation.

If environmentalists are concerned with how the 104th Congress will react to conservation issues, they need only to accept Pat Byington's invitation to "come back to the grassroots...build up from the bottom because that's always been the key to the environmental community's success."

Tom St. Hilaire is NPCA's director of grassroots.



STRIKING A BALANCE

Park managers, local residents, and conservationists must work to ensure that Wrangell-St. Elias, the nation's largest park, maintains its wilderness character despite growing visitation.

By Bill Sherwonit

N A SUNNY AND WARM Fourth of July morning, hundreds of people line McCarthy's Main Street for the town's holiday parade. Afterward, celebrants will enjoy footraces, barbecues, and late-night fireworks.

The celebration shocks a visitor who spent July Fourth in McCarthy ten years earlier. In 1983, this Wrangell Mountains community was a virtual ghost town. No crowds gathered to watch parades or participate in barbecues. Only a handful of Alaskans called McCarthy home, and its only businesses were a lodge and mountain guide operation.

Today, this town of 30 or so residents boasts a lodge, hotel, bed-andbreakfast, pizza parlor, espresso bar, two air-taxi operators, shuttle-bus services, and guide company. And it is visited, from May through September, by thousands of tourists who have come to discover one of America's most spectacular wilderness parks.

Located deep within Wrangell-St. Elias National Park and Preserve, McCarthy and neighboring Kennicott site of a long-abandoned but still famous copper mine—have, for better and for worse, been tagged as the park's principal gateway. For decades the quintessential haven for reclusive Alaskans, McCarthy-Kennicott (the two are



Above: McCarthy trams offer the only summertime access, other than aircraft, over the fast-moving Kennicott River.

Left: More than 8 million of Wrangell-St. Elias' 13 million acres have been designated wilderness.

inextricably linked) has been transformed into a tourist destination, with all the blessings and curses such change brings. The same tourism boom that so quickly transformed McCarthy-Kennicott has also pushed the surrounding 14-year-old park to a crucial management crossroads, complicating many of its other growing pains. Tourism, and associated development, is only one of the myriad challenges to be addressed at Wrangell-St. Elias. Others include subsistence hunting rights, private inholdings (more than 1.2 million acres are privately owned), off-road-vehicle use, public and private rights-of-way, backcountry use, and relationships with local residents.

Many of the park's management dilemmas are interwoven in complex and perhaps unimaginable ways, requiring new and imaginative solutions. "At Wrangell-St. Elias, we have to craft a new formula for success, invent a management philosophy that is rooted in both the enduring principles of the National Park System and the unique challenges of the Alaska parks. The formula must involve partnerships," says Chip Dennerlein, Alaska regional director for the National Parks and Conservation Association (NPCA).

Not so many years ago, Wrangell-St. Elias was an overlooked and undervalued mountain wilderness. Created in 1980, our nation's largest park—at 13.2 million acres, it is the size of six Yellowstones—was overshadowed in its early years by several other of Alaska's national parks: Glacier Bay, Katmai, and, above all, Denali. But word of its natural wonders inevitably began to spread, and sometime in the late 1980s,



Top left: Semipalmated plovers are among the creatures to be seen in Wrangell-St. Elias, which in recent years has begun to draw more birders.

Top right: With the influx of tourists have come services such as this espresso bar as well as a pizza parlor and air taxis.

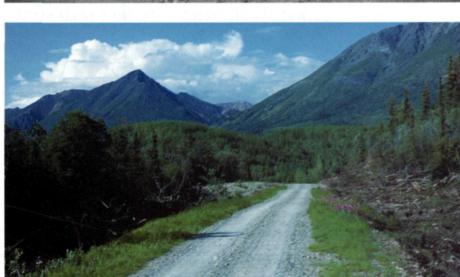
Right: Built in 1962 along a former railroad route, the road to McCarthy-Kennicott is a 60-mile drive. Most of the park's management challenges are focused along this route.

the public "discovered" Wrangell-St. Elias.

What they have found is a wild and magnificent alpine world that wilderness guide Bob Jacobs calls "North America's mountain kingdom." It is a kingdom that includes four major mountain ranges and six of the continent's ten highest peaks. Here, too, is North America's largest subpolar icefield, the Bagley, which feeds a system of gigantic glaciers; one of those, the Malaspina, is larger than Rhode Island. The glaciers have carved dozens of canyons; some, like the Chitistone and Nizina, are bordered by rock walls thousands of feet high. And rugged, remote coastline is bounded by tidewater glaciers and jagged peaks.

The park's superlatives, along with those of neighboring Kluane National Park in Canada, have prompted their





designation as a World Heritage Site. And 8.7 million acres within its borders have been designated wilderness, more than all of the parks in the other 49 states combined.

The irony-and a major management dilemma-at Wrangell-St. Elias, as at many other parks, is that few visitors actually touch the wilderness. Most experience the park from cars, buses, boats, or planes. Despite the vastness, or perhaps because of it, most park users are channeled into small, easily accessible corridors.

Wrangell-St. Elias is one of only three national parks in Alaska accessible from the state's highway system. Two gravel roads enter the park, and though neither is presently suitable for heavy bus or recreational vehicle traffic, the potential exists for large-scale, packaged tourism.

Consultants to the Alaska Visitors Association (AVA) have recommended Wrangell-St. Elias as a logical site for resort development, and association executive director Karen Cowart says the group will likely promote the park because of its high potential for the visitor industry. "We don't necessarily see it as a mass-tourism destination," she says, "Not every place should become a Denali." Yet, the specter of Denali looms over Wrangell-St. Elias like a dark cloud.

"Wrangell presents an incredible paradox," says Dennerlein. "Here you have this vast wilderness park, whose essence is one of enormous scale and ruggedness. And yet, it's along the highway system. So the question is: how do you balance the park's wilderness essence with the sort of tourism that highways engender?"



Of the park's two roads, the one to McCarthy-Kennicott is by far the more heavily traveled. Not coincidentally, this is where many of the park's management challenges are focused. Built in 1962 along a former railroad route, McCarthy Road received minimal maintenance through the early 1980s and was, at best, narrow, potholed, and washboarded. In rainy weather, sections often washed out; even in decent conditions, the 60-mile drive took four to five hours.

At road's end, another hurdle loomed: the notorious McCarthy trams, which offer the only summertime access (other than aircraft) across the large, icy, and fast-moving Kennicott River. Built in the 1940s, the original handpulled cable trams required lots of arm strength and more than a little courage. They, more than anything, kept Mc-Carthy's residents insulated from unwanted company.

The obstacles separating McCarthy from the outside world diminished dramatically during the 1980s. State crews improved the gravel road—most drivers can now do its 60 miles in two to three hours—and rebuilt an old, rickety bridge over the Kuskulana River. Local residents, meanwhile, replaced the aging trams with easier-to-use models. As word of the improvements spread, the number of park visitors funneled down McCarthy Road increased sharply, from about 5,000 in 1988 to more than 20,000 in 1994.

Increased traffic has prompted new demands for additional work to make

the road safer. Exactly how much and what kind of work is open to debate. The state, which owns the right-of-way, has at times pushed for major reconstruction. But park managers and most locals would prefer a "low upgrade" that removes hazards but does not make it a high-speed road suitable for tour buses or recreational vehicle caravans.

"We don't want it black-topped. We don't want it widened or straightened more than it needs to be," says Eric Yould, a civil engineer and McCarthyarea property owner. "We'd like the road to be part of the experience." Unfortunately, most of McCarthy Road offers little to catch visitors' attention. The roadway has few scenic pullouts, no interpretive displays, no road-side wildlife viewing, and no bathrooms or campgrounds until road's end.

The park's managers hope to satisfy some of these needs with wayside exhibits and perhaps trailheads, but acting superintendent Russ Lesko says "we're limited in what we can do. The state owns the right-of-way and the majority of adjacent land is privately owned. ...There's got to be a joint solution that involves us, the state, and local interests."

At road's end is another development project that will shape both McCarthy-Kennicott's future and the nature of park tourism: McCarthy's notorious trams are being replaced by a bridge. Exactly what sort of bridge has been the source of considerable debate. McCarthy residents and park officials have pushed for a footbridge; a vehicu-

Wrangell-St. Elias includes four major mountain ranges and six of North America's ten highest peaks.

lar bridge, residents argue, would open the town to unwanted traffic and destroy its character. As recently as last spring, the state planned a bridge suitable for vehicle traffic, but it also now supports the footbridge concept. To the Park Service, a footbridge is in keeping with a "light touch" approach to Mc-Carthy corridor projects. "We would like to keep McCarthy-Kennicott as rustic and quaint as we can," says Lesko.

One of the keys to any future Wrangell-St. Elias development is the Kennicott Mine. Located 4 1/2 miles from McCarthy, the mining camp was established in 1906, following the discovery of a rich copper deposit. At its peak, Kennicott employed about 600 people, and its main settlement included more than 40 buildings. Abandoned in 1938, the mine is now part of a 3,000acre inholding within Wrangell-St. Elias. Subsurface rights still belong to the Kennicott Corp., while surface rights are owned by a group of Alaskan investors. Kennicott's owners have proved willing to deal with the Park Service, but the agency so far has not had the money, or means, to obtain the mine and surrounding property.

While negotiations have remained in limbo, property owners have cleaned up Kennicott's hazardous wastes, and a nonprofit group called Friends of Kennicott has stabilized several of the mine buildings, with nearly \$600,000 from the state and federal governments. With stabilization nearly complete, McCarthy resident and Friends of Kennicott board member Ben Shaine believes that Park Service ownership of the mine and surrounding private property is a critical next step: "Here you have a place that's already the most-visited destination in the nation's largest park. It's a National Historic Landmark, with some of the best, most easily accessible trails in the whole state nearby; a place where you can come and experience the Wrangell Mountains, all within walking distance of the road."

If the Park Service does eventually

acquire Kennicott, NPCA, Friends of Kennicott, and Lesko share a similar vision of management style. "This is a place where less is more," says Sally Gibbert of Friends of Kennicott. "Take a low-key approach; make sure the buildings are stabilized, but don't do a total reconstruction. And don't turn it into a major tourist destination, with theme park and ski resort."

Some McCarthy residents oppose a Park Service purchase because they fear that it will lure mass tourism into their backyard and increase the government's presence. But Shaine argues that a management partnership between the Park Service and a private nonprofit group such as the friends group would, in fact, restrict development and limit—or perhaps even eliminate—the need for onsite park personnel.

Sixty miles north of McCarthy-Kennicott is Wrangell-St. Elias' other gravel road, the 45-mile-long Nabesna Road. Though in relatively good shape, the park's northern entryway is also scheduled for improvements. The biggest need, says Department of Transportation project manager Bill Townsend, is bridges. "There's a couple places where you have to ford rivers," he says, "and it's possible to get trapped if you have some flooding." Exactly how the streams will be spanned remains a question, and work will not begin until after park managers complete an updated management plan.

Nabesna Road is mainly bordered by parkland, not private property, and it offers scenic vistas along nearly its entire length. Its traffic is only one-tenth that of McCarthy Road, and most of its users have traditionally been anglers, hunters, and trappers. But that is changing. In 1994, the number of nonconsumptive travelers—birders, canoeists, hikers, backpackers—equaled or surpassed consumptive users.

District Ranger Sean McGuinness expects Nabesna Road to be inundated with park explorers when construction work on the Tok Cutoff Highway is finished in 1995—a scary prospect, considering the lack of facilities along the corridor. Visitors will find no bathrooms, campgrounds, or other services



along the roadway. Already, he says, "there's toilet paper everywhere, and people drive off the road, across the tundra, camping wherever they want. In places they are trashing out stream banks and lake banks, cutting down trees, leaving garbage."

Off-road vehicles present another dilemma. ORV use is allowed in Wrangell-St. Elias' nonwilderness areas for subsistence purposes, as well as for recreational use along designated trails. Access to several of the most popular routes is possible from Nabesna Road.

With increased traffic, some stretches of traditional, pre-park ORV trails have degenerated into large, deep mudholes, up to a quarter-mile wide. And ORV use by subsistence hunters is spreading to new areas. Park staff is conducting a three-year study to determine ORV impacts, and possible restrictions. Chief Ranger Jay Wells expects it will be a highly contentious issue, with ORV users and state government on one side, conservationists on the other, and the Park Service being fired on from both sides. "Legally, ORVs can be allowed only if they don't adversely affect park values," he says. "It's something we have to address, because their increased use poses some long-term threats."

Though increased human impacts are most keenly felt along Wrangell-St. Elias' road corridors, its backcountry is also experiencing a visitor boom. And even with their low-impact ethic, increased numbers of hikers, backpackers, and river floaters are having a cumulative effect. In places, vegetation has been trampled, littering and crowding have occurred, and air traffic has increased. Especially popular is the Skolai-Chitistone area, considered by many to be the park's premier wilderness site. To keep such popular spots from being degraded, guide Bob Jacobs says, "It's up to all of us to go to other areas, to spread the use around."

Exactly how, or where, wilderness seekers should be re-directed is uncertain. Improved access to the backcountry is one possibility; more day-use destinations is another. "Maybe," says Wells, "we'll eventually need to impose certain restrictions, go to a permit system or limit group sizes."

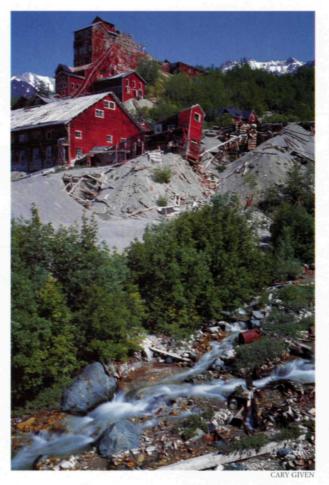
In some areas—Chitistone Canyon for example—and at certain times, Jacobs might support user restrictions. But no more trails, he pleads: "We have enough trails in other parks. Why not make this a fly-in park? Improve a few of the existing airstrips, build shelters of some kind, and have people fly in to do their day trips or overnighters." The backcountry needs creative thinking: "This place," Jacobs says, "deserves something different."

Also critical to the park's longterm well-being is its relationship with neighboring Alaskans. "At Wrangell-St. Elias we have to face some of the thorniest, most controversial Alaskan issues," says Molly Ross, special assistant to George Frampton, Jr., the Interior Department's assistant secretary for fish and wildlife and

parks. "That's why it's so critical to work together, to formulate a common vision."

Among park managers' chief concerns is subsistence, which, says Wells, "involves a whole morass of issues. Right now, the most controversial thing is defining eligibility. Who's a local resident? There are 18 communities within [the Wrangell-St. Elias] residency zone, but trying to define the communities has been a challenge." Already defined once, community boundaries are being re-examined because of heated local protests.

Hunting and wildlife management are also issues. Despite conflicting values and priorities, Russ Gallipeau, chief of resource management, says park staff has a good relationship with the Alaska Department of Fish and Game and local hunters. He points to a regional caribou management plan as a prime example of building partnerships. Yet Roy Ewan, president of Ahtna, Inc., a regional Native corporation, complains



Abandoned in 1938, Kennicott Mine is part of a 3,000-acre inholding within Wrangell-St. Elias. Established in 1906 following the discovery of a rich copper deposit, the mine is now listed as a National Historic Landmark.

the Park Service "hasn't done enough to protect our subsistence hunting rights."

An equally, if not more, divisive issue between Ahtna and Wrangell-St. Elias park is resource development. A major landowner both within the park and along the boundaries, its projects will have a large impact on park values and visitor experiences. Just last summer, timber harvesting began on Ahtna land along the park's western border a harvest easily visible from the McCarthy Road entrance. "We've made some recommendations," Lesko says, "asked Ahtna to be sensitive to visitor perceptions. Time will tell, I guess."

Ahtna's commercial interests extend to its park inholdings; the corporation

already owns more than 620,000 acres within Wrangell-St. Elias, and may receive up to 83,000 acres more. Much of that land holds timber, mineral, or tourism potential, though Ahtna officials say they have no immediate development plans.

Beyond Ahtna, hundreds of other inholdings exist, which Lesko sees as "both a blessing and curse." Inholders, even those in wilderness areas, are guaranteed "reasonable access" to their properties. To date, park management has been able to work out satisfactory arrangements with landowners, but Wells predicts, "It's only a matter of time before someone's going to want to build a road deep into the park, through wilderness."

A final critical challenge involves gaining the trust and support of local residents. Bob Jacobs, whose McCarthy ties reach back to the late 1970s, says widespread distrust of both state government and the Park Service exists. "The idea of coop-

eration and partnerships is a nice one, but with cooperation there are no hidden agendas. The Park Service alienated a lot of people early on, and there is no history around here of the Park Service working with the community. It is almost like we're a couple of trains on opposing tracks," says Jacobs.

Lesko, who has been at Wrangell-St. Elias since November 1991, is optimistic that his agency can improve relations with its neighbors. NPCA's Dennerlein agrees and suggests that partnerships are the key to success. "It's an enormous challenge: to preserve the park's essence while meeting the needs of those who live in and around the park, and at the same time, manage the park on behalf of millions of Americans. If we do it right here, just think what it will mean for Wrangell-St. Elias and Alaska's other parks. There's so much at stake."

Bill Sherwonit is a freelance writer living in Anchorage, Alaska.

SNOWED UNDER

The roar of snowmobiles in many national parks has replaced the solitude and guiet that once defined the winter landscape.

By Todd Wilkinson





O ONE REMEMBERS exactly when the 143,000th tourist came throttling through Yellowstone's west gate on a snowmobile. Although no celebrations marked the event, park rangers sensed that Yellowstone was on the verge of shattering annual winter visitation records. They knew it because the evidence burned in their lungs and rang in their ears.

During the winter of 1993, an unusual blue-brown pall of smog and woodsmoke collected above the town of West Yellowstone, Montana-a community that proudly proclaims itself "the snowmobile capital of the world"-and daily drifted eastward into the park. Rangers staffing the entrance station complained of headaches and nausea caused by the noise and fumes from a steady stream of snowmobile traffic.

According to the California Air Resources Board, the fumes from 1,000 snowmobiles-the number in the park on any given day-are equal to the total output of nitrous oxide and hydrocarbons from 1.7 million auto tailpipes. "Every year we receive more and more letters from visitors," says John Sacklin, the park's lead planner. "They're not all saying necessarily that they are having a bad experience, but they are seriously questioning the direction that winter recreation in the park is going."

When Yellowstone was set aside in 1872, certainly no one foresaw that vacationing in a frigid, snow-covered place would be enticing to people 123 years later. Until this year, Yellowstone had done nothing to monitor the impact of snowmobile emissions on park resources. But this year, Sacklin says sensing devices have been placed outside the west entrance to gauge levels of exhaust. Rangers also have the option of turning snowmobiles away if they are too noisy. Last year, he notes, several snowmobiles were denied entrance to the park because they exceeded noise limits.

Although snowmobiles fall through the cracks of pollution control, the Environmental Protection Agency is currently reviewing air quality standards for these machines, and the snowmobile industry itself has agreed to take the National Park Service's (NPS) concerns into account for future designs. "Snowmobiles are the worst [polluters]," says Charles Emmetts, an engineer with the California Air Resources Board. "They're extremely, extremely dirty compared to anything else."

How Yellowstone, once the rare gem of winter tourism in the lower 48 states, could reach a point of crisis has many planners such as Sacklin scratching their heads. Agency officials for the first time are contemplating limits on winter tourism that could have repercussions for parks across the country. But the solitude and quiet that defined the winter landscape in Yellowstone for decades may be beyond salvation.

Sacklin, who is coordinating a special task force on winter visitation, says the park may have made a gross miscalculation. When the downhill ski industry leveled off in the 1980s, agency officials assumed winter visitation in Yellowstone would follow the same course. It never did. Winter visitation, in fact, is the fastest expanding segment of tourism in the 2.2-million-acre park. While

NATIONAL PARKS

Yellowstone's annual rate of increase has been a steady 2 to 3 percent (it surpassed 3 million total visitors in 1993), visitation during winter has grown at a phenomenal 10 to 15 percent.

In 1964, fewer than a dozen snowmobiles entered the center of the park. They encountered no open hotels or restaurants, no gas stations or warming huts, no grooming machines or fleets of vehicles used to shuttle skiers to the interior. But nearly 20 years later, more than 100,000 people-the majority of them on snowmobiles-flooded the west entrance. In just eight years, annual winter visitation climbed again from 100,000 to 143,523.

For Terri Martin, Rocky Mountain regional director for the National Parks and Conservation Association (NPCA), the emerging dilemma facing Yellow-

Above: Once the quiet season at Yellowstone, winter is now a popular time for visitors- many of them snowmobilers.

Left: The willow ptarmigan, a winter resident of Yellowstone.

stone is nothing new. "NPCA has been pressing the Park Service for years to admit that overcrowding seriously threatens park resources and the quality of the visitor experience," Martin says. "The longer the problem is ignored, the worse it's going to get. We are pleased that the Park Service is now thinking about establishing limits down the road, but it needed to do something vesterday."

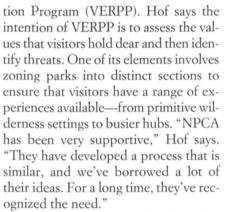
When Yellowstone prepared its pioneering Winter Use Management Plan in conjunction with Grand Teton in

A bull elk crossing a road in Yellowstone encounters a snowmobiler. Such confrontations are increasingly common.

1990, NPCA urged the Park Service to initiate a "Visitor Impact Management" plan, or carrying capacity study, to help ensure that dramatically increasing levels of visitation would not degrade park resources or erode the quality of the visitor experience. But resource experts informed conservationists that no limits on winter use would even be considered until Yellowstone reached 143,000 annual winter visitors. They estimated it would take ten vears-until the end of the century-before this arbitrary threshold was reached; instead, it was surpassed in two years. Now conservationists fear that, left unchecked, annual winter visitation could reach at least a quarter of a million people by early in the next century. Whether such numbers can be accommodated without sacrificing the wild and solitary character of Yellowstone's winter environment and stressing its wildlife is a matter of debate.

Not content to wait and find out, NPCA and other regional conservation groups argue that the Park Service should hold the line on winter visitation, especially snowmobile use, until a plan is developed that protects park values from overcrowding. "We really need a moratorium until we get a grip on how to protect park values from everincreasing winter visitation, especially snowmachine use," says NPCA's Martin. "We can't afford to wait while damage is being done and then try to turn the clock back." Officials at the agency's Denver Service Center (the Park Service's planning arm) say they are using some of the ideas presented in NPCA's carrying capacity handbook as a tool for assessing whether Yellowstone has reached its limit. First, however, they intend to look south-into the sunscorched Utah desert-for possible answers.

According to Marilyn Hof, a Park Service planner, the agency is developing a carrying capacity prototype at Arches National Park through the Visitor Experience and Resource Protec-



Resource experts readily admit that imposing limits on activities such as snowmobiling in Yellowstone is not a matter of if, but when. Surveys show that park visitors expect a serene experience. They come to enjoy the pristine beauty of the park's natural features, to watch wintering wildlife, and to experience the winter season's natural quiet. But each year, park managers receive more complaints from visitors about crowding and snowmobile noise and exhaust odors. Many business operators in Yellowstone's gateway communities are also realizing that crowding and excessive numbers of snowmobiles are not in their best interest. Still, the idea of imposing limits will no doubt evoke outcries from some who see the park primarily as a source of income.

Imposing limitations on recreational use and phasing out previously existing winter development are hardly new ideas. A decade ago, officials in Glacier National Park in Montana decided to prohibit snowmobiles in the park interior; in the early 1980s, limited snowmobile use was permitted and then subsequently withdrawn from California's Yosemite, Sequoia-Kings Canyon, and Lassen Volcanic national parks; and in 1992 at Rocky Mountain National Park in Colorado, the National Park Service closed a downhill ski resort called Hidden Valley after it was deemed financially insolvent and contradictory to park values.

Hidden Valley's snowmaking equipment required pumping water from a stream that supported the last viable population of threatened greenback cut-



throat trout. "The Park Service encourages recreational activities that are consistent with resource protection and are compatible with other visitor uses," suggests Ben Moffett, NPS spokesman for the Rocky Mountain region. "Downhill skiing simply doesn't fare well when you apply these tests because of the space and infrastructure the sport requires and the concentration of people and vehicles in staging areas. The Park Service feels the same way about snowmobiling."

The decision to close Hidden Valley drew the ire of the Estes Park business community. But the *Denver Post* supported Rocky Mountain regional director Bob Baker for placing park values ahead of economic development. "Local boosters should actually be applauding Baker's thinking, not second-guessing it," the *Post* pronounced. "Like many other savvy folks across the West, he had deduced correctly that wild lands may ultimately bring more money into the community when left untouched...."

Yellowstone's superintendent for 11 years, Bob Barbee, who in 1994 became the NPS Alaska regional director, guided the park through its most explosive era of winter use. Some say Barbee capitulated to the interests of regional tourism officials, who demanded that no limits be imposed; others say he worked behind the scenes to slow the rate of growth by allowing no new winter developments inside the park.

The burden has been inherited by Barbee's successor, Mike Finley, the former superintendent of Yosemite, who established daily visitation limits in Yosemite Valley. Finley, known for his ability to maneuver through tough political crises, has his hands full at Yellowstone.

Calls for caps on winter use are being made at the same time as the newly designated 240-mile Continental Divide Snowmobile Trail prepares to open in 1995, linking Lander, Wyoming, with Yellowstone's south entrance. Already promoted by the snowmobile industry, the trail is expected to bring thousands of additional snowmobilers into the park.



A portion of the trail cuts through Grand Teton National Park and will run along the shoulder of the existing park highway. The trail will cost millions of federal and state dollars to build and maintain, and it makes snowmobiling, which had a fairly low profile in Grand Teton, a major component of winter use. The issue of safety on the Continental Divide Trail surfaced last autumn when an engineer with the Federal Highway Administration said he was concerned that dangerous encounters could occur between snowmobiles and cars. Despite concerns, Grand Teton park officials said they would sanction the trail on an "experimental basis" for 1995.

"Building the Continental Divide Snowmobile Trail through Grand Teton is not only wasteful, pork-barrel politics, it is also dangerous and destructive," says NPCA's Martin. "The excessive number of snowmobiles in Yellowstone is already creating noise, air quality, and safety problems. Yet, the new trail in Grand Teton will encourCrowds and noise disturb park bison, already stressed by sub-zero temperatures, deep snows, and limited food supplies.

age even greater snowmobile use in both parks."

Jack Stark, a retired superintendent of Grand Teton, said he never supported the construction of the Continental Divide Trail through his park, but Sen. Alan Simpson (R-Wyo.) earmarked federal funding for the trail and then told the Park Service to make sure it got built. Stark said the trail has been a pet project of the Wyoming congressional delegation and a prime example of pork-barrel politics. The money set aside for the trail "could have been better spent, benefiting a lot more people," Stark said recently. "We could have used [the funds] for maintenance of our summer hiking trails and facilities or employed more seasonal rangers."

At Yellowstone, nearly \$17 million has been provided for capital expenses relating to winter use, including reconstruction of the rustic Snow Lodge at Snowmobiling has become so popular at Yellowstone that visitors sometimes must wait in long lines at the gas pumps.

Old Faithful, as well as winterization of a lodge and potentially several hundred cabins at Canyon Village. It has been rumored for years that Canyon Village, now closed in winter, may eventually be turned into a cross-country skiing development to serve as a principal destination for winter tourists coming in from Cody, an eastern gateway town. Sen. Simpson has been opposed to any caps on winter use, and commerce officials in Cody have not been shy in trying to grab their own piece of the winter pie.

Paul Hoffman, director of the Cody Chamber of Commerce, has pressed for Cody to become a base for winter tourism similar to West Yellowstone, involving both the national park and adjacent national forests. "Snowmobilers don't like to [putter] along in the park at 45 miles per hour over the groomed roadways," he says. "They like to get out and blast through snowdrifts."

Currently the park road headed east toward Cody is closed in winter to all snow vehicles. The Yellowstone Winter Use Plan calls for leaving the road closed because of avalanche danger. Conservationists say there is another good reason: some sections of Yellowstone should remain free of the noise and pollution of snowmachines.

The increase in winter use at Yellowstone has also spawned an array of secondary impacts that affect the park in profound ways. For most of this century, Yellowstone's free-roaming bison herds tended to stay in the park interior, unable to migrate outside the park through a deep snowpack. But since the 1970s, trails have been groomed to accommodate snowmobiles, and bison regularly wander outside the park. At the behest of the livestock industry, which fears the wild bovines could transmit diseases to domestic cattle, more than 1,000 bison have been killed in ten years. Noted bison biologist Mary Meagher says problems would be unlikely if snowmobile trails did not exist.

For Yellowstone planners contem-

plating options, an example may lie in Lassen Volcanic National Park in California, which in 1993 made the controversial decision to shut down a 55-yearold ski area, one of the oldest in the country. Some 53,000 downhill skiers recreated annually at the development in the Cascades until a competing resort on Mount Shasta caused visitation to plummet and the resort to lose money for seven consecutive years. Predictably, some local citizens who had grown up skiing in the park condemned the action by park superintendent Gilbert E. Blinn.

Blinn held firm to his decision. Lassen spokeswoman Betty Knight said the resort had been targeted for removal in the park's general management plan because it was deemed incompatible with natural values. "There were some tough decisions that needed to be made, but I would say [most of] the public was happy the superintendent made a stand on behalf of the resources," Knight said. "We also considered allowing snowmobiling, but the overwhelming consensus from the public was to keep it out."

Still, the snowmobile industry, buoyed by an ever-expanding clientele, perceives parks as places of untapped opportunity. Farther north, Dale Crane, NPCA's regional director for the Pacific Northwest, cites a recent confrontation in Crater Lake National Park in Oregon over a proposal to build a hotel on the rim of the famous caldera. Snowmobile groups had requested access to a summer highway that circles the rim. "In an act of good faith, the park backed off [the plan to build a hotel] and then wrote a winter use plan that was among the first in the region," says Crane. "It recommended that any future development be moved away from the rim into less sensitive areas."

Crane said winter use in parks such as Mount Rainier, Olympic, and North Cascades still is in its infancy, and it is unclear what role, if any, snowmobiles will play in those parks. The regulation of snowmobiles falls into a gray area of official public policy. While all other





A cross-country skier at Olympic, one of many national parks where snowmobiling does not yet dominate winter use.

recreational activities, ranging from scuba diving to bicycling, are addressed in established guidelines, snowmobiling was omitted from the Park Service's last management policies completed in 1988, two years before the benchmark winter use plan in Yellowstone and Grand Teton was completed.

"Each park will develop and implement visitor use management plans and take management actions, as appropriate, to ensure that recreational uses and activities within the park are consistent with its authorizing legislation or proclamation and are not carried out in derogation of the values and purposes for which the park was established," states the policies.

Nowhere is the dichotomy of public enjoyment versus resource protection more contentious than in Voyageurs National Park along the border between Minnesota and Canada. Voyageurs is the only other park in the system besides Yellowstone that has sizable snowmobile use—an estimated 30,000 enter Voyageurs annually. The issue has flared as park officials contemplate whether to set aside the pristine Kabetogama Peninsula as a federally designated wilderness where motorized vehicles are not allowed. Currently, the park allows snowmobiling across four lakes and a trail.

"Snowmobiles produce a lot of noise, and I believe any area set aside as wilderness should not have snowmobiles on it," says Voyageurs Superintendent Ben Clary, who helped craft the winter use plan in Yellowstone. "This park is somewhat similar, but the issues are different in Yellowstone, where you have wildlife along the roadways and harassment of animals being a problem."

Long before the national explosion of winter use began to flare in parks, bison and other creatures had the coldest months of the year virtually to themselves. They heard no motors, only the howling wind; they sniffed no scents but the woodsy spice of lodgepole pine. Now, people escape to parks in winter. Whether the Park Service can preserve a serene experience is a proposition that only time can tell.

Todd Wilkinson lives in Bozeman, Montana. He last wrote for National Parks about black-footed ferrets.

Help Preserve the Quiet

Readers who want to see the quiet and solitude of Yellowstone in winter maintained should write to the National Park Service to encourage the agency to initiate measures to limit the effects of snowmobiles on wildlilfe and other resources. Send comments to:

National Park Service Denver Service Center—TCE P. O. Box 25287 Denver, CO 80225



Hot Spots

The United States contains more than 65 active or potentially active volcanoes, 20 of them in or near national parks or monuments.

By Yvette La Pierre

N THE MORNING of May 18, 1980, Mount St. Helens in southern Washington exploded with the force of a 400-megaton hydrogen bomb, blasting off the top of the mountain. The north face of the volcano, swollen by pressure from magma and gases below, collapsed and slid down the mountain, flattening everything in its path. The blast stripped millions of 200-year-old fir trees of their branches, strewing them like match sticks up to 17 miles away. When it was all over, the landscape to the north of the volcano was devastated, rivers were clogged for miles with mud and debris, and 57 people and countless animals were dead.

Now imagine an eruption a thousand times greater than that occurring in a place that today is visited by three million people annually. What you are imagining is the last major eruption at Yellowstone about 600,000 years ago, which left a smoking depression, or caldera, 28 by 47 miles wide and several thousand feet deep.

"And that wasn't even the biggest," says Rick Hutchinson, research geologist with the park. "Ash from that explosion is 20 feet deep in parts of Oklahoma, Nebraska, and Kansas." The ash that actually fell from this explosion was believed to have created a foot-thick layer. It has become deeper as a result of erosion and deposition.

Polynesians once believed that an angry goddess caused volcanoes to erupt. Here, Kilauea at Hawaii Volcanoes overflows.



A thyme-leaved saxifrage flowers among volcanic rocks at Aniakchak Caldera in Aniakchak National Monument, Alaska.

Yellowstone has erupted three times in 2 million years. It may or may not erupt again. Nevertheless, Yellowstone is a geologically active place, the evidence of which is all around in the form of earthquakes, bubbling mud pots, fumaroles, and most famous of all, Old Faithful geyser.

In fact, the United States has more than 65 active or potentially active volcanoes, and about 20 of those are within or near a national park or monument. Most are in Alaska, including Lake Clark National Park and Preserve, which has two active volcanoes, and Katmai National Park and Preserve, which has a dozen. Mount Rainier in Mt. Rainier National Park, Washington, and Lassen Peak in Lassen Volcanic National Park, California, are technically active volcanoes in the explosive Cascade Range, to which Mount St. Helens belongs. Kilauea in Hawaii Volcanoes National Park is the world's most active volcano—lava has been flowing from the east rift zone since 1983.

An active or restless volcano in a national park presents a number of opportunities as well as challenges to park managers. Volcanic activity provides interpreters with excellent natural displays to teach park visitors about the geological history of the area. But the same activity can pose risks to visitors and employees, as well as buildings and other facilities and resources. Through its Volcano Hazards Program, the U.S. Geological Survey (USGS) is working with managers and resource specialists in several national parks to advise about eruptive activity, create maps that define hazard zones, and provide information that park rangers can use in educational displays and presentations. The goal of the program, says James Riehle, deputy for the volcano hazards and geothermal research program at USGS, is to limit the loss of life and property from an eruption.

Volcanoes have been a source of life, death, and myth throughout history. Centuries ago, the people living near the island of Vulcano in the Mediterranean Sea thought the mountain spit hot lava and ash clouds as Vulcan, the blacksmith of Roman mythology, beat out thunderbolts and weapons for the gods. In Polynesia, it was the beautiful but temperamental Pele, Goddess of Volcanoes, who caused mountains to explode when she was angry.

Today, we know that, to put it simply, volcanoes are sites at the Earth's



surface, either under the sea or on land, through which gases and molten rock (magma) erupt. Magma can be erupted as a smooth, continuous fluidal "flow," or as a toothpaste-like "dome" that mounds up over the vent. It also can be explosively ejected as fragments: cinders and ash are fairly small, walnut- or sand-size fragments of magma; "bombs" are larger fragments of molten magma; and "blocks" are solid fragments, such as pieces of old cone rocks that are explosively ejected. Blocks and bombs can be up to four feet across and can land up to a mile away, depending on the energy of the explosion. But volcanoes do much more than damage the land. They provide the materials, such as phosphorus, potassium, calcium, and sulfur, that are needed to create and sustain life.

Scientists divide volcanoes into four major types. Cinder cones, the simplest type of volcano, are built from particles, or cinders, and blobs of congealed lava that are ejected violently from a single vent. Most cinder cones are circular or oval and have a bowl-shaped crater at the summit.

Some of the Earth's grandest mountains, such as Mount Fuji in Japan and Mount Rainier in Washington, are composite volcanoes. These are usually large, steep-sided cones built of alternating layers of lava, volcanic ash, cinders, and bombs, or large rock fragments. They can rise to heights of 8,000 feet or more and generally have a central vent at the summit. Crater Lake National Park in Oregon has an interesting twist on a typical composite volcano. According to Marianne Mills, assistant chief of interpretation, a 12,000-foot-tall mountain called Mount Mazama stood at the site of Crater Lake until a tremendous eruption thousands of years ago.

"Where Mount St. Helens was more of an explosion, we were more of an implosion," Mills explains. The huge eruption rapidly drained the magma beneath the mountain, weakening the top part, which then collapsed to form a caldera. The caldera later filled with water, creating Crater Lake. A last gasp of energy formed a near-perfect cinder cone called Wizard Island, which rises above the lake, sporting a crater at its top. And that, says Mills, is how the lake got its name.

When lava pours freely in all directions from a central vent, it eventually hardens, forming a low, gently sloping

Mount St. Helens erupted in 1980, stripping millions of trees from the landscape and killing 57 people.

mountain called a shield volcano. Some of the largest volcanoes in the world are shield volcanoes, including Kilauea and Mauna Loa at Hawaii Volcanoes National Park. Mauna Loa, towering 28,000 feet above the ocean floor, is the world's largest active volcano.

In some volcanoes, the lava is so thick it cannot flow very far, so it just piles over and around its vent, forming a lava dome. If the dome plugs the vent, it is called a plug dome volcano. Lassen Peak may be the world's largest plug dome. Throughout the park system are many examples of these different types of volcanoes. (See sidebar.)

Geologists have another way of classifving volcanoes-hot-spot or plateboundary volcanoes, and intra-plate volcanoes. According to the plate-tectonics theory, the Earth's outer surface is broken into slabs or plates that move relative to each other over a hot, fluid zone, like corn flakes floating on simmering milk. When the boundary of one plate is forced under another, it creates a subduction zone where big, explosive volcanoes typically form, Riehle says. But some volcanoes are nowhere near plate boundaries. Instead, they form in the middle of a plate like a blister when the plate passes over a hot spot in the Earth's mantle. The Hawaiian volcanoes are examples of hot spot volcanoes, as is Yellowstone. So if Yellowstone is sitting over a hot spot, why is it not erupting regularly like the Hawaiian volcanoes?

"A thick continental crust in Yellowstone obscures things," Riehle says. "And the magma is stickier, and it doesn't move as easily." But the slow magma will make it to the top someday.

When molten rock, or magma, does force its way upward, driven by buoyancy and gas pressure, it may ultimately break through weak zones in the Earth's crust. The magma may be freed quietly as lava flows, or it may explode violently into the air. Kilauea and Mauna Loa exemplify the quiet eruption, where red-hot lava bleeds out of vents in the Earth, posing little risk to humans. But even these eruptions can damage property and crops. In 1989, lava destroyed the park's Wahaula Visitor Center, and since the current eruption began more than 11 years ago, 180 homes have been destroyed.

Because these volcanoes are frequently active, staff at the USGS Hawaiian Volcano Observatory, located at the summit of Kilauea Volcano in the park, works closely with park employees, offering lectures and field trips and providing a hazard map. Hazard maps outline areas at risk from lava flows, debris flows, massive slope failure, and other volcano-related events. Park officials use the map for land-use planning and visitor safety. Visitors receive a copy of the map in the park newspaper, as well as other safety information. Though the lava flows do not pose a big risk to visitors, one park visitor was killed in 1993 when he ventured too near lava flows that had just entered the ocean and which collapsed suddenly into the sea. Volcanic gases can kill or cause serious injury, too, so park rangers are on standby to warn people if the wind shifts in their direction.

The National Park Service also uses information provided by USGS for educational purposes, an integral part of any safety program. According to a 1994 National Research Council report, "Because many Park Service employees have developed skills of communication with the public and are in regular contact with many thousands of park visitors, they can play an important role in the design, preparation, and distribution of educational material...on volcanic hazards and emergency response for visitors."

Visitors to Mount Rainier National Park are well informed of the explosive history of the park's namesake through displays and interpretive programs at the park, using information provided by USGS. Scientists are discovering how essential communication with the public is in their mitigation efforts. When Mount St. Helens began to reawaken in March 1980, for example, authorities restricted access to the area. Some people were angry that they were kept

Volcanic vestiges

Throughout the National Park System is evidence of our planet's molten past, as well as present and future. Some parks contain the remains of long-silent volcanoes, whereas others continue to shake, bubble, and spew, reminding us that the Earth is far from finished creating itself. The following is a sampling of the parks where you can see volcanoes.

Big Bend National Park, Texas

Big Bend's landscape of intriguing formations and multicolored rocks is a textbook of volcanic history. Millions of years ago, at least three volcanoes erupted so violently that their crests eventually collapsed in on themselves, forming calderas. The volcanoes are extinct now, but studies of them will help predict the actions of live calderas, such as the one at Yellowstone.

■ Craters of the Moon National Monument, Idaho

A 7-mile loop road passes cinder cones, lava flows, and lava tube caves. When fluid, molten lava spilled out of the ground, it flowed downhill like a stream of water. The surface of this stream soon cooled and hardened, but the molten lava inside continued to flow. The lava inside eventually flowed out, leaving the crust as the walls of a tube or cave.

Devils Tower National Monument, Wyoming

The nation's first national monument, Devils Tower is an 865-foot tower of columnar rock. More than 60 million years ago, the tower began as molten magma forced into sedimentary rocks. It cooled underground. Over millions of years, the sedimentary rocks eroded, exposing the harder plug.

Katmai National Park, Alaska

When Novarupta Volcano erupted in 1912 in Katmai National Park and Preserve, it created the "Valley of Ten Thousand Smokes," where steam rose from countless fumaroles. For years, the valley remained so hot that people were able to cook over the fumaroles. Only a few active vents remain today.

Lava Beds National Monument, California

Volcanic activity spewed forth molten rock and lava here, creating an incredibly rugged landscape, with natural fortresses used by the Modoc Indians during the war that began in 1872. (See page 44.) One of the most striking volcanic features in Lava Beds is the more than 200 lava tube caves.

Sunset Crater National Monument, Arizona

The area is studded with volcanic peaks, cinder cones, and lava flows that represent a long period of volcanic activity. Evidence has been found here that the eruptions were separated by periods of inactivity during the last 2 million years. About 900 years ago, the last of these eruptions occurred, producing Sunset Crater.

source: National Park Service



Craters of the Moon is quiet now, but scientists say it will erupt again in the future.



from their property and recreation sites, and public pressure eventually led to permission for cabin owners to enter the area to retrieve their belongings. One such trip was scheduled for the morning of May 18, but the volcano erupted before the trip could take place. The death toll could have been much higher as a result.

Mount Rainier, in particular, has the potential for extreme hazard because it is near highly populated areas (most notably the Seattle-Tacoma metropolitan area), and its extensive cover of snow and ice could turn into catastrophic mudflows if melted quickly during volcanic activity. Staff at Mount Rainier National Park is currently helping USGS with its geologic mapping of the volcano's edifice to better understand past eruptions and debris flows in order to better predict future activity.

USGS has published a preliminary assessment of the general volcanic hazards of the mountain as well as specific studies of past floods and mudflows and the potential of future flooding. New studies of the frequency of eruptions and the potential for landslides and floods that are not triggered specifically by volcanic activity are currently under way. When completed, the current studies, together with the previous assessments, should lead to a new comprehensive hazards assessment. "The hazard information will not only help people living in nearby communities but will also let us [National Park Service] know what hazards we are facing," says Barbara Samora, natural resource specialist. "We'll utilize the information to determine where we should invest in maintaining or adding to facilities. Whether or not we move out of an area could depend on what we learn from the USGS."

According to Samora, the Park Service is also collecting ecological data from the area so that if there is an eruption, scientists will have good baseline information to better understand the effects on plants and animals and the recovery process.

Of course, the best way to ensure the safety of people near active or restless volcanoes is to warn them in advance of an eruption. Strides have been made toward more accurate predictions. At Hawaii Volcanoes, USGS scientists have been successful in predicting some eruptions far enough in advance so that park rangers were able to clear visitors from areas before the lava and gases hit.

Predictions have been aided by a long period of detailed, site-specific seismic recording. Only in the last few years have accurate predictions been made for subduction volcanoes. The eruption of Mount Pinatubo in the Philippines,

Thousands of years ago, a 12,000-foot mountain called Mount Mazama stood at the site of Crater Lake. A tremendous explosion toppled the mountain.

for instance, was forecast within days to minutes. Part of the reason for the difference is the nature of the volcano. Hawaii volcanoes erupt fluid lava flows, whereas subduction volcanoes erupt sticky, explosive magma that can vary widely in the rate at which it ascends the last few hundred meters to the volcano's surface. As with hazard assessments, eruption forecasts are based on the volcano's history to determine the pattern, magnitude, and frequency of past events. This information can help scientists determine when a volcano might erupt again and what type of eruption it would be.

"Once a volcano becomes restless, we install monitoring equipment, and we're better able to interpret the geophysical signs that there will be an eruption in weeks, days, or hours," says Riehle.

Emergency response to volcanoes has also improved, Riehle says, as better communication between scientists and the public has resulted in greater awareness in society of the risks associated with volcanoes. The ongoing studies by USGS and the Park Service of the mystery surrounding the awesome force always present beneath the Earth's surface remains, and it is that mysterious power-both frightening and thrillingthat draws people to volcanoes. Scientists have gained significant new insights into the dynamics of volcanoes, but the final decision still belongs to the mountain. As geologist Hutchinson says of Yellowstone's inevitable eruption, "Depending on where and how big, it could be 'gee, this is neat, another example of the living geological history of Yellowstone,' or 'hey, this is a big economic disturbance,' or life as we know it in the United States could end."

Yvette La Pierre is a freelance writer and children's book author living in Grand Forks, North Dakota. She last wrote for National Parks about haunted parks.

MARCH FOR PARKS CELEBRATES 25TH ANNIVERSARY OF EARTH DAY

Volunteers are needed to organize events in local communities

PCA's SIXTH ANNUAL March for Parks will once again be the nation's largest walking event for parks and open spaces. Held in conjunction with Earth Day, March for Parks raises awareness of park problems and funds for park projects across the country. More than 500 marches are expected to be organized to help celebrate the 25th anniversary of Earth Day on April 22, 1995.

NPCA encourages people with an interest in preserving or restoring a park in their community to organize a march sometime on Earth Day week-



end, April 21–23, 1995. One hundred percent of the proceeds from each

march will stay in the local community, to be donated to a park.

To support each march, NPCA will provide, **free** of charge:

▲ A comprehensive guidebook on how to organize a local march;

▲ A Teacher's Guide for events focused on children;

▲ A sample brochure/pledge form for walkers;

▲ March for Parks posters and signs; ▲ Sample press releases, PSAs, and logo sheets;

▲ Certificates of Appreciation for walkers;

▲ A toll-free number for advice and answers to your questions.

For free March for Parks materials, fax a signed copy of this form to: 202-659-0650. Or mail to NPCA, March for Parks, 1776 Massachusetts Ave., N.W., Washington, DC 20036. For more information, call 1-800-NAT-PARK (x225).

Name:		
Address:		
City/State/Zip:		
Phone: ()	Marcher Goal:	\$ Goal:
Name of Park:	Type of Project:	
Date of March: 🗅 April 21	April 22 April 23 Time:	

"I agree to hold a March for Parks on Earth Day weekend (April 21–23, 1995), using the official March for Parks logo and national sponsor logos on all printed materials. I will accept sponsorship only from companies that are not in conflict with national sponsors. I will donate all of the proceeds from my march to the public park of my choice. I will send results, photos and other information to NPCA after my event is completed."

Signature:_

Date:

NATIONAL PARKS

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ACCESS

Scenes from the Indian Wars

Sites in the National Park System trace the 400-year struggle between American Indians and the U.S. government.

by Elizabeth E. Hedstrom

ORE THAN 400 years ago when the first European colonists arrived, between 600,000 and 900,000 American Indians inhabited what is now the continental United States. At first American Indians' relations with traders, explorers, and settlers were generally friendly. But as the number of whites rose, hostilities flared on both sides. The struggle was most intense between 1860 and 1890.

As a way to contain the fighting, the British established the Proclamation Line of 1763 along the Appalachian Mountains. Whites were prohibited from settling beyond it without tribal and royal approval. After the Revolutionary War, the United States began acquiring lands west of the line. As the great tide of settlers surged forward and new states formed, American Indians lost more and more land. A separate Indian Country west of the Mississippi River was declared in 1825, and the Indian Removal Act of 1830 called for all American Indians in the east to be relocated there. By the 1850s, American Indians were being pushed onto reservations. Under Ulysses S. Grant's Peace Policy, the reservations were to be held inviolate and conditions were to be improved. But the reservations continued to shrink.

Besides a demand for land, white settlers brought diseases with them. It is estimated that while many tribes lost more than 10 percent of their members to warfare, the average loss of life from smallpox and other diseases brought by whites was 25 to 50 percent. By the middle of the 19th century, American Indians' numbers had shrunk by as much as two-thirds. Most of their land had been lost, and what was left would dwindle within a few decades to an area smaller than the state of Minnesota.

What finally brought about the American Indians' defeat was not inferiority in fighting prowess or tactics, but sheer numbers. By 1860 American Indians were outnumbered 100 to one. The 1890 massacre of the Sioux at Wounded Knee, South Dakota, marked the end of the Indian wars.

The National Park System preserves the scenes of some of the most significant events of the Indian wars. These places still convey a sense of what was at stake in the struggle and the passion with which it was fought.

Horseshoe Bend

In the early 19th century, the Southeast's most powerful and widespread tribe was the Creeks. Made up of many villages across Georgia and Alabama, the Creeks were tied together in a loose confederacy. During the first years of the century, the great Shawnee leader Tecumseh visited the Creeks. He told them about his vision of an Indian country reaching from Canada to the Gulf of Mexico in which all tribes would be united. Without unity, he argued, existing tribes would suffer the same fate as those of the Northeast.

"Where today are the Pequots?" Tecumseh asked. "Where are the Narragansetts, the Mohawks, the Pocanets, and many other once-powerful tribes of our people?...Will we let ourselves be destroyed in our turn without making an effort worthy of our race?"

Tecumseh found followers among

A portion of the Trail of Tears National Historic Trail passes through Kentucky.





Above, a petroglyph at Lava Beds National Monument. Right, the Modoc Indians lived on lands that are now part of the monument before being removed to a reservation.

the Red Stick faction of the Creeks, the tribe's traditional warriors. The White Sticks, its traditional peacemakers, opposed war. Friction between the two groups grew, as well as with whites. In 1813, the Red Sticks attacked an American fort in Alabama, killing most of its inhabitants. In response, General Andrew Jackson mobilized federal and state troops to "conquer the most warlike tribe of barbarians in the universe." Battles were fought through the rest of the year and into the next.

The decisive conflict took place at what is now Horseshoe Bend National Military Park in Alabama. On that site in March 1814, Jackson attacked the Creek stronghold on Horseshoe Bend, a peninsula jutting into the Tallapoosa River. The Creeks had built an ingenious log barricade shielding the peninsula from the mainland. Although they were confident it would protect them, Jackson's troops—which included 500 Cherokees and 100 Creeks—were able to surround the barricade by crossing the river and, after a long day of fighting, penetrate it.

The immediate result of the battle was the Treaty of Horseshoe Bend, in which the Creeks lost 23 million acres of land. Jackson also gained national prominence. His presidency two decades later meant final defeat for the American Indians of the Southeast.

A three-mile road loops through the



battlefield and includes trails and explanatory markers. A 2.8-mile nature trail starts at the overlook and winds through the battlefield. Motels and restaurants are located near the park site.

For more visitor information, contact Horseshoe Bend National Military Park, Route 1, Box 103, Daviston, AL 35256.

The Trail of Tears

Southeastern tribes varied in their responses to white settlement. Some, like the Creeks, resisted and suffered setbacks. Others, like the Cherokees, took on elements of white culture while retaining their independence. The Cherokees added to their already highly developed culture an elected government and learned new methods of business and farming. A Cherokee named Sequoyah developed a written form of their language, and by the 1820s the tribe had a written constitution and began publishing a newspaper.

The Cherokees, historic homelands included West Virginia, Kentucky, Tennessee, and Alabama in addition to the valleys of the southern Appalachians, from Virginia to Georgia. The discovery of gold near Dahlonega, Georgia, motivated white officials to accelerate a plan for relocating them and other tribes so that their lands would be available for mining and settlement.

In 1830, President Andrew Jackson

(whose life had been saved by a Cherokee at Horseshoe Bend) signed the Indian Removal Act, forcing the Eastern tribes off their lands to the Indian territory west of the Mississippi.

Along with the Cherokees, the Creeks and several other tribes were forced on an 800-mile trip westward to what is now Oklahoma. The number of those who died before reaching the end is unknown, but estimates range from 4,000 to 8,000.

Congress recently designated the route the Cherokees followed to Oklahoma as the Trail of Tears National Historic Trail. The National Park Service is working to certify sites on the trail, creating opportunities to visit and learn about sites and segments along the route. Although the Trail of Tears National Historic Trail is rooted in the Cherokee experience, it is intended to convey the story of American Indian Removal Policy in general. For more information, write to the Long Distance Trails Group Office-Sante Fe, National Park Service, P.O. Box 728, Santa Fe, NM 87504.

Lava Beds

The 1848 discovery of gold in California attracted a huge wave of miners and settlers. Under the onslaught, most of the state's American Indians quickly disappeared. One tribe that did resist was the Modocs of Northern California. They lived on the shores of Tule Lake, near the Oregon border. They clashed repeatedly with settlers until a new chief, Kintpuash, inherited leadership of the Modocs. His goal was to make peace with the whites, and those he visited gave him the nickname Captain Jack.

Kintpuash increased trade between his tribe and the settlers but was unable to stamp out conflict entirely. As a result, the settlers persuaded their politicians in 1864 to remove the Modocs to a reservation in Oregon.

The reservation also housed tribes that were the Modocs' traditional enemies. The situation was tense, and food and clothing were in short supply. Within a few months, members of the Modoc tribe began to return to their ancestral lands, and more and more joined them over the next several years.

The U.S. Army was ordered in 1872 to return the Modocs to the reservation. An Army patrol approached them with the demand but fighting broke out, and the Modocs fled to their ancient sanctuary near the lake, the Lava Beds.

The rough volcanic terrain, full of caves, fissures, and ravines, enabled Modoc warriors to hold off the troops for five months, even though they were eventually outnumbered 20 to one.

In May 1873, a few members of the tribe betrayed Kintpuash to the army, and after a several-day chase he surrendered. Captain Jack and three others were hanged, and the remaining 153 members of the tribe were exiled. Lava Beds National Monument preserves the rugged landscape where the Modoc War took place. Visitors can hike along the park's trails, which connect significant sites from the war.

A campground, near the visitor center, has water during the summer. Water is available at the visitor center at other times. Food, fuel, and lodging are available in Tulelake and Klamath Falls. For more information, contact Lava Beds National Monument, P.O. Box 867, Tulelake, CA 96134.

Little Bighorn

The best-known events from the Indian wars took place on the Great Plains, where the Sioux, Nez Perce, Kiowas,



Tombstones mark the spots where soldiers fell during the battle of Little Bighorn.

and others rode their horses and hunted buffalo. This was a life that could not be lived on a reservation. But the influx of miners and settlers and the disappearance of the buffalo all threatened their way of life.

Santanta, chief of the Kiowas, summed up the Plains Indians' response to these pressures, stating, "I have heard you intend to settle us on a reservation near the mountains. I don't want to settle. I love to roam over the prairies. There I feel free and happy, but when we settle down we grow pale and die...A long time ago this land belonged to our fathers; but when I go up to the river I see camps of soldiers on its banks. These soldiers cut down my timber; they kill my buffalo; and when I see that, my heart feels like bursting."

In 1868, the Black Hills were guaranteed to the Sioux by treaty. To the Sioux, the hills, *Paha Sapa*, were sacred land, the center of the world. But four years later, the rumor began that the hills held gold. In 1874, General George Custer led a reconnaissance team of soldiers into the Black Hills and reported that they were full of gold "from the grass roots down." White men began to pour into the area. When the federal government offered to buy the land, the Sioux turned them down firmly. By 1876, the War Department had labeled all Sioux not living on reservations as "hostile" and ordered military operations against them. Several battles occurred that spring, and in June the Sioux received word that Custer was approaching their camp on Greasy Grass Creek. They prepared to meet him and, under the leadership of Sitting Bull, dealt the U.S. Army its greatest defeat of the Indian wars. This was the battle of Little Bighorn, in which Custer and his men were killed.

This victory in the end undid the Plains Indians. The army, furious for vengeance, eventually eliminated leaders such as Crazy Horse and forced the Sioux onto reservations.

Great Plains sites preserved in the National Park System include Little Bighorn National Monument, P.O. Box 39, Crow Agency, MT 59022; Big Hole National Battlefield, P.O. Box 237, Wisdom, MT 59761; and Nez Perce National Historic Trail, care of Nez Perce National Forest, 319 East Main Street, Grangeville, ID 93530. The history and culture of the Nez Perce are represented at Nez Perce National Historical Park, P.O. Box 93, Spalding, ID 83551.

Elizabeth Hedstrom is former news editor of National Parks.

A Grand Celebration

NPCA took part in festivities marking the 75th anniversary of Grand Canyon National Park in October. NPCA presented the park with \$12,200—raised through a promotion with Matrix Essentials—to support native plant revegetation projects.

Park Superintendent Robert L. Arnberger honored NPCA and other partners and friends of the Grand Canyon for their contributions in the park's first 75 years. "The future of Grand Canyon National Park is bright," Arnberger said, "with all the many individuals, organizations, and businesses that are here to help us."

National Survey Results

More than 520,000 citizens nationwide have taken the time to complete NPCA's national survey on national park issues and activities. Survey results indicate that many Americans take an active interest in the parks and demonstrate that NPCA provides valuable information to citizens interested in protecting the parks. More than half of the respondents-57.3 percent-indicated that before they received information from NPCA, they believed that our national parks are always protected from development by the federal government. Education efforts to alert young students to future park problems are supported by an overwhelming 93.6 percent of respondents. Federal controls on acid rain-which could halt potentially irreversible damage to Shenandoah and other national parks-are advocated by 85.3 percent of respondents.

A Lasting Legacy

You can extend your concern for our national parks beyond your own lifetime. Your children and grandchildren will benefit from the lasting legacy you can help provide by including NPCA in your will, trust, or other estate plan. For more information on making a bequest to NPCA, contact Diane Clifford at 1-800-NAT-PARK, extension 131.

Correction

Our apologies to photographer Craig Blacklock, who provided an image of Voyageurs National Park for the 1995 NPCA calendar. Credit was mistakenly given to another photographer.

Southeast Regional Forum

Southeastern park activists and Park Service employees are invited to launch a new era of grassroots activism at the Southeast regional forum, to be held March 24–26 at the Martin Luther King, Jr., Center for Nonviolent Social Change in Atlanta. The event is the first of eight gatherings across the nation designed to foster regional grassroots activism on park issues.

NPCA and Quaker Oats will unveil an endangered species education program that features species struggling for survival in Southeastern parks—including the Florida panther, which survives only in the area around Everglades National Park, and the red wolf, which is being reintroduced in Great Smoky Mountains National Park.

To learn more about the Southeast regional forum, contact Don Barger, NPCA's Southeast regional director, at 615-494-7008 or Athan Manuel at 1-800-NAT-PARK, extension 221.

With All the Comforts of Home

Beginning with the next issue, *National Parks* will offer readers the opportunity to shop at home for quality merchandise and unique services offered by catalog companies. With the convenience of reader service, you can drop a postage-paid card in the mail and have the catalogs of your choice delivered directly to your home at no charge. In March/April, look for apparel catalogs. May/June will feature domestic touring companies. In July/August, we will offer "green" products. September/October will help you prepare for holiday gift giving, and in November/December, you will find books and publishing companies. Next January/February, look for international touring catalogs.



Help us celebrate the 25th anniversary of Earth Day with March for Parks on the weekend of April 21– 23. Each year, NPCA helps to organize more than 500 marches nationwide. Thanks to the generous support of our national corporate sponsors, every dollar raised stays at the local level to fund park projects. Please welcome our 1995 March for Parks corporate sponsors:

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Annual Report

The 1994 annual report heralds NPCA's accomplishments in its 75th anniversary year. From a national conference that developed new partnerships to work on behalf of the parks to victories secured through continued work with Congress and government agencies, NPCA had much to celebrate in 1994.

After leading a decade-long campaign to preserve the fragile and arid ecosystem of the California desert, NPCA helped to secure a landmark victory with the passage of the California Desert Protection Act. The largest land conservation measure since Alaskan lands were added to the park system in 1980, this legislation extends federal protection to 7 million acres of southern California's desert landscape. For more on this victory, see page 12.

NPCA took steps to add a missing piece to the National Park System with a loan of \$1.5 million to the National Park Trust, earmarked for the acquisition of the historic Z Bar Ranch in the Flint Hills of Kansas. The ranch boasts one of the last remaining expanses of tallgrass prairie—an ecosystem that once dominated the plains states. Plans are under way to establish a public-private partnership with the Park Service for management of the site and for legisla-

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tion to add it to the park system.

Together with several citizen groups, NPCA made headway on the campaign to protect the parks from the intrusion of unregulated aircraft overflights. NPCA and other organizations brought a lawsuit to compel the release of a long-delayed report to Congress on the effects of commercial aircraft tours over national parks.

In 1994, NPCA conducted a survey of park superintendents across the nation, asking them to rate the state of the national parks. Nationwide, the parks rated only a "C" average according to the superintendents' assessment.

According to audited financial statements for the fiscal year, 74.2 percent of NPCA's expenses go toward programs. To learn more about NPCA's accomplishments and programs, write for a free copy of the 1994 annual report: NPCA, 1776 Massachusetts Ave., N.W., Washington, DC 20036.

NPCA Online

NPCA encourages computer users with access to CompuServe, America Online, or the Internet to get more involved with the parks online. An "NPCA-National Parks" message board is maintained on CompuServe and America Online.

On CompuServe, at "Go:" type NPCA to get to the message board. NPCA also maintains a library of files in the Outdoors Support Forum. Send e-mail to NPCA at 74774,2456.

On America Online, type keyword Network Earth and select the message boards. E-mail NPCA at NATPARKS. Letters to the editor can be sent via email to EditorNP.

Internet users can also send and receive e-mail via CompuServe and America Online. On CompuServe, use 74774.2456@compuserve.com (NPCA). For America Online, use natparks@aol. com (NPCA).

Next Issue...

The March/April issue will feature stories on bats, oil and gas development in the parks, and the tallgrass prairie. "Access" will visit parks related to the end of the Civil War.

Sonoran Seasons

ITH 30 ARMS and a trunk nine feet in circumference, a giant saguaro cactus, the biggest thing for miles, dominates the Sonoran Desert of southern Arizona. Having lived there for perhaps 350 years, the giant fuels the illusion of permanence in the desert. The cactus, however, now lies dead. The desert adapts to the change and lives on.

The death of the giant saguaro is a moving symbol in *Sonoran Desert Spring* and *Sonoran Desert Summer*, two literate studies of desert biology by Arizona State University professor John Alcock. The Sonoran Desert covers more than 100,000 square miles along Mexico's Gulf of California. A majority of the the U. S. portion of the desert is in southern Arizona. Many park sites are located in this region, including Saguaro National Park and Organ Pipe Cactus National Monument.

In each book, Alcock's essays are grouped by month: the first grasses of February begin *Spring*, continuing through the heavy heat of June; a dry May begins *Summer*, ending in a September that witnesses "an easing...in the sensation of encirclement by heat." Illustrations by Marilyn Hoff Stewart enhance Alcock's vivid depictions, although in one instance the illustration is upside-down.

Alcock alternates between, and ultimately blends, in-depth studies of desert life and poetic essays that portray a tableau. He depicts each creature, from a mistletoe plant to the phainopepla bird, as a fiercely motivated individual, each one an "advertisement for adaptation." Contestants in this fierce competition to survive must be extraordinarily selfish. The saguaro may threaten the life of a "nurse plant," for example, often a palo verde tree, by growing up through its branches and usurping its resources. While he celebrates the singularity of each species, Alcock also notes similarities in the ways creatures accommodate the need for economy in expenditure. Many plants, for example, have shallow root systems to collect surface water: a grown saguaro's roots may distill water from a huge area, eliminating younger plants in the process.

Desert plants and wildlife are at highest risk from human vandals, intruders, and poachers, an "introduced species" as exploitive as the exotic African daisy that has spread from urban flower gardens. Much of the land Alcock studies is federally protected from real-estate developers, whose business is to "scrape, gouge, and shark their way through the flatlands."

"Despite the growth of desert-destroying cities," Alcock writes, "the Sonoran Desert is still one of the most beautiful and intriguing places on our planet."

Summer is the more palatable volume. In this book, Alcock writes with a lighter hand and a broader context, making the material more accessible.

Toward the end of *Summer*, Alcock wonders about the Hohokam people who inhabited the area for nearly 2,000 years and then disappeared—shattering the illusion of permanence like the death of the giant saguaro. *Hohokam*, Alcock writes, means "all used up." With this in mind, Alcock warns us with a question: "Will our culture, so dedicated to using up the land, the water, and the air of our desert Southwest, last half as long as the Hohokam?" The desert, he tells us, would adapt and outlive us even still.

Sonoran Desert Spring and Sonoran Desert Summer; both paperback, \$15.95 each; The University of Arizona Press, Tucson, Arizona, and London, England. —Kim A. O'Connell

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TRUSTEES FOR THE PARKS are dedicated members of NPCA who, by their annual general contribution of \$1,000 or more, continue to ensure the thoughtful stewardship of our National Park System. We gratefully acknowledge these individuals and their recent support of NPCA's park protection programs.

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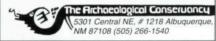
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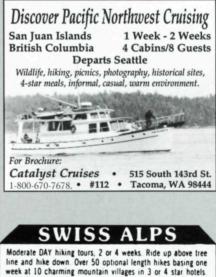
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PARK PURSUIT

Park Perennials

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

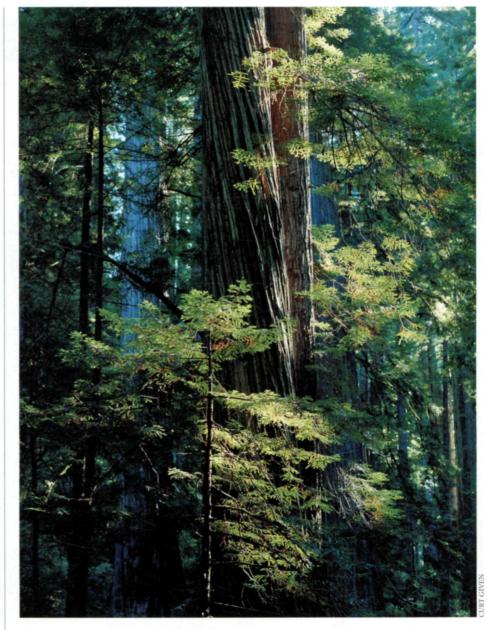
The January/February quiz focuses on parks with plant names within the National Park System, and information has been provided to aid you in identifying the sites depicted.

Plants and trees play important roles in our everyday life. Herbal remedies derived from plants are used to cleanse the liver, lower blood pressure, and treat respiratory problems. Plants and trees also are used to produce newsprint and lumber and also produce staples such as coffee, tea, vanilla, and cocoa.

Leaves work as filters, too, helping to cleanse the air of pollutants. Trees and other plants help conserve soil, prevent flooding, and play a crucial role in maintaining the balance of gases in the air. Plants shade us in summer and enrich our lives in spring with flowers and in autumn with spectacular foliage.

Although most people are aware of the plight of the peregrine falcon, few realize the same predicament faces the spineless hedgehog cactus. More than 400 varieties of plants are listed by the federal government as threatened or endangered. Many of them can be found in the national parks.

If you are unable to wait until the next issue for these answers, call our 900 number from a touch-tone telephone (see page 11). Answers to the November/December quiz are: 1. Kenai Fjords National Park in Alaska; 2. Grand Teton National Park in Wyoming; and 3. Mount Rainier National Park in Washington.



This park includes groves of ancient trees, including the world's tallest. These trees take four or five centuries to mature and survive easily twice that long. They thrive only along the Pacific Coast, where summer fog rolls in regularly from the ocean. What national park site is this?



Intense sunlight, and little rainfall characterize this Southwest region. The monument encompasses the bulk of the U.S. population of this plant, which blooms in the heat of May. What national park site is this?



Subtropical plant and animal life abounds in this ancestral home of the Seminole and Miccosukee Indians. The trees for which this park site was named can grow in water. Wetlands and warm temperatures combine to create a unique habitat that is peculiar to the Southeast. The swamp included within this park site is more than 6,200 square kilometers. What national park site is this?

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