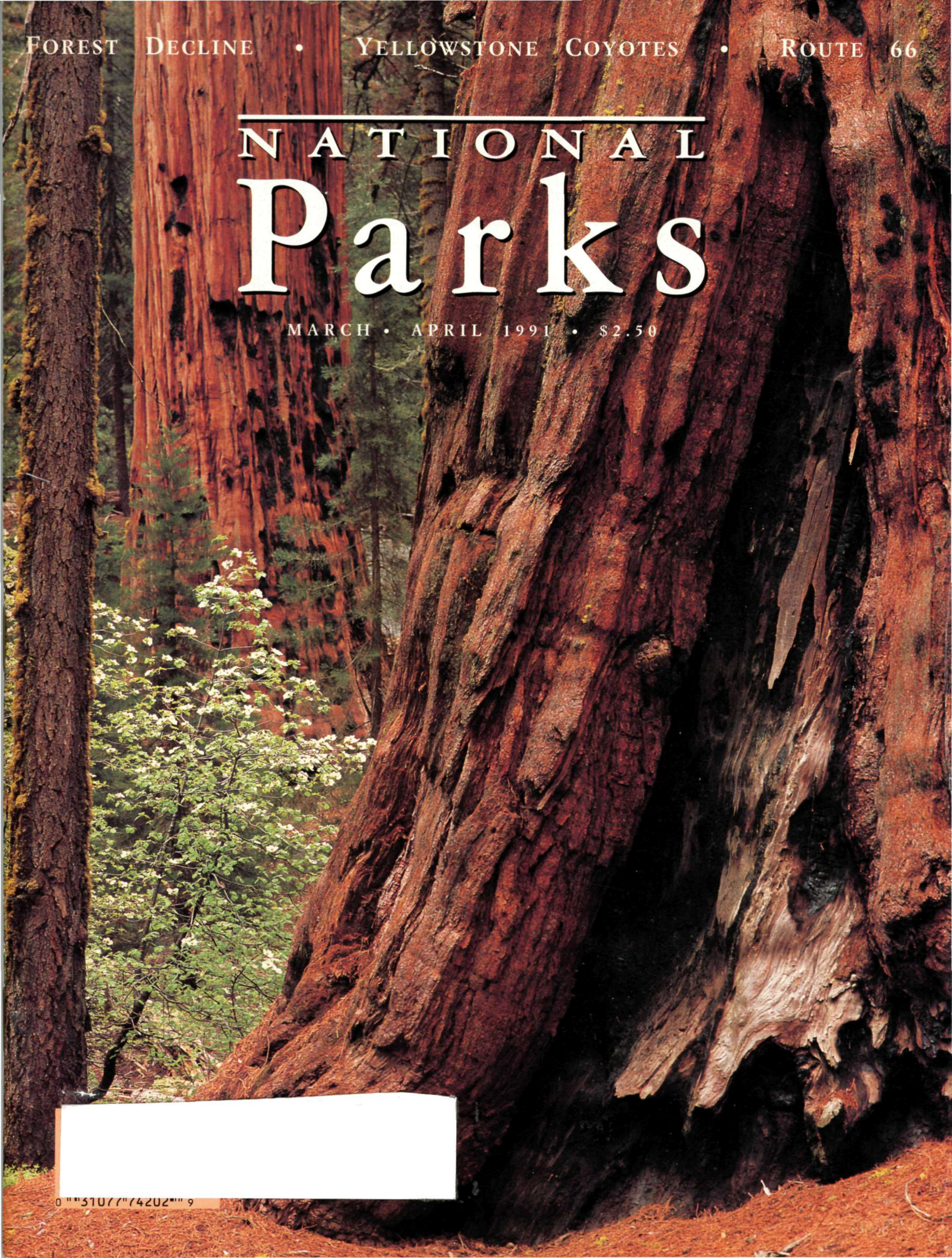
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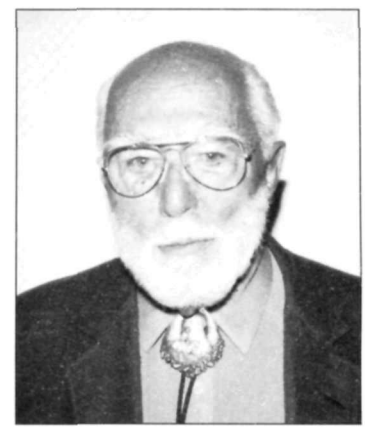
TRIBUTE TO EXCELLENCE

Marjory Stoneman Douglas Award

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

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

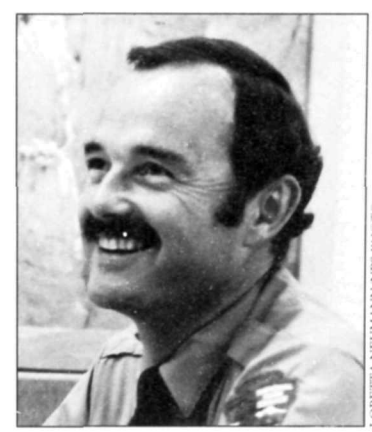


Frank E. Masland, Jr.

Stephen Tyng Mather Award

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

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



LORETTA NEUMANN/NPS PHOTO

Boyd Evison

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

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

BRAD CROOKS

Route 66 revisited, page 30

EDITOR'S NOTE

In this era of war and environmental degradation, it can be refreshing to look back at what seems to have been a simpler time in America—the advent of the nation's love affair with the automobile and the open road. In this issue, we take a nostalgic look at Route 66, the classic 2,400-mile highway that linked Chicago and Los Angeles as well as some 200 towns in between.

A recent congressional bill authorized the National Park Service to study ways of commemorating Route 66, which in recent decades has been replaced by monotonous interstate highways. Vestiges of the "Mother Road" and its unique roadside culture remain, and preserving them in some way will ensure that this vital part of America's history is remembered and passed on to future generations.

NATIONAL PARKS

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NATIONAL
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March/April 1991
Paul C. Pritchard, Publisher

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COVER: *Giant sequoia, Sequoia National Park, by Larry Ulrich. Forests, though enduring and resilient, are increasingly vulnerable to the influences of modern civilization.*

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

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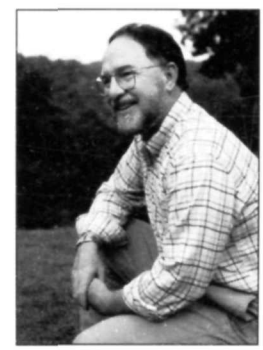
Concessions



YOSEMITE NATIONAL Park is currently a battleground in a war over who runs the national parks and their concessions. The battle, being waged nationally, will decide the fate of visitor services and facilities in all of the national parks, as well as preservation of the park resources themselves.

This is a battle in which every American has an interest—but for many of us, it would be difficult to choose sides. We visit the parks, enjoy their services, and use their facilities. Unfortunately, we see less and less of Park Service employees. For many visitors, the "park people" are the store clerks, hotel staff, and bus drivers—employees of the concessioners.

To understand the current struggle, it is important to grasp the historical role of the concessions. The park service, in an effort to assure a level of quality and safety for visitors, formalized its relationship to certain service providers, and they became the first concessioners for the national parks. Many of these concessions were marginal businesses because they had a short (three- to four-month) tourism season. To encourage them to operate for such a short period and under the conditions of service invoked by NPS, the concessions were given long-term leases and guaranteed a monopoly.

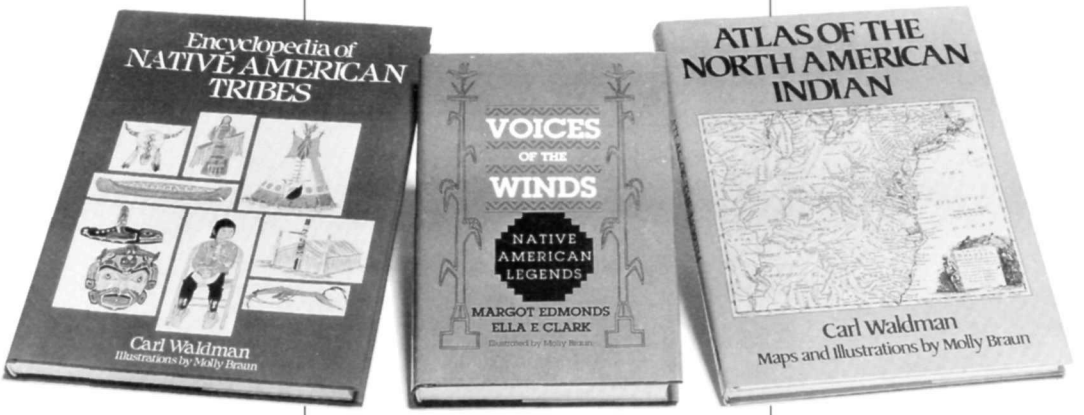
Today, the conditions that created the need to "make concessions" to the concessioners are largely gone. In fact, businesses line the highways to the large parks, and bus companies bring a steady stream of visitors to the historic sites. Park seasons are no longer limited to three or four months because of new recreational technology and increasing demands on the parks from older and more international visitors.

NPCA is not calling for the National Park Service to operate concessions. What *is* needed is new legislation assuring Americans that these services will be provided by businesses that see themselves as not just operating another motel or selling another roll of film, but as trustees of the park visitors' experience. Responsible concessioners, which we believe should be in American hands, must ally themselves with the conservation ethic of protecting the parks and providing for the enjoyment of parks for this and future generations.

Can the concessioners realize that the American public expects more of them than meeting a market need of the past? Can they provide the services of "ecotourism," the new and dynamic industry that is providing the concession services of many other nations' park systems?

If not, the ultimate losers will be our national parks, the visitors—and the concessioners themselves. It is NPCA's hope that the industry, the National Park Service, and environmentalists will come together to map out a strategy that will create a win-win-win situation for all parties—especially the parks.

Paul C. Pritchard



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Spectacular earthen mounds marked Indian burial sites and housed religious temples Photo by Molly Braun

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Rocking the Bolt

I am appalled by the misrepresentation of climbing activities and motives in "Set in Stone" by Claire Martin (November/December 1990), and I feel the author and your magazine have done a grave disservice to me and to the various land managers, climbing organizations, and climbers who are dealing with the delicate issues of climbing management.

The most unsettling aspect of the article is the tainted stereotyping of sport climbers and traditionalists.I also found the rampant reference to "many" climbers inappropriate when referring to infrequent incidents which have happened at climbing areas.

In September, Ms. Martin asked me to review her draft. I strongly objected to the misstatements regarding climbing as well as the inaccurate quotations attributed to me.

The article strongly supports Ms. Martin's personal views on bolting and sport climbing which are in sharp contrast to my own. I truly regret that your magazine offered a forum for such a biased attitude.

I urge you to take a better look at rock climbing in national park areas and discard the "set in stone" position.

Maura Longden
Almo, Idaho

There is no dispute among climbers about whether clean climbing or environmentally conscious climbing includes the use of permanent anchors or bolts. Bolts are used by all climbers today. Without the use of permanent anchors, modern rock climbing would not be possible.

At every major climbing area, particularly those within the national parks, except for Rocky Mountain NP in Colorado, climbers and their organizations are working closely with rangers to protect the environment.

Armando Menocal
Chair, The Access Fund
San Francisco, California

Your outstanding article exposed the crime of defacing rock faces in our national parks. In climber's terms, "those who bolt can never be one with the rock." It's simply bad karma!

Peter Gaddy
North Creek, New York

Hunting for a Solution

It may be time for NPCA and many of our members to reevalutate their

antihunting stance. As Stephen Nash points out in his excellent article about songbirds, "In Shenandoah and many other national parks deer populations are now about ten times their natural density." The deer are destroying the natural understory necessary for the wood thrush to nest and survive.

We need to admit that humans have permanently altered the balance of nature and in spite of our personal views about hunting, recognize that hunting is a necessary evil, even in our national parks.

Stanley Hastings, DVM
Erlanger, Kentucky

I can live without ever tasting a buffalo burger, but my heart will miss the sight of the free-living bison when they are shot for profit by ranchers and park administration.

Wanda Metcalf
Niles, Michigan

Look Out for Lujan

Your November/December 1990 "Outlook" praises Secretary of the Interior Manuel Lujan as a champion in the effort to save our national battlefields.

Isn't this the same Lujan who questions, "Do we really need to save every species?" referring to endangered wildife, particularly the Mount Graham squirrel in Arizona.

Before NPCA pins the medal to his chest, Lujan should be examined for who he really is.

Richard Sayers
Oregon, Ohio

It's a (Too) Small World

I'll probably never visit Yellowstone or Yosemite again because there are just too many people [Winter Paradox, November/December 1990].

If I want crowds, fast food joints, long lines, and other amusements, I'll pay $30 and go to Disneyland.

Candace Tomlinson
Newport News, Virginia

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

N • P • C • A
NEWS

Reform Ahead for Park Concessions

At the center of controversy over national park concessions is Yosemite Park and Curry Company, which provides food, lodging, and tourist services at Yosemite National Park. As proposals, bills, and hearings on the issue accrue in Washington, a turning point toward concessions reform may have come with a January agreement to sell Curry Company to a semi-public, nonprofit group.

"Yosemite is one of the leading splendors of the park system, and it now may provide a leading example of how to reshape the concessions system," NPCA President Paul Pritchard said.

Yosemite, one of the most popular national parks, has become a symbol of the system's problems. The Curry Company's 30-year contract with the Park Service requires it to return only three-quarters of one percent of its gross receipts to the government as a franchise fee. In 1989, this was $580,000 out of $78 million.

Some conservationists have defended Curry Company as a generally responsible concessioner. All are concerned, however, by overdevelopment in Yosemite Valley, the heart of the park. Motels, gift shops, restaurants, and parking lots have given the once-pristine valley the look of an amusement park.

The number of visitors to Yosemite has grown 37 percent in the last decade alone. Traffic jams are routine, and the population density on peak summer days can equal that of Houston.

Controversy over Yosemite concessions intensified late last year when Matsushita Electric Industrial Co. purchased Curry's parent company, MCA. Secretary of the Interior Manuel Lujan went public with his doubts about the appropriateness of foreign ownership of national park concessions.

RICHARD BLAIR

Overdevelopment has long been a problem in Yosemite Valley.

Lujan also accelerated his drive for concession reforms, in particular for NPS acquisition of possessory interest, the equity concessioners build up in park facilities. He has argued that possessory interest makes it nearly impossible for NPS to terminate a contract, since it must then pay concessioners the cost of reconstruction, minus depreciation, of the facilities.

NPCA joined Lujan in publicly questioning foreign ownership of concessions. It urged reform of the 1965 Concessions Policy Act, so that a higher percentage of concessions profits returns to the government, and called for the funds to go directly to NPS rather than to the general treasury.

As a result of the pressure placed upon it, Matsushita sped up plans to find an American buyer for Curry Company when its Park Service contract expires in 1993. In early January the firm entered an agreement to sell Curry Company at that point to the National Park Foundation for $49.5 million.

When the foundation takes ownership of Curry Company in 1993 it will donate its possessory interest to the Park Service. NPS will then accept bids for the contract and negotiate better terms, including a higher franchise fee.

The day after the agreement, NPCA and others applauded the outcome at a hearing held by the House Interior subcommittee on national parks and public lands. Pritchard testified that Yosemite nonetheless represents only "the tip of the iceberg" of concessions problems. Other problems NPCA has cited include the strength of the concessions lobby and lack of public access to information about concession profits.

As well as calling for reform of the

Concessions Policy Act, Pritchard said, "NPCA is also concerned about the concept of what are 'necessary and appropriate' services to be offered to visitors at a national park."

Representative Bruce Vento (D-Minn.), chair of the subcommittee, stressed this point as well, asking how the new agreement at Yosemite would be used to implement the park's landmark 1980 general management plan.

The widely hailed plan lays out steps for removing excessive development and traffic from Yosemite Valley, including a reduction in overnight accommodations within the park and removal of nonessential NPS and concessioner buildings. A 1989 Park Service report showed, however, that few of these steps had been taken.

Lujan stated the 1993 contract will specify actions the concessioner must take to fulfill the plan's goals.

Meanwhile, NPS and Congress are moving toward concessions reform. NPS is in the process of revising its internal concessions regulations to reflect Lujan's proposals. They are likely to include reform of the possessory interest system; restrictions on granting a preferential right of renewal, which allows current concessioners to meet the best offer for their contracts; and reducing contract terms, now as long as 30 years, to between five and ten years.

Lujan has also suggested that franchise fees be raised to 22 percent of gross receipts, with 5 percent going to the general treasury and 17 percent back to parks. A 1990 report by the Interior Department's Inspector General found that franchise fees average 2.5 percent. In 1988 this meant $12.5 million out of $500 million in gross receipts.

Senator Dale Bumpers (D-Ark.) and Representative Mike Synar (D-Okla.) both plan to sponsor concessions reform bills. Another has been introduced by Representative Frank Guarini (D-N.J.).

Several major contracts are coming up for renegotiation soon. Along with the 1993 expiration at Yosemite, the contracts at Sequoia and Yellowstone end, respectively, in 1991 and 1992. The next few years will therefore shape the future of national park concessions.

Red Wolves Return to Great Smoky Mountains

Two breeding pairs of red wolves arrived at Great Smoky Mountains National Park in Tennessee and North Carolina this January. The red wolf is the first major predator to be reintroduced to a national park.

"The citizens and leaders of North Carolina and Tennessee, as well as the agencies involved, are to be commended for their vision for our national parks and all of wild America," commented NPCA President Paul Pritchard.

There are only about 130 red wolves alive in the world, principally in captive breeding locations. Predator control programs exterminated the last red wolf in the Smokies in 1905. The wolves once ranged from the Atlantic coast to Texas and north to the Ohio River Valley.

Red wolves were initially reintroduced to the wild at Alligator River National Wildlife Refuge in North Carolina in 1987.

The new arrivals to the park will be placed in acclimation pens to limit human contact and stress while allowing the wolves time to adjust to their new surroundings. It is hoped the pairs will mate and produce litters this spring. One pair with pups will be released in the park in August, while the second pair will be held for release in the spring of 1992.

JAMES H. ROBINSON

The red wolf is the first major predator to be reintroduced to a national park.

"Our ultimate goal is to reach a population of 50 to 75 wolves in the park, with subsequent releases of six to eight more pairs of wolves in 1992–1993. However, all of this hinges on the data we receive from our initially released pair," said Bob Miller, park management assistant.

A fund to be established between private citizens and the Fish and Wildlife Service will compensate for any livestock losses attributed to wolves.

NEWSUPDATE

Glen Canyon waste. The concessioner at Glen Canyon National Recreation Area in Utah is under investigation for alleged dumping in the park. Years of drought have lowered water levels at Lake Powell, exposing discarded batteries.

Award. NPCA's Arizona and New Mexico Council gave its 1990 Conservationist of the Year award to the *Santa Fe Reporter* and staff writer Keith Easthouse. A series of articles by Easthouse uncovered resort development plans threatening Pecos National Monument and led to its expansion and redesignation.

Grand Canyon. EPA Administrator William Reilly has decided to require pollution controls at an Arizona power plant to help clear the winter haze that impairs visibility across the Grand Canyon.

Celebrate Wild Alaska. To honor the Alaska Lands Act's tenth anniversary, the Alaska Coalition organized a January conference about what still needs to be done to protect Alaska's wilderness, especially to prevent opening of the Arctic National Wildlife Refuge to drilling. To help protect these lands, contact Celebrate Wild Alaska at (202) 293-0922.

These are not expected to be a major concern, as red wolves do not hunt in packs and feed primarily on small mammals, birds, insects, and plants.

"The proven success of wolf reintroduction in the East is breaking down the unfounded opposition to wolf recovery in the West," Pritchard said. While the Mexican wolf and the Rocky Mountain grey wolf are also on the endangered species list, recovery plans for them have yet to be implemented.

—Joseph L. Kreuzman

Las Vegas Project May Drain Water From Parks

As the swimming pools and casino waterfalls of Las Vegas multiply out of the desert, the city has made plans to nourish continued expansion with a massive drainage of underground water from rural Nevada.

Several national parks are in the areas targeted by the water diversion project, possibly the largest transfer of underground water ever in the West. Along with other federal agencies and several Nevada counties, the National Park Service is challenging the plan.

"This is one of the most dramatic examples ever of how human water use can put national parks at risk," said Russ Butcher, NPCA Pacific Southwest regional director.

In 1989 the Las Vegas Valley Water District filed claims with the state engineer for more than 800,000 acre-feet of water under lands as far as 250 miles away. It also filed for 60,000 acre-feet of water from the nearby Virgin River each year. (An acre-foot is a volume one foot deep and one acre square.)

The targeted aquifers are the main water source for Death Valley National Monument in California and Nevada. Officials there say the project threatens the park's several hundred springs.

"All the evidence indicates that the anticipated use . . . exceeds annual rainfall," said superintendent Ed Rothfuss. With water drained from aquifers faster than it is naturally replenished, he stated, "the springs are going to decrease their flow or dry up."

JEFF GNASS

In arid Death Valley, wildlife depends on a limited number of water sources for survival.

"Aside from our own summary we have been advised by the U.S. Geological Survey that in their professional opinion those water withdrawals would affect the water resources of the monument," the park's Mel Essington said.

In a place as arid as Death Valley, wildlife depends on the springs for survival. "The majority of our wildlife would be devastated if those water resources were denied," Essington stated.

Most at risk, natural resource specialist Tim Coonan said, would be the bighorn sheep, already listed as a "species of special concern"; the endangered Devils Hole pupfish; and the park's eight species of spring snails. One, the Badwater snail, has been proposed for the endangered species list. Coonan said coyotes, bobcats, and other park animals would also suffer.

Owen Williams of the NPS water law division said that Lake Mead National Recreation Area and Great Basin National Park, both in Nevada, could be affected as well.

On behalf of the parks, the Park Service has filed protests over 130 of the city's 146 applications. The Bureau of Land Management, the Fish and Wildlife Service, and the three affected Nevada counties have formally protested as well.

In January, Las Vegas scaled back its plans, saying it would seek between 160,000 and 240,000 acre-feet. It did not specify which of the applications it would still pursue. It was also not clear if the new figure included or was in addition to water from the Virgin River.

Butcher said conservationists were no less concerned since, depending on which sources of water the city is targeting, the smaller project may be an equally large threat to the parks.

Williams also said the new lack of information makes it more difficult for NPS to present its case at hearings to be held by the state engineer this spring.

While NPS can appeal the state engineer's decisions, it would not be allowed to present any new evidence Williams said. So the fewer the details available and the later they are made known, the more difficult it will be for NPS to prepare its case. "It's very difficult to develop the technical information that you need to respond without knowing the specifics," he stated.

Letters about the project may be sent to Michael Turnipseed, Nevada State Engineer, 123 West Nye Lane, Carson City, NV 89710; or to Interior Secretary Manuel Lujan, Department of the Interior, Washington, D.C. 20240, asking him to defend park water rights.

Stables for Quayle Planned at Manassas

The National Park Service has agreed to build horseback riding stables at Manassas National Battlefield Park in Virginia, which will be used by Vice President Quayle, his family, members of the Secret Service, and others.

NPCA and other critics of the project, to be funded by NPS, say it is unnecessary and runs contrary to the Park Service's responsibility to preserve Manassas. They say it comes at the expense of the battlefield's already decaying structures and dwindling programs.

Six new horse stalls will accommodate the needs of mounted rangers and park police as well as the vice president's Secret Service detail. The stalls would be built at the park's Sutton Farm, where three existing stables are used for mounted ranger patrols.

The Park Service at first planned to put the project out for bids. Original estimates of the cost varied between $50,000 and $75,000. Sources say it now plans to use its own staff for construction instead. NPS has not announced the date it plans to begin construction.

The Park Service says the new stables will provide needed housing for NPS horses. "Quayle has probably ridden them, but that's not why they're there," an NPS representative stated.

Former Manassas staff historian John Hennessy disagrees. He states that expanding the stables is the pet project of a well-connected political appointee who is head of the Manassas mounted ranger program and has built "a constituency for horseback riding at Manassas at the upper levels of government, most prominently now the Vice President."

"Without the connection to Quayle, these stables probably wouldn't be built. They've been shown to be unneeded and damaging to the park's historic character," NPCA cultural resources program manager Bruce Craig said.

A $500,000, 13-stall equestrian center was proposed for another area of Manassas in 1987 but vetoed by then-NPS Director William Penn Mott.

Further, in a letter written that year Mott stated that the existing set of stables "is in the core historic area of the park and is, therefore, inconsistent with the restoration policies set forth in the park's General Management Plan," which calls for the restoration of Sutton Farm to its appearance at the time of the Civil War.

Direct and indirect costs of the mounted patrol, the only one at a battlefield park, took up 12 percent of the park's fiscal 1990 budget. This compares to 14 percent for interpretation and visitor services and 5 percent for resource management.

Meanwhile, Manassas is strapped for funds for other budget items. Various historic structures are in disrepair, and newly acquired lands have yet to be restored. Staffing and interpretive programs have also been slashed recently.

Hennessy says that the Quayle family and other prominent figures regularly come to Manassas on Sundays to ride Park Service horses. "It's a grand party," said one witness.

During the Columbus Day weekend last October, when the federal budget crisis forced Manassas to close to the public, the three remaining on-duty rangers were required to accompany the Quayle family on a horseback excursion through the park. The incident generated much local criticism of Quayle.

MARKUP

Key Park Legislation

Bill	Purpose	Status
Arctic National Wildlife Refuge H.R. 759, S. 109 H.R. 39, S. 39	NPCA opposes the first two bills, to open the wildlife refuge's coastal plain to oil and gas exploration, and supports the second two bills, to designate it as wilderness.	H.R. 759 and H.R. 39 are before the House Interior Committee; S. 109 is before the Senate Energy Committee; S. 39 is before the Senate Environment Committee.
Saguaro National Monument H.R. 664, S. 292	Expand Saguaro by 3,540 acres to protect a dense, healthy stand of the disappearing cacti. NPCA supports.	H.R. 664 is before the House Interior Committee; S. 292 is before the Senate Energy Committee.
Grand Canyon Protection Act S. 144	Require Interior to stabilize flow from Glen Canyon Dam, to minimize damage to the Grand Canyon. NPCA supports.	S. 144 has been referred to the Senate Energy subcommittee on water and power.
California Desert Protection Act S. 21	Create Mojave National Park; expand Death Valley and Joshua Tree national monuments and re-designate them as national parks; create 4.5 million acres of wilderness. NPCA supports.	S. 21 has been referred to the Senate Energy subcommittee on public lands.
Concessions H.R. 571	Require competitive bidding process for concessions contracts and limit them to five years. NPCA supports.	H.R. 571 is before the House Interior Committee.
Wilderness Battlefield H.R. 424, S. 225	Expand boundaries of Fredericksburg and Spotsylvania National Military Park to include unprotected area of Wilderness Battlefield. NPCA supports.	H.R. 424 is before the House Interior Committee; S. 225 has been referred to the Senate Energy subcommittee on public lands.
Niobrara River H.R. 614, S. 248	Add segments of the Niobrara in Nebraska and of the Missouri in Nebraska and South Dakota to the Wild and Scenic Rivers System. NPCA supports.	H.R. 614 is before the House Interior Committee; S. 248 has been referred to the Senate Energy subcommittee on public lands.
Florida panther H.R. 367	Gives endangered species status to the 30 to 50 remaining Florida panthers. NPCA supports.	H.R. 367 is before the House Merchant Marine Committee.

Snowmobile Trail for Grand Teton Approved

The National Park Service has approved plans to establish segments of the 370-mile Continental Divide Snowmobile Trail through Yellowstone and Grand Teton national parks. The approval came in January in a final winter use plan for the two parks.

NPS has faced political pressure over the project, first proposed by the state of Wyoming. Senator Alan Simpson (R-Wyo.) last year threatened legislation requiring construction if NPS did not approve the plans. The trail's boosters expect it to aid the local economy.

The project requires construction of a 30-mile route through Grand Teton to link existing trails. Since an off-road trail would have violated NPS regulations, which permit snowmobiling only on unplowed roads used by vehicles in other seasons and on frozen lakes, NPS has decided to clear and groom a 10- to 12-foot strip on the shoulder of a highway that runs through Grand Teton.

"Those regulations make clear that there's a place for snowmobiles in parks but not at the expense of other resources," said Terri Martin, NPCA Rocky Mountain regional director. "This project violates the spirit, if not the letter, of the law. It drains away huge sums of money without benefitting the parks at all." Martin noted as well that placing snowmobilers on the edge of a highway could be dangerous.

NPS also promises to intitiate a visitor use management process meant to keep winter use of the parks, and of the trail in particular, from causing ecological damage. Winter visits to the two parks have quintupled in 20 years

NPCA has developed a model method for assessing visitor impacts and has urged NPS to use such a process.

NPS, however, does not plan to initiate the process for ten years, since it expects only "modest increases . . . without unacceptable impact" until then. It will begin sooner only if these assumptions prove false. It will, though, begin examining use of the snowmobile trail in its first season and promises to alter the project if it proves harmful.

Construction of the trail is dependent on funding from Congress. Martin encouraged NPCA members to ask their representatives not to fund the project.

NPS May Inherit Army's Problems at Presidio

As the Army makes plans to close its historic Presidio base in San Francisco and hand the site over to the National Park Service, NPS may inherit severe environmental problems the Army is failing to document or correct.

NPCA, environmental and civic groups, and the city of San Francisco cite unresolved problems such as toxic wastes, sewage backups, asbestos contamination, and deferred maintenance for historic buildings.

In 1989 the Army listed the 215-year-

old base as one of dozens to be shut down nationwide. Golden Gate National Recreation Area will assume management of the Presidio in 1995.

The Army released last August a draft environmental impact statement (DEIS) on the Presidio transfer. It was supposed to document the condition of the base and list steps it would take to mitigate problems there.

NPCA and other groups charge the Army failed on both counts, giving little information and, in general, indicating it will solve problems by turning them over to NPS. The Army did not give the cost of resolving any of the base's problems or a schedule for the transfer.

According to the Environmental Protection Agency, the Army's examination of the presence of polychlorinated biphenyls (PCBs) and other toxics at the base was "inadequate," because it did not indicate how widespread or serious the problem is. The DEIS says only that the Army will study toxic sites after the final statement is completed. The Army also indicates it may not clean up all the sites before 1995 and, in fact, suggests it may merely fence them off.

An outside study has shown the need for a $10.7 million removal of asbestos at a Presidio hospital building. The Army mentioned only the presence of asbestos in one room and said no cleanup was needed beyond that room.

Monitoring shows the Presidio may be discharging raw sewage into San Francisco Bay. Its electrical system has deteriorated as well. The Army did not adequately document these problems, critics say, or set forth measures to solve them. It also did not provide for maintenance of historic buildings over the several-year transfer period.

The Army plans to release a final version of the statement in April. NPCA and other groups say a lawsuit may be necessary if the Army does not remedy the flaws of the first document.

"We want to prevent the Army from shirking responsibility for the mess it has created at the Presidio and passing on that mess and the expense of cleaning it up to the Park Service," said Dale Crane, NPCA Pacific Northwest regional director.

Oil Spill Leaves Crude Mark on Alaska

On the second anniversary of the *Exxon Valdez* oil spill—the largest ever in American waters—conservationists say they are frustrated with bureaucratic cleanup efforts and the lack of substantive information.

Claims by Exxon Corporation and Alaskan tourist agencies that the area is "essentially recovered" are misleading, says Mary Grisco, NPCA Alaska regional director. Because no comprehensive surveys of the region existed before the oil spill, scientists lack the essential baseline data needed for a realistic restoration plan, she said.

Inclement conditions cut the annual field season to four months during the summer, limiting research time, and much of the current, post-*Valdez* data is ensnared in the legal process, Grisco explains. Information pertinent to the spill cannot be publicly revealed if it is to be used as courtroom evidence in the civil and criminal lawsuits that followed after the accident.

In March 1989, the tanker *Exxon Valdez* ran aground on Bligh Reef, dumping more than 11 million gallons of crude oil into the Prince William Sound. The accident occurred about 25 miles out of the southern port of Valdez, in an area containing some of the nation's most pristine national parks.

At Kenai Fjords National Park, cleanup efforts for the 1990 field season removed most of the thick crude oil from the park's rocky coastline. Decisions to continue cleanup work at Katmai National Park and Preserve, the park most affected by the spill, will not be made until the tundra thaws this spring, says John Quinley, NPS Alaska information officer.

"Katmai and Kenai Fjords coastlines were exceptionally pristine ecosystems prior to the oil spill," Quinley explains. "You can spend money for a cleanup, but you can never put the 'pristine' back in nature."

In total, the National Park Service already has spent more than $8 million for immediate response to the spill and long-term research, Quinley says. A

significant portion of the cleanup bill has come already from the Alaska region's annual budget, about $30 million. Exxon will provide substantial funding as claims are settled and paid, and Congress designated supplemental emergency appropriations when the spill occurred, but the final costs are still unknown.

This spring, Exxon will go back and reevaluate the areas affected by the oil spill in conjunction with the authorities involved in the cleanup, says Lance Lamberton, a media analyst at Exxon.

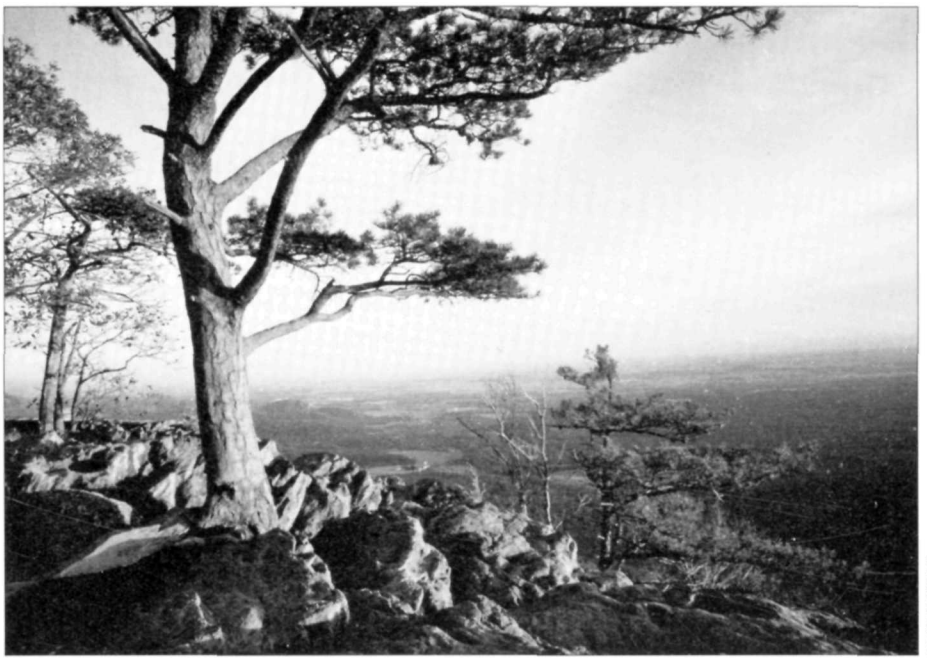
Meanwhile, the recent spillage of crude oil in the Persian Gulf has rekindled the public's memory of the *Valdez* incident. "It's amazing how much more aware everyone is because of the *Exxon Valdez* spill," says Kenai superintendent Anne Castellina. "If Valdez has done anything to us, it has raised the national consciousness. That may be one benefit from all of this."

Power Plants Threaten Shenandoah's Air

Between 15 and 20 proposed major power plants in Virginia threaten Shenandoah National Park with deteriorating air quality and other damage.

Nineteen plants have recently sought air pollution permits from the state, and four of these have been granted. The Department of Interior, which must ensure that requirements of the Clean Air Act are met, has issued a preliminary determination that one plant, operated by Multitrade Limited and located about 65 miles from Shenandoah, will adversely affect the park. Interior also warned it may issue similar determinations in regard to other proposed plants.

Shenandoah has suggested a halt in permitting until further determinations can be made. Virginia admits concern over air quality, but the state claims it cannot delay permitting under current regulations. Elizabeth Haskell, state secretary of natural resources, said, "Providing all . . . regulatory requirements are met, there is no basis for delay or denial of the application, and a permit must be issued."



CARR CLIFTON

Shenandoah's overlooks are often obscured by the worst air pollution in the park system.

Shenandoah has compiled evidence of damage caused by air pollution over the past decade. Human-created pollution substantially decreases visibility within the park 90 percent of the time, and park visibility has dropped 50 percent over the last 40 years. "Poor visibility is the single most frequent complaint we hear from visitors," said superintendent William Wade.

Although progressive damage to visibility is the most obvious problem resulting from pollutants the power plants would emit, they also would contribute to acid rain, harming the park's streams, and elevated ozone concentrations, damaging sensitive vegetation and posing a potential threat to human health.

Given the severity of current problems, the Interior Department holds that any significant increase in emissions would be damaging. Interior has proposed that no permits be issued to any new facilities without an offsetting agreement, whereby a new source's emissions would be matched by a decrease of at least the same amount elsewhere in the state. Interior also recommends that Virginia develop an emissions control strategy, setting a total emissions cap for the entire state.

The park is particularly concerned about the cumulative effects of air pollution from multiple sources. Although most of the plants seeking permits are relatively small, their combined impact could be significant. Plans for many of them do not incorporate state-of-the-art pollution controls. The state, however, says it must consider each facility separately. Virginia claims it may consider facilities with emissions under a certain level non-impacting by looking at the effects individually rather than collectively.

David Haskell, chief of natural resources and science at Shenandoah, has indicated that Interior will probably appeal to the Environmental Protection Agency if the state continues to permit facilities that the park considers threatening. EPA could dismiss the appeal or could move to overturn the permits.

He said the park hopes private companies will make offsetting offers on their own, and that Virginia will "take a more aggressive stand in setting regulations for the whole state" so that the matter will not come to an EPA appeal.

Elizabeth Fayad, NPCA staff counsel, said "NPCA is considering alternatives, including litigation, to assure that Shenandoah's natural beauty and resources will not be further adversely impacted by these sources."

—Heather Swain

Rocky Mountain Ski Area Creates Catch-22

The National Park Service has long acknowledged that a commercial ski area is out of place in Rocky Mountain National Park. But because of a clause in a 1975 document, NPS is searching for a new operator for the failing resort.

NPCA and other groups are urging the Park Service to phase out the resort when the current operator retires.

"Congress did not establish parks for commercial resort activities," said Terri Martin, NPCA Rocky Mountain regional director. "Having a commercial ski area in Rocky Mountain undercuts the park system's purpose—to protect parks as natural environments."

Last April, a local park district said it would no longer operate the park's Hidden Valley ski area. The ski area, one of only three in the park system, was controversial even when created in the 1950s. Profits at the site have sagged in recent years, and low snowfall forced it to close for several weeks last winter.

In 1973 NPS called for removing the ski area. The park's 1975 master plan, however, stated it "should be continued until alternative facilities become available to . . . nearby communities."

Because of this mandate, NPS has agreed to help search for a new operator for the resort. At the same time, it acknowledged in 1986 that "the Hidden Valley Ski Area is fundamentally inconsistent with the purposes for which Rocky Mountain was established."

"The position in the master plan was that the ski area was not compatible with the park and should be removed, but when an alternative facility [is] developed," said Sheridan Steele, assistant superintendent. "We're waiting for that, and prospects are not very good."

Since 1975, Colorado's ski industry has shifted toward major resorts, making small areas less profitable. Another site is now unlikely to open nearby, blocking removal of Hidden Valley. "It becomes somewhat of a Catch-22," said Rick Eckhart, a local activist.

"NPS should not feel compelled to keep it open because of the 1975 master plan," Martin agreed. "Changed conditions make the promise of an alternative ski site unrealistic." She said the Eldora ski area 25 miles away serves as a reasonable alternative.

The change in the industry may mean no new concessioner will come forth. If there is no response, "then I think that could be the end of the ski area," Steele said. Conservationists point out, however, that large ski operators sometimes run unprofitable smaller areas as "feeders" for their main resorts.

NPCA Names Winners Of Two Annual Awards

NPCA presented two annual awards to outstanding National Park Service employees at ceremonies last fall.

The Stephen Tyng Mather award, sponsored by Faultless Starch/Bon Ami, recognizes an NPS employee who has risked his or her job or career for the principles and practices of stewardship.

The 1990 Mather award winner is Boyd Evison, NPS Alaska regional director. Despite political pressure to remain uninvolved, Evison responded to the *Exxon Valdez* oil spill with measures that later proved vital. As oil headed toward Alaskan parks, Evison took immediate action to limit injury to the parks and to collect data that made it possible to assess the extent of damage.

NPCA and NPS present the annual Freeman Tilden award, named for the "father of park interpretation," to the ranger who most creatively and effectively teaches the public about parks.

Everglades National Park ranger Maureen Loughlin received the 1990 Tilden award in a November ceremony. Loughlin instituted a lecture series on biodiversity that reached more than 20,000 people and children's essay and art contests on the Everglades.

The ceremony recognized K.C. DenDooven, Tilden award co-originator, for his support of park interpretation. Most recently, KC Publications and NPCA sponsored an exhibit on Freeman Tilden, installed last summer at the NPS Mather Training Center.

Profit from the Parks

The Concessions Act is outdated, does not ensure adequate financial return, and is anti-competitive.

By Senator Dale Bumpers

IN ITS EARLY YEARS, the National Park Service used favorable contracts to attract private businesses, with the hope that they, in turn, would attract visitors to the fledgling parks. Today, with the number of visitors exceeding 250 million, these contracts allow businesses, or concessioners, to make enormous profits from the services they provide in national parks while returning little of that profit to the government.

The Concessions Policy Act of 1965, the law under which these contracts are made, is in need of major reform. The existing law is outdated, does not ensure an adequate financial return to the government, and is anti-competitive.

Current concession operations in parks vary in size from small, family-owned businesses providing services like canoe rentals and livery services, to major hotel and restaurant facilities operated by large corporations. There are currently some 560 such operations inside units of the National Park System.

Concessioners' total gross revenues currently amount to more than $500 million annually. Significantly, fewer than 10 percent of the concessioners account for 80 percent of these revenues.

Concessions policy and the need for significant reform have been topics of intense interest for many years. Numerous congressional oversight hearings have been conducted, most recently by the Senate Subcommittee on Public Lands, National Parks and Forests, which I chair. In addition, this issue has been the subject of numerous studies, reports, and analyses, prepared by Congress, the General Accounting Office, the Interior Department's Inspector General, the Park Service, and a variety of private research organizations.

In response to two new reports issued by the Park Service and the Department's Inspector General, Secretary of the Interior Manuel Lujan has proposed changing the way the Park Service handles concession contracts. This is the first time since I came to the Senate in 1975 that a Secretary of the Interior has taken an active role in attempting to reform the existing concessions system, and he is to be commended for his leadership in this area. While the Secretary has proposed administrative changes, I feel strongly that changes in the law itself are needed also, and I plan to introduce legislation early in the 102nd Congress that will address a number of important issues.

For instance, franchise fees, the fees paid by concessioners to the government (and indirectly to the American people) for the privilege of operating a business inside a national park, are too low and should be increased. This is especially true for the larger concessioners who are operating under long-term contracts entered into many years ago. At present, the U.S. Treasury receives just $12.5 million in franchise and related fees from concessioners who do in excess of *$500* million worth of business in our parks. This is a grossly low rate of return to the American public and results in a giveaway of some of our nation's most valuable resources.

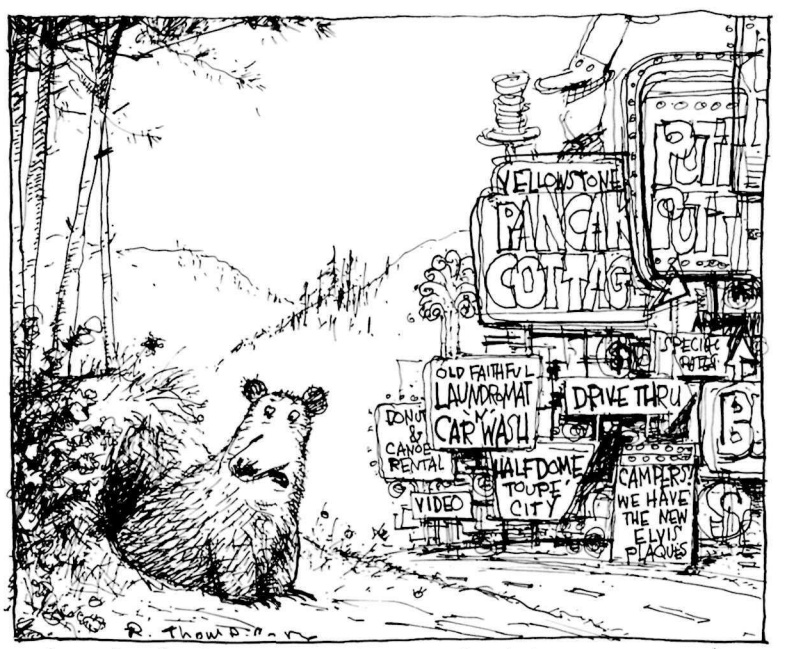
In addition, the widespread Park Service practice of significantly reducing franchise fees in exchange for improvements in the parks should be re-examined. As construction and operating budgets for parks have shrunk, the Park Service often has sought to provide additional visitor facilities by negotiating lower franchise fees from concessioners in exchange for new building programs, roads, or maintenance activities. The fact is that the Park Service does not have the capability to determine whether such arrangements are fair and reasonable, or whether the public interest is served, since there is no system to ensure that these improvements and other activities are equal in value to the fees being foregone.

Concessioners do in excess of $500 million worth of business in our parks.

In addition, under existing law, franchise fees are deposited as miscellaneous receipts in the U.S. Treasury. Since these funds do not directly benefit the parks or the people who use them, there is not much incentive for the Park Service to aggressively pursue increased fees—or for concessioners to pay them. The law should be changed so that these fees are earmarked for

programs and activities directly benefiting the parks.

I am also concerned about the statutory preferential right to contract renewal that, as currently interpreted by the Park Service, gives an existing satisfactory concessioner the right to meet the terms of the best offer and to retain the contract if its offer is substantially equal. I feel this is anti-competitive and should not be granted as a matter of law. While such a preference may have been warranted years ago to encourage certain developments in parks and ensure the continuity of concession operations, it can also limit both the Park Service's influence in dealing with concessioners and the ability of most Americans to compete for concession contracts. In many instances, the right to provide visitor services inside national parks is a very desirable and valuable privilege, which can attract a host of extremely competent and qualified prospective concessioners. NPS ought to be able to choose from these qualified applicants without being constrained by a preferential right.



Hey, Hon? Guess what happened while we were asleep.

ILLUSTRATION BY RICHARD THOMPSON

It is also clear that the Park Service does not adequately publicize new concession contracts or contract renewal opportunities, nor does it always provide interested parties with the specific requirements needed to submit competitive proposals. When renewing a contract, the Park Service should issue a detailed prospectus of the requirements that all prospective concessioners must meet. NPS should then award the contract to the applicant who best meets these criteria—regardless of whether that applicant is an existing concessioner.

When a concessioner makes an improvement on land inside a park, the concessioner is entitled, with the approval of the Secretary, to a possessory interest in that improvement which consists of all rights of ownership except legal title. The amount the Park Service must repay a concessioner if it terminates its contract is "sound value." Sound value is defined as current reconstruction cost, less depreciation, not to exceed fair market value. This effectively gives concessioners a right of compensation for the appreciated value of their improvements.

While some type of possessory interest may be necessary in some instances to attract investment in park facilities, the current practice of routinely granting sound value can result in concessioners being entitled to millions of dollars in ownership rights. This can make it impossible for the National Park Service to terminate a contract. This practice is not financially warranted in all circumstances, serves as a barrier to new and qualified concessioners, and limits the Park Service's flexibility in managing concessions facilities.

It is apparent that regional and park personnel often do not have sufficient educational or professional backgrounds to perform the financial analyses necessary to evaluate proposed concession contracts. In many instances, the Park Service simply does not have the staff or the technical expertise to play on a level field with many of the largest concessioners.

For example, of the 120 positions in the Concessions Management Division here in Washington, only four are accountant, auditor, or financial analysis positions. Park Service personnel are often over-matched when negotiating complex concessions contracts with major corporations. While there are a number of very competent and professional Park Service employees involved in concessions management activities, there just are not enough of them.

I realize that major changes in the Concessions Policy Act will not come easily. Efforts to reform the system have been ongoing for more than 20 years, and little improvement has been made. For several reasons, I hope that this year will be different. First, as I mentioned earlier, the Secretary of the Interior favors changing the existing system. Without support from the highest levels of the Department, any meaningful reform will be difficult to achieve.

More importantly, however, I believe that in our current budget situation, the American people expect Congress to more closely examine federal programs to ensure that the government is receiving a fair return on its investment. In recent years many of us in Congress have sought changes to the federal onshore oil and gas leasing program, the federal timber sale programs, the 1872 Mining Law, and the federal grazing program. The goal of each of these efforts has been, and continues to be, to ensure a fair return to the public for the use of public resources. I feel strongly that the concessions program of the Park Service should be examined in this same light.

Senator Dale Bumpers (D-Ark.) chairs the subcommittee on Public Lands, National Parks and Forests.

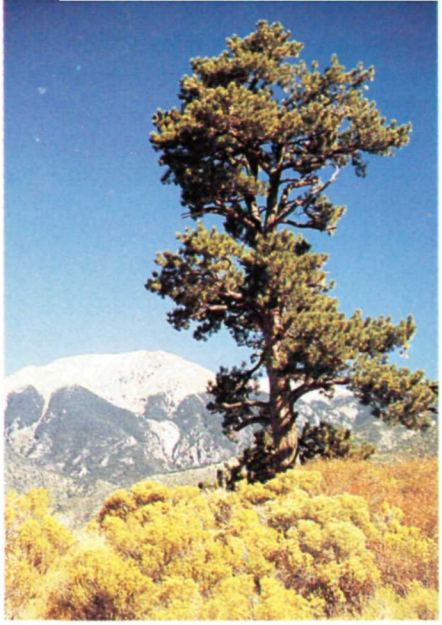
Ghost Forest

Trees are losing the battle against disease, pollution, and drought.

By Steve Nash and Mike Spear

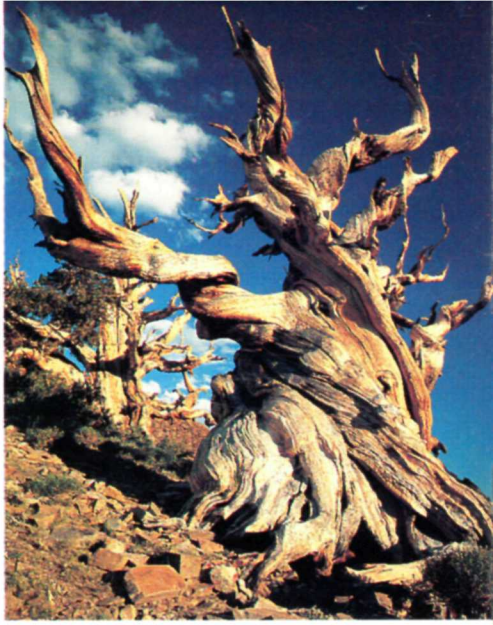
GRANT HEILMAN

Large stands of dogwoods are dead or dying from a fungus called anthracnose.



GRANT HEILMAN

Conifers, such as ponderosa pines, are sensitive to ozone pollution.



High carbon dioxide levels are causing bristlecone pines to grow abnormally fast.

UNDER GLASS IN AN EXHIBIT at Sequoia National Park stands a head-high auburn slab of wood, sawn from the trunk of an ancient giant. Its growth rings record a succession of climate variations and fire scars across 19 centuries—a reassuring testimony to the longevity of our forests.

But scientists at Sequoia and other national parks are finding that forests, though enduring and resilient, are increasingly vulnerable to the influence of modern civilization. For example, plant and insect pests, often introduced by humans, have blighted and killed trees and forests in many parks, from conifers in California to palms in Biscayne Bay. Ozone, a common component of smog, is slowing tree growth at Virginia's Shenandoah National Park and along the Blue Ridge Parkway and threatens the health of conifers in Sequoia, Kings Canyon, and Yosemite national parks. In Maine's Acadia National Park, needle rot on eastern white pines may be the result of acid fog and ozone pollution moving up the Eastern seaboard from the megalopolis to the south. And huge stands of mature lodgepole pines in wide areas of the West, including Grand Teton and Yellowstone parks, are not regenerating well. Fire, which forces their cones open for reseeding, has been too heavily controlled, says Steve Miller, a botanist at the University of Wyoming.

A key question for scientists confronting dead and dying forests across the country is: how much of the decline is part of nature's normal turbulence and how much is human-made? The results of natural factors such as disease, climate, age, and competition are often difficult to separate from pollution effects, or from each other. Trees in the Sierras, for example, are under assault from severe drought, insects, and ozone pollution simultaneously. Among the most prominent victims are ponderosa pines, Jeffrey pines, and white and red firs.

"We're seeing more dead trees than we've ever seen before," says Diane Ewell, an air quality specialist in Sequoia. "In some areas, in pockets, as many as 20 percent of the trees you see are dead." The trees are assaulted by domestic western pine and engraver beetles, and drought has made the trees so weak they can't "pitch out" (fill the holes that bark beetles bore in them). Under normal conditions, this defense forces beetles out of the trees, says Forest Service plant pathologist John Pronos.

Ironically, as the trees are ravaged by drought, they win some respite from ozone. They photosynthesize less, taking in less ozone through their leaves, says Paul Miller, a Forest Service plant pathologist. But when the drought ends, ozone damage increases. In the Sierras, hourly ozone concentrations often meet or exceed state standards during a third of most summers, Ewell says, and they may be the highest in the nation. Ozone reduces conifer growth and causes whorls of needles to turn yellow and fall off. In some cases only one whorl remains on Ponderosa pine stems that normally have five or six.

The Jeffrey pine is among the most ozone-sensitive trees, UCLA biologist Mark Patterson says. It grows at high altitudes in rocky soil, and its roots may tap drought-proof water sources in rocks, making ozone damage worse because its photosynthesis process is not decreased. Jeffreys could decline to the point that they are replaced by other species, such as the incense cedar, that seem to be more resistant to ozone. In recent experiments, ozone damaged needles and reduced growth in sequoia seedlings less than a year old. Controlled amounts of ozone also injured rooted cuttings of larger sequoia branches, according to Miller and Forest Service plant physiologist Nancy Grulke.

Fortunately, more mature sequoias don't seem as vulnerable. Atop a scaffold halfway up a 200-foot sapling last summer, Miller and Grulke enclosed branches and subjected them to several levels of ozone. They are still analyzing the results, but Miller has a hunch they will find little impairment to the photosynthetic activity in trees that size.

LARRY ULRICH

Ozone pollution damages needles and reduces growth in sequoia seedlings.

PHOTO/NATS

Bark slides off this tree as it succumbs to Dutch elm disease.

GRANT HEILMAN/GRANT HEILMAN PHOTOGRAPHY

Thrip, an introduced pest, is endangering many sugar maples.

Ozone pollution in Sequoia may worsen despite new auto emissions standards, Ewell says. The adjacent San Joaquin Valley has the highest population growth in the state. And new coal-fired plants are springing up nearby, a situation Ewell calls "scary." In the East, Shenandoah park officials went on record late last year in opposition to one of 20 new power plants proposed in their region, partly because of the threat of increased ozone damage to trees such as tulip poplars and pines.

The most talked-about pollutant is "acid rain," a catch-all phrase for certain chemicals that are discharged into the atmosphere, often from coal-fired power plants, and returned to earth in rain or fog, or in a dry form. Rain and fog with the acidity of lemon juice has been recorded from the Appalachians to the Sierras. A battery of federal studies, concluded late last year, found that masses of red spruce have been dying high on northeastern mountainsides, especially on sites that receive heavy doses of acid rain and fog. Wood samples taken from sick spruce at several locations contained an unnatural surplus of aluminum and a shortage of calcium, a result of changes in soil processes caused by acid precipitation, new research suggests. The same imbalance of essential tree nutrients has been found at soil test sites in the Southeast, including Great Smoky Mountains National Park, where spruce growth also is depressed and acid levels are high.

But this airborne acid pollution also illustrates the complexity of separating natural from human-made factors. An array of studies, costing millions of dollars, has so far failed either to completely indict or exonerate acid deposits as a major factor in forest declines. Scientists say a final verdict will be years in coming.

ANOTHER ENEMY OF TREES in national parks, sometimes called "biological pollution," is unquestionably caused by humans: we have accidentally introduced a long list of insects and diseases into parklands, especially since the turn of the century. The open oceans no longer function as a barrier to alien pests. Insects and diseases arrive on imported nursery stock and lumber or through other human traffic. They can quickly weaken or destroy native trees, leaving them no time to evolve natural defenses before they are wiped out.

Biological pollution can strip tree species from whole regions in a matter of years. Waves of alien pests, introduced by humans, have moved south through the Atlantic states continually during the past several decades. The now-familiar gypsy moth was introduced from Europe accidentally in 1869. Moving inexorably southward each season, the moth reached Shenandoah National Park in the 1980s and has been defoliating and killing broad expanses of oak forest there. Regions in the western U. S. have not suffered the same degree of gypsy moth infestations. So far the moth doesn't present a serious problem in the West, says Bob Averill, a Forest Service entomologist.

The hemlock woolly adelgid, another alien pest, arrived in Shenandoah last year after killing Canadian hemlocks of all sizes in Connecticut and Massachusetts. The Smokies have one of the world's largest concentrations of virgin Canadian hemlocks, two and three hundred years old or more, forming the dominant stands along streams on Mt. LeConte and in Newfound Gap. The trees are at risk, park personnel say.

Nine-tenths of the dogwoods at Catoctin Mountain Park, Maryland, have perished since the arrival in the mid-1980s of anthracnose, a fungus most scientists believe is an import. U.S. Department of Agriculture geneticist Frank Santamour tested different native varieties of the tree in hopes of finding a resistant strain. In 30 months, they all succumbed. "My God, we just wrung our hands in anguish," he said. "The disease was just leaping so fast. . . ." Now, large stands of dogwoods in the Smokies are dead or dying, as the fungus spreads through the southern region. "At least in the mountain areas,"

CONNIE TOOPS

MARY STIBRITZ

Above: Acid rain damages red spruce needles, disrupts the balance of essential tree nutrients in the soil, and weakens trees—making them less able to fight pests and disease.
Right: A tree is infested by egg-laying gypsy moths. Since their introduction from Europe, gypsy moths have been spreading across the country. Their voracious caterpillars feed on leaves, and tracts of defoliated trees are becoming a common sight in parts of the Northeast.
Below: Adult bark beetles burrow a series of tunnels under the bark of a ponderosa pine. Weakened by drought, trees can't fill the holes to force the beetles out.

C.E. ROBBINS

Santamour says, "the dogwoods are pretty much under the gun."

The outlook is grimmer still for butternut, sometimes called white walnut. A recently discovered virus, probably introduced, aborts the nuts in their embryo stage, diminishing reproduction to nearly zero. The tree is currently an official candidate for the federal government's list of species threatened with extinction.

Probably the most visible die-off in the Smokies is in the 48,000-acre "ghost forest" of dead and dying Fraser firs. More than 90 percent of the firs at the park have been killed so far by an imported aphid-like insect, the balsam woolly adelgid. One controversial theory is that the adelgid's fatal success on Fraser firs is linked to acid rain, which weakens the fir's natural immune systems. A recent survey found that nearly 75 percent of the 65,000 acres of spruce-fir forest in the southern Appalachians lies within the boundaries of the park, and another 10 percent is along the Blue Ridge Parkway.

The problems are not always so obvious to park visitors. "It still looks great," resource management specialist Keith Langdon says. "But internally, in how the forest works, there are some serious problems."

Hundreds of elms have died in the last few years in New England from Dutch elm disease, which is expected to arrive in the Appalachians eventually. Many sugar maples are succumbing to an introduced thrip, a small bug first seen on pear trees in California. "Things that have co-existed for a long time are being interrupted and we're losing some of the players," Langdon says. "The more we lose, the more inherently unstable the system becomes."

Chestnuts provide a clear example of this ecological instability. One of the most common trees in the Appalachians until the 1920s, chestnuts vanished by the billions after the introduction of an Asian blight. Chestnuts were not highly palatable to gypsy moths, but the oaks that usually replaced them are. "Now we're seeing the gypsy moth really speed up," Langdon says.

Some afflictions, like butternut can-

ker, have no known cure. Others, like dogwood anthracnose and the balsam adelgid, can be arrested but not cured by spraying, with fair success. But insecticides and fungicides are expensive to administer. And, especially in a park, they can be more objectionable or hazardous than the pest itself.

Unlike red spruce and Fraser fir in the East, trees at high altitudes in the West seem to be little affected yet by drought, bugs, or pollutants.

Currently, however, whitebark, foxtail, and bristlecone pines in high altitudes in the West are growing at an abnormally fast rate, possibly because of higher levels of carbon dioxide in the atmosphere, park service ecologist Dave Peterson says. Growth has been dramatically faster for about the past 140 years, he notes, coinciding with the start of the Industrial Revolution. Dan Duriscoe, a park service consultant who specializes in ozone research, says the three types of pines may also be more resistant to ozone because they have a slower metabolism and absorb smaller quantities of it.

Global warming could affect tree growth at high altitudes as well, says Lisa Graumlich of the Tree Ring Laboratory at the University of Arizona. In this century, the tree line has moved up as much as 30 feet in some regions of the Sierras and the Rockies, she says, and it may go higher if controversial predictions of a 5- to 9-degree-Fahrenheit rise in temperature proves true in the next century. Perhaps for the same reason, more trees are growing in the higher altitudes generally, particularly in subalpine meadows.

SCIENTISTS WITHOUT research funds and means of implementation are nearly powerless—like witnesses at a train wreck, as one biologist put it. Park researchers are concerned that serious ecological disturbances can occur without anyone knowing of them. Langdon said that for an unknown period, the butternut disease went unnoticed: "I think it's a real indictment of our ability, particularly in national parks where we put a prize on natural systems and trying to monitor them, that we never picked it up. And I include myself in that. There are too few of us and too little money."

Penn State plant pathologist John Skelly says federal funding for acid rain research was a start, but long-term studies are needed. "The organisms are 125 years old, and we were given five years to tell whether they're healthy or not," he says. "A lot of that was done with a pair of binoculars. You wouldn't be happy if you went to your doctor and he showed up at his door with a pair of binoculars and diagnosed the whole room."

NPCA has been especially concerned about the inadequacies of the Park Service's science program as threats to the parks increase. "With research representing about 2 percent of the overall NPS budget, the agency is virtually driving a twisting mountain road at night, with its headlights off," says NPCA natural resources program manager David Simon. "The result is that not only are we missing much of the parks' beauty and value, but the basic mandate to preserve them is not being carried out."

Predictably, scientists do not speak with one voice about the gravity of the threat to our forests. Skelly, for one, has reservations. "I think air pollution's important," he says. "Very important. But I don't think it's causing the level of damage that people are leading us to believe. Even though the gypsy moth is introduced, it would have gotten here eventually, and it would have found a banquet. These things are all part of nature."

Introduced diseases and insects have always been part of nature, Langdon concedes, but human activity has jammed the pace of change into high gear. "And it's not natural—it's devastating and it's permanent, unless we take very expensive intervention measures," he added.

If forest ecologies are forced to adapt to a polluted environment during the next century, some of the damage will be invisible at first, such as a shrinking of the gene pool, a process biologists call "depauperization." Harvard entomologist E.O. Wilson has written that genetic variations form a rich endowment of information, like an immense library whose volumes we have not yet even counted, let alone read. Once lost, the information cannot be restored or retrieved. We can only guess as to its significance.

Skelly's research on white pine, an important timber crop, offers strong hints, however. Genetic losses in just one species can be important, even if measured only in narrow economic terms. He found that the genetic families of white pine most vulnerable to ozone damage in Shenandoah National Park were those that grow fastest in clean air.

At Acadia National Park in Maine, geneticist Robert Ecker of the University of New Hampshire is, like Skelly, investigating pollution's effects on eastern white pines. "We may be looking at the tip of the iceberg," he says. "The species that are damaged might be called indicator plants, and the long-term effects of some of this exposure to pollutants are not well known. We don't really even have a good estimate of what proportion of the gene pool is being lost, because trees are just sick enough so they're not reproducing, but they're not dying."

Sequoia's Ewell says environmental policy should respond to the current warning signals: "People require things to be dramatic before they think they are significant. People want to hear that fish are dying, trees are dying. I don't understand why we have to wait for things to get to that point, because at that point, it's too late."

Narrowing genetic diversity and species diversity among trees encroaches on the survival of birds, insects, mammals, and other life forms, as the intricate ecology of the forest shifts in unnatural ways. And, as biologists say, losing parts of the ecosystem is like losing rivets from an airplane. If one or two pop out, little harm is done. But as more are lost, the whole structure threatens to fall apart and crash.

Mike Spear and Steve Nash teach journalism at the University of Richmond in Richmond, Virginia.

Yellowstone's Top Dog

New research may have profound implications for coyotes, the most misunderstood predators in the American West.

By Michael Milstein

TICK...TICK, chirps the little box about the size of a transistor radio. TICK. Biologist Bob Crabtree slowly turns the receiver's antenna, which towers out of the roof of a plywood shack on Yellowstone National Park's Blacktail Plateau. TICK, TICK. The signals are coming faster now. Crabtree glances out the plastic window in the general direction the antenna is pointing—toward his target. "He's out over there," Crabtree says, aiming his finger toward a lonely grove of pines in the distance. "They're out there resting up while it's still hot out. Later on, when it cools off, they'll become active and start hunting for food."

Resting in the far-off stand on a summer afternoon in Yellowstone is perhaps the most misunderstood but prevalent predator of the American West. It's smaller than a wolf but larger than a fox, and more mottled in looks than both. It is both a revered symbol of the West and a hated troublemaker. What Crabtree and his crew have been watching so intently in Yellowstone for the last year, and will for the next four, is *canis latrans*: the coyote.

In perhaps the first large-scale study of a coyote population untinged by human wrath, the team, funded by the National Park Service, is examining the wily creatures and their intrinsic connection to other parts of the Yellowstone ecosystem. What they are discovering may have profound impacts on government coyote-eradication projects and may also imply dramatic changes in Yellowstone's pending restoration of another major predator, the grey wolf.

The highly adaptable coyote is one of the enduring symbols of the American West. Above: Pups are usually strong enough to crawl out of the den when they are three to four weeks old.

THIS PAGE: ERWIN AND PEGGY BAUER; FACING PAGE: JEFFREY T. HOGAN

"We really need to know our predators to know how complete our ecosystem is," says Yellowstone Research Chief John Varley. "Since predators top the food chain, everything is magnified for them. They are really a defining factor in environmental health."

Using advanced research techniques, the team is finding coyotes in Yellowstone very different from those inhabiting other western lands, where they are annually subjected to multi-million dollar, tax-funded killing campaigns. Park coyotes have more stable communities and social structures and hunt in packs like wolves. This is probably the normal lifestyle for coyotes; not the solitary life coyotes in the West have adopted to survive the advancement of civilization. In the absence of wolves, Crabtree suspects, coyotes have slid at least partially into the wolves' niche, often preying on large mammals like elk that might not normally be such a large part of their diet.

"Coyotes have certainly taken over some of the wolf's role in the park," Crabtree says. "How much and how well is what we are trying to find out." But whatever it is, the coyote, not prey species, is the one creature that probably will be most affected if wolves come back, because the two species will be in direct competition for prey.

A romantic icon of the American West, the coyote—sometimes nicknamed the "moon dog" or "prairie wolf"—has long filled frontier lore. In American Indian fables, the coyote appeared often as a crafty jokester. To some, the coyote's yipping bay was a familiar sound of security. But soon, the coyote became the hated scourge of modern ranchers whose sheep they sometimes kill. Today, the Department of Agriculture spends close to $30 million nationwide on predator control projects to kill coyotes, primarily on western rangeland.

That does not include the sanctuary of Yellowstone, but it once did. When the world's first national park was established in 1872, it was a haven for big-game hunters who reasoned that coyotes, wolves, mountain lions, and other predators unfairly cut into their take. So hunters and park managers began lacing carcasses with strychnine and broken glass and dynamiting dens to kill any scavenging "flesh-eaters."

JEFF HENRY

With the help of radio collars, researchers can follow coyotes through their daily routines, offering insight into the predator's role in molding Yellowstone's ecological communities.

"In the winter coyotes hereabouts became so numerous that I at last felt obligated to order the destruction of some of them," early park Superintendent George S. Anderson wrote in his 1893 annual report. In 1897, Superintendent S.B.M. Young commented that "coyotes are numerous and bold. It is estimated that of a herd of 500 antelope that wintered in the valley of Gardiner and on the slopes of Mount Everts, 75 (15 percent of the herd) were killed by coyotes during the past winter, and many antelope fawns, elk calves, and broods of grouse have been destroyed by them this season." According to historic records from 1904 to 1935, 121 mountain lions, 132 wolves, and 4,352 coyotes were killed in the park.

While wolves and cougars were virtually wiped out of Yellowstone by the turn of the century, coyotes—more abundant, prolific, and wary—hung on despite continued intermittent killing. It was not until 1940 that they and other predators (for which it was too late) finally got the same protection as the tourist-pleasing wildlife. That was the year that naturalist Adolph Murie published his landmark study, "Ecology of the Coyote in the Yellowstone," which for the first time credited the coyote as a "desirable member of the assembly of animals."

Biologists usually examined specific animal species, most often big game, with the goal of promoting a population's size for hunting "harvest." But Murie was one of the first to consider a species within the context of its entire environment—looking, for instance, at how the coyote affects other prey animals as well. He concluded that coyotes and other predators play an important role in keeping other species from gophers to elk healthy by culling the weak and infirm.

"The big picture is the key," says renowned predator biologist Maurice Hornocker, who founded the nonprofit Wildlife Research Institute, which is administering the $120,000 coyote study

A volunteer removes a puppy from its den for examination and implantation of a radio transmitter. Researchers are particularly interested in examining and tracking coyote young because they are perhaps most indicative of the population's future.

and a simultaneous study of Yellowstone mountain lions, which could be sharply affected by wolves cutting into their hunting base. "What Murie did and what we're doing on an even more advanced basis is looking at all the environmental influences that affect an organism directly and indirectly. It's a seamless fabric."

After Murie released his study, coyote control in Yellowstone ceased, and the maligned species began to flourish. Now, without any wolves and only a few mountain lions recolonizing Yellowstone, coyotes remain the region's foremost predator next to the threatened grizzly bear. So park managers decided in 1989 to gather baseline information on coyotes in the wake of the 1988 forest fires and in the face of potential wolf reintroduction, bogged down in political rhetoric for years. If wolves—the one missing link in the park's ecosystem—are ever restored, it would be a spectacular opportunity to watch the effects one predator species would have on another.

"It's an incredibly crucial question to answer," Crabtree says. "The park's foresight here could give us the knowledge we need to manage national parks as the true ecosystems they should be and as models for other ecosystems in need of restoration."

Biologists suspect that major predators, sitting at the top of any food chain, are one of the most important factors in the entire structure and diversity of an ecosystem. They affect how and where other species live and, consequently, which live and which die. Research in South America has shown that, by limiting the distribution of plant-eating animals, predators help effectively control the growth patterns and success of plants in the jungle.

SIMILAR EVENTS could be happening in Yellowstone. There are somewhere around 400 coyotes living in the park's lower elevation northern range, where Crabtree's study is concentrating. Coyotes prey on both small rodents—lots of mice, pocket gophers, and meadow voles (Murie found that rodents and grasshoppers comprise 60 percent of a coyote's diet)—and larger mammals like elk, antelope, and deer. If present, wolves would prey mostly on the larger mammals, while red foxes, strangely rare in Yellowstone, prey almost exclusively on the smaller rodents, which probably consume more grasses than any other animal class. More numerous than they would be if wolves were present, Yellowstone coyotes take up territory and prey that foxes normally would use, preventing extra fox predation on vegetarian rodents.

Yellowstone coyotes should fare better than their brethren on Isle Royale if wolves return to the park. When wolves first crossed ice-covered Lake Superior to arrive on the isolated island of Isle Royale National Park, coyotes were abundant there. After a few years, wolves had crowded coyotes into invisibility, while fox populations boomed. Now, there is a healthy population of red foxes, some wolves, and no coyotes.

Unlike the smaller, confined environment of Isle Royale, Yellowstone is large enough to accommodate both wolves and coyotes. If wolves return to

The coyote is the fastest North American canid, cruising at 25 to 30 miles per hour and capable of bursts of 40 miles per hour. Opposite: Life for Yellowstone's coyotes will be much different if wolves return.

Yellowstone, coyotes would almost certainly decline but not disappear, Crabtree says. Wolves would take up much, but perhaps not all, of the slack in influencing big game herds. No longer competing against so many coyotes, fox populations could also rebound, eating even more rodents than coyotes do now, and thus allowing the park's grasslands to further prosper. That would mean more forage for big game, and more big game would mean more food for wolves and coyotes. It's a never-ending, hypothetical merry-go-round of causes and effects. "There are a lot of theories about the role of predators in molding ecological communities," Crabtree says. "Here's our best chance to look at how it all works."

Making the most of that chance, however, is a complicated business, requiring both manual labor and advanced research and analytical techniques. Crabtree and his team of volunteers and paid workers will spend hours tracking coyotes with radio transmitters, watching them through binoculars, collecting coyote scats to determine the animals' population density and diet, and mapping the creatures' sovereign territories.

Since last fall, the study team has captured 37 adult coyotes from 13 territorial packs, examining and marking them in a systematic 45-minute process. With smelly lures simulating coyote scents, researchers set padded jaw traps with a shock absorber to keep from injuring the coyote. A radio transmitter alerts researchers when the trap is sprung, so they can be on the scene within minutes after an animal is caught.

First, the group blindfolds the coyote to keep it calm, takes its body temperature, and checks it for shock. Researchers then weigh and measure the coyote and take a blood sample, to be used for nutritional analysis and to examine the genetic differences between individual coyotes and packs. They look for distinguishing characteristics—scars usually prove an animal as the dominant, or "alpha" member of a pack—and administer antibiotics to prevent any infection. Finally, they strap a radio collar around the coyote's neck. Since newborn pups are perhaps most telling of the coyote population's future, Crabtree's team also captured and examined 13 of the young. Instead of using radio collars, which cannot expand to accommodate the juveniles' growth, veterinarians implanted a plastic-encased transmitter in the creatures' abdominal cavities. Equivalent to only about three percent of a three-pound pup's weight, and less as it grows, the harmless but permanent implant is not as intrusive as a radio collar might be.

Most coyote studies have reported roughly one inadvertent death for every 20 animals captured. But after more than 200 captures, Crabtree has not recorded a single death in Yellowstone or during his other studies of coyotes at California's Mono Lake and Washington's Hanford Nuclear Reservation.

With the animals carrying radio transmitters, researchers then use their five tracking stations, cloistered from the view of visitors, to follow coyotes through their daily routine. They have pinpointed the creatures more than 5,000 times, mapping each location to establish the boundaries of coyote territories. Coyotes generally rest during the day and grow active as dusk ap-

proaches—patrolling their territory and foraging for food. They rest again for a few hours in the middle of the night, and then go back on the prowl until shortly after dawn. Coyotes are known to be smart and keenly adaptable, traits that helped them survive the violent campaigns that quickly claimed their fellow predators. They eat grasshoppers, crickets, and even ants, and killed roughly 40 percent of elk calves under study in northern Yellowstone's Lamar Valley. Coyotes have probably benefitted from 1988's fires, which opened and fertilized areas for grasses and shrubs that are important to small rodent species, boosting the predator food supply.

Hanging around picnic areas, coyotes also take full advantage of park visitors who illegally offer them handouts. Rangers trying to catch such "beggar coyotes" have had to go undercover, wearing plain clothes and driving unmarked vehicles because the coyotes learned to recognize their uniforms and patrol cars.

ALAN AND SANDY CAREY

Researchers have noticed that Yellowstone's coyotes—the biggest of the species in North America—tend to function in packs, a characteristic not generally recognized among most western coyotes. Each pack includes a dominant breeding male and female as well as several young "helpers" or "biders," so called because they are biding their time before leaving the group. By watching specific pups, Crabtree hopes to determine when and why young coyotes leave the pack: do the more capable pups set out first? Do their parents force them out? Do they start a new pack or join an established one?

Although their packs are smaller, Yellowstone coyotes have a social structure very similar to that of wolves; the one difference is that while some coyote pups usually strike out on their own after a summer with their parents, young wolves generally stay with their parents through the first winter. That is most likely because wolves need larger packs to bring down their larger prey, and young wolves cannot survive solely on easily caught rodents as coyotes can.

But there are notable differences between coyotes in Yellowstone and those in other parts of the West, where they are targets of government trappers who, to keep land safe for livestock, poison them, shoot them from airplanes, and dig up their dens to kill their pups. In natural areas like Yellowstone, researchers have found an annual average of two to three newborn pups per territory, while exploited populations generally average about five to eight per territory. That means that in areas where coyotes are hunted heavily, they reproduce more quickly to repopulate vacant domains.

J. ROBINSON

Those coyotes that do take over vacant territories are often young and inexperienced and hunt alone rather than in packs. Not having secured status, they may turn to killing more sheep, a veritable fast food, than those that were there before. And several federal studies have also proven that coyotes kill the most prey—whether it be domestic sheep or wildlife—when rearing their young. So by killing coyotes indiscriminately and leading them to produce more young at an earlier age, control agents may actually be boosting coyote predation when they are really trying to lower it.

Coming up against coyote's instinctive cunning, efforts to kill them off may have backfired even more than we realize. Early rangers and ranchers, by poisoning carcasses in hopes of killing predators, destroyed those animals that scavenged on already dead animals, and probably taught coyotes to kill fresh meat. Hunters shoot the most visible and vulnerable coyotes, sparing those most skilled at stealth and hiding. Despite persecution that annually kills up to 70 percent of their populations in some places, coyotes have not only not died off, they have actually expanded their range toward the East Coast. In short, some biologists think, predator control efforts have turned the mythic coyote into an American "super-predator," more evasive and inclined to kill than any that existed before. Yet a new draft environmental impact statement prepared by the Department of Agriculture, which runs the nation's predator control activities, proposes continuing current programs. The document did not consider preliminary results of the Yellowstone study or any other research on unexploited coyote populations.

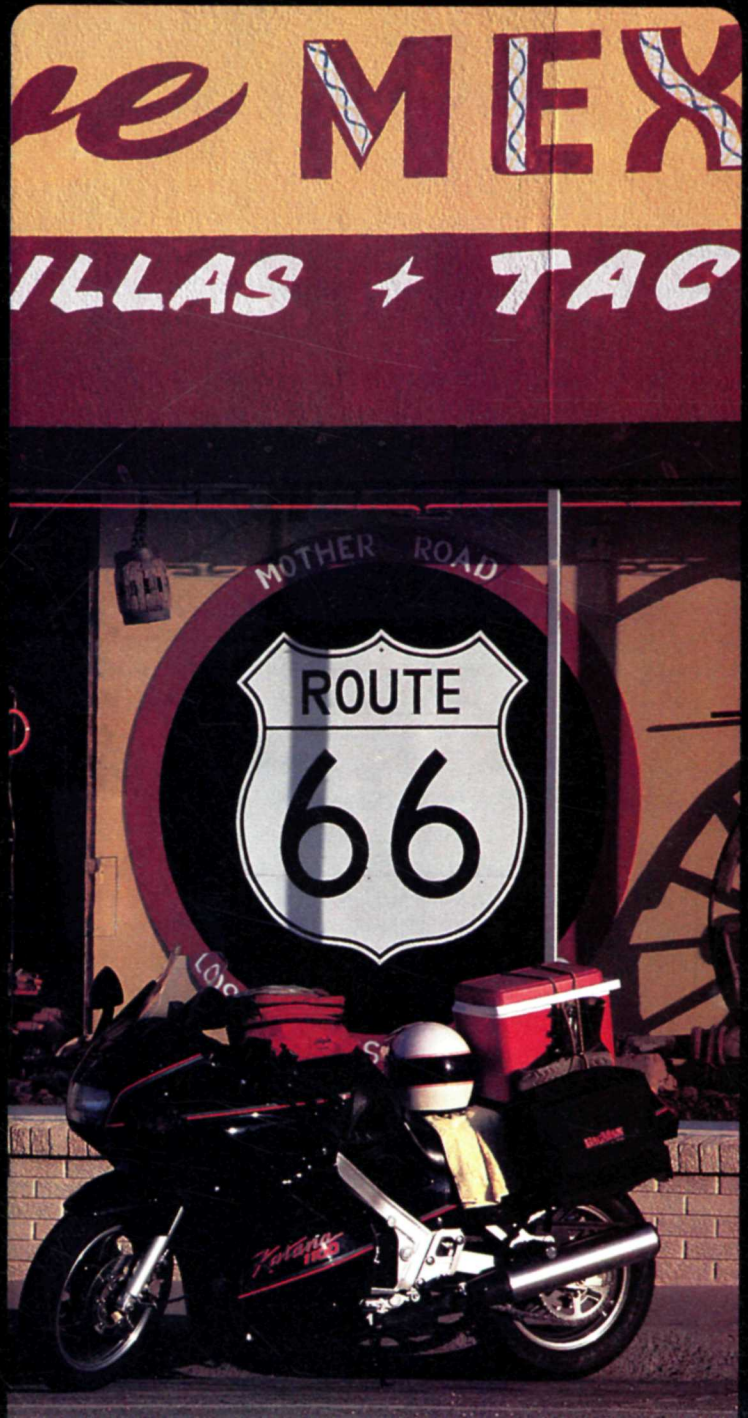
"We know so little about them, and yet we spent millions and millions of dollars trying to get rid of them; it's a complete fiasco," says Hornocker, one of the first to question predator control programs. "In many cases, the best control is no control at all; they will limit their own numbers if you just leave them alone."

With its protected status, Yellowstone is home to what is probably one of the most stable coyote populations in the United States, making its study even more important to knowledge of the coyote as a species. When wolves return, the habits and lives of both coyotes and their prey will change; but that grand experiment, too, will reveal dramatic clues to the true nature of natural systems. For while coyotes have resisted human wrath for years, they may not do as well against one of their own—the wolf.

As the receiver keeps on ticking off the radio beacon of a far-off coyote, Crabtree jots down the hidden creature's coordinates. "That's where it is right now," the biologist says. "Who knows what will be happening here in ten years. Will there be wolves or coyotes or more elk or fewer elk or better forage? Whatever it is, if all the pieces are in place, it will be closer to the real Yellowstone."

Michael Milstein, a reporter for the Billings Gazette *and a former park ranger, last wrote for* National Parks *on the worldwide disappearance of frogs.*

America's Main Street



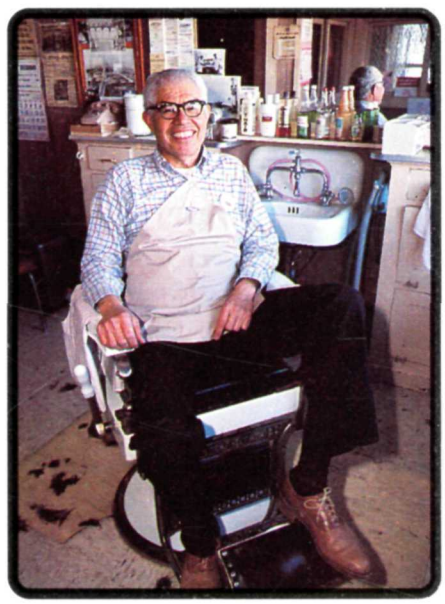
Route 66, soon to be commemorated by the Park Service, symbolizes the nation's love affair with the open road.

BY LAUREN YOUNG

SOMEWHERE ALONG the ribbon of decaying asphalt and concrete that extends from Chicago to Santa Monica—a road commonly known as U.S. Route 66—is Seligman, Arizona, a dusty town with nearly 1,000 residents and Delgadillo's Barber Shop. It is here that every Tuesday through Saturday at 9 a.m., armed with a straight-edge razor, sharp shears, and a bottle of lemon creme aftershave, Angel Delgadillo puts on a white apron and begins his work behind the stainless steel barber's chair that once belonged to his father. For five dollars a cut, you may not find salon styling and glossy magazines to read while you wait, but you do get to spend a few relaxing minutes with Delgadillo. And for one dollar more, you can have an old-fashioned head massage.

"There's so much congeniality in my barbershop, so much is discussed here—just family and clean conversation," says Delgadillo. "I try not to let religion and politics get too thick. I've been in this shop for 40 years and I'm still what a barber was years ago."

Delgadillo is just one of the many "mom and pop" old-timers living and working along America's Main Street—U.S. Route 66, the two-lane road thousands of travelers once followed in search of America. To them, Route 66 symbolized 2,448 miles of hope and adventure. Now, more than 40 years since the establishment of the complex, multi-billion-dollar interstate system that bypassed Route 66 in every direction, a



TERRENCE MOORE

Angel Delgadillo, a barber in Seligman, Arizona, is one of many who live and work along America's Main Street.

congressional bill has authorized a two-year study to determine ways to preserve and commemorate this historic highway.

More than 80 percent of the original Route 66 is intact today. And although one-of-a-kind attractions like the Wigwam Motel in Rialto, California, and Cadillac Ranch—where ten Cadillacs are planted Stonehenge-style, face down, in a field near Amarillo, Texas—have been replaced by a monoculture of fast-food joints and chain hotels, America's passion for the Mother Road remains.

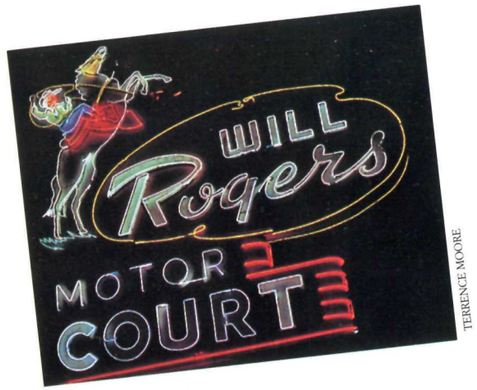
Each of the eight states Route 66 traverses—Illinois, Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona, and California—supports active Route 66 associations. The combined efforts of these grassroots organizations, the recent release of *Route 66: The Mother Road* by Michael Wallis, and legislation to preserve 66, introduced by Senator Pete Domenici (R-New Mexico), all have contributed to the "66 Fever" that is sweeping the nation.

Americans always have looked to the Western states as the land of gold and adventure. The great urge to "Go West, young man," which began as early as 1800, continued in great waves into the first half of this century. Route 66 traces those trails blazed by Native Americans, golddiggers, claimstakers, and pioneers as they headed toward the Pacific Coast. By 1926, around the time the National Highway System Act created Route 66, Fords and other automobiles were available at such a price that many Americans could finally afford to substitute four-legged travel for four wheels. At this point in history, America's love affair with the open road shifted into fifth gear.

In the next few decades, Route 66, along with other transcontinental highways, would lead the country west. In the first mass exodus, the sons and daughters of the Dust Bowl fled the parched farmlands of the Midwest and Southwest during the Great Depression. The next important wave of travelers came after World War II as factories in Detroit stopped making trucks and

TOM SNYDER

TERRENCE MOORE



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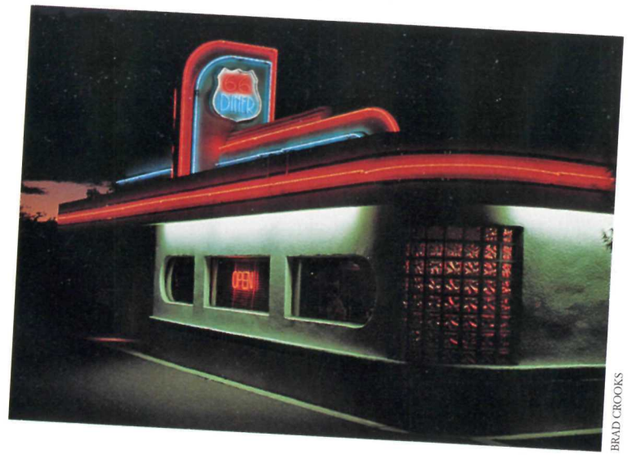

BRAD CROOKS

tanks in favor of automobiles. For the first time in history, the unionized autoworkers received two weeks paid vacation and discounts on the cars they produced. Touring America via 66 became a national pastime.

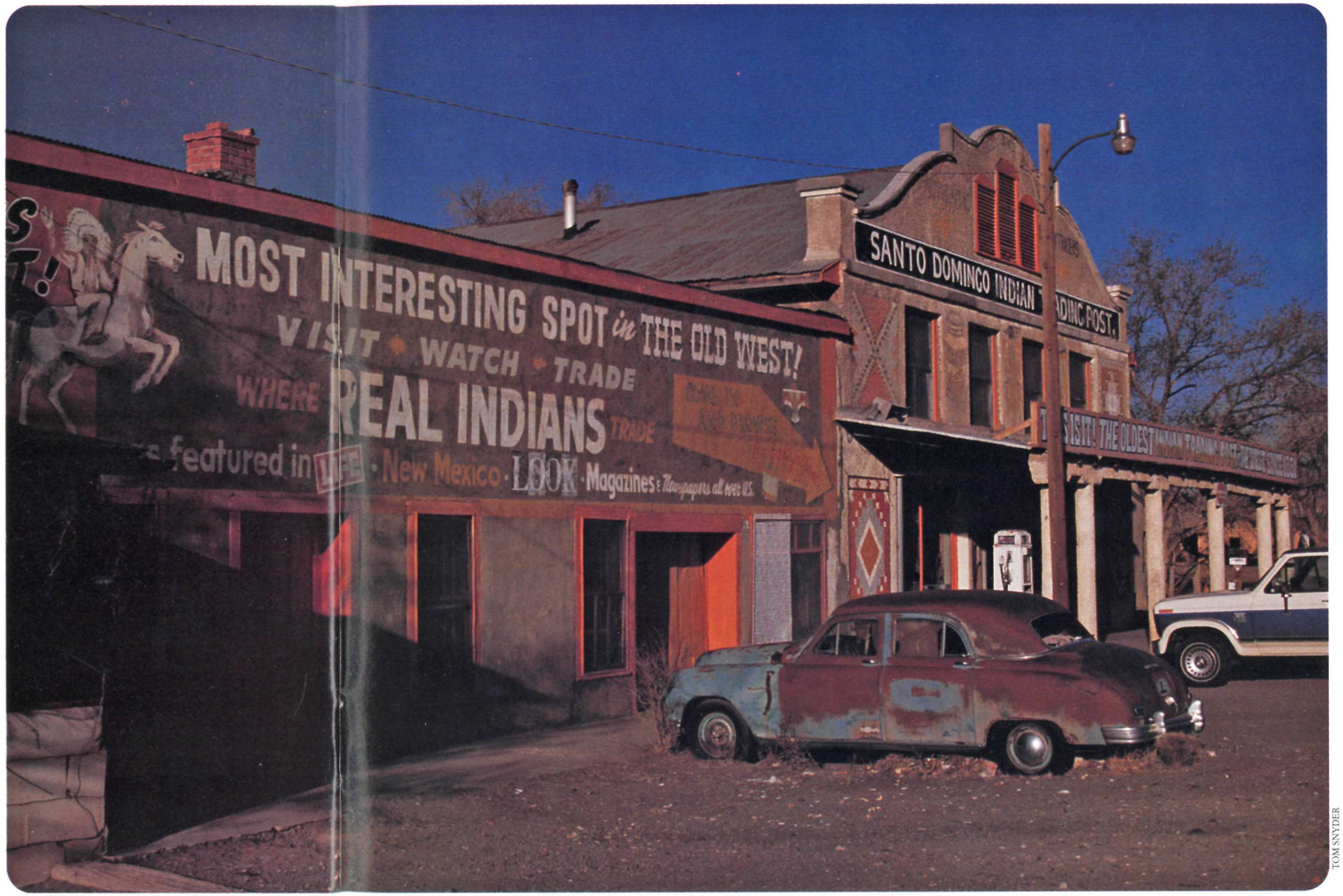
"As the first major highway going across the United States, Route 66 still is in people's minds, indelible in their spirits," says Bruce Meyer, president of the Kansas Route 66 Association. "Route 66 means adventure. It represents a time when car travel was exciting. If you were going to go 200 miles, you didn't know if your car would break down, what the road would be like, or whether, beyond a certain point, there would be dragons."

What also makes traveling Route 66 an adventure is the odd assortment of restaurants, motels, and tourist attractions that interrupts the scenery along the road. "When you walk into a Route 66 cafe, you don't know if you are going to get ptomaine poisoning or find a feast," says author Michael Wallis. "It's not predictable, unlike the generic, cookie-cutter culture of interstate highways."

To Wallis and thousands of others, Route 66 is our last link to the time of waitresses named Mae, homemade cherry pies, Burma Shave signs, porch swings, neon storefronts, and driving below the speed limit. "If you want to make time and go lickety-split, by all means take the interstate," Wallis says. "But if you want to see genuine America, if you find time holy and want to rediscover yourself—rediscover this country—take Route 66."

Never before has the park service attempted to study more than 2,000 miles of culture, so it is only natural that the Route 66 project is the most ambitious of its kind, says David Gaines, NPS southwest chief of long-distance trails. Many of the existing partnership parks (parks that are neither federally owned nor directly administered by the National Park Service but which employ NPS assistance)—such as the Delaware and Hudson Heritage Corridor Project in New York—may span a couple hundred miles. The entire entity of Route 66, however, crosses nearly two-thirds of the U.S., making it one of the most extensive trails in the nation. Decades of travel along Route 66 and the highway's contribution to American pop culture also add to the road's significance. In addition, the project will be important for its examination of traditional national parks and cultural resources in the study of commercial archeology, notes Gaines.

Many national park sites focus on a particular event or a person of historical importance, but interpreting a 2,400-mile highway is a true twentieth-century phenomenon. Tom Snyder, founder of the National Route 66 Association, says the project will undoubtedly focus on the relationship between the public and private sectors. "Route 66 was nothing without commercial business. This will be different



TOM SNYDER

Offbeat commercial ventures thrived along Route 66 in its heyday. This abandoned trading post in New Mexico once lured tourists with a promise of "Real Indians."

Russell Soulsby's service station along Route 66 in Illinois has been run by the Soulsby family since 1926.

from anything the Park Service has ever done."

Route 66 is a window into our history, but it is important for other reasons, Snyder adds. "You can point to the Okie migration and perhaps link history to it, but it's not a historic highway in the same sense as the Boston Post Road or the Oregon Trail. Route 66 exists in a totally different plane of consciousness: it was the first highway to become a destination in itself. We started traveling to travel, not to go somewhere."

The National Parks and Conservation Association supported legislation to study appropriate methods to commemorate Route 66. In testimony before the Senate Committee on Energy and Natural Resources, Bruce Craig, NPCA cultural resources program manager, stated that "it is most important to assess the surviving roadside architecture including motels, restaurants, and gas stations" and comparatively evaluate the integrity of the surviving historic fabric.

Recent efforts to commemorate the Mother Road have peaked not a minute too soon. "Though Route 66 is seemingly recent, the American commercial environment regenerates itself so rapidly that the architectural and physical evidence of this roadside is often lost before it has been recorded," reported the Society for Commercial Archaeology in a statement last June. "If swift action is taken, Route 66 can tell its own story. If we wait another generation, the story of Route 66 will be limited to published accounts and markers along the highway."

For many travelers, Route 66 is a home away from home. That old road is a historic ribbon linking the lives of people going somewhere, seeing America, seeking their fortune. As Steinbeck wrote in *The Grapes of Wrath*, "66 is the mother road, the road of flight."

Lauren Young is editorial assistant for National Parks.

TERRENCE MOORE

The following is a collection of impressions about life and travel along Route 66.

The Grand Tour

Pictured is our maiden voyage vehicle, a vintage Ford Touring Sedan that performed like a pro from Ohio to California in the summer of '36. For the staggering sum of $25 we acquired ownership, added a touring top, and took off via Route 66. All of the passengers but me are now deceased, including mother, sister, husband, and faithful canine companion, "Pick."

Five more treks across the country via Route 66 introduced poor pale-faces to rich Indians, lecherous ranchers, transient evangelists, aging prospectors, desert heat, and no air-conditioning. Our only assets were youth and hope.

—Marjorie Adams
Lompoc, California

In 1936 Marjorie Adams and her family traveled from Ohio to California via Route 66 in this Ford Touring Sedan.

Cozy Dog

I was stationed in Old Amarillo, Texas, along 66 as a buck private. When we dropped the bomb on Japan, I was in the finance office, bored stiff. So I got to thinking that I had been in the food business before and had made a lot of donuts. Why couldn't we get a weenie and dip it in a batter and cook it up like a donut?

I had a friend who owned a bakery, so I had him fix me up a batter. We called 'em Crusty Curs. They were very popular. We put them in the PX on base and sold them at the USO in town.

After a couple of months I got discharged, and we moved out to Springfield. When my wife heard the name Crusty Cur, she said it was a horrible name for a hot dog on a stick. So she came up with the name Cozy Dog. And it stuck.

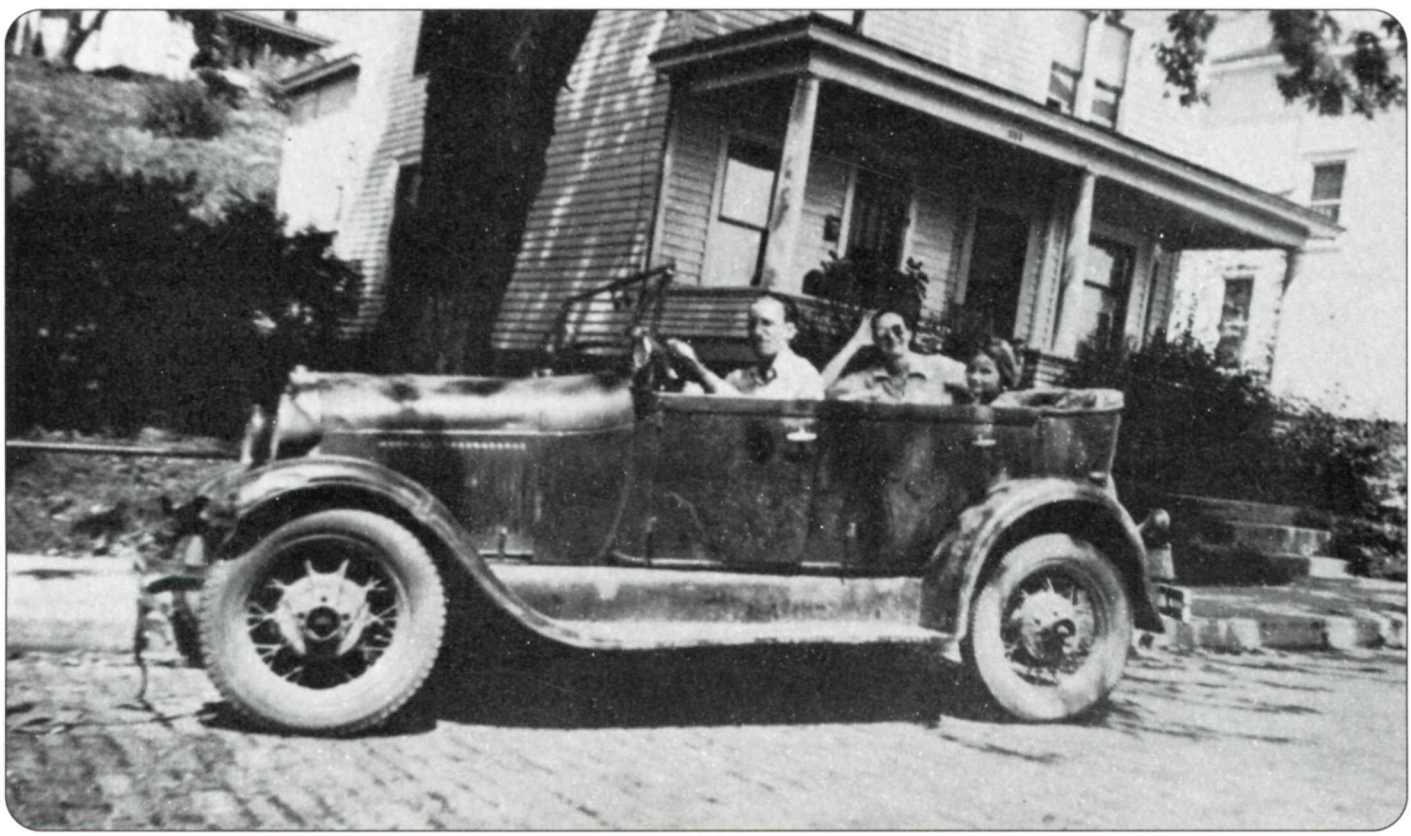
—Edwin Waldmire
Owner, Cozy Drive-In
Springfield, Illinois

The Dust Bowl

In the days of the Dust Bowl, I'd have people in my rooms for more than a month at a time until we could get some help for them to go on down the road. I ended up with a yard full of cars from people like the migrant workers. They'd have to sell their cars to go on. Or I'd give them gasoline because I didn't have enough rooms in the motel to accommodate them all. Eventually, people started thinking this place was a junkyard or a used-car lot.

They shut me off from the main highway in 1966. That's the year my daughter started college, so I started selling beer to survive. Most of the businesses pulled out, but I couldn't do that. Now I've got all these tourists and I'm loving it.

—Lucille Hamons
Owner, Hamons' Service Station and Motel
Hydro, Oklahoma



Political Cartoons

In the late '60s, I got out of college and eventually hitchhiked on Route 66 from St. Louis back to my parents' who lived on 66 in California. At the time society had gotten very polarized—it was the "them against us" kind of thing. People started getting a little freaked out if your hair was too long, for instance.

I was in the middle of that, but this trip ended up being a very positive thing. Middle-class people in station wagons—women traveling with their sons—would stop and pick you up. That wouldn't happen today. Now only real oddballs stop for you on the road.

On this trip an old guy picked me up in Arizona in a '50 Chevy. We came up behind a Navajo Freight Line truck. For years and years, Navajo was probably the biggest freight company that ran up and down Route 66. Their logo was a silhouette of what they called the blue-eyed Navajo.

The back end of the truck was very dirty—the Indian's face was looking at us from behind all the dirt. Well, someone had taken his finger and drawn a balloon from the Indian's mouth, as in cartoons. It said, "Me no like 'em Reagan."

And that was 1967.

—Terrence Moore
Photographer
Tuscon, Arizona

American Roots

Living along Main Street, as old Route 66 was known in Bloomington, Illinois, I joined the ranks of the converted and came to appreciate the roots of Americans displayed along the road. Route 66 meanders past Funks Grove, a green thicket of maple trees where generations of the Funk family have made syrup. Thousands of truckers "just passin' through" stop at the Dixie Truckers Home just long enough to post a polaroid of themselves and their rigs on the bulletin board—a montage of tattoos, corn-fed bellies, and wide grins beneath truckers' caps.

Farther along the road, the Bloomington Courthouse provided a scene for Lincoln's "lost speech," so-called because spellbound reporters, enraptured by his lyricism, forgot to take notes.

Route 66 saw the birth of the very first Steak 'n' Shake, famous for steakburgers and the slogan, "It's a meal." The Falcon Restaurant featured a $1.99 breakfast special with biscuits and gravy that stay with you all day—sometimes for two or three days.

—Marian Quinlan
NPCA
Washington, D.C.

Kiss and Don't Tell Motel

The Route 66 scenery in Missouri is the prettiest of all the states. There are still interesting things to do and see along the way.

In St. Louis, there's Ted Drewes Frozen Custard, the 66 Park-In-Theatre, and the Coral Court.

The Coral Court is an interesting place because today it's what you call a "kiss and don't tell" motel and it's also on the National Register of Historic Sites.

The Court is absolutely gorgeous—1941 streamlined modern. All of the units have self-contained garages, so it keeps the grounds looking really nice. This is also one of the reasons it makes a perfect hideaway; nobody can identify your license plate.

It would be terrible for me, though. My license plates say "HWY-66" on them, so anyone could spot me easily.

—Jim Powell
President, Missouri Rt. 66 Association
St. Louis, Missouri

Pig Hip

One day a man came and asked for a sandwich from a pig's hip, so we gave it to him. We found out later that the left hip was more tender than the right. When hogs scratch, they tend to lift their right leg, and that makes it more tough; we let our competitors have it. We have our own little slaughterhouse here, and we buy direct from the farmer.

For years no one would serve the colored people. I kept my door open to them, but it wasn't allowed legally. There was a lot of controversy. We'd have white people come and get upset when they saw the coloreds. I had a sign up that said, "We reserve the right to serve our patrons." People would come in and ask what it meant. I said it means everybody is welcome.

But America today is more crude. People slurp at their soup and coffee. I say bring back Emily Post.

I'm going on 74 and I'd like to retire, but I'm having too much fun.

—Ernie Edwards
Pig Hip Restaurant
Broadwell, Illinois

The Good Old Days

My father was in the service, and we drove Route 66 on assignments many times. I lived for the day when we could stop in those curio shops. I was constantly harassing my family to stop.

They also had those snake farms, animals, Indians. . .I still have a bear claw necklace. My father bought it for me when I was 12 years old. I've always had it sitting on top of my dresser or hanging on the wall. I never wore it; in the '50s, men didn't wear necklaces. A man could get away with wearing it these days.

Those were the days of ducktails, convertibles, and turned-up collars. Kids would drag around main street on Highway 66 in Albuquerque—not much drinking or drugs. Those were probably the good old days.

—David Couch
San Antonio, Texas

Get Your Kicks

You can't leave out Bobby Troup's song, "Get Your Kicks on Route 66," when talking about 66. When I came across the country as a boy, the song was on all the jukeboxes. I would beg my folks for a nickel to play the song. Of course, they wouldn't allow me to have the money. But if I said, "Gee, I wonder if the town we're in is in the song," I would get the nickel.

My parents were always very high on education.

—Tom Snyder
Founder, Route 66 Association
Oxnard, California

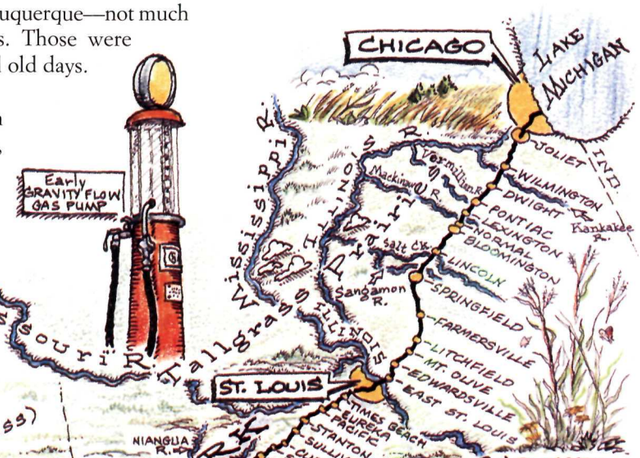


ILLUSTRATION BY BOB WALDMIRE

ACCESS

Cabin Vacations

Cottages, ranging from rustic to deluxe, are nestled throughout the park system.

By Connie Toops

FOR BACKPACKERS, planning a vacation may mean mending a sleeping bag or ordering a new set of topo maps. For those who would rather stay in more luxurious surroundings, perhaps it is time to peruse the brochure of a favorite lodge. There is, however, an option that combines wilderness and comfort—renting a cottage in a national park.

Within the national park system there are cabins nestled in scenic settings amid rugged mountains, on seacoasts, and in shady forests. A few are located near pioneer settlements, while others are themselves historic structures.

The facilities are as diverse as the surrounding scenery. "Rustic" accommodations were likely built half a century ago, during the Civilian Conservation Corps era. Some are spartan, with merely a sheltering roof, a wood stove for warmth, bunk beds, and an outdoor privy. "Standard" cabins may be from 25 to 40 years old and are usually furnished with linens and cooking utensils. A cluster of these cabins may share a bathhouse. "Deluxe" ratings indicate more recent construction, a full range of housekeeping amenities, and modern bathrooms with showers.

Prices vary from $3 per night for bare-bones facilities to $200 per night for deluxe digs. Some cabins rent for a weekly rate and are suitable for groups of four to 12 people. Because of the limited number of cabins and the popular demand for them, it is prudent to make reservations well in advance of your vacation date.

Keep in mind that these parks are more than vacation destinations. They are ecosystems which, in order to thrive, should be disturbed as little as possible. You might let park officials know that it's the naturalness of these areas, not their amenities, that attracted you.

Olympic National Park

Kalaloch lies near the southern end of the narrow coastal section of Olympic National Park in Washington. Here, crashing waves sculpt sea stacks and arches. Drift logs are strewn on the sandy beaches, where visitors surf fish and dig for clams. In the tidal zone lie pools filled with limpets, anemones, starfish, and other colorful treasures of the sea.

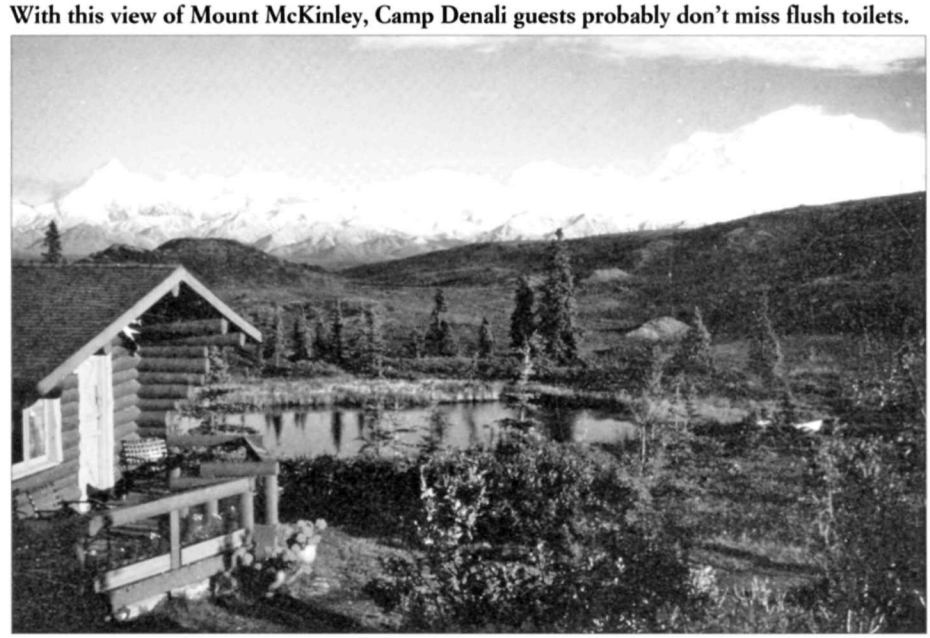
A few miles away are temperate rainforests that shelter spotted owls in the moss-hung branches of huge old Douglas fir and western hemlock trees.

At Kalaloch, the Scenic Bluff cabins overlook the ocean and are equipped with linens, a range, and a refrigerator, but no cooking utensils. They accommodate from four to nine people. Nearby, the Duplex Bluff cabins also command spectacular ocean views. These cabins have no kitchens but are heated by Franklin fireplaces. Rates begin at $71 for cabins that sleep as many as four people.

The resort also includes 19 deluxe log cabins that can accommodate up to four people each. They are outfitted with modern bathrooms, kitchenettes, and Franklin fireplaces, but no cooking utensils. Rates start at $76 per night.

For information, contact Kalaloch Lodge, HC Route 80, Box 1100, Forks, WA 98331; (206) 962-2271.

With this view of Mount McKinley, Camp Denali guests probably don't miss flush toilets.



CONNIE TOOPS

Denali National Park

The tidy cabins of Camp Denali in Alaska rest in rustic elegance on a tundra ridge overlooking Wonder Lake. The resort's owners, Wally and Jerryne Cole, admit that "luxury wilderness camping" is not for everyone. At Camp Denali, there is no pool, no bar, no TV, no central heating, and no flush toilet. Each cabin does, however, command a spectacular view of North America's highest mountain, Mount McKinley, only 27 air miles away in the heart of Denali National Park and Preserve.

Since the Coles cater to guests interested in natural history, the Camp Denali experience actually begins 90 miles away at the park entrance. Interpreter guides pick up their guests at the train station and treat them to a half-day tour of Denali National Park on the way to the camp. They stop to photograph grizzly bears, Dall sheep, caribou, moose, and other wildlife along the way. At the resort, guests may participate in guided hikes, river rafting, canoeing, cycling, plane tours, gold panning, fishing, or quiet relaxation.

Rates begin at $675 per adult, double occupancy, for a three-night, four-day stay, which includes use of a cabin, all recreational equipment, meals, and ground transportation. The numbers of guests at Camp Denali and nearby Northface Lodge are limited to 30 to 40 per night, ensuring that nature dominates the scene.

Contact Camp Denali in summer at Box 67, Denali National Park, AK (907) 683-2290. In winter, write to Box 216, Cornish, NH 03746; (603) 675-2248.

Shenandoah National Park

Many people enjoy the scenic beauty of the Blue Ridge Mountains from 105-mile Skyline Drive, which bisects Shenandoah National Park in Virginia. Scenic overlooks frame views of the lush Shenandoah Valley and of wooded hillsides where white-tailed deer, black bears, and wild turkeys roam. Hiking trails lead to mountaintops, waterfalls, and forests rich in wildflowers.

Rustic cabins, some of which were settlers' homes, are located throughout Shenandoah. Six cabins operated by the Potomac Appalachian Trail Club are reached by hiking from one-fifth to four miles along back-country trails. These cabins have fireplaces or wood stoves, privies, and minimal housekeeping equipment. They sleep eight to 12 people. The cabins rent for $3 per person per night on weekdays and $14 per person per night on weekends, and are in high demand in the spring and fall.

There are also cabins along Skyline Drive at Lewis Mountain, Big Meadows, and historic Skyland, where the area's first resort opened in 1894. Modern plumbing, linens, and grills are furnished, but guests provide cooking utensils and coolers. Mid-week rates for cabins that sleep two begin at $44.

For information on Potomac Appalachian Trail Club cabins, contact the Club at 1718 N Street, NW, Washington, DC 20036; (202) 638-5307.

For information on Skyland, Big Meadows, and Lewis Mountain cabins, contact ARA Sky-Line Company, Box 727, Luray, VA 22835; (703) 743-5108.

TW SERVICES

Pine trees and waterfalls provide the setting for "Frontier" cabins at Yellowstone.

Yellowstone National Park

In the early days of the park, trains and stagecoaches carried tourists to the Yellowstone country, where they marveled at spouting geysers, steaming fumaroles, and bubbling mud pots. On the hillsides surrounding the hydrothermal features browsed elk, deer, bison, moose, and bighorn sheep.

Some old-time visitors camped, but many stayed at the grand lodges in the park. Beginning in the 1920s, cabins were built at the park's Roosevelt, Lake, Old Faithful, and Mammoth areas. They proved to be extremely popular. At present, 1,200 cabins throughout the park are available to summer visitors, and 34 cabins at Old Faithful remain open in the winter.

Among the newest of Yellowstone's cabins are the deluxe "Western" accommodations at Lake, Old Faithful, and Canyon. They have stylish furnishings, modern plumbing, and sleep up to five people. Rates begin at $66 plus tax per night, double occupancy.

At Canyon, where the mighty Yellowstone River cascades over two thundering waterfalls, carving a steep, spectacular valley, deluxe cabins are supplemented by "Frontier" cottages. Modern bathrooms and all linens are included in the base rate of $41 plus tax per night, double occupancy, but there are no cooking facilities.

At the opposite end of the scale, the "Roughrider" cabins at Roosevelt lend authenticity to the Old West atmosphere in this section of the park. Their only amenities are a wood stove, simple beds, and a small table with chairs. The cabins do not have running water, but communal bathrooms are located

NATIONAL PARK CONCESSIONS

Guests at Mammoth Cave cottages find the world above ground is also worth exploring.

nearby. The no-frills rate is $17 plus tax per night for one to four occupants.

For information, contact TW Recreational Services, Yellowstone National Park, WY 82190; (307) 344-7311.

Mammoth Cave National Park

Mammoth Cave in Kentucky is the centerpiece of an extraordinary underground world. Within the more than 300 miles of known passages dwell blind fish, colorless cave crayfish, unusual shrimp, spiders, and beetles specially adapted to a world of darkness.

In addition to the cave's remarkable length, it features towering vertical shafts and delicate mineral formations. The above-ground terrain is a mix of oak-hickory forests dappled by irregular limestone and meandering streams.

Guest cabins are open from spring through autumn. They include modern furnishings and bathroom facilities. Most are located in a wooded glade near the park's picnic area, while the rest are near Mammoth Dome sinkhole. Rates begin at $23 per person per night.

For further information, contact National Park Concessions, Mammoth Cave, KY 42259; (502) 773-2191.

Badlands National Park

Although French-Canadian trappers referred to the region as *les mauvaises terres à traverser,* bad lands to travel across, Sioux Indian culture flourished on the rolling South Dakota prairie, now the site of Badlands National Park. The park is a mosaic of buttes, spires, knobs, canyons, and gullies etched by the relentless forces of wind and water. One-quarter of the park is wilderness, where golden eagles soar over ridges lined with prairie wildflowers.

Guests at Cedar Pass cabins can scout for large mammals including bison, pronghorn, mule deer, and bighorn sheep, explore fossil beds formed some 37 million years ago during the Oligocene Epoch, or marvel at the multitudes of stars in the midnight sky. The park encompasses part of Pine Ridge Reservation, and Cedar Pass Lodge is owned by the Oglala Sioux tribe. Native American handcrafts abound in the gift shop and authentic items on the dinner menu include Indian fry bread and buffalo steaks. The 24 rustic pine cabins are heated and air conditioned, have showers and baths, and sleep four to six people. The base rate is $32 per night, double occupancy. The cabins are available from May to October.

For information and exact seasonal dates, contact Cedar Pass Lodge, Box 5, Interior, SD 57750; (605) 433-5460.

Virgin Islands National Park

St. John is the smallest and most pristine of the three Caribbean isles that comprise the U. S. Virgin Islands. In 1956 more than half its land mass and much of its shoreline were set aside as parkland. Today visitors can dive or snorkel through magnificent coral gardens and explore mountain trails to Indian petroglyphs and sugar mill ruins.

Since St. John averages 79° F, with little variation between summer and winter, open-air accommodations are popular. Maho Bay Camp offers canvas- and screen-covered cottages that sleep two to four people. The 16-by-16-foot abodes are furnished with beds and linens, campstoves, cooking utensils, and fans. All accommodations at this unusual resort are built on elevated wooden platforms, connected by raised walkways, so that vegetation beneath is undisturbed. Winter rates are $75 per night, double occupancy. In summer cabins rent for $45. Reservations are booked as much as a year in advance.

Cinnamon Bay Campground provides 10-by-14-foot canvas-sided cabins and 15-by-15-foot cottages that have two concrete and two screened walls. Both come with campstoves, ice chests, cooking utensils, and linens. Rates vary from $71 per day, double occupancy, for cottages and $56 per day for tents in the winter to $42 for cottages and $28 for tents in the off-season. Cinnamon Bay also includes a commissary and cafeteria. Both camps arrange dive and snorkel trips, windsurfing, and sailing.

Contact Maho Bay Camps at Box 310, Cruz Bay, St. John, VI 00830; (800) 392-9004. Contact Cinnamon Bay Campground at Box 720, Cruz Bay, St. John, VI 00830; (800) 223-7637.

Connie Toops is a photographer and the author of many books and articles on national parks and natural history. Her latest book, The Enchanting Owl, *was recently published by Voyageur Press.*

March in May

It's not too late to sign up for NPCA's second annual March for Parks, a nationwide walk for the environment. Plan to put on your walking shoes and join in the fun on May 4–5.

1991 marks the first year of a combined effort between March for Parks and The National Celebration of the Outdoors (NCO), the largest coalition ever assembled to protect America's parklands and open spaces. You can participate in March for Parks–The Celebration of the Outdoors by holding a march in your community or by organizing tree plantings and other educational activities during the week of May 4–11.

March for Parks funds will be used to support NPCA's efforts to protect America's parks and open spaces from threats including shrinking wildlife habitat, pollution, and development in and around park borders. One-half of the proceeds raised also will be returned to the local group to help pay for environmental projects.

If you are organizing a march in your community, you may want to begin planning for the event. Here are a few suggestions:

•Identify local environmental projects to be funded.

•Select date (May 4 or 5) and time for the event.

•Consider possible locations for your event. NPCA recommends that the walk route begin and end at the same place. Try to pick a scenic walk that is between five to ten miles.

•Begin recruiting volunteers to help you organize the event.

To receive a March Partner Kit and for further march information, please call 1-800-225-WALK.

Conservation Credit

NPCA's new affinity MasterCard is an overwhelming success with our members. The credit card, offered through the Bank of Baltimore, allows members to get involved with the preservation and protection of America's national parks each time they use the card.

By choosing one of three special MasterCard designs, members can decide what area they want proceeds to benefit—wildlife protection, cultural heritage preservation, or environmental education. According to the Bank of Baltimore, the wildlife protection card, featuring two bears, is the most popular with card users.

With a low annual percentage rate of 16.9 percent and a credit line of up to $25,000, the card offers an easy way for members to protect our parks.

For more information about the NPCA credit card, please call the Bank of Baltimore's toll-free number, 1-800-252-9002.

K Mart Gift

We would like to thank K Mart Corporation for their generous investment toward the establishment of a NPCA Midwest regional office. With the founding of this office, NPCA will soon have six regional offices nationwide.

The work of regional directors in the field is important to NPCA's effectiveness as a national lobbying organization. To contact your regional director with a concern or question, please write or call: **Pacific Southwest:** Russ Butcher, Box 67, Cottonwood, AZ 86326. (602) 634-5758. **Pacific Northwest:** Dale Crane, 618 South 223 St., Des Moines, WA 98198. (206) 824-8808. **Alaska:** Mary Grisco, P.O. Box 202045, Anchorage, AK 99520. (907) 258-9154. **Southeast:** Ney Landrum, 126 Mill Branch Rd., Tallahassee, FL 32312. (904) 893-4959. **Rocky Mountain:** Terri Martin, P.O. Box 1563, Salt Lake City, UT 84110. (801) 532-4796. **New York Parks and Conservation Association:** Richard White-Smith, 35 Maiden Lane, Box 309, Albany, NY 11201. (518) 434-1583.

The Mather Society

The Mather Society involves dedicated members and friends of NPCA who, by their annual general contribution of $1,000 or more, continue to ensure the thoughtful stewardship of our national park system through their leadership and activism. We gratefully acknowledge the following individuals whose generous support enables us to continue the fine tradition of Stephen Tyng Mather, the first director of the National Park Service, and one of the founders of NPCA.

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Planning to travel in the U.S. this spring and summer? Let NPCA's park publications be your guide!

Books and Park Guides
The Complete Guide to America's National Parks, W115, $12.95 ($11.65)
The National Seashores: The Complete Guide to America's Scenic Coastal Parks, W102, $11.95 (10.75)
Thirteen National Parks with Room to Roam, W113, $10.95 ($9.85)
Glacier Country, C163, $16.95 ($15.25)
Many Storied Mountains: Official National Park Handbook of Glacier National Park, C123, $11.95 ($10.75)
Grand Teton: Official National Park Handbook, F123, $7.95 (7.15)
Yosemite: Official National Park Handbook, F123, $7.95 ($7.15)

Hiking Guides
A Guide to Hiking the Inner Canyon, B118, $5.95 ($5.15)
Grand Canyon Trail Guides (set of 4 booklets), B123, $12.95 ($11.70)
Along the Rim: A Road Guide to the South Rim, B125, $5.95 (5.15)
Bryce Canyon Auto & Hiking Guide, C104, $5.95 ($5.15)
Hiker's Guide to Glacier National Park, C122, $11.95 ($10.75)
Roads & Trails of Waterton-Glacier International Peace Park, C124, $11.95 ($10.75)
Teton Trails: A Guide to the Trails of Grand Teton National Park, C132, $4.95 ($4.45)
Hiking the Yellowstone Backcountry, C166, $11.95 ($10.75)
Yellowstone Trails, C176, $11.95 ($10.75)
Exploring the Backcountry of Zion National Park Off-Trail Routes, C164, $10.95 ($9.85)
Hiking in Zion: The Trails, C165, $6.95 ($6.25)

Topographical Maps
Glacier/Waterton Lakes, Q108, $8.95 ($7.95)
Grand Canyon, Q110, $8.95 ($7.95)
Grand Teton, Q111, $8.95 ($7.95)
Yellowstone, Q119, $8.95 ($7.95)
Yosemite, Q120, $8.95 ($7.95)
Zion, Q121, $8.95 ($7.95)

Video Tapes (VHS only)
Camping: A Video Guide to Our National Parks:
Volume 1, The Eastern States, P150, $32.95 ($29.65), 70 min.
Volume 2, The Central States, P151, $32.95 ($29.65), 80 min.
Volume 3, The Western States, P152, $32.95 ($29.65), 75 min.
BONUS: Set of three, P153, $88.95 ($80.05)
Grand Teton National Park, P132, $26.95 ($24.25), 32 min.
Touring America's National Parks, P108, $30.95 ($27.85), 65 min.
Touring Hawaii, P146, $30.95 ($27.85), 60 min.
Washington Parks and Forests, P139, $30.95 ($27.85), 65 min.
Yellowstone National Park, P156, $30.95 ($27.85), 60 min.
Grand Canyon National Park, P155, $36.95 ($33.35), 90 min.
Yosemite National Park, P154, $36.95 ($33.35), 90 min.

NPCA Gift Items:

NPCA Popover Pouch Jacket (royal blue; adult S, M, L, XL), N102, $26.95 ($24.25)
NPCA North Coast Indian Art Collage Tote Bag (black or natural; size: 19" x 17" x 5"), N137, $18.95 ($17.05)
NPCA Wildlife Collection T-shirt (adult S, M. L, XL)
Bald eagle (navy), N138, $16.95 ($15.25)
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Loon (white), N145, $16.95 ($15.25)

Member prices denoted in parentheses

Prices are subject to change without notice

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Order Number	Quantity	Title/Description	Size/Color	Price	Total

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Bravo 20

UNDER THE BLAZING SUN, photographer Richard Misrach picked his way past shrapnel, craters, and bombs half-buried in the sand. Though it sounds like a photo assignment for a war, Misrach was exploring a stretch of public land in the Nevada desert known as Bravo 20. After spending some time in the area, Misrach knew there was a book there. The result is *Bravo 20: The Bombing of the American West*, a combination photo essay, history of the illegal bombing of public land, and proposal for reclaiming the land for a national park.

Bravo 20 is a strange story of Navy pilots buzzing schoolbuses full of children, mysteriously charred cows, bombed historic vestiges, and fuel dumping in wildlife refuges. It is also the story of citizens fighting military expansionism and environmental abuse in the West. As one local resident asked the Navy: "If you are destroying what you're trying to protect, what have you accomplished?"

For more than 30 years, the Navy illegally used this 64-square-mile stretch of high desert, which lies right next to two wilderness refuges and within 10 miles of a farming community, for bombing practice. Lone Rock, the only relief on the desert floor for miles and an ideal target, has shrunk 100 feet from constant aerial assault.

Misrach's dramatic photos capture the classic beauty of the area, long sacred to the Northern Paiute Indians who called it the "Source of Creation." But Bravo 20's peaceful landscape is overshadowed by the human-made devastation visible everywhere. Thousands of bomb craters pock the desert floor, some oozing blood-red or emerald green water. Others are decorated with the tangled remains of blown-up vehicles and shrapnel. One of the most disturbing photos shows the charred insides of a bombed yellow school bus.

Bravo 20 concludes with Misrach's intriguing proposal to turn the land into America's first environmental memorial—Bravo 20 National Park. The architectural drawings of the proposed park include such tantalizing sites as Devastation Drive, Boardwalk of the Bombs, and a museum styled after a typical military ammunition bunker, all of which can be reached via tour buses (decommissioned personnel carriers).

Beyond protecting the land from further destruction, the park would have an educational mission. Misrach envisions an annual conference between representatives from Native American tribes, citizen groups, government officials, and military personnel to address issues of cohabitation with the military.

Though the designation of a park site devoted to the military's peacetime abuses of land and people has little chance of becoming reality, a permanent reminder of our failing stewardship of the earth is overdue.

Bravo 20, by Richard Misrach with Myriam W. Misrach, Johns Hopkins Univ. Press, Baltimore, MD; $25.95.

Bomb craters oozing liquid and destroyed vehicles litter the Nevada desert floor.

RICHARD MISRACH

Get Your Kicks

U. S. Route 66 is in vogue these days. Known as "The Mother Road" to thousands of travelers, this national highway now is under study by the National Park Service for its historic importance and contribution to American culture. Amidst the deluge of Route 66 music videos, memorabilia, and travelogues are two excellent books for lovers of neon-lit motels, greasy cheeseburgers, mandolin muzak, and plaid flannel shirts — *Route 66: The Mother Road* by Michael Wallis and *The Route 66 Traveler's Guide and Roadside Companion* by Tom Snyder.

Readers interested in the history of Route 66 will find Wallis's book to be the most extensive written journey down "America's Main Street." Wallis, who was born near Route 66 in St. Louis, spent more than 17 years conducting research for *The Mother Road*. The culmination of his monumental effort is

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a "love letter to the highway" loaded with nostalgic photos, illustrations, and facts. "A thread looping together a giant patchwork of Americana, this fabled road represents much more than just another American highway," writes Wallis. "Route 66 means motion and excitement. It's the mythology of the open road."

The eight states Route 66 passes through are highlighted in separate chapters, creating a convenient map to trace the story of Route 66. Particularly interesting are the *Route 66 Portraits* interspersed throughout the text that provide important oral histories of notable 66 individuals such as songwriter Bobby Troup who wrote "Get Your Kicks on 66" and Lyman Riley, the self-proclaimed inventor of the bumper sticker. The stories of these and other 66ers, along with more than 250 photos, give life to *The Mother Road.*

While Wallis's slick book is something you might want to leave at home on the coffee table, Snyder's *Route 66 Traveler's Guide* is a slim, handy, town-by-town guidebook and a definite "must" for anyone interested in touring 66. In fact, Snyder hopes you will leave his book in your glove compartment and writes that it should be "well-thumbed, brown-edged and stained with juices from your favorite Route 66 cafes and barbecue joints."

Vintage maps are provided so travelers can plan their expected road trip, and there are no pictures because Snyder wants you to focus attention on the scenery through the windshield. *The Traveler's Guide* is instructive, and it is informative: be sure to see the neon cross dedicated to an Italian WWII victim at a church in Hamel, Illinois, and look out for the junk-food-craving wild burros when picnicking in the Arizona desert! Also handy is a detailed index of Route 66 sights and comprehensive list of roadside resources for those seeking more information.

Route 66, The Mother Road by Michael Wallis; hardback; $29.95. *The Route 66 Traveler's Guide and Roadside Companion* by Tom Snyder; softcover; $8.95. Both books are published by St. Martin's Press.

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Alaska's National Parks

AFTER NINE YEARS OF LEGISLATIVE BATTLES AND MIDNIGHT compromises, The Alaska National Interest Lands Conservation Act (ANILCA) was signed into law on December 2, 1980. The Louisiana Purchase of the American conservation movement, it more than doubled the acreage of the National Park and National Wildlife Refuge systems. Born that day were seven national parks, ten national preserves, four national monuments, nine national wildlife refuges, and twenty-five wild and scenic rivers. Enlarged were several preexisting areas, including Mount McKinley National Park, renamed Denali National Park and Preserve.

The roll call included Alaska's finest: the temperate rain forests of Admiralty Island and Misty Fiords (administered by the U.S. Forest Service); the human cultures and sweeping lands in Bering Land Bridge, Cape Krusenstern, Kobuk Valley, and Noatak; the shining rivers and imposing peaks of Gates of the Arctic; the peregrine falcons and fire ecology in Yukon Charley; the azure lakes and sockeye salmon in Katmai and Lake Clark; the "world inside a mountain" in Aniakchak; the glacial legacies in Wrangell-Saint Elias, Kenai Fjords, and Glacier Bay; the wildlife in Denali. To complete the roll call were the preexisting historical parks of Sitka and Klondike Gold Rush. Our nation, still young and exuberant, had been given a second opportunity to save her wilderness heritage on a grand scale, and she had taken it.

Above: misty Yukon River. Below: brown bear and cubs at Brooks Falls. Opposite: Lamplugh Glacier.

Excerpted from Alaska's National Parks, *photos by Fred Hirschmann, text by Kim Heacox; Graphic Arts Center Publishing Co. Available from NPCA Park Education Center, 1015 31st St., N.W., Washington, DC 20007; $36.95 + $3.50 shipping.*

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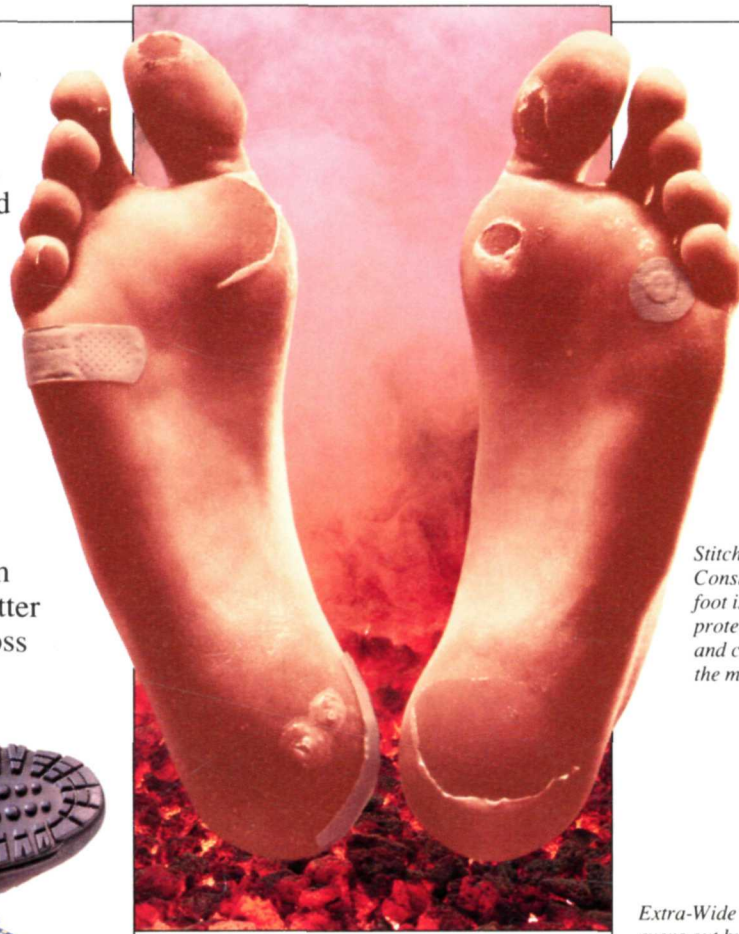

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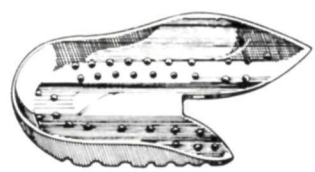

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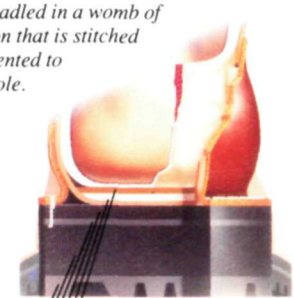

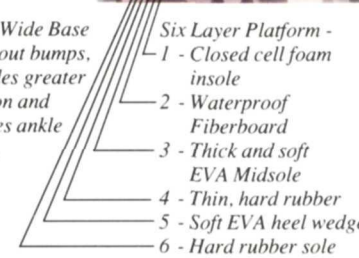

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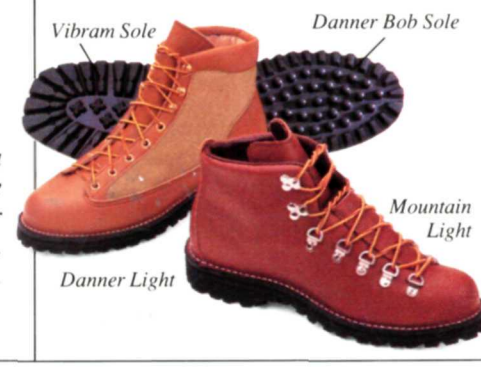

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