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NATIONAL GEOGRAPHIC

A SPECIAL ISSUE
DEVOTED TO
THE BEST OF THE LAND

Our National Parks

INCLUDING
A VISITORS'
GUIDE TO ALL
320 PARK SITES

OFFICIAL JOURNAL OF THE NATIONAL GEOGRAPHIC SOCIETY WASHINGTON, D.C.

NATIONAL GEOGRAPHIC

THE NATIONAL GEOGRAPHIC MAGAZINE VOL. 156, NO. 1

July 1979

OUR NATIONAL PARKS
Photographs by David Alan Harvey

COVER: *Meltwater from heavy snows surges over Yosemite's Bridalveil Fall. By David Alan Harvey.*

THE BEST OF OUR LAND

IN APRIL of 1916, NATIONAL GEOGRAPHIC published an issue titled "The Land of the Best." It was a milestone in the history of the magazine.

Implicit in that issue was the idea that citizens of the United States could, and should, draw spiritual sustenance from the gifts with which nature had so generously endowed them. Europe was at that time darkened by one of the most terrible wars of history. Here was a call to consider our own history, which represented a fresh start for so many millions. The American Revolution had borne good fruit; a driving, creative spirit had expanded the horizon westward, and immigrants crowded eastern ports.

"In that architecture," the Editor wrote, "which is voiced in the glorious temples of the sequoia grove and in the castles of the Grand Canyon, in that art which is mirrored in American lakes, which is painted in geyser basins and frescoed upon the side walls of the mightiest canyons, there is a majesty and an appeal that the mere handiwork of man, splendid though it may be, can never rival.

"As playgrounds for recreation and instruction our national parks are without rivals on any continent," he wrote. At that time Congress was considering the creation of a special agency to run the park system, and the appearance of that NATIONAL GEOGRAPHIC provided a rich visual aid in evaluating the country's magnificent natural endowment.

In the years since, the National Park Service has become one of the great success stories of our nation.

Now we again devote an entire issue to our parks, and several reasons impel us. With the recent addition of tens of millions of acres in Alaska, the system has grown more in a single bound than at any time since its inception. The service has also ventured into bold new programs, including urban parks, taking it far afield from the scenic environs of its formative years. Parks have again acquired a high priority among the American people after a period of being overshadowed by other concerns. Finally, this issue continues and culminates an inventory of our natural and scenic treasures that began in 1974 with articles on the national wilderness system and has included wild and scenic rivers and wildlife refuges. No other publication has provided its readers with so complete a description of all the major systems.

The past six decades have taught us the hard-earned lesson that natural resources are perishable, and often irreplaceable once lost. We have become aware of the price paid for national growth—not only native populations swept aside and urban ills that beset an industrial society, but also the loss of priceless wilderness and natural beauty.

The parks speak to each generation in their own way, but today, as never before, there is a compelling validity to their message. Though we are less chauvinistic than those of an earlier time, I think we appreciate more the magnificence of a preserved wilderness, the sad destiny that led to Appomattox, the need for natural beauty and historic patrimony to help us face the future with confidence.

Gilbert M. Grosvenor

Masterworks of the wild – a portfolio from our national parks

BUTTRESSES *and battlements of a stone fortress in Bryce Canyon National Park, Utah (right), were carved by water. (For descriptions of the next five photographs, keep this flap folded out.)*

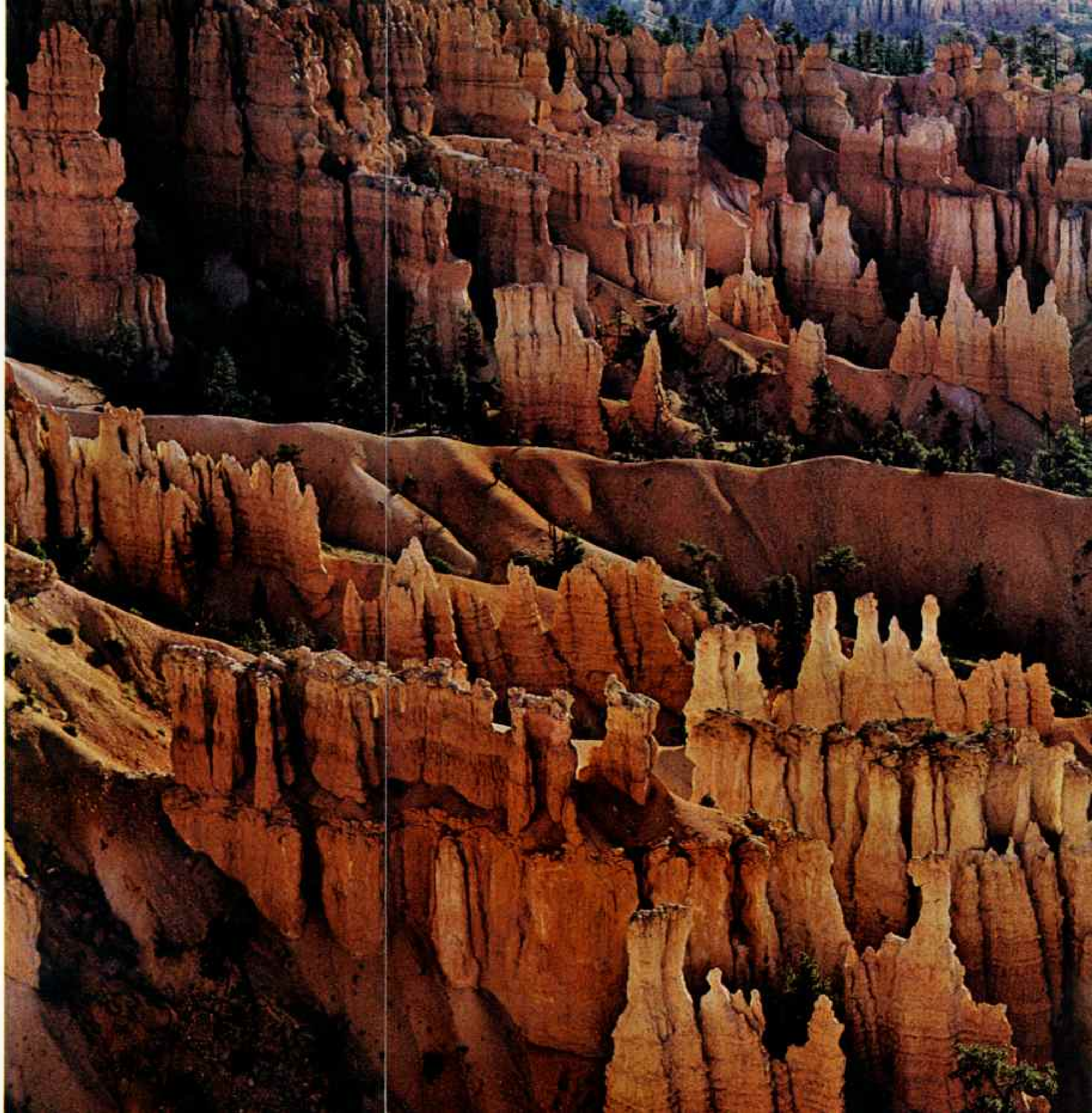
AUTUMN'S PALETTE *transforms sumac trees into blazing scarlet and orange in Great Smoky Mountains National Park, Tennessee and North Carolina.*

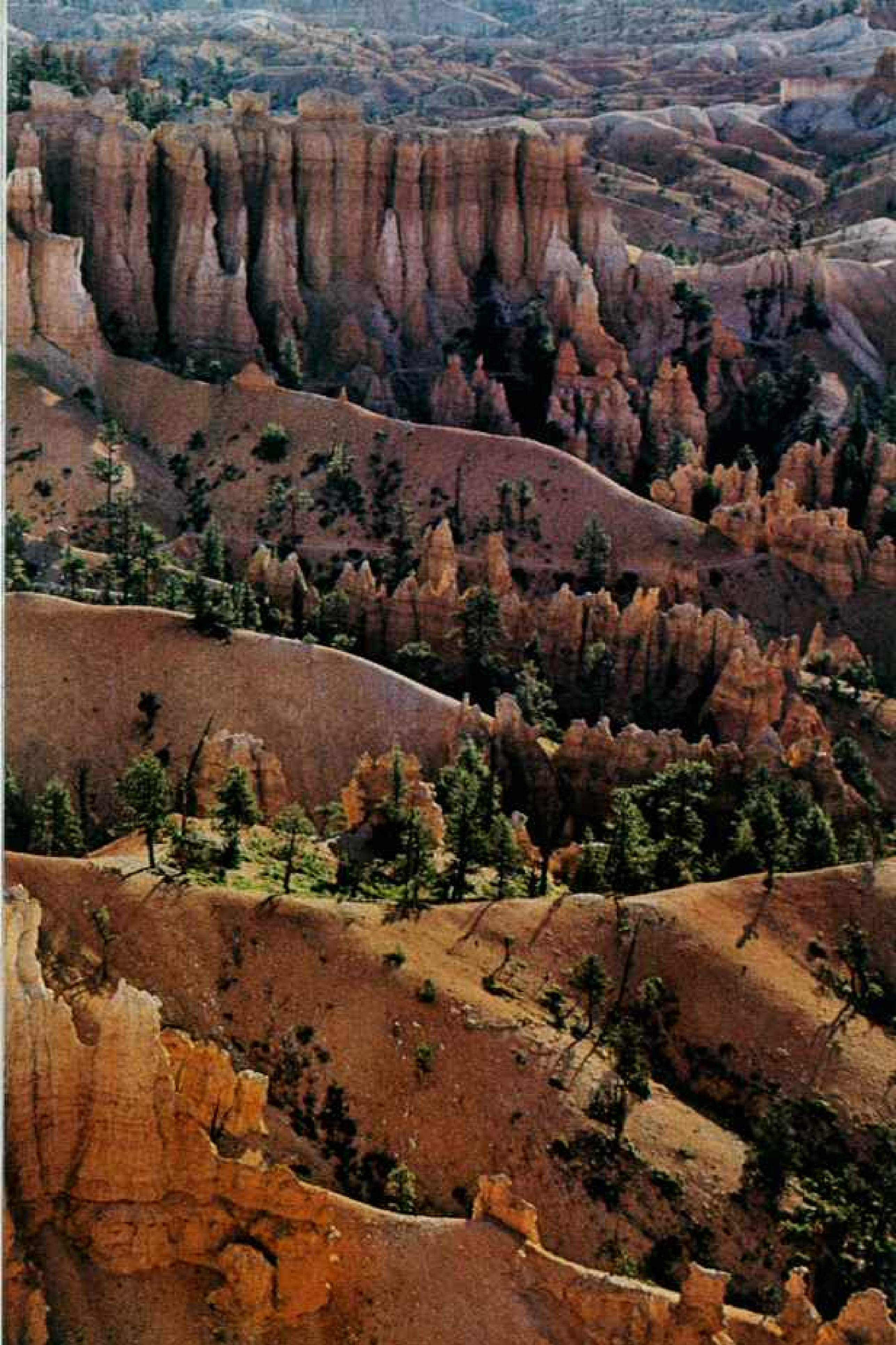
ON LITHE WINGS, *a roseate spoonbill rises from a lagoon in Everglades National Park, Florida.*

ELK MIGRATE *to an ancient refuge on the flatlands of Jackson Hole, Wyoming, when deep snow and foul weather invade the high country of Yellowstone and Grand Teton National Parks.*

FRONT YARD *of San Francisco, Golden Gate National Recreation Area offers quick access to beaches, forests, and rocky headlands. Surfers climb aboard beneath the Golden Gate Bridge.*

GIANTS OF THE EARTH, *the tall trees of Redwood National Park, California, dwarf a visitor.*

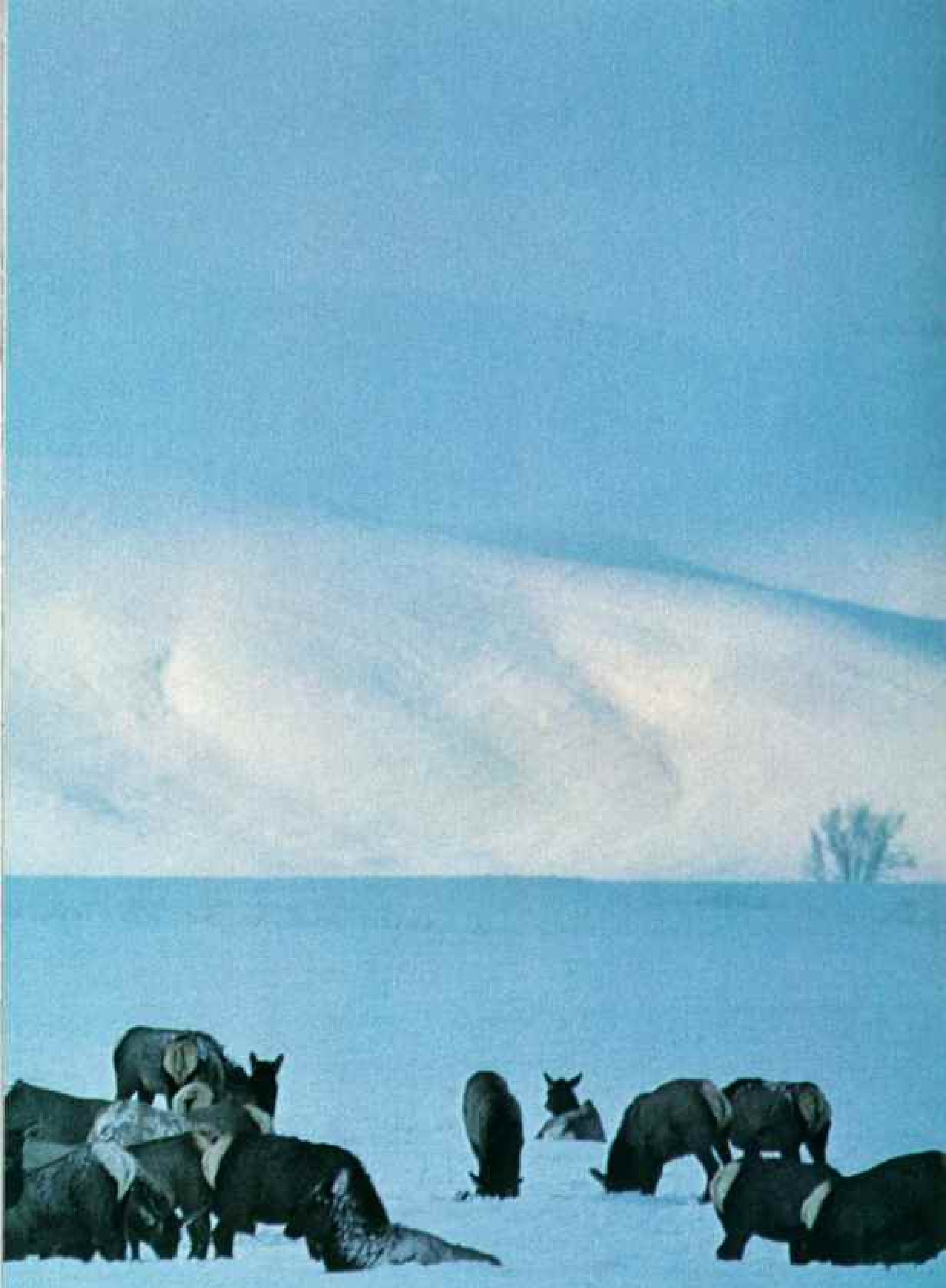


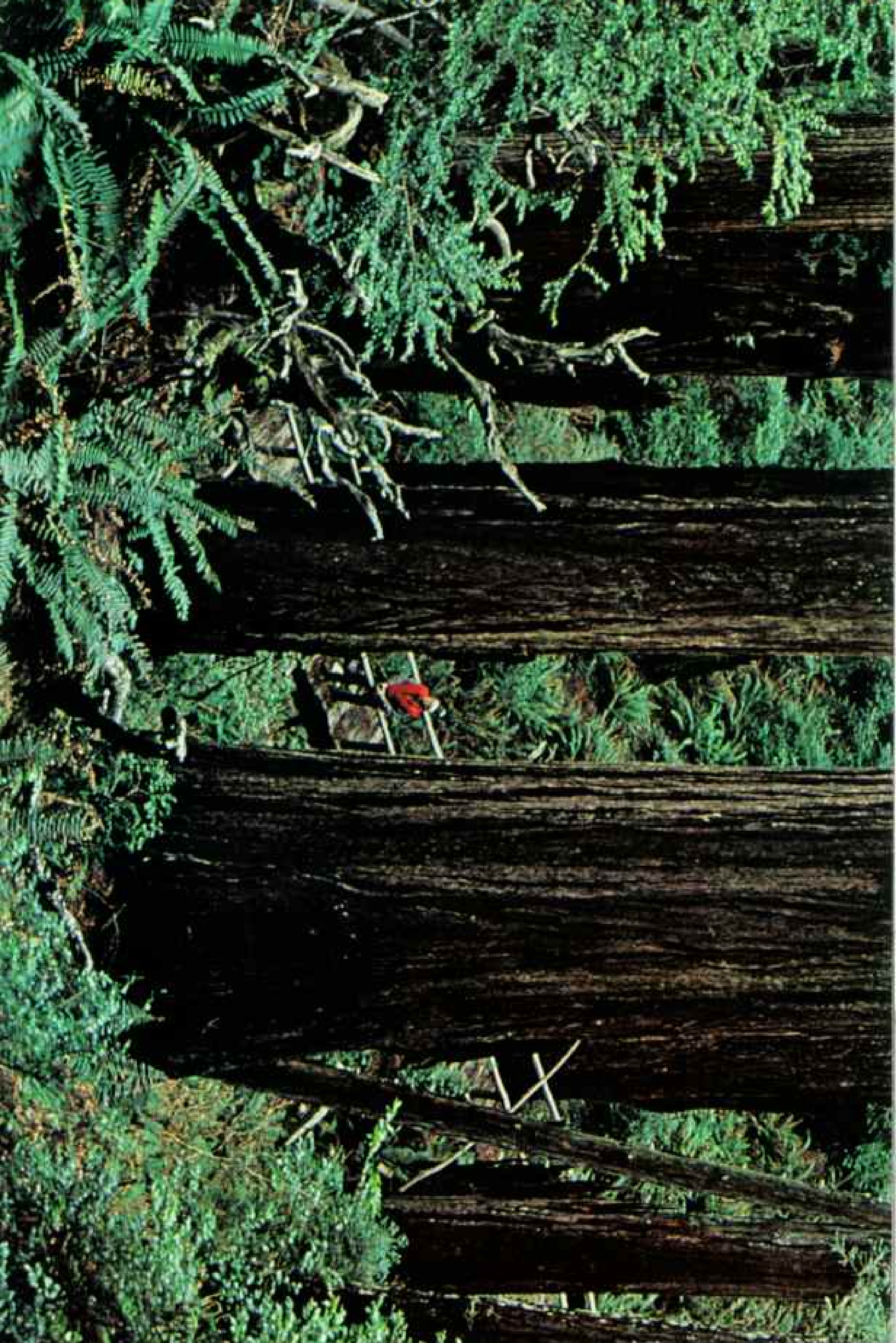


Photographs in this special issue, unless otherwise credited,

By DAVID ALAN HARVEY

NATIONAL GEOGRAPHIC PHOTOGRAPHER





A Long History

By MELVILLE BELL GROSVENOR

U.S. DEPARTMENT OF THE INTERIOR

One of America's earliest national parks, *Yosemite shelters from the logger's ax the towering sequoias that conservationist John Muir called "kings of their race." In 1903 President Theodore Roosevelt, standing in a stage* ***(above)****, asked Muir to lead this group of officials. The Wawona Tunnel Tree, carved out in 1881 to attract visitors, withstood 2,200 winters before falling to a storm in 1969. Roosevelt enlarged Yosemite to include its famous valley and established five new parks, 18 monuments, and 148 million acres of forest reserves.*

# of New Beginnings

EDITOR EMERITUS, CHAIRMAN OF THE BOARD EMERITUS, NATIONAL GEOGRAPHIC SOCIETY

SINCE THE DAYS of Sir Francis Drake, the coasts near San Francisco have witnessed some vivid history—forty-niners disembarking to seek gold, sailors celebrating on the Barbary Coast, convicts headed for Alcatraz, naval flotillas off to war, and in the great redwood forests nearby, men I remember well gathering to discuss how best to save them.

These men, and others like them, set in motion the beginnings of our National Park Service. The major emphasis then was on preserving scenic wonders. Now there's something new.

At San Francisco's Hyde Street Pier workers holystone the deck of a low wagon-shaped sailing ship. They are volunteers, donating labor to restore the 19th-century hay scow *Alma*. Visitors arrive by cable car to see a three-masted lumber schooner, a paddle-wheel ferryboat, and the nearby square-rigged sailing ship *Balclutha*, which once beat her way around Cape Horn.

These vessels, all part of the largest fleet of historic ships still afloat, surprisingly now belong to the National Park Service. And, even more surprisingly, so does Alcatraz, once famed as the Rock when it was home for some of our most notorious criminals. Now it's a major attraction of the Golden Gate National Recreation Area.

Recently I looked over the San Francisco waterfront to see just how well our park rangers move between the tall trees and the tall ships. I was sampling park trends for this special issue of the GEOGRAPHIC, one dedicated entirely to an up-to-date look at our national parks. And I learned some things about our new urban parks: They are fun, instructive—and often puzzling.

On the other side of the continent, in New York's Gateway National Recreation Area, I went to the beach by subway. There, in Jacob Riis Park, I talked with a ranger who had grown up in Harlem. A street-wise naturalist, he explained to me the way visitors, as many as 50,000 daily, sort themselves out by custom: "Each group has a bay of its own—family parties, oldsters, Hispanics, blacks, gays, and nudists. We don't classify the beaches. Visitors go to the places where they feel comfortable."

How well does this system work? An article beginning on page 86 gives more details. Naturally, 1979 folkways bother some old-timers of the National Park Service.

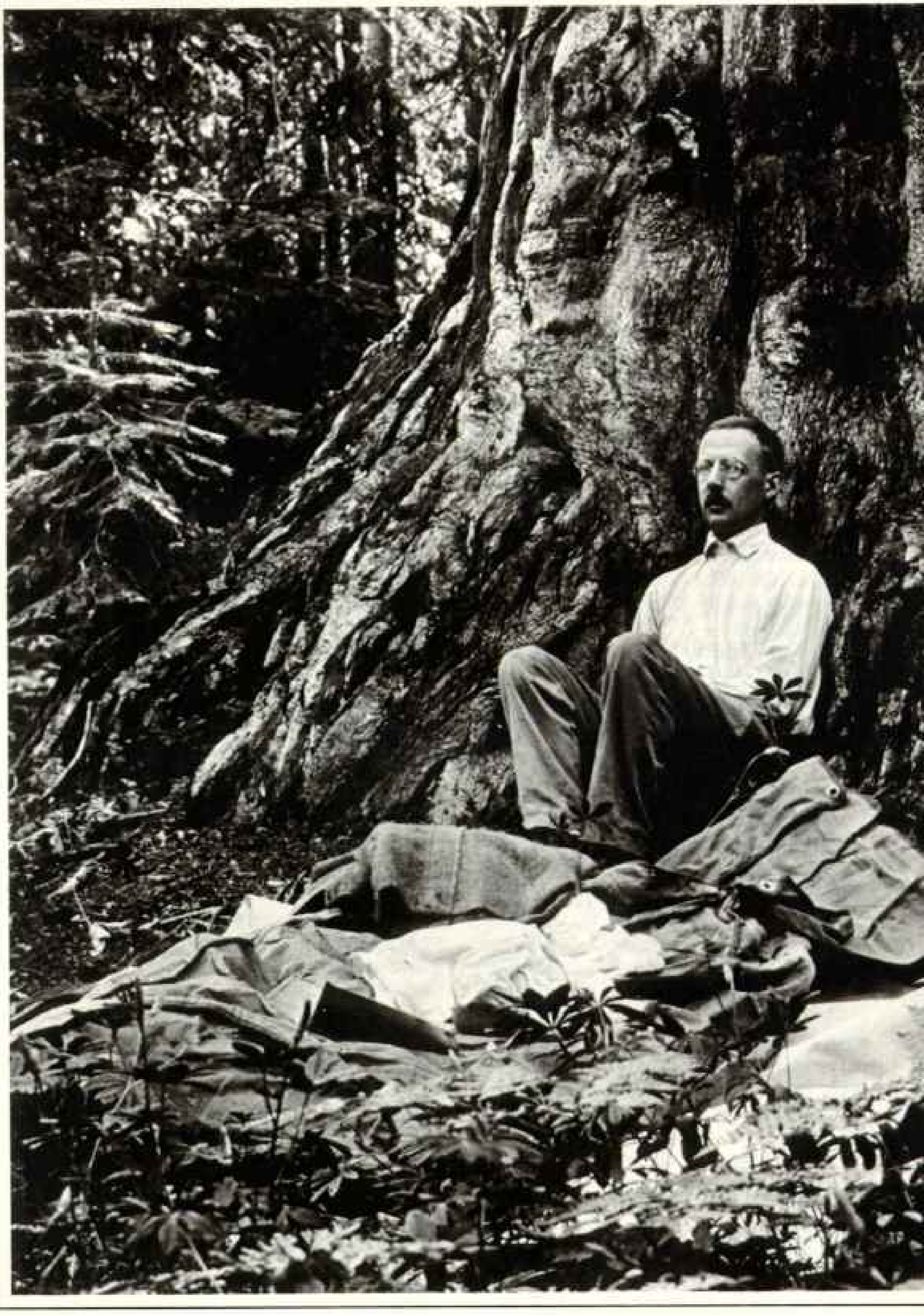
"Urban parks may spread our trained people too thin," one former superintendent told me. His caution is understandable: Golden Gate now employs 325 people—more than twice the number needed for the vast park acreage in Alaska that President Jimmy Carter set aside last year. Many urban rangers are recruited locally, of course, and have a special feeling for urban mores.

Robert Paul Jordan takes the measure of these dramatic additions to our park system on some of the following pages. Whatever the problems, a picture on pages 88-9 shows all of us what our urban parks can mean: A man confined all his life to a wheelchair has his first splash in the ocean.

Protecting the Best in America

"We're in a different era today," Park Service Director William J. Whalen remarked to me. "When state or local governments are unable or unwilling to act, we have to protect the best of what's left in America." He cited Ohio's Cuyahoga Valley in the Akron-Cleveland area, the Santa Monica Mountains of Los Angeles, and the old Spanish missions at San Antonio, Texas. And then Bill Whalen added this thought:

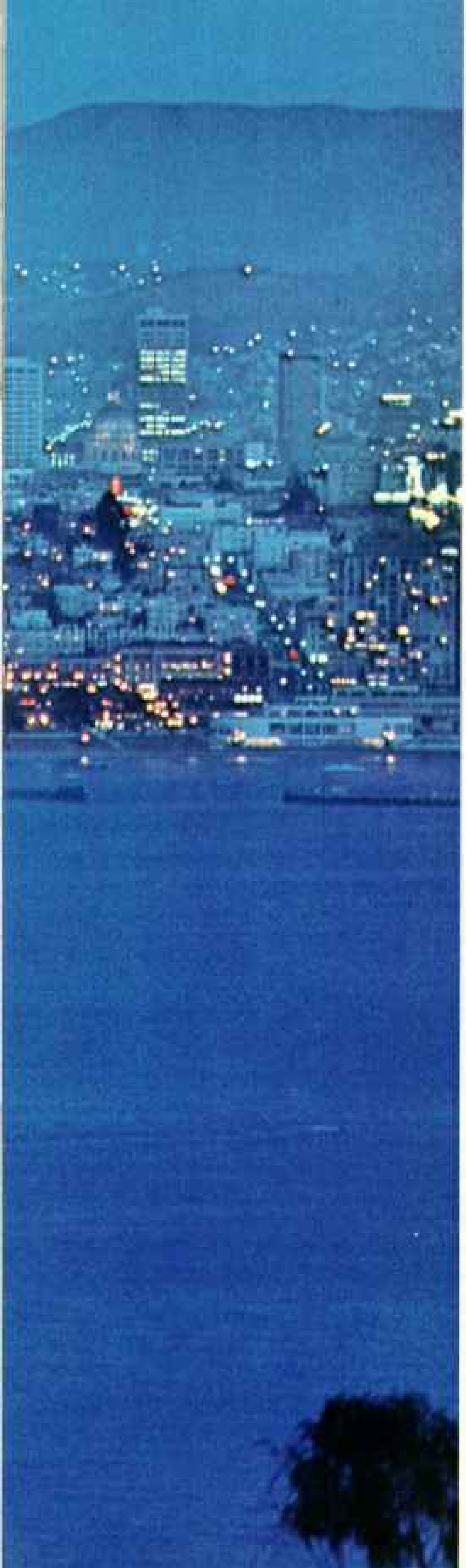
"We have 200 historical sites covering Indian civilizations, *(Continued on page 26)*



The "majesty and friendliness" *of the sequoias so moved* GEOGRAPHIC *Editor Gilbert H. Grosvenor during his first visit in 1915 that he*

HORACE ALBRIGHT, THE GROSVENOR COLLECTION

insisted on sleeping beneath this overwhelming giant. The experience inspired a lifelong devotion to conservation. Mr. Grosvenor's profusely illustrated article "The Land of the Best" filled the entire April 1916 GEOGRAPHIC and helped influence the creation that year of the National Park Service—the first in the world.



Surprising cityscapes *have joined the National Park System. In San Francisco, citizen groups worked for years to save dwindling open spaces before Congress established Golden Gate National Recreation Area in 1972. This view from Angel Island includes the infamous Alcatraz Island and the city's historic waterfront beyond. There on a restored schooner* ***(below)*** *children haul away like 19th-century seamen. Nationally managed urban parks offer one alternative for financially hard-pressed cities.*

SUSAN BRIMBERG (LEFT)

(Continued from page 19) exploration, settlement, wars, and political affairs, but only a few, like the Saint-Gaudens and Carl Sandburg homes, for artists and writers. Perhaps we should strive to add more."

Yet, for all its expansion and changes, the National Park System still tends our old favorites. I asked Horace Albright recently which park was his favorite. "You shouldn't ask me that," he scolded—and with reason. For nearly five years, Horace directed the National Park Service, after serving his friend Stephen Mather, the first director, for 14 years.

"My favorite park ought to be Yellowstone," he said. "I was there ten years as superintendent. But I grew up with Yosemite—it was created the year I was born, right next door in 1890. As a boy, I rode with a ranger over the Yosemite high country."

I encouraged Horace to reminisce, for his memories are rich, historic, and clear. As a University of California student in 1912, for example, Horace met John Muir shortly before that great naturalist died. "His beard was gray, of course, but Muir seemed in good health. He wasn't loud or vociferous or arrogant. A mild, mild man." That's the way Horace recalls the giant whose wisdom and enthusiasm helped preserve so much of our national heritage.

Early parks began helter-skelter without any central direction or agency. The U. S. Army was still in control of Yellowstone when Horace Albright started work for the Department of the Interior in 1913.

Conservationists Tour the West

Horace and I are among the last lucky men who have known all ten directors of the National Park Service. I must confess that my memories of Stephen Mather are a small boy's impressions. But Horace was Mather's right-hand man even before the Park Service was organized.

"In 1915 Mather invited a party of 15 conservationists and writers for a trip into the High Sierra," recalled Horace. "That helped get the Park Service started. Your father [Gilbert H. Grosvenor] represented the National Geographic Society, of course. His first night in the big trees he insisted on moving his sleeping bag to the foot of a huge sequoia [pages 20-22]. Mather was against it, said a small branch falling from that height could kill a man. But Mr. Grosvenor said he'd take the chance. Well, I joined him—and we lived!

"One result of that trip," Horace continued, "was that your father designed a special issue of NATIONAL GEOGRAPHIC—it was April 1916. He called it 'The Land of the Best' and he showed *all* the best things in the United States. He especially emphasized the scenery of our national parks.

"We made sure that every Congressman got a copy of that issue before voting to establish the National Park Service. That's why I say the National Geographic Society has been closer to the Park Service than any other existing organization. Remember: Yours was the first national organization to donate money to save the redwoods."

Horace was referring to a gift of $20,000 that the young Society's trustees voted in 1916 to help preserve a private stand of great trees remaining in Sequoia National Park. That donation came just in time; an option for purchase of the trees was running out, and Congress had appropriated only part of the needed funds.

My father became actively involved with the California coast redwoods only a few years later, helping to form the Save-the-Redwoods League in 1919 and serving as a member of its governing council.

Your Society has collaborated directly with the Park Service to preserve other sites, from the Valley of Ten Thousand Smokes in Alaska to New Mexico's Carlsbad Caverns and Pueblo Bonito. An archaeological expedition sponsored jointly by the Society and the Smithsonian Institution in the 1950's proved that early man had lived and warmed himself over campfires in Alabama's Russell Cave some 9,000 years ago. The Society promptly bought the invaluable 310-acre site for the Park Service.

Each park, each monument, has its own atmosphere and admirers. Our memories of national parks have the nostalgia of a family album. My daughter Sara remembers the Tetons for a particular family vacation there one summer. Yet those glories of the West sometimes blind us to the richness of our eastern parks—Acadia in Maine, Independence Hall and Gettysburg, the Smokies and the national seashores at Cape

Cod and Cape Hatteras, and so many more, all the way east to the Virgin Islands.

I fondly remember the day the parkland on St. John, a gift from Laurance S. Rockefeller, was turned over to the people of the United States.

My own memories go back to my boyhood in Washington, D. C. After a midday Sunday dinner, as an ice-cream dessert was being served, my father would signal me to use the telephone.

With boyish pride I would call the livery stable and order a two-horse phaeton to our door. Soon my parents and four sisters and I would excitedly take our seats in this grand open carriage; the liveryman would cluck and shake the reins, and his horses would clomp their way down a hill into Rock Creek Park, past the National Zoo. What splendid Sunday afternoons they were! And how much more exciting that park became when we got our first automobile in 1915; we could easily drive its length on a Sunday.

In just this way the American motorcar brought admirers—and complications—to all our parks. When the U. S. Army ran Yellowstone, people saw Old Faithful by riding in 11-seat coaches called tallyhos. Wagon wheels rutted the landscape and polluted the Wyoming air with dust. Cars brought greater park use, along with the crowds and exhaust fumes that our Park Service is trying to remedy today.

I recently revisited my favorite park, Redwood National Park on the northern California coast, a park that the National Geographic Society helped establish.

In the early 1960's the Society's Committee for Research and Exploration met to consider the future of our coast redwoods. Conrad L. Wirth, then director of the National Park Service, also was a trustee of the Society and a member of the Research Committee, so he was able to provide the closest

PHOTOGRAPH BY WILLIAM HENRY JACKSON, COURTESY THE NATIONAL ARCHIVES

***Photographs of the miraculous**—of bubbling caldrons, clockwork geysers, and bridal-veil falls—helped convince Congress in 1872 to set aside a Wyoming wilderness larger than Delaware. Yellowstone, the first national park anywhere, had few visitors at first; last year there were 2,600,000.*

More junk pile *than forest primeval, the 48,000 acres bought in 1978 to enlarge Redwood National Park still bear the steel-cable tangles left when lumber companies clear-cut the watershed above the tall trees. The Park Service is replanting redwoods such as this seedling examined by author Melville Bell Grosvenor, former chairman of the Advisory Board on National Parks.*

cooperation. The Society authorized a $64,000 grant to enable the Park Service to study redwood ecology.

On a survey trip to the coast we determined to measure any outstandingly tall redwoods. A state ranger showed us a tree thought to be the world's tallest, but trees on private lands had not been measured.

A few months later, in late 1963, the Society's senior naturalist, Dr. Paul A. Zahl, sent the news that he and his Park Service colleagues had measured several trees of record height. I left at once to see their discovery. To reach that grove of champions, we jounced over logging trails, then hiked, and finally paddled rubber boats across the crystalline Redwood Creek.

The pictures we took that sunny day were published in July 1964, along with an announcement of the discovery. Members of the Society could see for themselves what treasures lived in Humboldt County, California. But the trees stood on lands owned by a large commercial lumber company. Their future was uncertain.

Consequently, President Lyndon B.

National Geographic, July 1979

Johnson proposed a Redwood National Park. At a White House press conference, he personally held up enlargements of the Society's photographs of the tall trees to dramatize his point. After months of patient persuasion, President Johnson got a bill through Congress to establish the park.

"It wasn't as much as we wanted," Horace Albright recalls. "We needed more of the watershed."

Park Receives Bare Hillsides

The hillsides above the champions on Redwood Creek finally came into the park last year: some 48,000 acres. But only 9,000 of those acres represented old-growth trees; the rest had been logged in the years and months just before acquisition. Seeing the bare, eroding slopes from an airplane last winter, I felt a sharp sadness. Many of the streams were now clogged with sediment; salmon would have a difficult time swimming upstream to spawn.

Walking through the area, I was once again encouraged.

"Congress allocated 33 million dollars last year to rehabilitate these logged areas," said Superintendent Robert D. Barbee. "We think our program here is a landmark in National Park Service efforts to manage its resources. We've been experimenting with the latest scientific methods and innovating as we go. We intend to restore this portion of the watershed to a reasonable replica of its natural state."

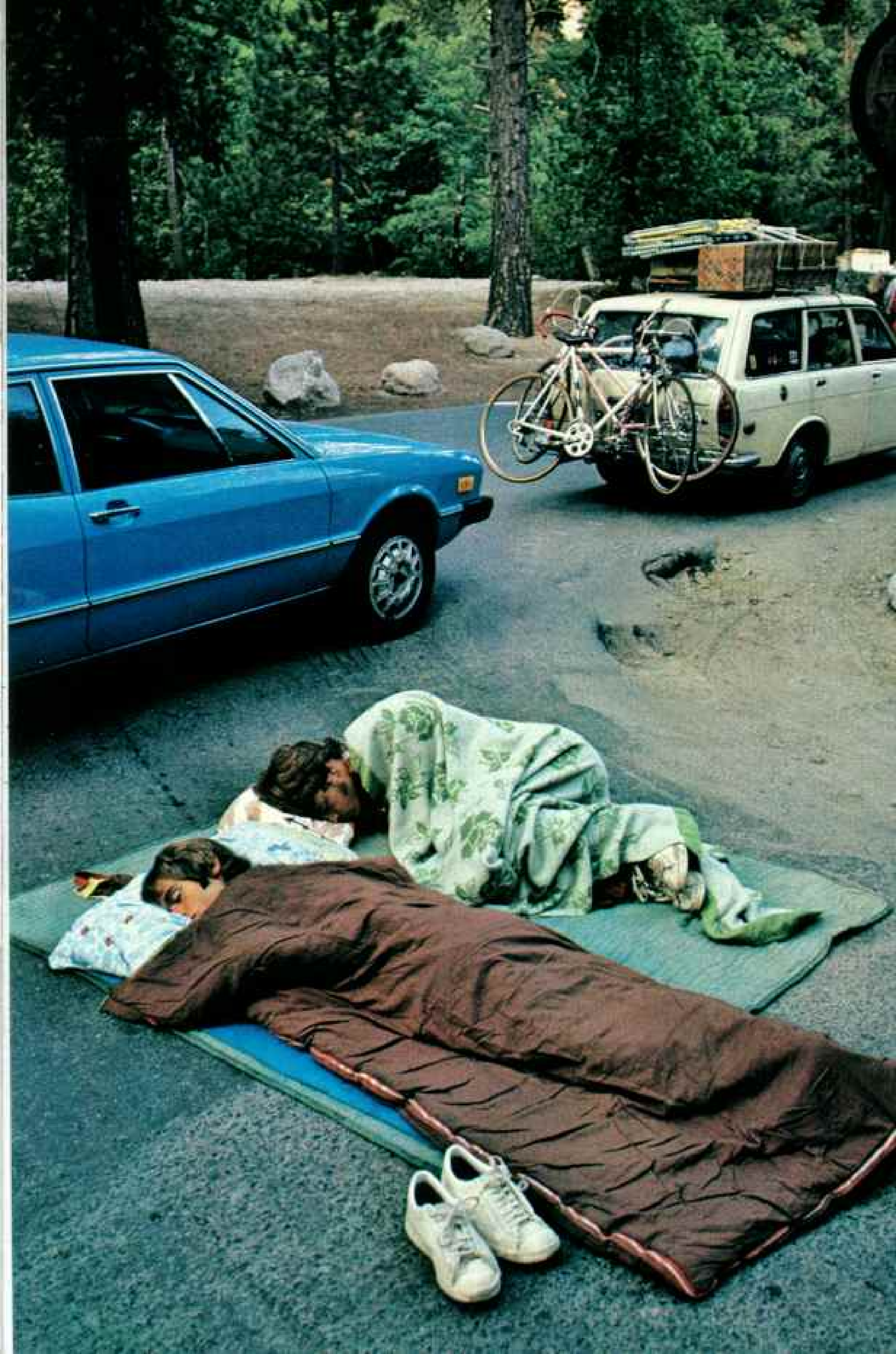
Among the 106,000 acres in the complex of Redwood National Park and three California state parks, some 50,000 acres are cutover land. The techniques now being used on those logged tracts could help us reclaim abused land all over the U.S.A.

Meantime, while stumps sprout and seedlings grow, we will have those towering, 2,000-year-old coast redwoods that all our conservationists saved by working together.

Over the entranceway to Yellowstone, a sign quotes words from the congressional act that established our first national park:

"For the benefit and enjoyment of the people."

In the same spirit, we at the GEOGRAPHIC offer this July issue of the magazine. □



Will Success Spoil Our Parks?

By ROBERT PAUL JORDAN
ASSISTANT EDITOR

NATURE COMES RIGHT UP to the busy highways of Yosemite, Yellowstone, and other national parks. Passing motorists idly watch backpackers turn off the road and vanish into looming woods, putting civilization behind immediately.

I know. Once I walked in small and good company more than two hundred miles around Yellowstone's wild perimeter. Brief minutes off the noisy road, the stillness wrapped us as closely as it later did in the far reaches. In that month on the trail, only one unnatural sound intruded—a sonic boom.

Such solitude is not for most people. We crowd into a tiny fraction of each wilderness park we visit and look at one another when the scenery has satisfied us. One day I talked

Sacked out *after an all-night drive, two men hold their place in a two-mile line for campsites at Yosemite National Park, where chronic overcrowding has led to a new reservation system.*

about this with a park concessionaire of long experience. "The most popular park use," he told me in all seriousness, "is people-watching."

As one who has seen more than his share of scenic and historic parks, I sought not long ago to reacquaint myself with our National Park System. What I discovered startled me. For years, I learned, the park system has been rapidly evolving. Lately its growth has been meteoric.

Three decades or so ago scenic and historic aspects of parks were the main attractions. Then recreation gained prominence as we took increasing interest in boating, fishing, skiing, and the like. Next, the urban-park concept began developing, aiming at bringing park experiences within reach of people locked in city cores. And cultural attractions enjoyed ever growing importance.

Park System Comes of Age

Today, as suddenly as backpackers bump into nature a few steps beyond thronged highways, the grand design of the National Park System has finally become clear. Moving into its second century, it finds itself in an era of immense promise and challenge. Consider:

• On December 1, 1978, President Jimmy Carter proclaimed 56 million acres of magnificent Alaska wild lands as national monuments, 17 of them—most to be administered by the Park Service. The size of the park system has more than doubled, and our last great wilderness parks have been born.

• By act of Congress, 18 additional units are entering the system, among them two more urban parks known as national recreation areas, within metropolitan Los Angeles and the Atlanta region. Such urban parks already serve San Francisco, New York-New Jersey, and Cleveland-Akron. In its unprecedented spate of parks legislation last year, Congress established five new national trails and vastly increased park wilderness acreage. Also, the Wild and Scenic Rivers System was further enlarged.

• Potential additions are under study. The Park Service is required to make at least a dozen proposals to Congress annually.

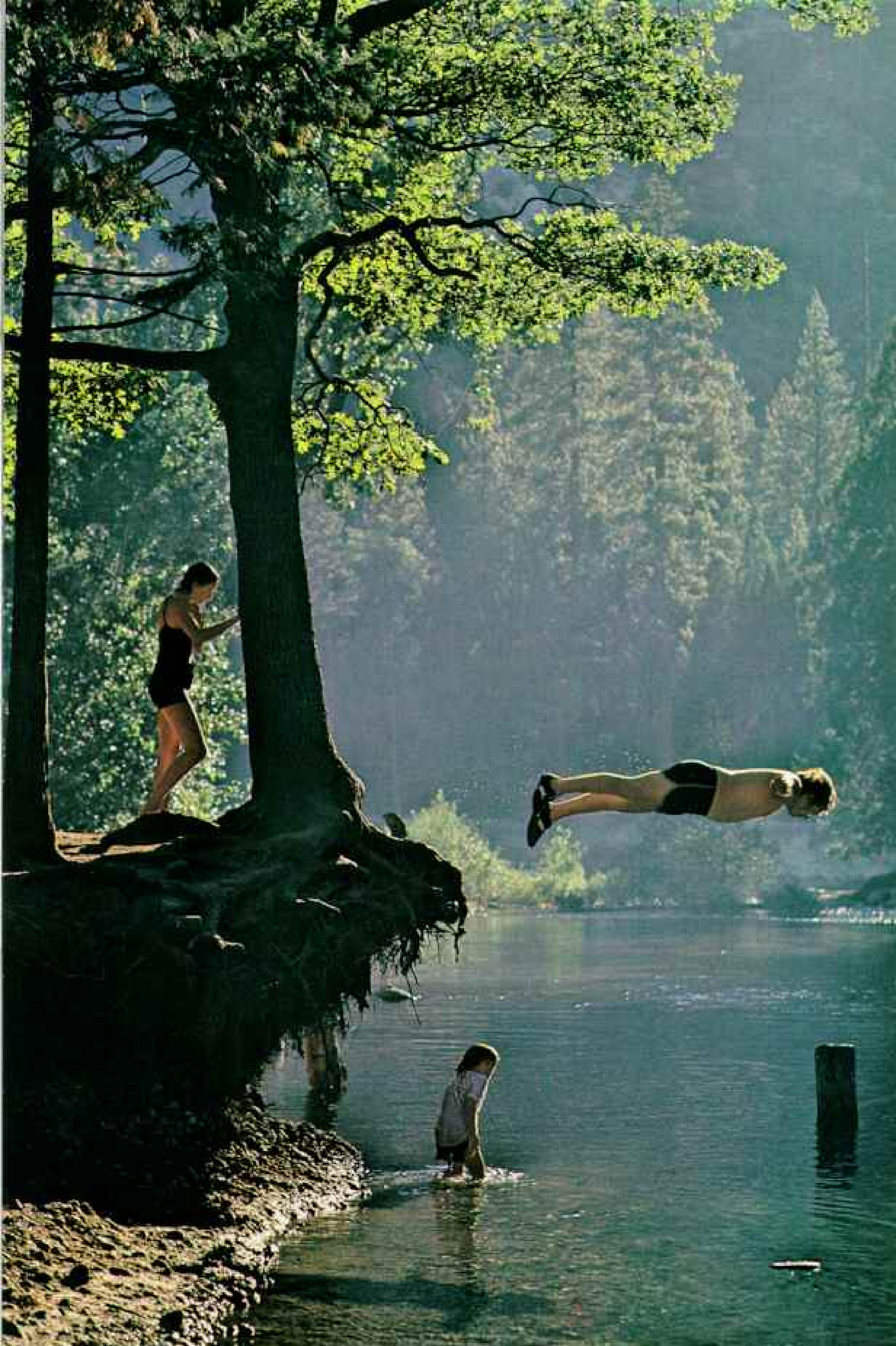
Congress also has before it an enlarged version of the administration's 1978 proposal for Alaska parks legislation. President Carter proclaimed the Alaska national monuments last December when Congress adjourned without passing the bill.

Look at all this in a different light, and what you see is the latest chapter in an astonishing love story. We Americans have been smitten with the national parks idea since Yellowstone was created in 1872 as America's, and the world's, first national park.

Incredible, what we have made of this. We possess more than 300 such treasures, large and small. Thirty-nine are national parks, the bellwethers. The remainder bear other tags: seashores, rivers, parkways, memorials, preserves, sites, and so on. Our most distant park is both new and not in Alaska. It is War in the Pacific National Historical Park, in the Territory of Guam.

Belly whopper in progress: *A youngster plunges into the Merced River in Yosemite Valley (**right**).*

*With outdoor recreation booming, the National Park Service must grapple with vexing new problems. Pondering the challenge, Park Service Director William J. Whalen (**left**) pauses over a cup of coffee, alongside Yosemite Superintendent Leslie Arnberger. Formerly the head of Golden Gate National Recreation Area, Whalen rose through the ranks to become, at 38, the second youngest director in Park Service history. He oversees what he calls "the world's best park system."*



In a year we pay hundreds of millions of visits to these havens. They belong to everybody, are for enjoyment, and must be preserved unimpaired for future generations.

Such is their prescription, long since written. Often it fails to work.

"My biggest problem," a superintendent told me, "is to keep people from loving the park to death." He was talking about carrying capacity and the conflict between enjoyment and preservation. The rub of too many people, too many vehicles. It is an old refrain among the Park Service's dedicated men and women.

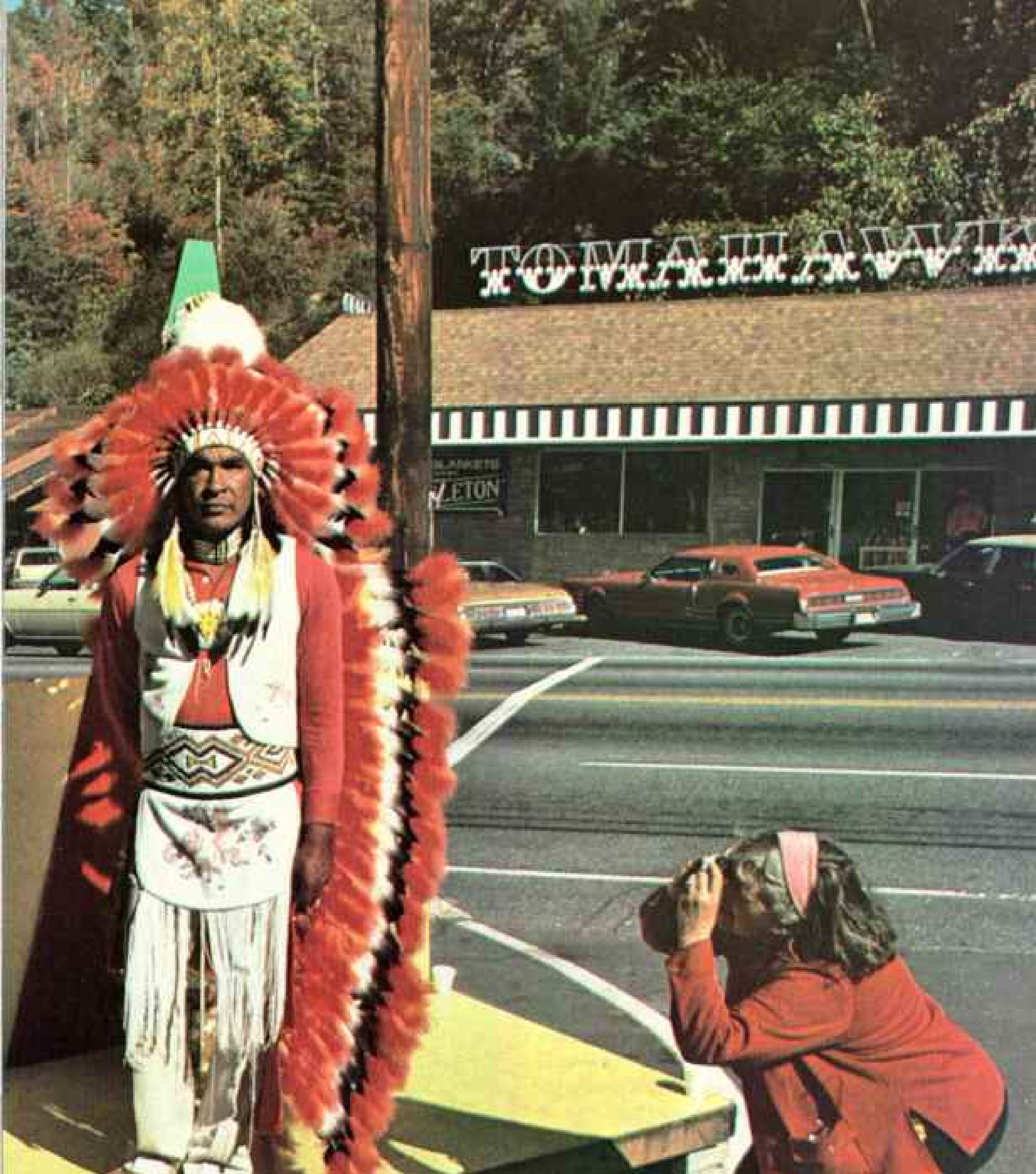
I remember a crisp autumn day when God was in His heaven and Yosemite was never grander, except for a stalled car holding up traffic. A ranger arrived. She eased the gun on her hip for comfort, raised the hood and poked around inside, regapped the distributor points with a shoehorn, and smiled as the engine roared to life. So did the man at the wheel.

Far more serious problems occur, sadly. Rangers increasingly are trained in law enforcement. The superintendent I mentioned had recently dealt with an armed robbery. Park police, a crack unit of the service, have assisted the Coast Guard off Gateway National Recreation Area in intercepting narcotics bound for New York City. Drug smugglers also cross from Mexico into remote areas of Big Bend National Park. They have shot at park rangers. The Park Service works with U. S. Customs agents who are now stationed in Big Bend.

In wilderness parks, you may witness foolhardy visitors breaking the law—despite rangers' warnings—by handing food to begging bears. Tragedy has resulted. Even to feed the innocent-looking donkeys in Virgin Islands National Park is dangerous. They are feral. They bite.

Some difficulties are more commonplace.

Souvenir hunter bags a trophy *in Cherokee, North Carolina, near Great Smoky Mountains National Park. Where wilderness beckons, commercialism often follows, creating a dilemma for the Park Service: Within park boundaries should shops be removed at the inconvenience of the visitor?*


TOMAHAWK

A family pulls up after a hard day's drive and takes the ranger at the gate to task because all campgrounds are full. Backpackers seek the solitude of the trail and gripe that the trail is overcrowded. An irate shopper at a lodge's store complains that the concessionaire is more interested in profit than service.

Old and Young Differ on Goals

It all comes down to overwhelming success. Much of this popularity has developed since World War II. In 1946 the Park Service's annual operating budget amounted to a mere five million dollars. Some thirty years later it exceeds half a billion. Nine thousand full-time employees, and more than that many seasonal ones, strive to keep the system's success under control.

With the Park Service in evolution—its urban involvement, for instance, only gained momentum in this decade—many old-timers do not like what they see. "We have become an agency that tries to be all things to all people," one remarked to me. But others, younger, look at it differently: "Until recently, the organization was living in the past instead of looking to the future."

One thing is certain. Veterans of long service in the scenic parks and the newest recruits on urban duty alike consider themselves members of an elite. They are right. An indication: Job turnover is very small, while the number of applicants ranges as high as 40 for every job opening. This despite a low entering salary: Starting pay for a full-time park ranger with a college degree, for example, is $10,507 a year.

Before setting out to survey America's wonderlands, I called on Park Service Director William J. Whalen in Washington, D. C. My particular interest at this meeting was the new Alaska parks.

Not yet 40, one who has made his way through the ranks, Bill Whalen spoke directly. "In Alaska," he said, "we have the opportunity to start over, to make the most of our long experience. We don't want to change the land, but to keep it from changing. I could not be more optimistic. We have been planning for years."

I flew there and found that many Alaskans consider the parks a grievous mistake. Land should be used, not locked up, they cried. (See articles beginning on page 60.)

The land in question is public property, remote, sparsely populated. Bush pilots flew me in, landing on rivers, lakes, and any suitable strip of earth. In two days from what Alaskans term the lower forty-eight,

Happy bicentennial *birthday party culminated in Washington, D. C., on July 4, 1976. The French firm that supplied the fireworks had been recommended once before—by Thomas Jefferson. The National Capital Region of the Park Service manages 56,500 acres, including the White House and other historic sites.* MEDFORD TAYLOR

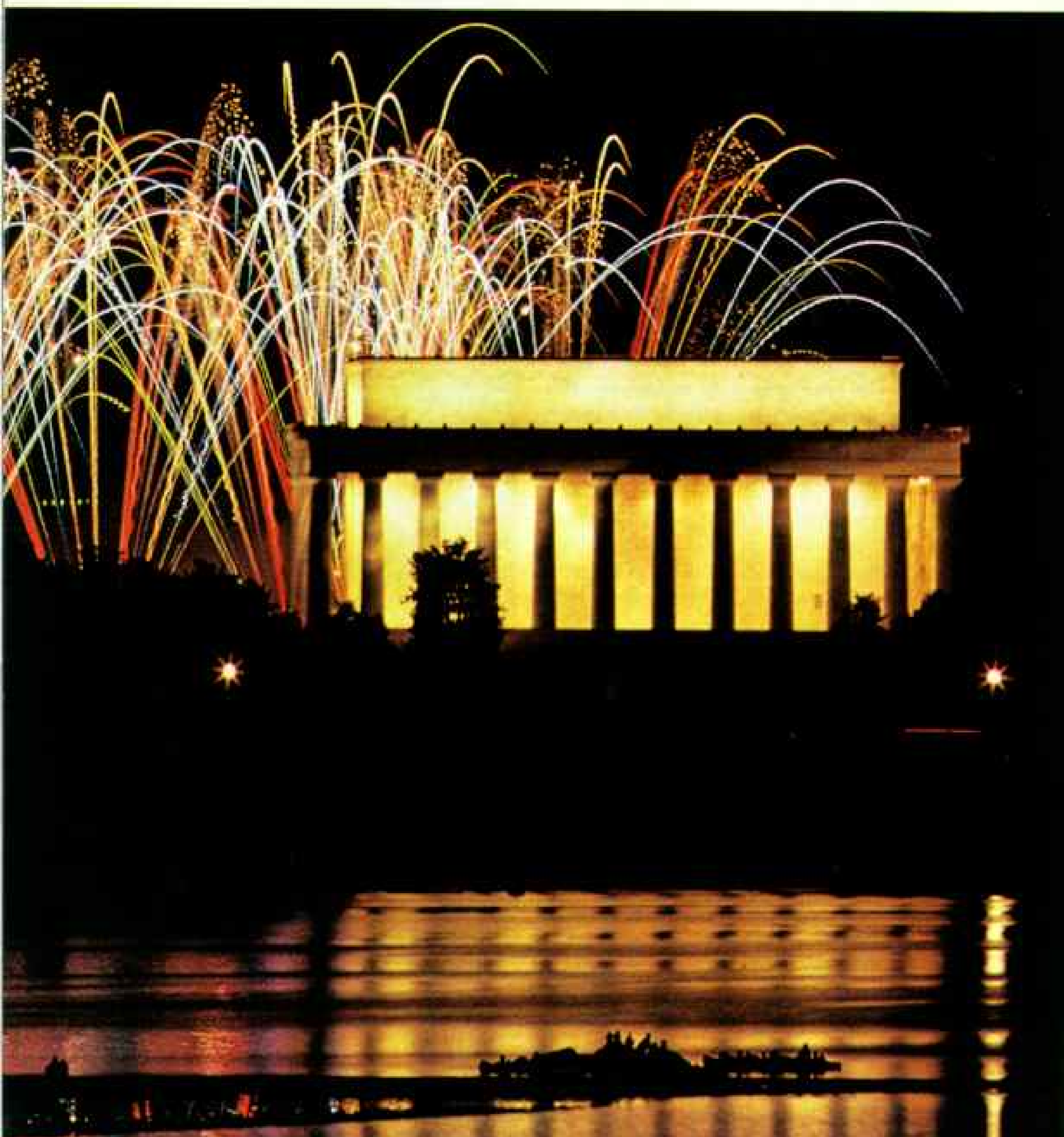
one can set down in the heart of this untrammeled country.

And what does one see so precious as to warrant federal protection?

Pristine tundra at the Bering Strait, where mankind is believed to have first set foot on the New World from Asia. The Noatak River's undisturbed drainage, a complete and self-contained ecosystem, our nation's largest and last of its kind. A mighty ice field above the stormy Gulf of Alaska that looms over glaciers and fjords. The habitats of whales, sea lions, sea otters, seals. The nesting sites for untold millions of migratory waterfowl. Places where the wolf roams, and swift streams where brown bears sate themselves on salmon.

One sees, too, the indigenous people and their way of life. I particularly remember Charley—his real name, Eskimo name, I never did learn.

All his life Charley had lived in what became the state of Alaska, above the Arctic Circle where the central Brooks Range lords it over a land unchanged since its creation. When he was young and on the hunt, he would meet more bears than people. Now he was old, and troubled.



His eyes searched the valley and the distant peaks that contained it. "People from 'Outside' come into Eskimo country," Charley said. "They hunt, they climb the mountains. With the binoculars we can see them in their red tents." He looked at me, another alien. "They do not belong here."

He knew, of course. In time, more visitors would arrive, though not the sportsmen with their powerful rifles. Beyond us spread the last great American wilderness. Part of it—four Yellowstones in sweep—was soon to become a national monument called Gates of the Arctic.

Hunting is prohibited in monuments and parks. Those sportsmen would have to shoot Dall sheep elsewhere. What then of Charley's people, the Nunamiut, or inland Eskimo? They had always depended on wandering caribou, occasional moose. End subsistence hunting and a culture would die.

But in Gates of the Arctic, and in other future Alaska parks where people have been following the old ways, the National Park Service would permit the subsistence life to continue. Charley knew that too.

What of the press of park visitors? Their footprint would be light, I told him. No roads were planned, no development. Gates of the Arctic was to remain unspoiled. His people could help others to understand such a land. He did not reply.

A Way of Life Lives On

I said good-bye and took off in a floatplane to glimpse this wild northern park, flying over an almost uninhabited tundra country of valleys, pure rivers, and blade-sharp new mountains. Arrigetch, the Eskimo call these granite peaks—"fingers of the hand extended." As afternoon waned, I camped beside a serene lake, drank its sweet water, and took dinner from it with a single cast.

I moved on, to the tip of Cape Krusenstern beside the jade Chukchi Sea, at the fringe of human habitation. Humankind's known presence here spans 5,000 years, and continues. Eskimo families from afar had again come to spend spring and summer. They were sheltering in tents and huts, hunting the beluga whale and the *oogruk*, the bearded seal. Seal meat was drying on racks in the sun.

At a table near the water's edge, I lunched

Fresh sockeye salmon, *netted by Tanaina Indian Steve Hobson, dry*

JIM BRANDENBURG

on spruce poles near the new Lake Clark National Monument in Alaska. The Park Service allows native Alaskans to continue to hunt and fish here.

with Bob Uhl and his Eskimo wife, Carrie. A sinewy man in his 50's, Bob said grace, and we dined on roasted porcupine, whitefish, seal oil, and homemade bread, helped down with tea.

Bob looked off to the sea. Fishing season began that evening; he would be going out to make some cash catching salmon. "I came up here after serving in the Army in World War II," he said. "I've never been back. Carrie's father taught me the subsistence life. It is a good way, taking food from land and sea, adding what you want from town."

Cape Krusenstern is now a national monument, a marvelous statement of man's will to survive the harsh Arctic. Archaeologists have documented, through unearthed hearths, caches, tools, and other artifacts, a chronology of ten prehistoric cultures.

In a periodic and inexplicable phenomenon, nature has arranged this long record. Every fifty years or so, wave-driven gravel suddenly piles up above the old tide line, forming a new beach. Down the centuries hunters of whale and seal have camped on the most recent ridge. Across Cape Krusenstern's narrow width now repose 114 ridges. Today's subsistence hunters, I noticed, had strewn the ground with tomorrow's artifacts: aluminum cans, rifle shells, the hulk of a snowmobile.

I walked out on the old beaches. Ryegrass and beach pea covered the gravel, and forget-me-nots poked through. I appreciated the breeze; it kept the mosquitoes away. Nothing could deter the swooping jaegers and arctic terns. A musk-ox wandered into view. Of the grizzly that works the cape I saw nothing, though I did look.

I got into my chartered plane and flew back to Kotzebue, about 35 miles distant. Eventually this little city will serve as the jumping-off place for some of the parks. For the time being it remains the end of the line to the tourist trade.

Like Alaska itself, Kotzebue was drawing record numbers of visitors. More than 10,000 were descending on this hard-living outpost north of the Arctic Circle during the short spring-summer season. Those without room reservations found beds difficult to come by. Prices were high, whiskey and beer flowed, fights erupted.

Eskimo Activists Support Park Service

With Robert Belous, a National Park Service planner, I dropped in on John Schaeffer, the outspoken young president of the powerful Northwest Alaska Native Association. His group, composed of Eskimo, supports the Park Service because it will protect both the landscape and subsistence people, which are one and the same thing. When, I asked him, would visitors

Competing anglers, *brown bears and two oblivious visitors, fish the Brooks River in Alaska's Katmai National Monument. Set aside for its volcanic wonders, Katmai was enlarged last December to protect vital bear habitat.*

begin pushing beyond Kotzebue in number?

"Not in my lifetime," he answered firmly. "How will they get to the parks? Where will they stay? There are no roads or camps."

Bob Belous saw it differently. Kotzebue itself proved, he said, that the influx was building. Hardship and distance, remoteness, attract people. "It's not 'When will they come?' but 'How many, and how do we handle them?' Once Yellowstone was considered too remote."

How the Park Service would handle his own people concerned Mr. Schaeffer. "They are apprehensive and suspicious," he warned. "There will be civil war if the wrong managers are sent. We will not be coerced. We will not change if change is dictated to us."

Mr. Belous responded. An outdoorsman, for years he has roamed Alaska as the Park Service's liaison with Eskimo, Indians, and Aleuts. The new parks were special, he said quietly. Special managers would be needed, those who could perform under rigorous conditions and deal sensitively with unusual situations. "We have them in our ranks," he said. "But we will need the help of *your* people. They will make fine park rangers and superintendents."

It may be that harried urban folk, trying to get away from it all, will ride one day from Kotzebue on boats or Hovercraft to the peaceful world of the Kobuk Valley. The broad river of this new monument winds through a mountain-rimmed country where traces of the late Pleistocene epoch linger.

STACY MACSTUDEBAKER

One remnant, I thought, flying over it, must be as incongruous a sight as the Arctic offers—a golden desert of undulating sand dunes spreading across 25 square miles. Its origin remains a mystery. Some speculate that it is the residue of ancient glaciers. Radiocarbon dating of peat bogs beneath the dunes indicates an age of greater than 33,000 years.

The sagebrushes, grasses, and sedges of prehistory grow in the Kobuk Valley. Fossils of woolly mammoth emerge from the Kobuk's banks. Herds of migrant caribou ford the river at Onion Portage as they did when time had no measure but the seasons; hunters harvest the caribou there as they have for ten thousand years. The chronicle of their camps has been unearthed layer by layer.

Today's hunters use what they want of Outside's wares: I rode to Onion Portage in Tommy Lee's motorboat. In summer it speeds him to the salmon nets; in winter a snowmobile carries him to the muskrat and red fox in his traps. His wife, Clara, handcrafts exquisite baskets of birch bark and spruce root; the money they bring in helps buy gasoline and supplies.

At their home in the village of Ambler, Tommy said to me, "It's all right for Kobuk to be a park, as long as Eskimo can hunt. My children can live as I have lived."

Clara shook her head. "Some young men and women are forgetting. Many girls no longer know how to make mukluks."

Humanity is spread thin in the high wilderness parks. When hikers and boaters begin arriving, they can learn much from people like Tommy and Clara, who are making the best of old ways and new.

Of the Alaska wonderlands I visited, one contained in its landforms a microcosm of all: Lake Clark National Monument. It is readily accessible by plane from Anchorage.

This new national monument is unparalleled in its diversity, with a seacoast, two active volcanoes among its alpine peaks, glaciers, rivers, waterfalls, and expanses of tundra. From the air I stared down on an inlet whose salmon-choked waters gleamed like ebony. Eagles soar here, and moose take their ease in ponds. Much of the area is still unexplored.

I put up on the shore of Lake Clark in the handsome log lodge of Chuck and Sara Hornberger, as contented a couple as I shall ever meet.

Sara, a former schoolteacher, and Chuck, a 44-year-old Navy veteran and bush pilot, go to town as seldom as possible. Like my Eskimo friends far to the north, they live off the land. Sara's rich garden provides vegetables for all seasons. When cold weather draws near, Chuck goes hunting for the moose or caribou whose meat will feed them and their daughters, Linda, 22, and Gayle, 18, all winter long.

We talked of such things, and too soon it was time to depart. I stood a final moment contemplating lake and mountains and vaulting sky.

"To me," Sara said, "this is the most beautiful place in the world. I never want to go Outside again." Her voice caught. "Here we are free. If I had to choose between country and state, I'd take Alaska."

Cities Getting Their Fair Share

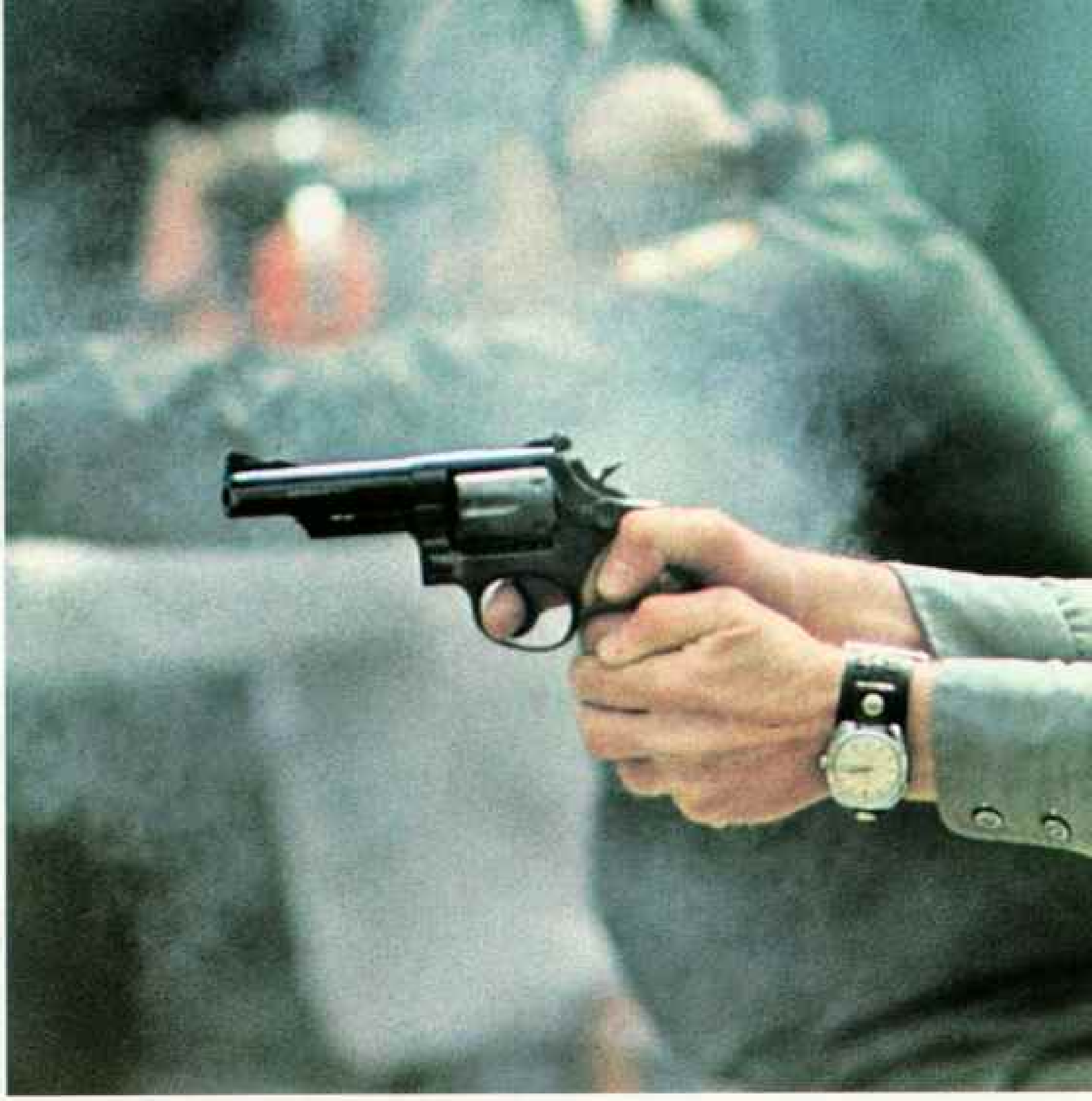
A lot of citified Americans in the lower forty-eight wouldn't trade with Sara, preferring nature in small doses, if at all. But many other people, captives of inner-city ghettos, lack even the opportunity to reach open space to sun on a beach or hike the hills. Bringing nature to them—as well as making historic landmarks and cultural activities readily available—increasingly occupies the Park Service.

Examples abound. Near the heart of Los Angeles, people will enjoy walking along the spine of a rugged range and exploring its canyons and meadows. The new Santa Monica Mountains National Recreation Area is now in the planning stage.

I think of Boston National Historical Park, too, where in a day's walk along the

Some of the greatest shows on earth, *all for free, rocket from the craters of Hawaii Volcanoes National Park, where a geologist braves an eruption of Mauna Ulu to collect lava spatter. When fire goddess Pele holds her breath, many park visitors wander such Big Island slopes to explore unearthly landscapes forged by molten rock.*

NATIONAL GEOGRAPHIC PHOTOGRAPHER ROBERT W. MADDEN



Freedom Trail you can immerse yourself in the Revolutionary times and deeds from which this nation grew. The Old State House. Old North Church. Faneuil Hall. The Old South Meeting House. Paul Revere's House. Bunker Hill. Part of the Charlestown Navy Yard, including the U.S.S. *Constitution*.

A high-school history class swept into Old North Church as I paused there, and settled into the pew boxes.

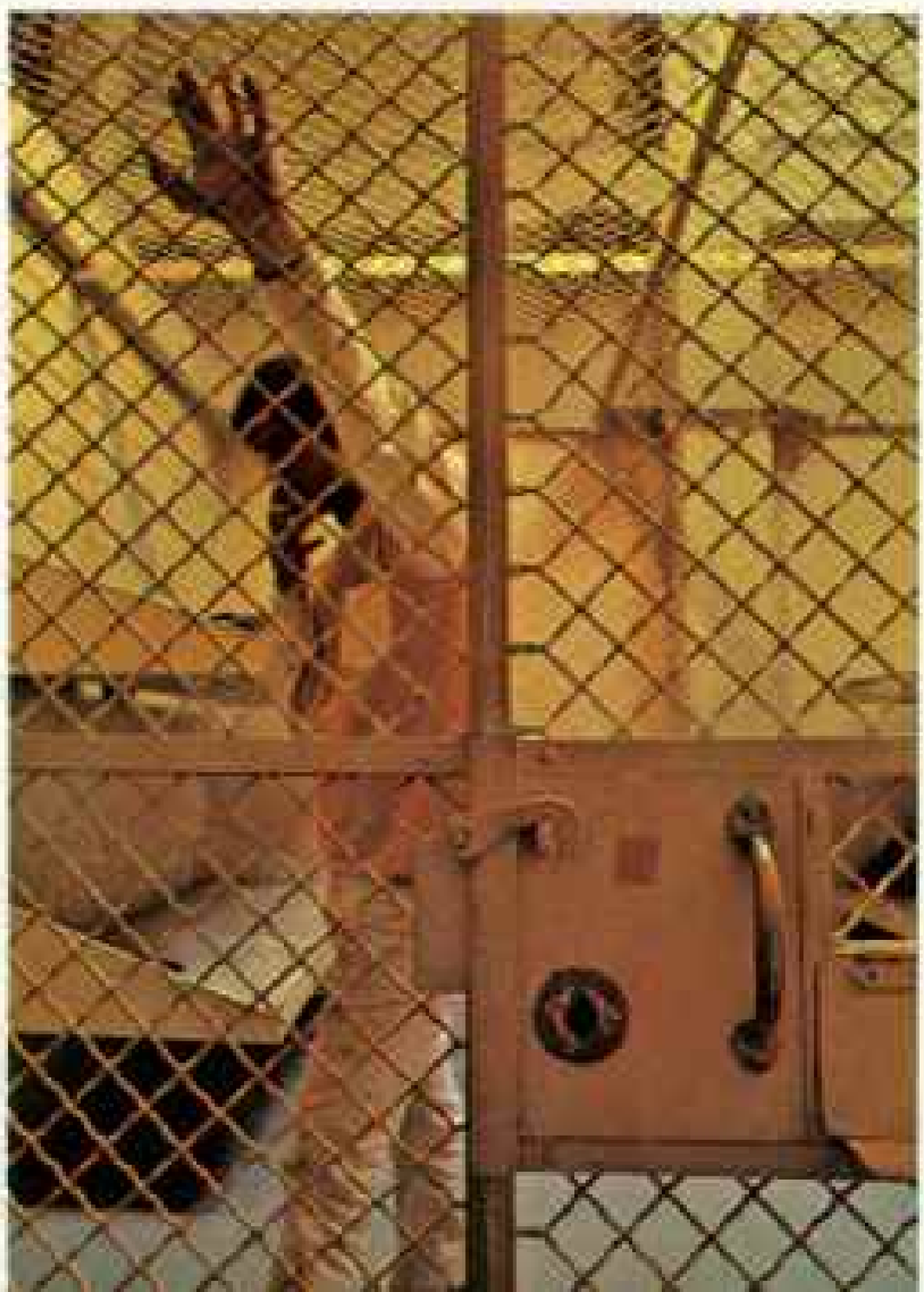
"Who hung the lanterns in the church steeple to warn that the British were coming?" asked the Reverend George Wilkinson, assistant vicar.

The class stirred. Small voice: "Paul Revere?" Father Wilkinson smiled.

"No," he said. "It was Robert Newman, the sexton. Paul Revere rode to sound the alarm. You know, it really was a major troop movement by the British—700 soldiers against Concord's 1,500 residents."

Those students, and any of us who can visit the nearby city of Lowell, one day soon will get another immediate taste of history—the industrial revolution of the early 1800's, with its tremendous social and economic impact. A new national historical park there will preserve mills, canals, and buildings that once made Lowell the largest textile center in the nation.

While the Park Service presents such valuable glimpses of our history, what of the history being made in this day? Some top officials believe that Park Service experts should be tape-recording oral-history interviews with leading contemporary figures. "A century *(Continued on page 49)*

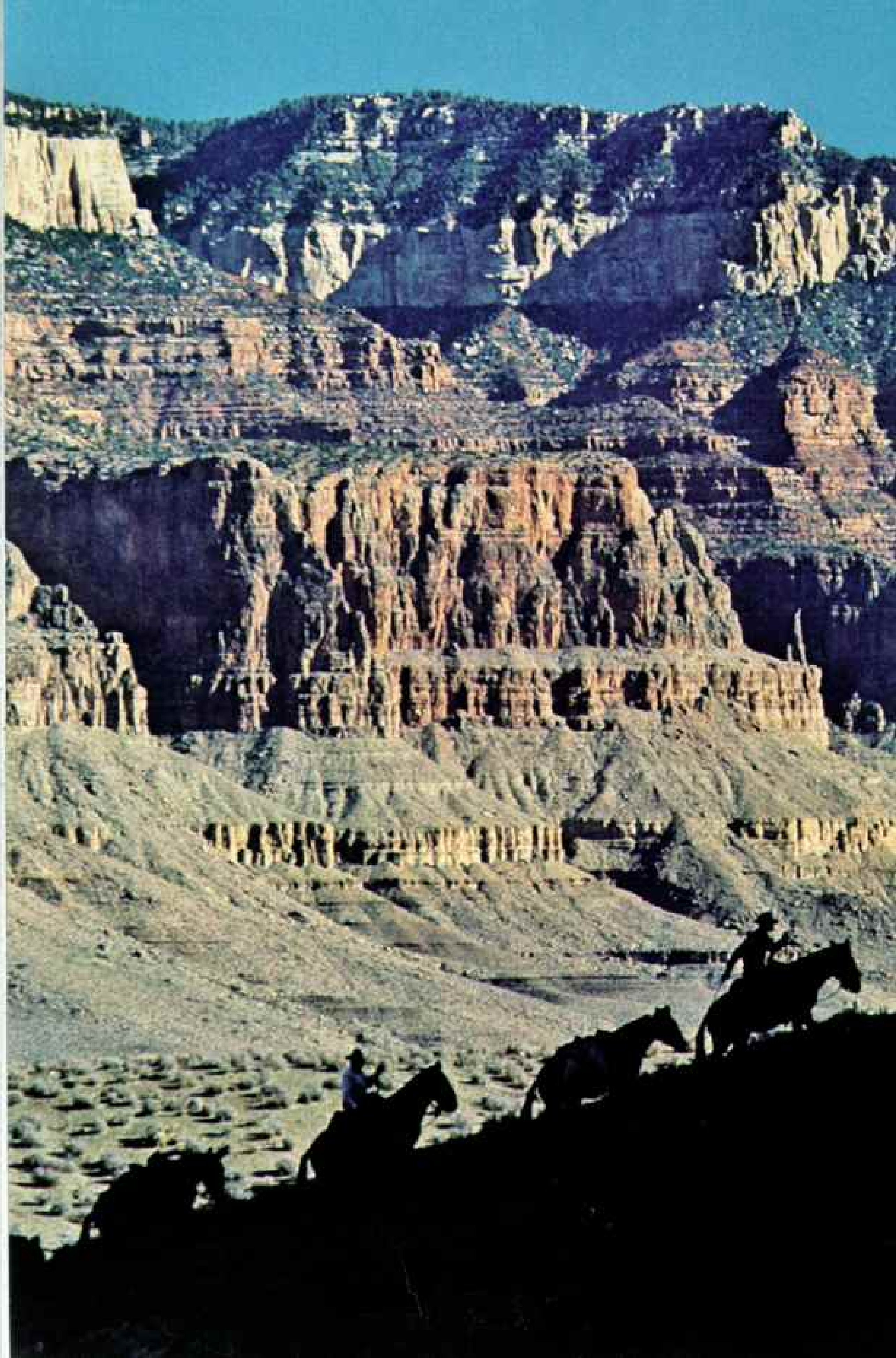


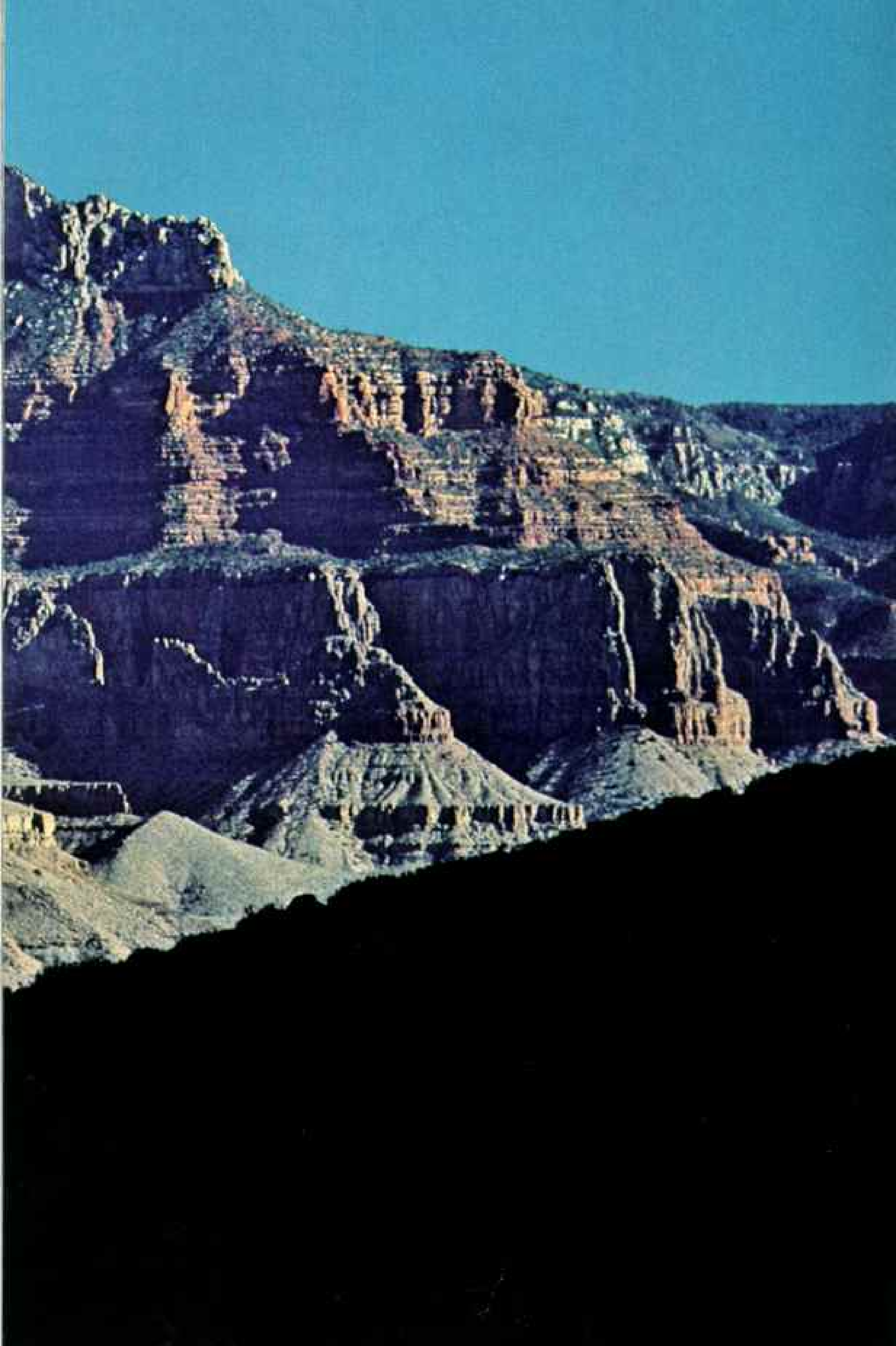
Squinting down the sights *of a .357 Magnum revolver, ranger Dan Taylor takes a qualification test* ***(above)*** *at Glacier National Park. With major crimes on the rise in the parks, more and more rangers receive law-enforcement training.*

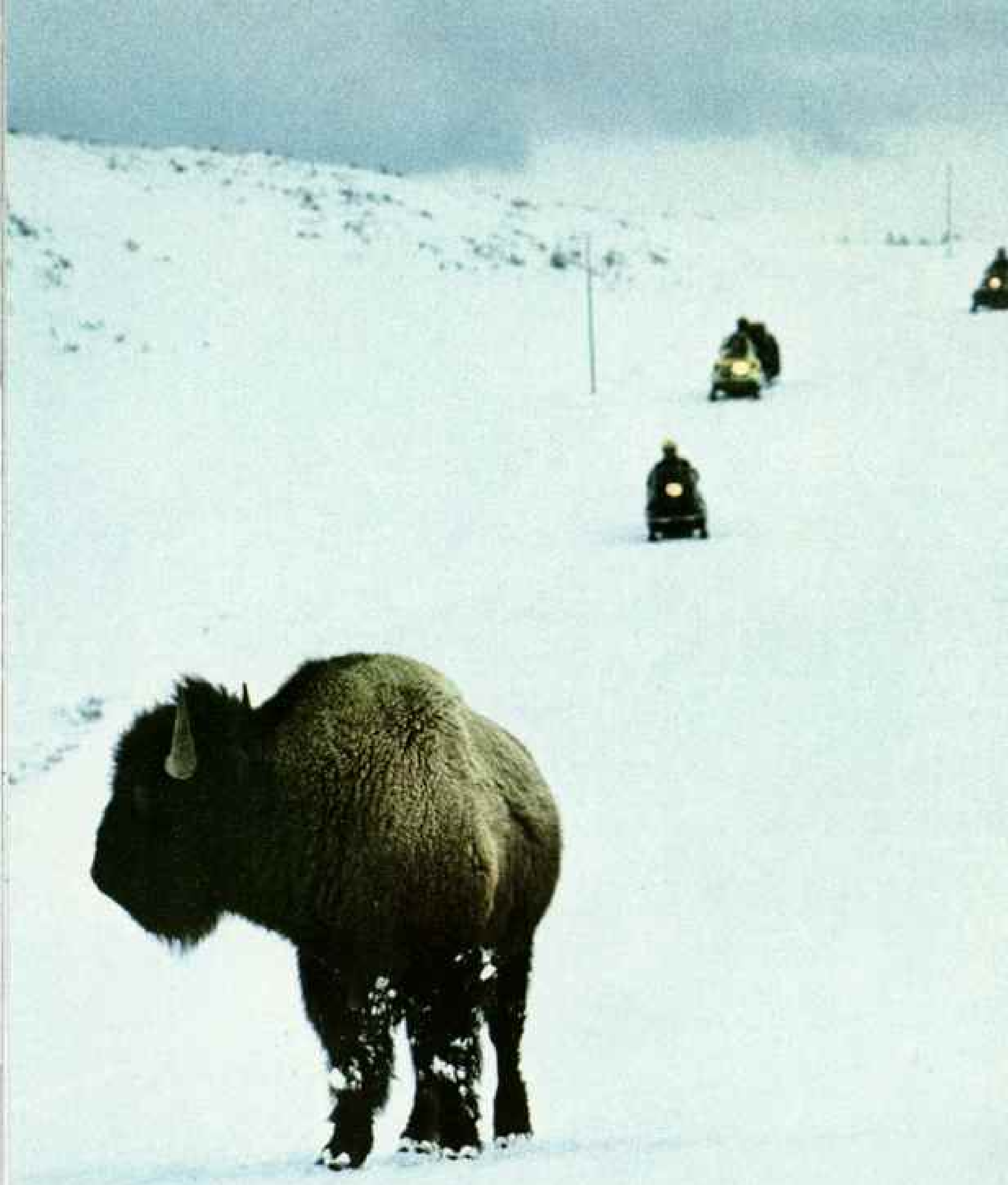
At Yosemite, where property theft tops the crime list, the Park Service has built a new jail that can accommodate 16 people ***(left)****. A park magistrate hears petty offenses, while felony cases are handled at the district court in Fresno.*

Ever reliable *mules carry explorers in search of prehistoric Indian sites through the Grand Canyon* ***(overleaf)****. There, about 18,000 visitors a year ride the sturdy mounts.*

W. E. GARRETT, NATIONAL GEOGRAPHIC STAFF







The roar of change: *On a road marked by snow poles, snowmobilers confront one of 1,500 bison that winter in Yellowstone. A generation ago this valley was quiet.*

R. STEVEN FULLER

Today, on a busy weekend, 1,500 snowmobiles may travel park roads.

(Continued from page 44) from now," one told me, "we should have historic sites for today's important composers and artists and others."

Parks Harbor Special Memories

All the parks, whatever their specific names, have a common denominator. They renew us in one way or another, re-create something deep within us. Let me illustrate in a small and personal way.

When I look from the North Platte Valley in western Nebraska at the massive promontory rising above it, Scotts Bluff National Monument, I do not see only the famous landmark of westering covered-wagon trains. I go back in memory to a small boy who was fortunate enough to spend a summer or two in its presence, exploring it when chores on the farm permitted.

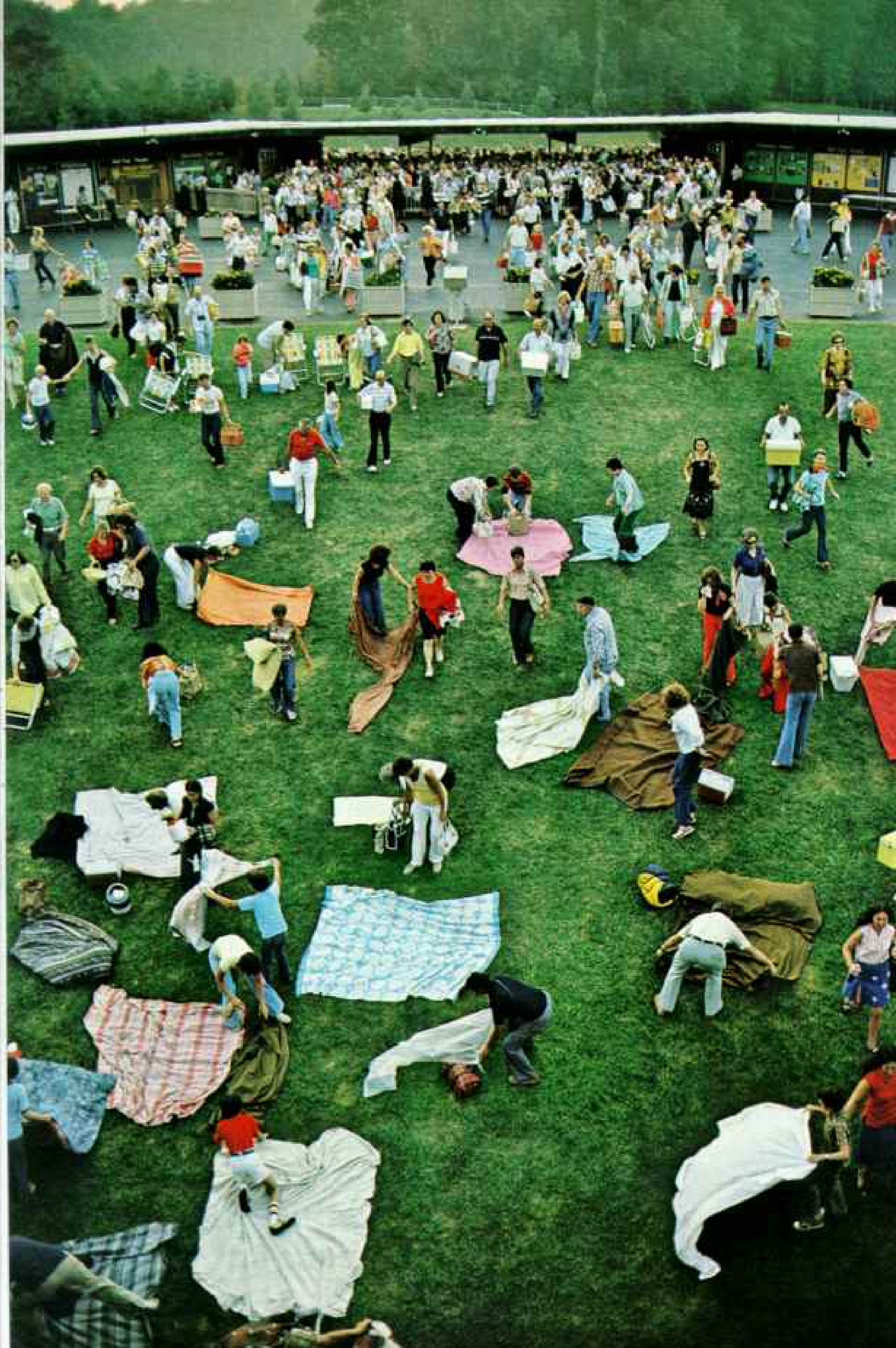
Or take Fort Mason, the old Army post on San Francisco Bay, now headquarters of the Golden Gate National Recreation Area. Culture is big at the fort today, filling a big need. You can participate in art and theater, dance, concerts, seminars, discussions, workshops, classes in health, recreation, and physical education.

Fine. Fort Mason also happens to be the place where I—and a million other soldiers, no doubt, but I—disembarked to embrace America again after many months overseas in World War II.

The parks touch all of us, I say, in one way or another, which is why the Statue of Liberty is now preserved as a national monument, and Tuskegee Institute has become a national historic site. For some, the battlegrounds of Gettysburg and Vicksburg have intense personal meaning; grandchildren and great-grandchildren walk those haunting fields now, and wonder.

We all wonder, in the parks, and sometimes we grow closer to one another. (I am not referring to the exasperating traffic congestion.) It happens when, assembled near Old Faithful in Yellowstone, we marvel at the faithful miracle. Grouped in dread fascination beneath El Capitan in Yosemite, we are linked more subtly.

El Capitan's sheer granite face rises 3,000 feet. Specks of humanity are toiling upward on it. You and I are secure, our feet anchored to earth, our view of the world



IRA BLOCK (LEFT AND BELOW); BILL WEEMS, WOODFIN CAMP

Red cedar glows gold *under the lights at Wolf Trap Farm Park* ***(above)****, the Park Service's first for the performing arts. Tucked into the Virginia countryside near Washington, D. C., the park offers music that runs the range of tastes from grand opera to jazz and bluegrass. Other activities include interpretive programs for children and for senior citizens. Although the amphitheater seats 3,500, many prefer to spread blankets on the sloping lawn outside* ***(far left)*** *and enjoy a picnic with music alfresco.*

Last August, Wolf Trap paid special tribute to composer-conductor Leonard Bernstein on his 60th birthday. Near the end of the program Bernstein climbed the podium ***(left)*** *to conduct for two distinguished soloists, violinist Yehudi Menuhin and cellist Mstislav Rostropovich.*

level—normal. To us, the world of those climbers is frightfully askew; we are disturbed for them, and we stare.

"What if," someone asks a ranger, "a climber freezes in fear and can't continue?"

"A team of expert rock climbers rescues him. Sometimes a helicopter is called in, and we lift him off."

"How often. . . ?"

"Not often. But sometimes we reach a climber in trouble and find that we have rescued him before."

Climbers do fall, yes. Half a dozen have plunged to their deaths. There will be more. "As long as there are mountains," the ranger said, "there will be climbers."

Yosemite may be signaling the future of all parks afflicted with overcrowding and resultant pollution and litter. Its proposed master plan—a draft in which the public participated widely—aims at restoring the natural scene as much as possible. How? By controlling, which means limiting, visitor use.

The plan, which Congress must fund, requires day visitors to Yosemite Valley to leave their cars in parking lots and travel by bus. On busy days they will be turned away once the lots are full. Eventually the Park Service wants to exclude private vehicles from the seven-square-mile valley, which attracts nine out of ten visitors. The park itself spreads across 1,200 square miles.

That's for starters. Overnight-use capacities have been established and will be maintained through the wilderness permit and reservation systems. Only so many can camp out; only so many can occupy rooms. No longer will long lines of cars wait all night for the next day's vacancies.

Further to restore the natural environment, the plan transfers some employee

"I try to make history come alive," *says folksinger Linda Russell* ***(above)****, serenading New York City schoolchildren in Federal Hall National Memorial. The handsomely colonnaded building marks the site of George Washington's first inauguration—as echoed by his statue* ***(right)*** *overlooking the pursuit of happiness on Wall Street.*


OPEN

housing and other structures to locations outside the park. The commercial garage, car rental, and some sportswear and gift shops are to be removed. Also to go: the ice rink, a golf course, some tennis courts, most swimming pools.

Question: Are these long-established recreational facilities completely out of place? For many visitors, I know, they add quality to the park experience.

Over-commercialization received wide criticism in the planning process. It is an old story, and not a simple one. To some, a lodge's shopping bazaar is visual pollution; others like to buy souvenirs of their visit, or a raincoat if they need it.

Concessionaires Clean Up Their Act

In any event, concessionaires are looking closely at their own standards of performance. The Park Service plans to cancel its contract with the biggest concessionaire at Yellowstone because, it announced, the company was providing "unsatisfactory service to the public."

The Yosemite concession has had its own difficulties, and has overcome them. Back in 1974, a great environmental hue and cry arose when the Yosemite Park and Curry Company advertised for conventions. The Curry Company, as it is called, listened. Today it works hard to keep Yosemite as pure as possible.

"We want to be the number one environmentally concerned company in the park system," Edward C. Hardy, chief operating officer, informed me.

He makes an impressive case. The recycling program he originated not only clears away litter but makes a modest profit. Sierra Club teams trek far into Yosemite's wilds to cut up airplanes that have crashed over the years. Part of the recycling income pays for a helicopter to carry the material away in slings, and nature slowly reclaims the site.

The Curry Company razes dilapidated buildings and intends to remove a collapsed bridge. At considerable expense, the company bear-proofs garbage cans and food lockers.

Ed Hardy pays attention to details. Most beverage-can litter was ended by requiring a nickel deposit. The return rate, he told me, astonished him: 75 percent.

He also insists that beverage cans have nondetachable pop-tops. This policy once angered a prominent brewer, Mr. Hardy recalled. "You can't tell me what kind of pop-tops to use," the brewer bellowed over the long-distance phone.

"I told him I agreed with him," the concessionaire said. "I also told him that I didn't want to go around picking up his tops, and therefore wouldn't buy his beer."

A while later the brewer called again. His cans now met the specifications.

During my Yosemite visit, Park Service Director Whalen arrived for a meeting with the service's civilian advisory board. I asked for some of his time, and he graciously conducted me on a tour of the park, which he had served not long before as its deputy superintendent.

We covered many topics during that ride, and I summarize them here.

"You have seen parks injured by overuse," Bill Whalen said. "Yosemite's proposed master plan is a good start, and it points to the solution for all overcrowded parks, hard though that solution may be.

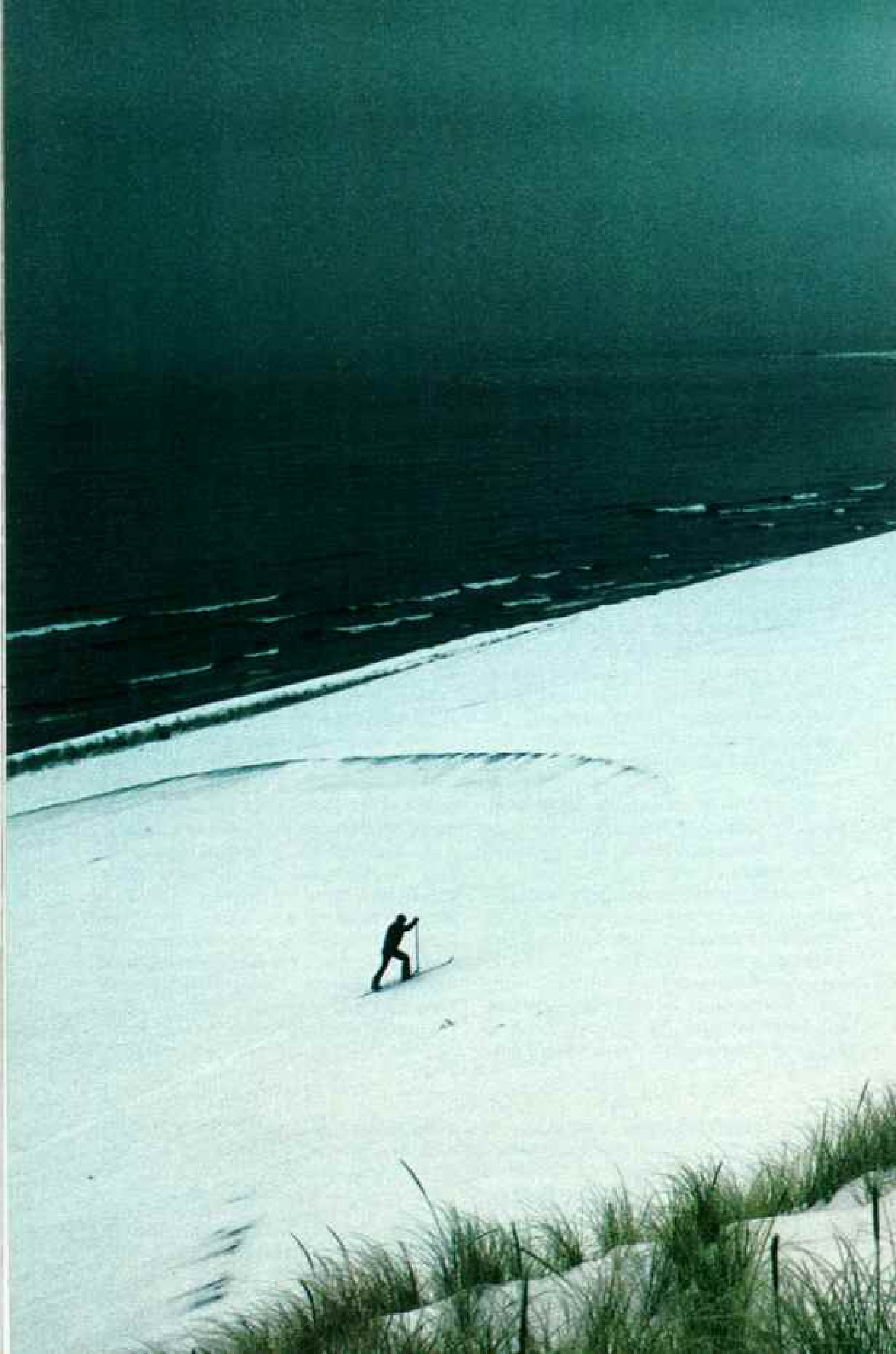
"Concessionaires? In the past they and the Park Service worked together as coequals, as partners. Now we consider it the Park Service's responsibility to direct their operations. The public deserves the same high quality of service from the concessionaire as it demands from us. That is our standard for concession management."

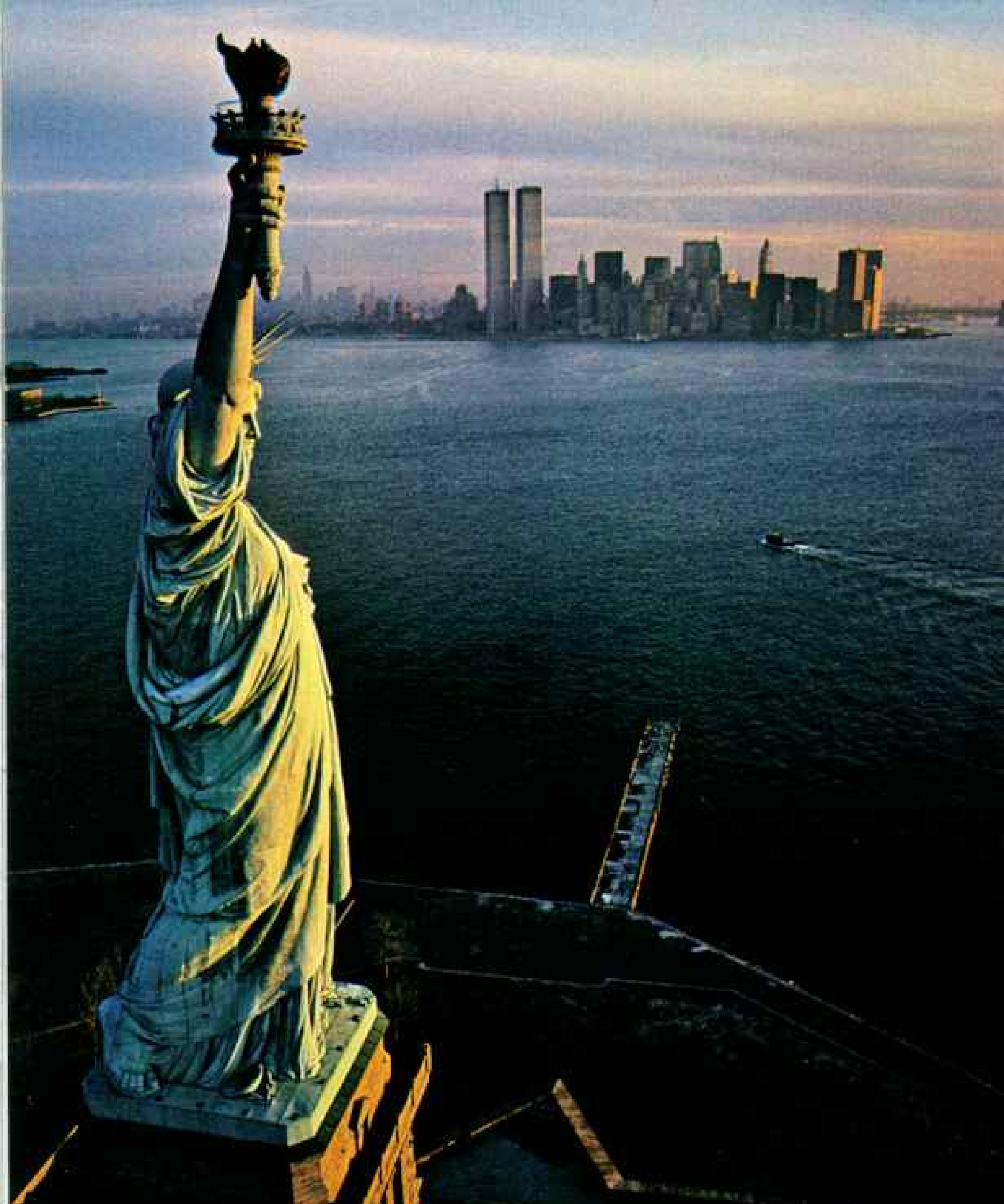
I asked Director Whalen to comment on external

(Continued on page 59)

Second Battle of Gettysburg: *A war of lawsuits was won by an entrepreneur who erected a 307-foot tower—a "monstrosity," cried critics; a "service," claimed proponents—at Gettysburg National Military Park. On Cemetery Ridge, the ranger's talk is free.* CARY WOLINSKY, STOCK, BOSTON

A solitary skier *glides across the beach at Indiana Dunes National Lakeshore* ***(overleaf)****, bracketed by a power plant and several steel mills.*





dangers. He thought a moment, and his words came faster.

"Our parks have been called islands of hope. I wish the people who enjoy them so much realized that almost every park is or will be threatened in one way or another."

Would he explain. . . ?

"Air and water pollution from afar brings insidious destruction," he replied. "Poisonous runoff from mining, for example, or drainage from timber harvesting on adjacent land. Power plants can blanket us with smog, particulates from a smelter rain on us, new highways and houses hem us in. Legal mining damages some parks—look at the huge open-pit borate mine that scars Death Valley National Monument."

All appropriate steps to protect park environments will be taken, he said. Public support would be welcomed. The watchword is vigilance.

As for the Park Service itself, he added, one of his biggest challenges is developing people to fill tomorrow's leadership roles. Most of today's leaders, he explained, began their careers at the end of World War II. They had brought it through lean years. Now it has grown to the point where it affects the lives of people in almost every state.

To help pay maintenance costs, Congress is considering entrance-fee increases proposed by the administration. They would affect 30 parks and some 150 campgrounds, the director said.

As we arrived back in Yosemite Valley, Bill Whalen offered a final thought.

"We're in this forever," he said. "The Park Service is like a family whose size is increasing. As our organization grows, our capacity to love grows too. I'm tremendously proud of the men and women of the Park Service. We still have a long way to go, but we're on our way."

Several years ago, on assignment for NATIONAL GEOGRAPHIC in Oklahoma, I spent some peaceful hours in what was then Platt National Park, now part of Chickasaw National Recreation Area. I had driven south nearly a hundred miles from Oklahoma City across monotonous shimmering plains and welcomed the interruption of the ancient Arbuckle Mountains, a range so worn down that it hunkered on its nubbins where once it had soared like the Rockies.

It was shady among the trees, and cooler along the creeks, and visitors were few. I walked the woodland nature trails and stopped to sip the sulfur springs. Fashionable ladies in sun hats and men in bowlers had come here in their day to take the waters. To protect the springs from overuse, the Chickasaw nation sold the land to the federal government in 1902.

Oasis in a Crowded World

I returned to Chickasaw not long ago in a winter month and again enjoyed solitude. Curious, I thought. Could *this* park be undiscovered? Why not? Nearby towns went about their business, Interstate 35 came no closer than eight miles, the urban hives of Dallas-Fort Worth and Oklahoma City each lay a long drive distant.

I proceeded to park headquarters. Superintendent John C. Higgins waved me to a chair in his office. Where were the visitors? He smiled.

"Up to the start of school," he answered, "it's bumper to bumper in here on a Sunday. Every campsite is taken. We've been using the reservation system for four years."

Then he wrapped up many months of work for me—parks, people, prospects. The whole story.

"The future is here," said Superintendent Higgins. "You can see it. Our increasing number of visitors reflects it.

"People are moving here and commuting to Oklahoma City. The big ranches are being bought up around the park for new homes. Along the superhighway a solid metroplex will spring up from Dallas to Tulsa. Fifty years from now Chickasaw National Recreation Area will be hemmed in."

And, I thought as I left, more important, more needed, than ever. □

Liberty hails the dawn *over New York Harbor and lower Manhattan. Now a national monument, the Statue of Liberty draws almost 1.5 million visitors yearly. Heirs of the immigrants she once welcomed, Americans still yearn to breathe free. Today, in growing numbers, they seek freedom in the national parks.*

Sharing Alaska: How Much for Parks?

Who should control which wild lands in Alaska and for what purposes? The long debate continues.

JAY S. HAMMOND
GOVERNOR OF ALASKA

AN UNFORTUNATE and inaccurate perception of Alaska has emerged from two great propaganda wars waged over the allocation of publicly owned lands in Alaska. In the early 1970's development interests campaigned for land for the trans-Alaska oil pipeline. Recently, environmental forces have been seeking the withdrawal of as much as 125 million acres, even before Alaska receives title to the full 104 million acres promised it at statehood, 20 years ago.

Like the citizens of any state, Alaskans are both developers and environmentalists, with the majority in the middle between these poles. The majority agrees that Alaska should be given some say in deciding the state's destiny. But Alaska's voice has been drowned out in the contests over land disposition.

The common proponent of the developmental and environmental campaigns for Alaska lands has been the federal government. In both instances, Alaska and the American public have been ill served by

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CECIL D. ANDRUS
U. S. SECRETARY OF THE INTERIOR

THERE ARE NOT ENOUGH superlatives in my vocabulary to describe Alaska. I've made four trips there, and each time it overwhelms me with its immensity, its primitive majesty and solitude, and its almost unlimited variety. Alaska is one of a kind.

The U. S. House of Representatives recognized that fact in May 1978 when it voted, 277 to 31, to set aside more than 100 million acres of federally owned lands and waters in Alaska (of a total state area of 375 million acres) as national parks, wildlife refuges, forests, and wild and scenic rivers. The House bill went somewhat beyond the administration's proposal for 92.5 million protected acres.

The trouble began when the Senate Energy and Natural Resources Committee took an ax to major elements of the House bill. Even so, its version was better than no bill at all. During the final days of the 95th Congress last October, I found myself working closely with some determined critics of our plan to try to get a compromise bill passed. It failed to reach

poorly thought-out government solutions.

For example, the pipeline superheated Alaska's economy. When it was completed, it fell to my administration to slow runaway inflation in a state that now has the nation's highest cost of living and highest unemployment rate, the latter running up to 65 percent in some towns and villages. Now the federal government wants to withdraw a third of Alaska in a way that could cool our economy to the point where we could not afford to balance adequate resource protection with adequate resource development. This would be tragic for all interests.

Alaskans are not against providing the resources the nation needs or the greatest extent of protected acreage in the world. We know there are enough resources and land to do both. But we know it must be done properly.

The ecology and economics of Alaska are somewhat different from those in other places. To impose inappropriate economic and environmental standards is punitive to Alaska's people, and, in the long run, to the national interest itself. Alaskans have been distraught over federal incursions. They recall bitterly the bleak history of federal fish and game management, a major incentive in the drive for statehood. They are appalled at the prospects of a return to expanded federal management. They feel outraged that lands promised them 20 years ago have yet to be conveyed. They are dismayed by federal restrictions that depress severely the revenues from the state's nonrenewable oil resources. They are incensed by dumps and waste materials from federal projects that remain strewn from the Aleutian Islands to the Arctic Coast.

NGS PHOTOGRAPHER JAMES P. BLAIR

GOVERNOR HAMMOND

The decisions now before Congress involve the *(See HAMMOND, page 64)*

the floor of the Senate, chiefly because of an Alaska senator's threat to filibuster and thereby block adjournment.

Congress's own deadline, set in 1971, for passage of an Alaska-lands conservation law was midnight December 16, 1978. Unless something could be done to preserve the status quo pending final congressional action, protective land orders that were issued years before would lapse automatically. Mining, mineral leasing, and selection of acreage for other uses would be possible in these priceless areas.

NGS PHOTOGRAPHER JOE BAILEY

SECRETARY ANDRUS

The Interior Department took two quick steps. One order placed most of the 92.5 million acres under a three-year withdrawal from other uses; it helped, but it did not clear away all potential legal issues. The second decision was to ask President Jimmy Carter to invoke the 1906 Antiquities Act and proclaim 56 million especially sensitive and vulnerable acres as national monuments. On December 1 he announced the historic action that permanently set aside these lands subject to modification only by act of Congress.

The President—vocally supported by many members of Congress—carefully explained that his intention was to ensure that Congress would face up to its challenge at an early date. Because national monument designation is more restrictive than any likely law, it gave Congress a powerful incentive to legislate rather than leave major decisions to the Executive by default. By early 1979 hearings were being held on Capitol Hill and prospects were excellent for enactment of a comprehensive law later in the year.

There are sincerely motivated critics who charge that the administration seeks to "lock up" Alaska's mineral, timber, and other economic potential. We respond by noting that the boundary *(See ANDRUS, page 64)*

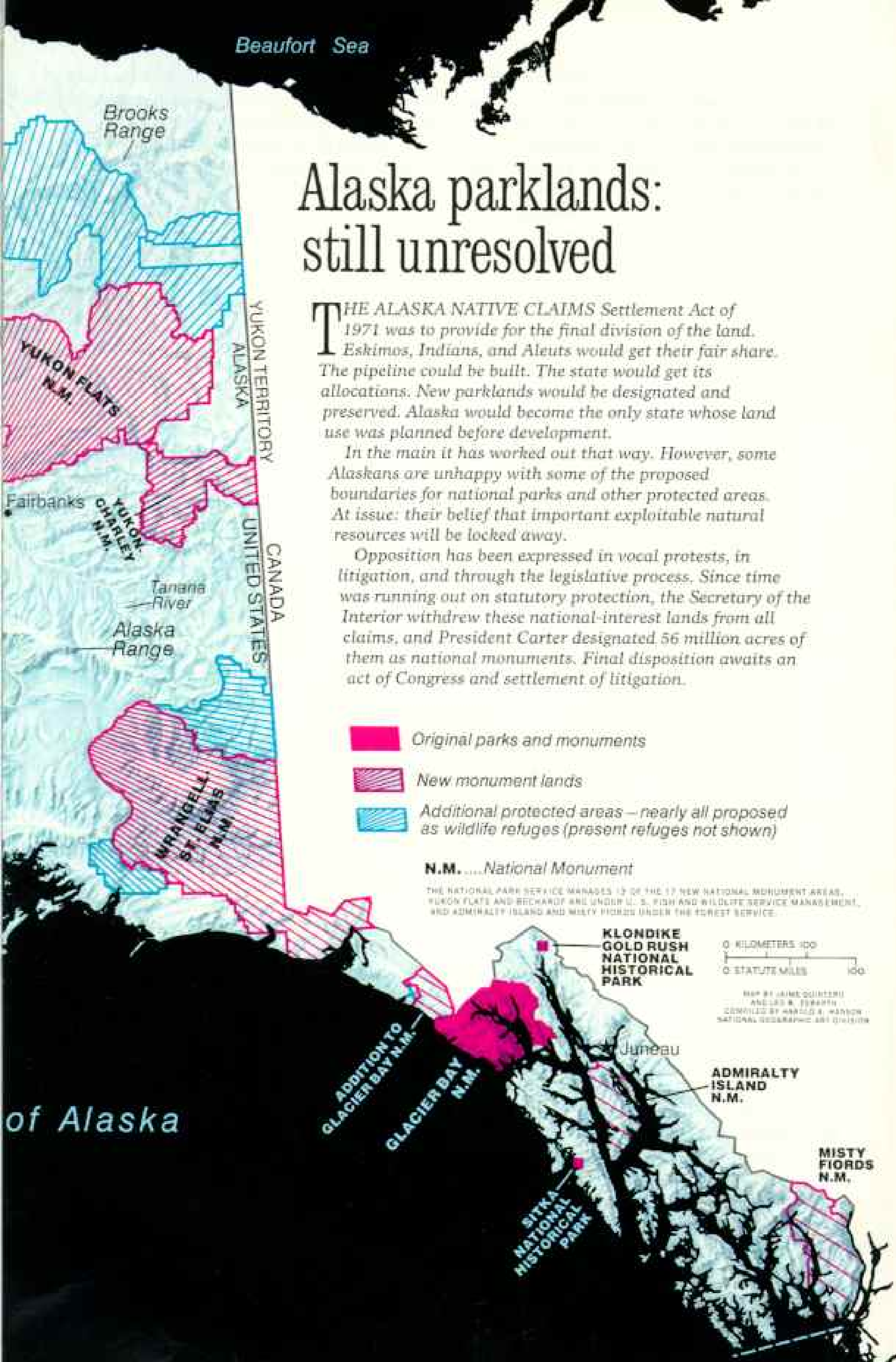
Chukchi Sea
U.S.S.R.
U.S.
Bering Strait
CAPE KRUSENSTERN N.M.
Colville River
Brooks Range
NOATAK N.M.
KOBUK VALLEY N.M.
GATES OF THE ARCTIC N.M.
BERING LAND BRIDGE N.M.
Nome
Yukon River
Norton Sound
St. Lawrence Island
MOUNT McKINLEY NATIONAL PARK
DENALI N.M.
Yukon River
Kuskokwim River
Mount McKinley 6,194 m 20,320 ft
Nunivak Island
Alaska Range
Anchorage
ADDITION TO KATMAI N.M.
LAKE CLARK N.M.
KENAI FIORDS N.M.
Bering Sea
Bristol Bay
KATMAI N.M.
AKHIAKCHAK N.M.
BECHAROF N.M.
Gulf
Alaska Peninsula
Kodiak Island

Alaska parklands: still unresolved

THE ALASKA NATIVE CLAIMS Settlement Act of 1971 was to provide for the final division of the land. Eskimos, Indians, and Aleuts would get their fair share. The pipeline could be built. The state would get its allocations. New parklands would be designated and preserved. Alaska would become the only state whose land use was planned before development.

In the main it has worked out that way. However, some Alaskans are unhappy with some of the proposed boundaries for national parks and other protected areas. At issue: their belief that important exploitable natural resources will be locked away.

Opposition has been expressed in vocal protests, in litigation, and through the legislative process. Since time was running out on statutory protection, the Secretary of the Interior withdrew these national-interest lands from all claims, and President Carter designated 56 million acres of them as national monuments. Final disposition awaits an act of Congress and settlement of litigation.



of Alaska

HAMMOND long-term management of some of the nation's greatest resources, but the debate over land allocation is fraught with emotionalism and oversimplification.

The desire of Alaskans to receive their statehood land grant of 104 million acres is only one consideration of this complex issue. Alaskans are equally concerned over the management of those lands in Alaska that will forever remain under federal ownership. The management of these lands can provide great benefits to Alaskans as well as all other Americans. At the close of the congressional session last year, my administration supported an Alaska lands bill that would have more than doubled the size of the National Park System and more than tripled the acreage in the wilderness-preservation system. That bill, which failed to pass in the closing days of the Congress, would have placed almost one hundred million acres in units of the federal conservation system.

We must also consider the immense size of the conservation units that will most likely be created under any bill passed by the Congress. The need for access across these areas to other federal lands as well as to state, private, and native lands is absolutely crucial. My administration has not supported the arbitrary design of access corridors through these national-interest lands any more than we have supported the arbitrary designations of large wilderness acreages without rational planning and study. But we recognize that the demand for strong mechanisms by which access can be granted if a need arises is critical, especially since Alaska's present transportation system is embryonic.

I will not allow Alaskans to be cast as unenvironmental, or to be pitted against other U. S. citizens. We will not see our land despoiled, but we will see it wisely managed. We wish only for ourselves the rights granted to every other sovereign state, and that the great ethic of conservation—the greatest good for the greatest number over the longest period of time—be applied to the management of all resources in Alaska.

If we allow ourselves to fall into the conflict of Alaska versus the United States, not only Alaskans and all Americans, but the land itself, will emerge the losers. □

ANDRUS lines for national monuments and our other proposals were drawn to exclude the overwhelming majority of those known resources. Under our plan, some two-thirds of Alaska's land will remain open for multiple uses such as logging, mining, and oil and gas development under federal, state, Eskimo-Indian-Aleut, and private ownership.

Furthermore, lands now designated as wilderness can be opened for development in the future. But, with Alaska's harsh climate and fragile soils, lands now clear-cut or strip-mined or opened up with high-grade roads will never regain their pristine character.

The administration also seeks to conserve entire natural ecosystems and watersheds to avoid repetition of the kind of costly mistakes made for more than a century in the lower forty-eight. American taxpayers over the years have had to pay premium prices to buy back from private ownership lands that never should have left the public estate. A prime example is Redwood National Park in California. In Alaska we have a last chance to do it right the first time.

It was not surprising that Americans laughed at Secretary of State William H. Seward's 1867 purchase of Alaska from Russia for 7.2 million dollars. Alaska was cold, far away, and seemed useless. It was dubbed Seward's Folly and Seward's Icebox.

The remoteness that made Alaska into Seward's Folly a hundred years ago protected it from much of the unthinking and unplanned development of America's early years. Today, in a nation where the buffalo still roam only on a handful of ranches and in a few parks, we can still look to Alaska for huge herds of caribou and millions of nesting birds. Alaska still offers the chance to see America as it once was.

We are starting to conserve in Alaska at a time when most land needs little in the way of management to maintain its natural productivity. And we are starting to develop Alaska in a way that should protect much of the state's wild allure for coming generations, while providing important natural resources for the nation.

In Alaska we must not fumble away our last chance to do it right the first time. □

JIM BRANDENBURG

Home from the sea, *sockeye salmon gather where the Kijik River enters Lake Clark. They will fight their way up feeder streams to spawn and die.*

NEW MOUNT McKINLEY CHALLENGE

Trekking Around the Continent's Highest Peak

ARTICLE AND PHOTOGRAPHS BY NED GILLETTE

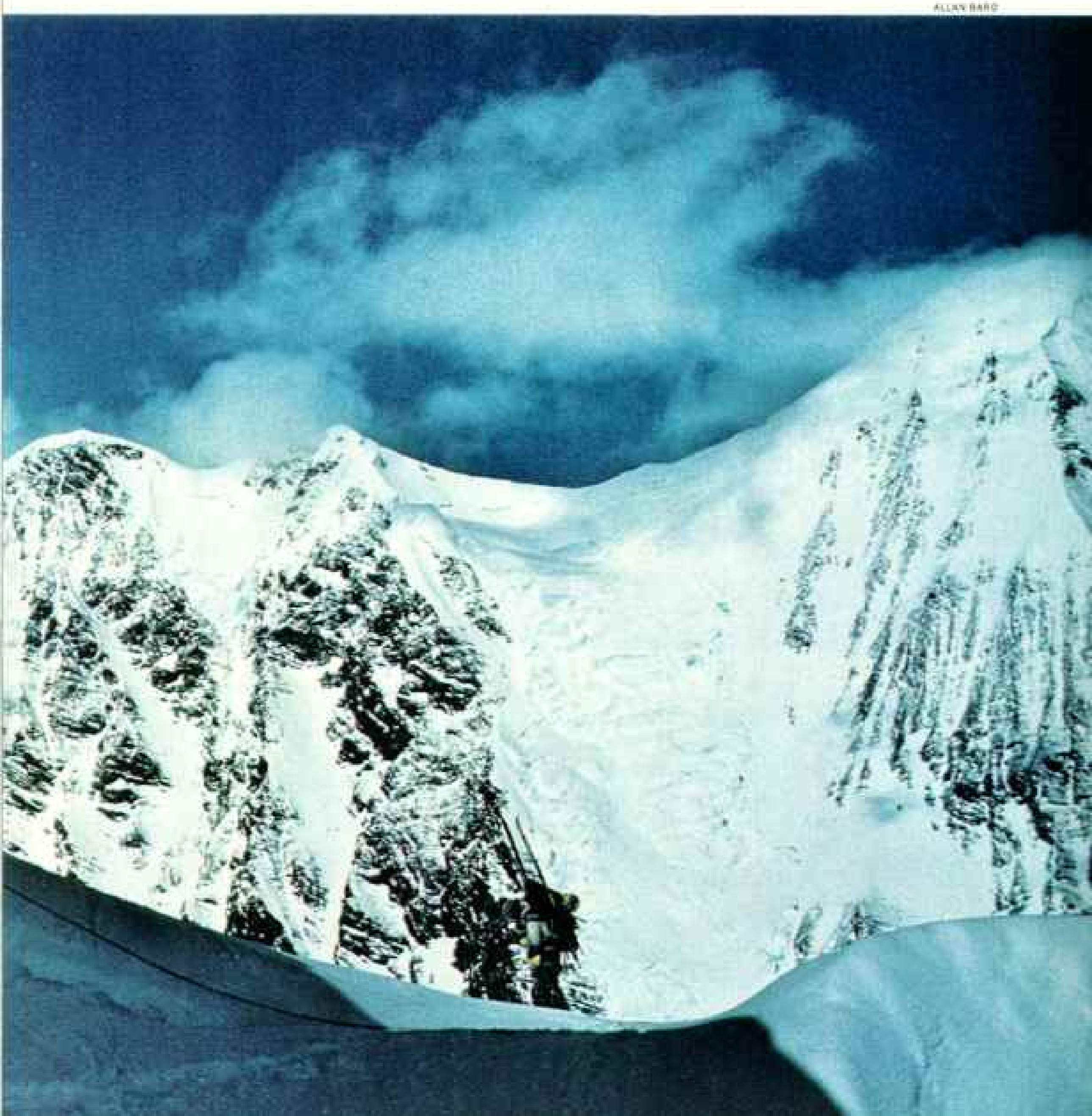
DOUG HAD FALLEN, but we didn't know it yet. When we heard the muffled *whump* as the snowbridge gave way under him, our single thought was: Avalanche! We dived beneath an icy overhang and waited for the world to disappear. Seconds passed in silence. Then Allan realized: "Doug's in a crevasse!"

We ran back toward the fissure, only to see a wavering pair of ski tips rise out of nowhere, then a pack, then Doug, shaken but unhurt. The crevasse was shallow. He had dropped only a few feet. We grinned with relief at the look on his face. But each of us knew; the mountain's gentle nudge reminded us where we were—halfway through a four-man circuit of North America's highest peak, days from any hope of rescue.

At least we were back on level glacier, our toughest challenge behind us. We had crossed the Traleika divide, a massive barrier of ice and rock (**below**). We donned skis, roped up, and headed on.

Hundreds set out to scale 20,320-foot Mount McKinley each year. But attempts at a trip around it have been turned back since 1903, when Frederick A. Cook made a wide orbit. We traveled in the shadow of the mountain itself.

ALLEN BARD



GALEN POWELL (BELOW)

NOTHING STIRS the juices like an early morning slog under eighty-pound packs. Herringboning up Gunsight Pass (***above***), Galen Rowell and Allan Bard trail Doug Wiens over one of four major ridges that separate gentler glacial stretches. Here, briefly, we were freed from crevasse danger and our safety ropes.

Speed was essential from the moment we flew in to a point as close as possible to Mount McKinley National Park. Our supplies were limited, and with April's lengthening daylight hours and temperatures that ranged from minus 20°F to a warm 29°F, snowbridges began to collapse and avalanches increased. Still, we played when we could, as Galen did with this downhill plunge (***above***). Our thin but efficient tent provided Doug (***left,*** from left), myself, Galen, and Allan with wilderness comfort—close quarters, but home.


North Peak
5,934 m
19,470 ft
South Peak
6,194 m
20,320 ft
Traleika divide
MOUNT McKINLEY
PHOTOGRAPH ABOVE
Gunsight Pass
1,999 m
6,560 ft
Peters Glacier
Kahiltna Pass
3,146 m
10,320 ft
Gillette and Rowell return in June to climb the mountain from Kahiltna Pass in one day.
Ruth Gap
3,341 m
10,960 ft
19-day trek around McKinley starts April 7, 1978.
Base Camp

BRADFORD WASHBURN

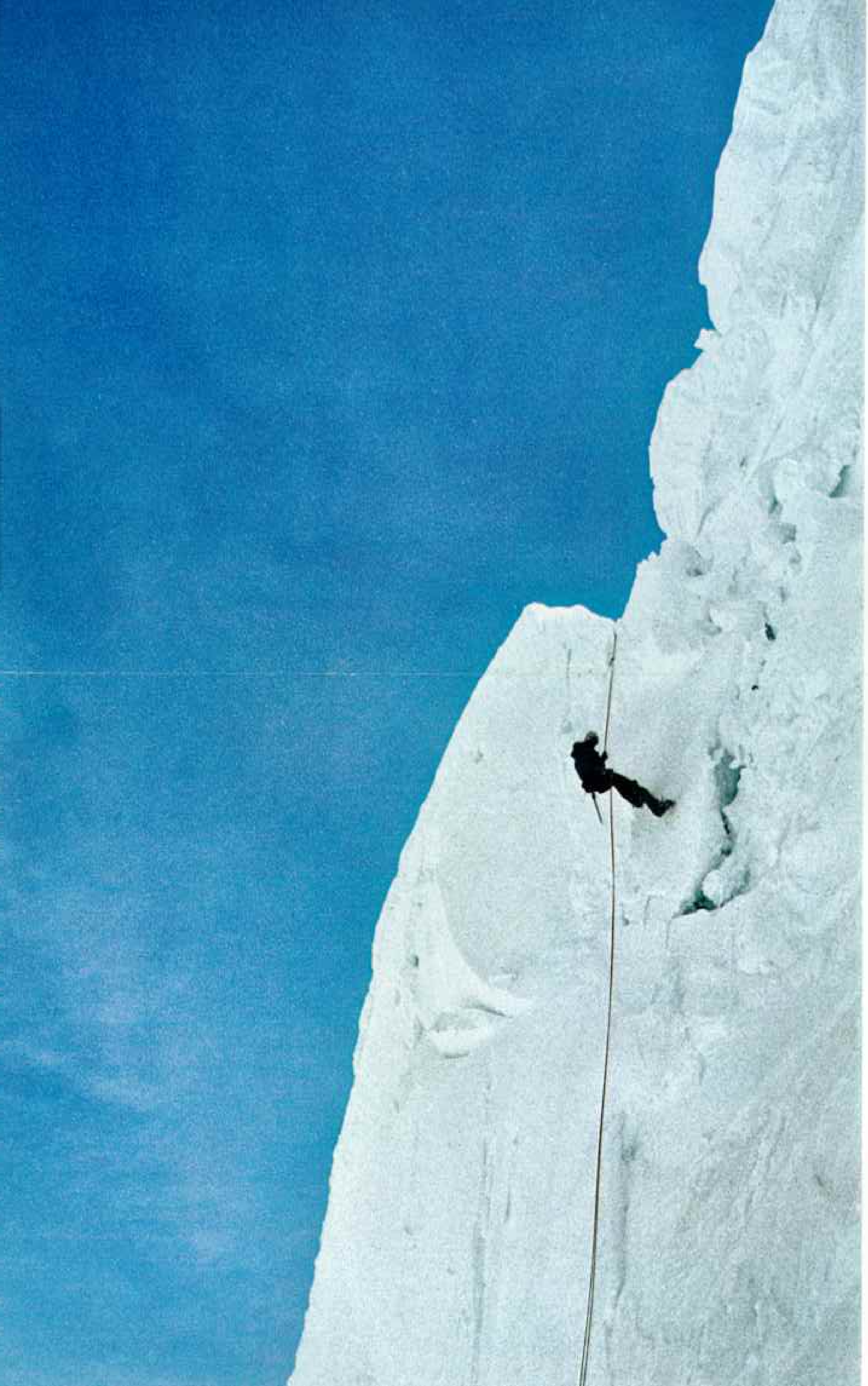
THE CONTINENT'S double-crested crown rises so high that, although below the Arctic Circle, it is sunlit for nearly 24 hours on the day of the summer solstice.

Storms often roiled the peaks—a sign of killer winds aloft—as we skied in sunshine at the base.

You can't leave anything to chance when planning a wilderness expedition, but chance inevitably plays a part. As we had hoped, we found our two prearranged food caches intact. And we felt confident that our light cross-country ski equipment, the sort I use for a day's outing in my native Vermont, could stand up to this harsh environment.

As it turned out, both we and our equipment were to be tested by the terrain—awesome, unforgiving, and beautiful (***overleaf***).

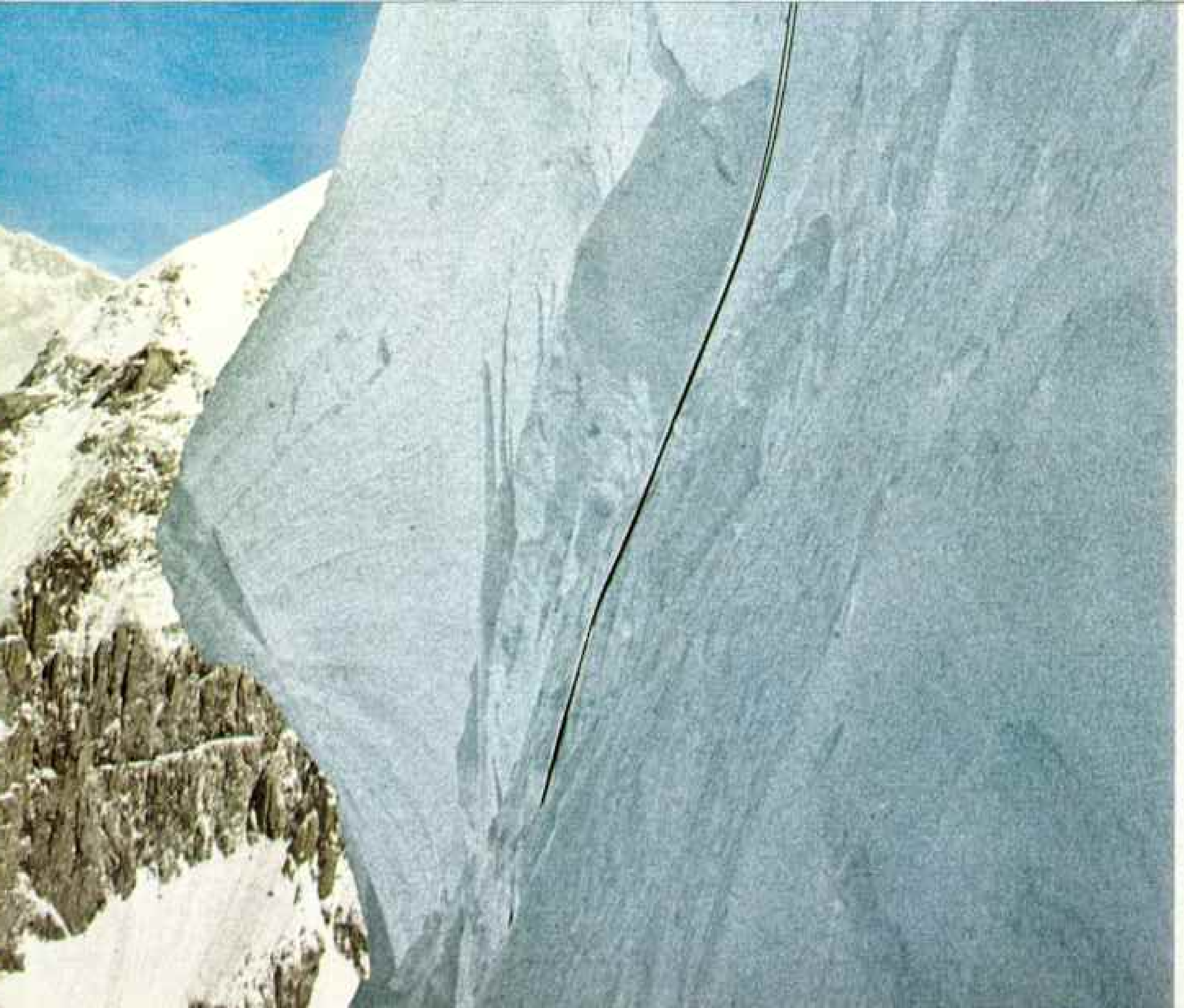
Chance was not to be denied its part. Despite careful plotting with the aid of aerial photographs, the route down from the Traleika divide proved far steeper than we had anticipated. At one point we were forced to rappel and had to abandon our only two ice screws, essential protective devices for ice climbing. The generous loan of two more screws from a well-equipped climbing party we met on our homeward leg enabled us to cross the final ridge safely. Such good fortune cannot be planned.



GRAVITY did the work as Allan rappelled down our last obstacle, an ice cliff near Ruth Gap, after an uneasy night camped in the creaking jumble of an icefall. Beyond and below, a day's ski away, was the place we had left 19 days before.

We skied in silence toward our goal, graver men than those who started on the first exhilarating day. All of us were veterans of other expeditions, but every new encounter with the wilderness reminds us that we are little people in a big country.

Yet as each challenge welded us more firmly into a team, we rediscovered one of

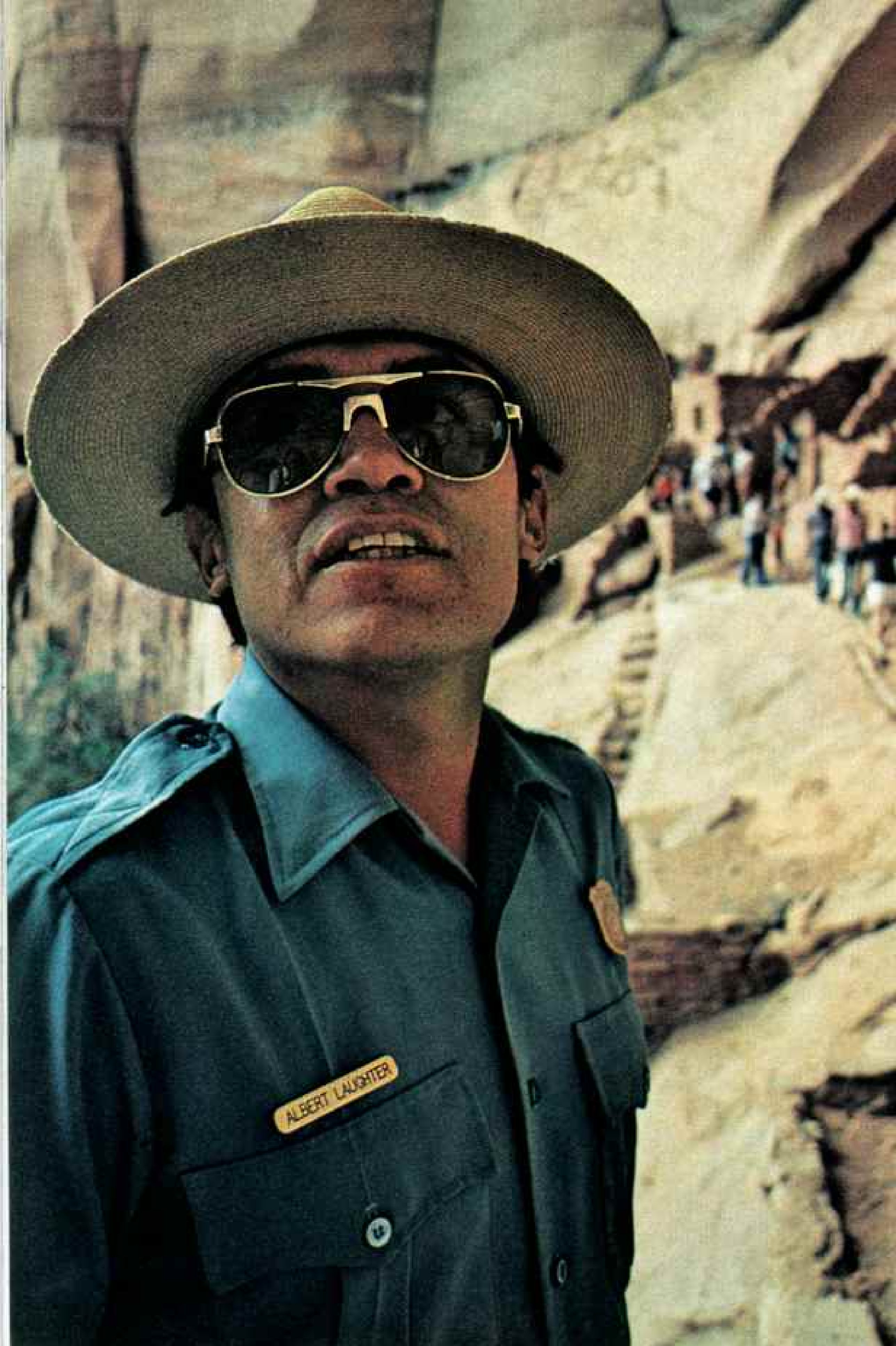


adventure's greatest joys—the friendship that grows within a self-reliant group sharing good times and bad. Some days we huddled in a tent buffeted by gale-force winds. On others we skimmed along in shirt sleeves, warmed by snow glare so intense it can sunburn the roof of the mouth.

We had a fifth companion with us too, the mountain that we now knew from all sides. We felt a respectful intimacy with its granite walls and high, desolate dome, and with the pristine land of ice and rock around it.

Soon after our return, Galen and I went after another challenge—a one-day ascent of McKinley. After a climb from 10,320-foot Kahiltna Pass more exhausting than seemed possible, we stood on the top and gazed at our expedition route, spread beneath us like a map. Its ridges and glaciers gleamed in that frigid sunlight like stairs on a path to the very ramparts of the sky. □

GALEN ROWELL


ALBERT LAUGHTER

NAVAJO RANGER INTERPRETS

Our People, Our Past

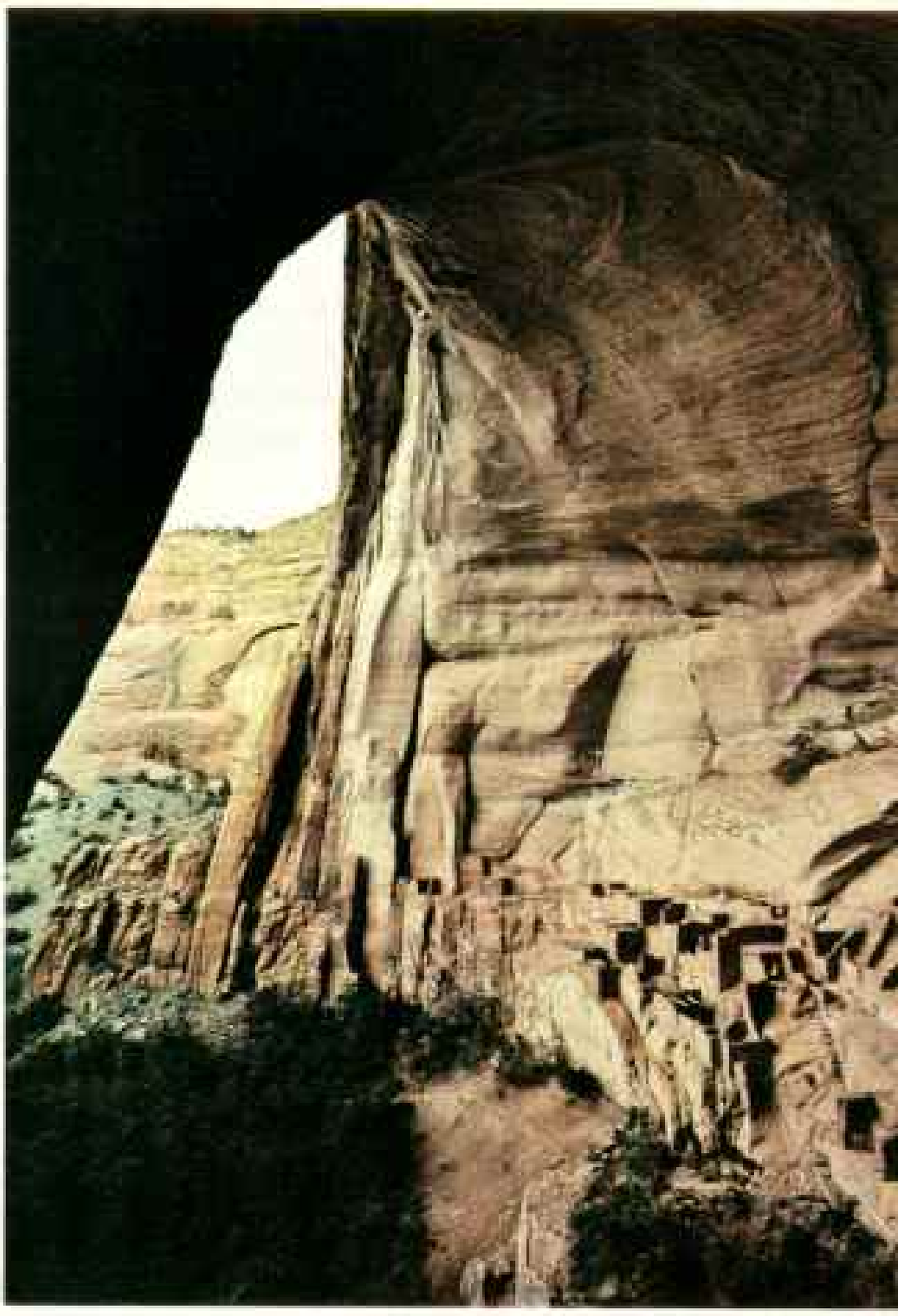
By ALBERT LAUGHTER

THE ROOM was pitch-dark. I pressed my hand against the low adobe ceiling, black from the smoke of open fires. I could almost see the flames, smell the food cooking, hear the music and laughter of a mysterious people who fled these cliff dwellings seven centuries ago.

I was a teenager when I first entered the ruins called Betatakin (***right***), Navajo for "ledge house." Deep in a canyon, a sandstone alcove nearly 500 feet high shelters 135 rooms, including living quarters, granaries, and a kiva, or ceremonial chamber. Since 1909 Betatakin and two similar cliff dwellings, Keet Seel and Inscription House, have been preserved as Navajo National Monument; its 360 acres lie deep within the Navajo Indian Reservation. My family lives at Shonto, four miles from the monument headquarters and visitor center, where I have shared my thoughts with thousands of visitors and led tours to the cliff dwellings.

Who were those prehistoric people? Anthropologists call them Anasazi, a Navajo term meaning "enemy ancestors." But my family has always said Anosazi—"buried ancestors." Many believe they were the forebears of Pueblo Indians like our Hopi neighbors, that drought and soil erosion drove them away by 1300, and that we Navajo, arriving much later, are unrelated to them.

My heart disagrees. From all our spoken history handed down to me through generations, I feel a kinship to



Editor's note: *Albert Laughter, a Navajo teacher, was a seasonal ranger last year at Navajo National Monument in Arizona. He follows in the footsteps of his father, Hubert, who was also a ranger at the monument.*

these vanished ones. Like us, they were Indians. Like them, we learned to survive in this harsh land. My grandmother says they became overconfident and ignored the gods. They went too far and were punished.

THOSE ARE the feelings I tried to get across to our visitors—but Navajo traditions are more than history. Even as I interpreted the ruins last August, my family was bound tightly together during a ceremony called "the Enemy Way."

My brother David had fought as a Marine in Viet Nam, and ever since his return in 1974 he had suffered nausea and dizziness. We felt he was threatened by spirits of the enemies he had shot. He was not himself.

To cure him, we held our week-long ceremony. Much of the activity centered around a hogan, the Navajo log-and-earth dwelling that we built for the occasion (***right***).

During a break, several of us relaxed (left to right): myself, acting as headman; David, wearing his finest jewelry; Leonard Williams, a boy who played an important part in the ceremony; Kelsey Yazzie, my nephew; and Duane, David's son.

To help David rediscover his true self, we threaded throughout the ceremony the relationship of trust and respect among our Navajo clans. At one point our clan exchanged wealth with the clan of a friend named Red Shirt, who lives 30 miles away at Inscription House. In repayment for a buckskin received from his clan, my mother, Mary, spent nearly two weeks weaving a rug (***far right***), one that could sell for between fifty and a hundred dollars at a local auction.

On David's behalf, medicine men made offerings and prayed to the gods for four days. Although David went through many serious rituals, the ceremony had its lighter side—times of dancing, songs, laughter, and feasting. My mother, who was in charge of

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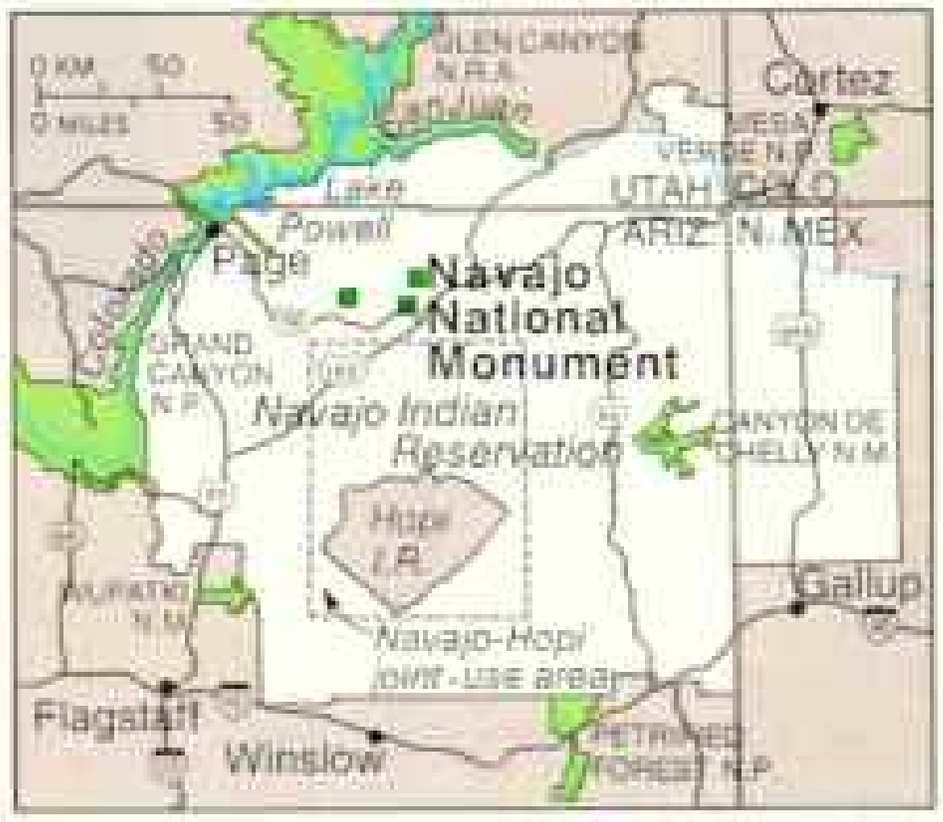
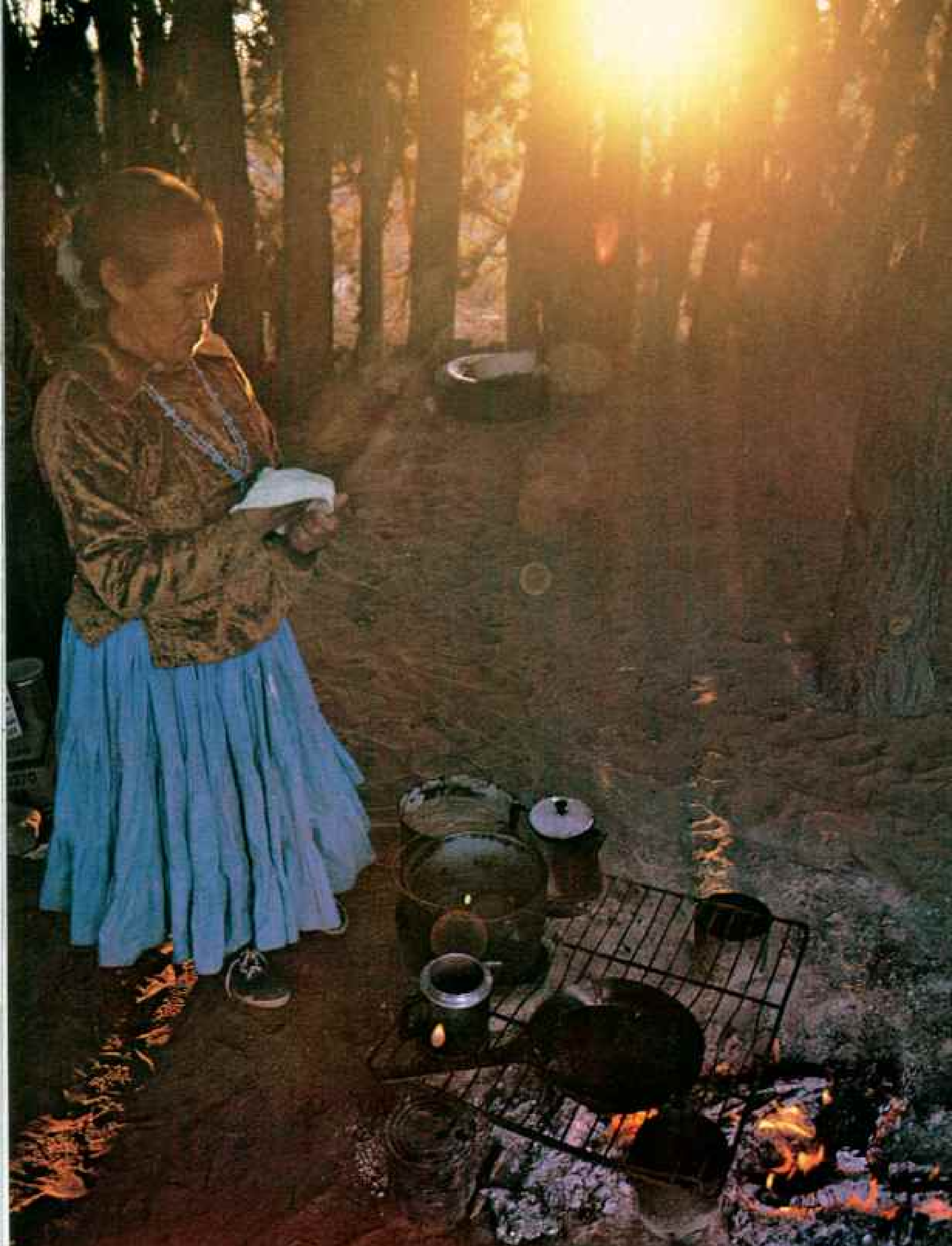




feeding about two thousand hungry mouths, prepared fry bread as part of the hospitality (***left***).

The ceremony was meant to free David of anxieties by "killing" his enemy spirits. The old ways and traditional objects were used. He gained strength from a juniper stick given added power by eagle and turkey feathers. From ancient times our people have believed that to possess something personal of the enemy gives one power over him. In this instance David's uncle had brought home a fragment of bone from a Viet Nam battlefield. Only after this had been destroyed was he cured. It was as if he had come home again.

AROUND a campfire at monument headquarters (***right***), I taught our visitors how to make blue-corn fry bread, just as my mother does: Mix flour, baking powder, blue Indian corn, salt, and warm water. Flatten a piece of dough and cook in a greased skillet for a few minutes, turning once. I also made a plain version, without the blue corn, so they could compare the two (***lower right***). The corn-flavored bread usually won.

The ruins in Navajo National Monument and others at Chaco Canyon, Mesa Verde, Hovenweep, and Canyon de Chelly all seem part of the same heritage. To visitors they may seem like the remains of a lost people, but to me they are like the homes of forefathers. Their life goes on, as in our ceremony for David.

When I am asked, "How did you adapt to our culture?" I say: "I pushed myself to accept it. I live in two worlds. One is yours, and one is my grandmother's. In our hogan these two cultures live together under one roof."

There, although I often eat and dress like the white man, I am called by my Navajo name, *Wóódíí*—Runner. We still call ourselves the *Dineh*—the People. Our skin is still brown like our mother earth. Our eyes are black like the universe at night. Our smiles are like the stars. And we speak like the voice of the wind. □

Smack-dab in megalopolis, Gateway National Recreation Area brings "parks to the

GATEWAY

Elbowroom for the Millions

By LOUISE LEVATHES

"LOOK!"

"Where?"

"Over there."

"But I don't see. . . ."

Just then my binoculars focused on a slender egret standing motionless at the edge of Jamaica Bay. Long, sculptured, it hardly looked like a bird at all, rather a misplaced porcelain vase. As we stared, another white bird, the crook-nosed Concorde, came into view, descending past the twin towers of the World Trade Center in the distance.

The peculiar mix of wildlife and citylife in Gateway National Recreation Area embodies the personality of the park. On another visit, my friend and I discovered a remote beach where terns nest—and thieves sometimes leave the shells of stolen cars.

Gateway is a patchwork park, its 26,000 acres divided into four main units scattered around New York Harbor: Breezy Point on

people." Riders cut across parkland created by fill dumped in New York's Jamaica Bay.

the Rockaway Peninsula, Jamaica Bay, the southeastern shore of Staten Island, and Sandy Hook in New Jersey. Together they offer ocean beaches for swimming and fishing, abandoned military installations to explore, and, at Jamaica Bay, one of the most successful bird sanctuaries on the East Coast—a paradise for bird-watchers and streetbound city schoolchildren.

By subway or school bus, thousands of children visit Jamaica Bay Wildlife Refuge every year. They taste autumn olive berries for the first time, think crickets are cockroaches, and wonder what witchcraft turns mallard ducks' heads green. If they are lucky, they will spot an owl or a rabbit.

"Do you think it's right to use the 12,000 acres of the refuge just for birds and animals when people in Brooklyn and Queens have to live so close together?" ranger Jeanette Parker asked a group of 12-year-olds

NATIONAL GEOGRAPHIC ART DIVISION

Bittersweet baptism, *Sal Cavallero's first dip in the ocean fills him with apprehension. He and other cerebral palsy victims* ***(left)*** *visited Breezy Point as part of Gateway's attempt to involve the handicapped and disadvantaged.*

Despite Gateway's nine-million annual attendance, both the Park Service and many minority groups are pressing for more public transportation to its facilities. Without it, says U. S. Senator Harrison A. Williams, Jr., of New Jersey, "for the 57 percent of New Yorkers without cars, Gateway might as well be in Wyoming."

Fearing disruption from outsiders as well as traffic snarls, some communities near the park oppose such moves.

from Public School 274 in Brooklyn.

"No!" they all shouted at once.

"But, can we live without animals?"

"Well, no. . . ," said a few, a little less convinced. Before Jeanette had a chance to talk about the balance of nature and how important birds are in insect control, they were distracted by a flock of honking brant.

Mother Nature Conquers All

The miracle of Jamaica Bay is not only that snowy egrets and ibises nest near one of the nation's busiest airports, John F. Kennedy International, or that holly, bayberry, willow oak, and wild rose flourish on a garbage landfill. It's also that as attendance has increased, from a few thousand a year to 50,000, so too have the kinds of birds that come and nest—from 63 species in 1953 to more than 300 today.

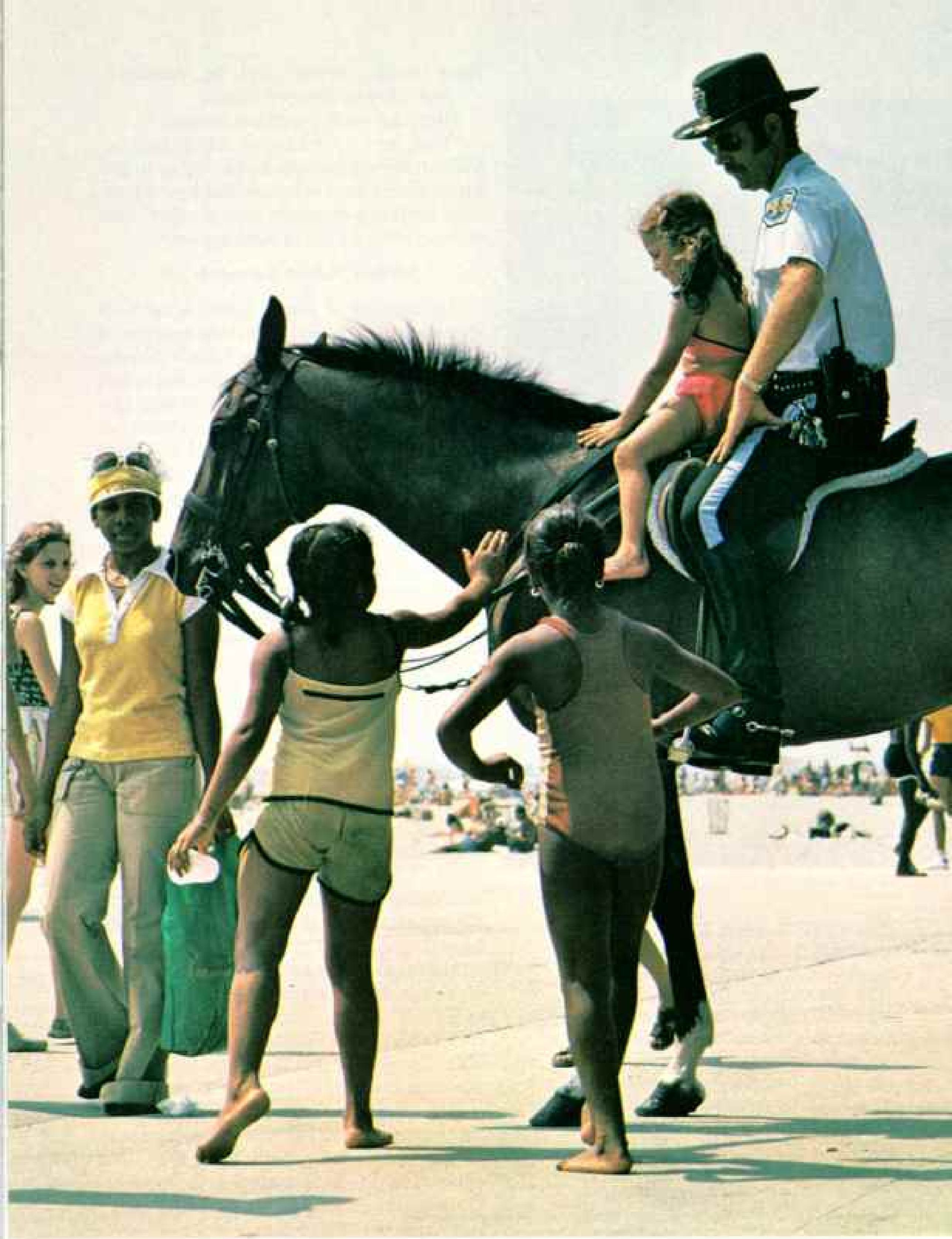
Seemingly, here the National Park Service has met its great challenge in reaching out to urban areas: creating a harmonious relationship between man and nature, despite the strain of intensive use.

The Park Service had been involved in urban areas before Gateway was established in 1972, but nothing on quite this scale. With a budget of 7.8 million dollars, Gateway dwarfed its sister urban recreation area, Cuyahoga Valley in the Cleveland-Akron area, and surpassed Golden Gate in San Francisco (pages 98-105). Developing Gateway fully will cost 300 million dollars or more. Congress recently authorized two new urban recreation areas, Chattahoochee River (Atlanta) and Santa Monica Mountains (Los Angeles).

Although Gateway has only one percent of Yellowstone's acreage, its visitors (nine million in 1978) outnumber Yellowstone's four to one. Such numbers are understandable. Gateway serves the more than 20 million people of the Greater New York area.

But many residents opposed the plan, first announced in 1969, of "bringing parks to the people." In New York City that evolved into federal control of local parks. Opponents would just as soon the parks stayed the way they were.

Staten Island has always been a country cousin to the four other New York boroughs. Nearly a century and a half ago William H. Vanderbilt, son of Commodore



In the lap of the law: *At Jacob Riis Park—a former city beach now part of Gateway's Breezy Point Unit—a park policeman gives a ride. On peak days the beach attracts up to 50,000 visitors. Lost hikers and foolhardy bear feeders are*

no problem at this park—but vandals and drug users are. Many people across the country applaud urban programs of the Park Service, yet some fear new demands may drain revenues from traditional parks.

Cornelius Vanderbilt, ran a 260-acre farm there to provision the family mansions in Manhattan and elsewhere.

"The whole island is like a garden and affords very fine scenery," wrote Henry David Thoreau, who lived there briefly in 1843. The farms have now largely been replaced by modest homes of blue-collar workers. But every spring thousands of monarch butterflies still gather at Crookes Point to deposit their eggs on the milkweed plants.

In a wooded corner of the Staten Island Unit's Great Kills Park, a cabin built by a group of neighborhood boys miraculously escaped the watchful eye of the Park Service for three months. Then ranger Chris Schillizzi had the unpleasant task of telling the boys that the cabin, papered with *Playboy* magazine photos, had to come down.

"We haven't got anyplace to go," one protested. "Everybody always tells us 'Get out of here' and 'Get out of there.' But we built this place and we're going to stay."

"What would you do," Chris asked, "if someone came into your neighborhood and tore down your house?"

"Bust their heads off!" one boy said.

"Well, is that what I should do to you?" Chris asked them.

There was silence.

"To build this, you came in here and tore down a lot of trees and bushes, which was someone's house too," continued Chris. "Suppose all the kids in the neighborhood came in and did this? There wouldn't be anything left of the park or anyplace for the wildlife to live. . . ."

The boys reluctantly took down the cabin within an hour.

Convincing them that having the National Park Service around might be as much fun as a cabin took longer. Gradually they began to participate in park-sponsored programs, such as fishing clinics, bird-watching walks, community garden projects, and photography and craft workshops.

"Staten Islanders have gotten used to thinking of this as their park," said Chris one afternoon as we were walking on Crookes Point. "They're afraid of busloads of outsiders coming into the park who will disrupt the neighborhood."

"Outsiders?"

"Disadvantaged people from the inner

Ecology and technology *reside in harmony at Gateway's Jamaica Bay Wildlife Refuge—a prime example of reclamation. A Concorde* ***(above)*** *takes off from Kennedy Airport, while students* ***(below)*** *bird-watch nearby.*

city," he said. "But I tell them that senior citizens from the north end of Staten Island—their own neighbors—will be on those buses too. . . ."

Chris abruptly stopped walking.

"Shhhh. Listen."

A breeze rustled the goldenrods in the dunes. Just beyond, I heard the sound of waves. I could almost smell the wild herbs.

"No traffic. No noise," said Chris. "That's what Gateway really has to offer the people of New York."

Armies of kids *now bivouac at old Fort Tilden and two other deactivated military installations that make up part of Gateway's 26,000 acres. These Brooklyn youngsters collect spent bullets at the fort's target range.*

Although state and city officials generally welcome Gateway as a chance to unload some costly park responsibilities, Staten Island's State Senator John Marchi has been cautious. As head of the Senate's powerful Finance Committee, he has so far blocked transferring Midland and South Beaches to the National Park Service.

"Can Staten Island afford the social philanthropy of becoming the playground for 20 million people?" he asks. "Let's just wait and see what Gateway does with what they have."

Striped bass, sometimes weighing as much as forty pounds, and bluefish are caught in the surf off Sandy Hook. The dunes and forests of this 6-mile-long sandspit are rich in pokeweed, prickly pear, beach plum, joe-pye weed, and also cedar, which the Lenni Lenape Indians used for boat building centuries ago. The Army later valued its strategic position at the entrance to New York Harbor. A 1764 lighthouse, an old lifesaving station, and the charming Victorian buildings of Fort Hancock remain here today, along with a venerable holly forest and nesting osprey and great blue heron.

Clearly, Gateway has important natural and historic resources to be protected. It also has some areas, however, that require a little more imagination to picture as part of a national recreation area.

On the north side of Jamaica Bay are polluted beaches, landfills, and garbage dumps, and, on the west, weed-infested Floyd Bennett Field, New York City's first airport, later turned over to the Navy.

On the south side of the bay, on the Rockaway Peninsula, there are busy Jacob Riis Park, a former city beach popular with a wide mixture of New Yorkers since 1937; Fort Tilden, an old Army post; and Breezy Point, a lovely windswept beach area—except for a 513-acre private community in the middle of it.

Gateway rangers will tell you that this—not the Alaskan wilderness—is the frontier of the Park Service.

"There are more crises here in a day than in most national parks in a year," Deryl Stone told me.

The day I met Deryl, he was trying to find bathroom facilities for 300 Boy Scouts camping at Fort Tilden. Most rangers here

frankly admit they have more experience with wildlife than with portable toilets.

But they're learning fast. Park personnel regularly remove stripped and stolen cars from remote beach areas. At Breezy Point alone, 162 cars were removed in 1974, soon after the Park Service took control from New York City.

With two or three arrests each weekend during the summer, mainly for disorderly conduct and narcotics violations, Riis Park poses a challenge for its rangers and contingent of park police.

Bathing areas at the beach have been more or less self-segregated for years. Families, blacks, Hispanics, whites, senior citizens, teenagers, homosexuals, and nudes congregate in specific sections of beach. Beachgoers usually self-monitor the groupings peacefully. Nonetheless, strangers unaware of the arrangement have had problems. Last summer a black teenager was severely beaten by a group of white youths when he sat down on "their" beach to read a book.

Keeping order in packed Jacob Riis Park—50,000 bathers on a peak summer day—is child's play for the Park Service compared to the task of coming up with a Gateway master plan satisfactory both to the surrounding communities and to the metropolitan area as a whole.

Surrounding Gateway's Breezy Point Unit are proud, fiercely protective Jewish, Irish, and Italian neighborhoods, whose families have lived there for years. They are determined not to go the way of central Brooklyn neighborhoods, plagued by crime. In 1971, when former President Richard Nixon toured the proposed park area by helicopter, the mothers of Breezy Point made a brown paper sign thirty feet long that read: Our Children Are Safe Here.

"We can live with Gateway, but we don't want to be devoured by it," said John J. Carroll, attorney for the Breezy Point Cooperative, a community of 2,800 homes in the middle of the park sometimes called the Irish Riviera.

Members of the cooperative, mainly summer residents, oppose overnight adult camping at the Breezy Point Unit and label as "destructive" plans to double peak use on a given day to 200,000.

"Look what happened there on July 23," warns Carroll.

July 23, 1978, was a particularly hot Sunday, and huge crowds—some say 200,000—swarmed Jacob Riis Park. When it came time to go home, no one could move.

There was some drinking and some uninvited picnicking on lawns. Traffic backed up for miles. Windows of buses were broken. Drivers were assaulted. It was after midnight before the last people were able to leave the park.

This, of course, is not what the Park Service has in mind. To begin with, they would like to spread people throughout the Breezy Point Unit. And then eliminate some of the cars and traffic congestion with improved mass transit.

Park's Success Rides on Transit Plans

Mass transportation is the key to bringing all these bits and pieces of park together and making it accessible, as Congress had hoped, to inner-city people with limited recreational opportunities. Transportation is also the most sensitive issue in the Gateway planning process. The potential is there to make Breezy Point a 38-minute boat ride from lower Manhattan.

Current plans call for the extension of two city bus lines and for express bus service from Newark to Sandy Hook. All would be financed in part by funds recently authorized by Congress to improve access to U. S. parks. Water transportation is still at the discussion stage. Meanwhile, some Gateway communities vow a fight to the end to keep the buses off their streets.

The inner city, meanwhile, has not been silent. Minority groups are as interested in jobs and business opportunities at the park as they are in Gateway's beaches and ball parks.

"We want our piece of the pie," said Al Wood of the Central Brooklyn Coordinating Council, which represents 125 civic and business organizations.

Two years ago the Park Service set employment goals for women and other minorities at 40 percent by the end of this year. In addition, they promised to notify such groups of all available park concessions and contracts. Gateway also initiated Job Corps and Youth Conservation Corps programs to

help relieve the high unemployment among New York City youth.

In a special program Gateway arranges visits to the park by groups of handicapped, senior citizens, and others who might not otherwise be able to get there. Rangers specially trained to work with the handicapped pushed excited New Yorkers in wheelchairs to the edge of the Atlantic last summer, carrying some into the surf, where tears of joy mixed with salty water.

An entire beach facility with picnic and play areas is being designed for the handicapped at Fort Tilden. Also, in the Breezy Point Unit, rubble from demolished, never-completed buildings will be shaped into hills with walking trails.

The old military facilities at Fort Hancock on Sandy Hook and Floyd Bennett Field will eventually be converted into year-round activity centers offering interpretive programs dealing with man and his environment.

Energetic Dr. Rene Dubos, a member of the Gateway Citizens Committee, which has been influential in planning the park, envisions a "Gateway to Gateway" at Floyd Bennett Field to help orient visitors. They would be led from audiovisual presentations about nature in the old hangars to landscaped, seminatural environments around the landing strips, and finally to the marshes and fields of Jamaica Bay.

Gateway's color-coded plans, five years in the making, are beautiful, but Superintendent Herbert Cables hasn't yet iced the champagne for a grand-opening party.

"Transportation is crucial. We have to get people from the inner city to the park, but local residents don't want new bus routes

An explosive end *comes to unfinished condominiums near Fort Tilden, winning cheers from citizens who fought and won the battle to clear the site for parkland.*

bringing outsiders through their neighborhoods. We need time to work out a solution—and get the funding in hand. Until then the full potential of the park won't be realized."

Last fall I took a helicopter tour of Gateway with Superintendent Cables. As we flew over Staten Island, he said he was disturbed at the slow progress the city was making with a new sewage pipe through the center of Great Kills Park. Bulldozers had cut an unsightly wound through several of the park's baseball diamonds.

Another Urban Crusade?

Admittedly, Gateway has its problems. Still, this scattered recreation area was the only truly free land on New York City's waterfront when the National Park Service came on the scene. The beaches weren't choked with concrete as they are on Coney Island. The underbrush was winning its battle with the crumbling gun batteries at Sandy Hook. It was an enormous achievement just to secure these diverse lands for a national recreation area.

Without the perseverance of the late New York Congressman William Fitts Ryan and others, Gateway might have become new runways at Kennedy, or low-income housing developments in Brooklyn, or a deepwater supertanker port at Sandy Hook.

Gateway has not been an easy assignment for the Park Service, but it will certainly not be its last urban crusade.

"Gateway has whetted my appetite for urban areas," Park Service Director William Whalen told me.

"That's where the Park Service belongs. That's where the people are." □

Rubble from the condemned buildings will become landscaped hills overlooking 4.5 miles of beach, which adequate transit could make accessible to the area's millions.

MARK LOUSAUS

GOLDEN GATE

Of City, Ships,

By DAVID S. BOYER

and Surf

NATIONAL GEOGRAPHIC SENIOR WRITER

Suspended in fog, *San Francisco's Golden Gate Bridge staples two sections of the 38,600-acre Golden Gate National Recreation Area. Including a 28-mile stretch of prime shoreline, this new urban parkland, put together by Congress in 1972, includes former state and city parks, military installations, and holdings purchased from private owners and conservation groups.*

"ARE THERE TIGERS up in those trees, mister?"

The youngster's eyes were wide and white. Staring into a forest, just across the Golden Gate Bridge from San Francisco, he stammered the question to a National Park Service ranger.

At last, sure that there were no terrible wild animals, he and his classmates from an inner-city school started up a forest trail, though still a bit uneasy, still peering nervously into that dark and unknown jungle of coast redwoods.

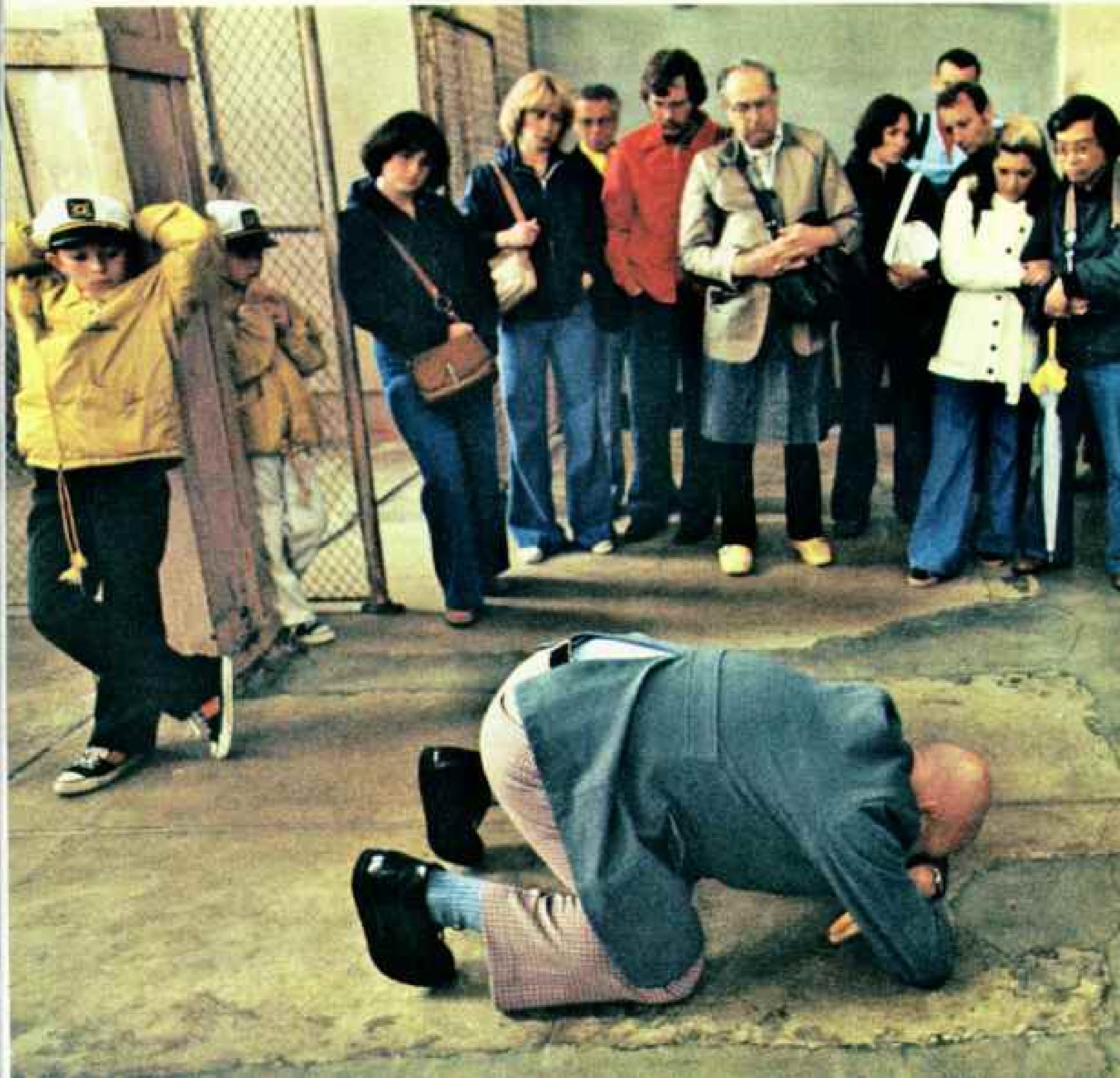
The ranger turned to me, his smile half sadness:

"You hardly know what to say to these kids. They live in some of the most dangerous environments in the United States—poverty, traffic, drug use, crime. But what scares them are forests and mountains and the ocean. They've never seen them before. And that's amazing, because they only live an hour's ride away from them all."

Without realizing it, that ranger had said a great deal about the National Park Service's new direction in park planning: urban recreation areas. Both Golden Gate National Recreation Area and Gateway were founded in 1972 as the first of the urban national recreation areas.

On an excursion boat in San Francisco Bay, Golden Gate Superintendent Lynn Thompson told me more. Lynn is an Ivy League-graduated-and-accented administrator who loves this western city.

"The idea," he said, "is to sponsor a new



kind of city experience for everyone—for tourists, yes, but mainly for the people of the cities themselves. Tens of millions of urban Americans have no automobiles, to say nothing of money, to travel to Yosemite or Yellowstone or the Great Smokies. Tens of thousands of San Franciscans don't even have bus fare to ride out to our beaches.

"But cities themselves, and their outskirts, can be marvelous if you can just take advantage of them. And around San Francisco we've got an ocean, mountains, rivers, and forests. And forts from the Civil War era and historic ships anchored in the harbor. Even this—a spooky, ruined prison."

Tourists End Up in Prison

Our boat slapped into a dock under a rusting guard tower on the island of Alcatraz—sometimes called America's Devil's Island. Here, sometimes not even allowed to talk, sometimes in solitary confinement, lived some of America's most notorious criminals.

Alcatraz? Part of the National Park System?

Well, it's probably the most compelling attraction in one of the biggest tourist towns in the nation. Nearly 150 of us had squeezed in for this boat trip and, by the end of the day, some 1,350 had landed on the Rock, to shudder their way through crumbling cellblocks and into lightless, cold steel cells that once incarcerated such infamous Americans as Al Capone, "Machine Gun" Kelly, "Doc" Barker, and Robert Stroud, the "Birdman of Alcatraz."

I joined a tour group clustered around Russ Wilson, one of the young National Park Service ranger-guides steeped in prison lore. Russ explained how Alcatraz—a federal prison for nearly thirty years—had begun as a fortress, guarding the harbor with big guns of the U. S. Army.

"In the 1850's they were trying to protect the fabulous wealth of the California gold rush against piracy or possible capture by foreign powers. Then, in the early 1860's, the guns were readied in case the Confederacy threatened San Francisco."

It was this fear of attack that preserved much of the Golden Gate Recreation Area for the people of the 1970's. For a century the Army maintained a veritable Maginot Line of fortifications in the cliffs and mountains above the harbor. Now several thousand acres of that land fall within the boundaries of the park.

Most of this new playground includes unspoiled lands running north from the Marin Headlands—a glorious stretch of rolling hills, ocean beaches, patches of near

*"**This is how it was,"** says Frank Hatfield (**left**), formerly Alcatraz prisoner No. 1296. Convicts thrown into the Hole—steel-floor solitary confinement—slept on knees and elbows to conserve body warmth.*

*A lift from a friend (**right**) helps muscle things along at an exercise course on the Golden Gate Promenade.*

BOSS BRIMBERG (FACING PAGE)

wilderness, and forests of redwood and oak.

"That's the miracle of Golden Gate—near wilderness within an hour's drive of San Francisco," said a Park Service official.

But the recreation area also encompasses some of the most intensively used land in the entire National Park System. Golden Gate teems with activities: hiking, camping, hang gliding, horseback riding, running, sailing, fishing, swimming, surfing. And not only outdoor sports; visitors also enjoy painting, sculpture, acting, music, dancing, folk festivals, children's arts and crafts, and classes on everything from photography to speed-reading.

There is no precise count, but the Park Service estimates that some 11 million people visited Golden Gate last year—almost the number that visited Great Smoky Mountains National Park, the nation's most visited national park.

Few city dwellers have the natural advantages that San Franciscans enjoy. Besides adopting a scenic wilderness deemed surplus by the Army, they have fallen heir to parklands from the city of San Francisco and the state of California, as well as other areas that had been preserved by conservation organizations and by individuals.

In addition, there is beautiful Point Reyes National Seashore to the northwest, some 67,000 acres of grandeur in cliff and beach,

NATIONAL GEOGRAPHIC ART DIVISION

***Every masterpiece** starts out this way: London Copening ponders the infinite possibilities inherent in a blank piece of paper at the San Francisco Children's Art Center, which offers programs in the arts and humanities at the Fort Mason Center cultural complex. Free or low-cost classes in onetime Army warehouses muster the old, the poor, the handicapped, the young, and the simply curious. All can share in new opportunities made available by the imaginative use of existing structures on parkland.*

mountain and forest, birds and mammals. The two parks are often considered extensions of one another, but are administered separately, with Point Reyes maintained primarily as a natural area, rather than for recreation.

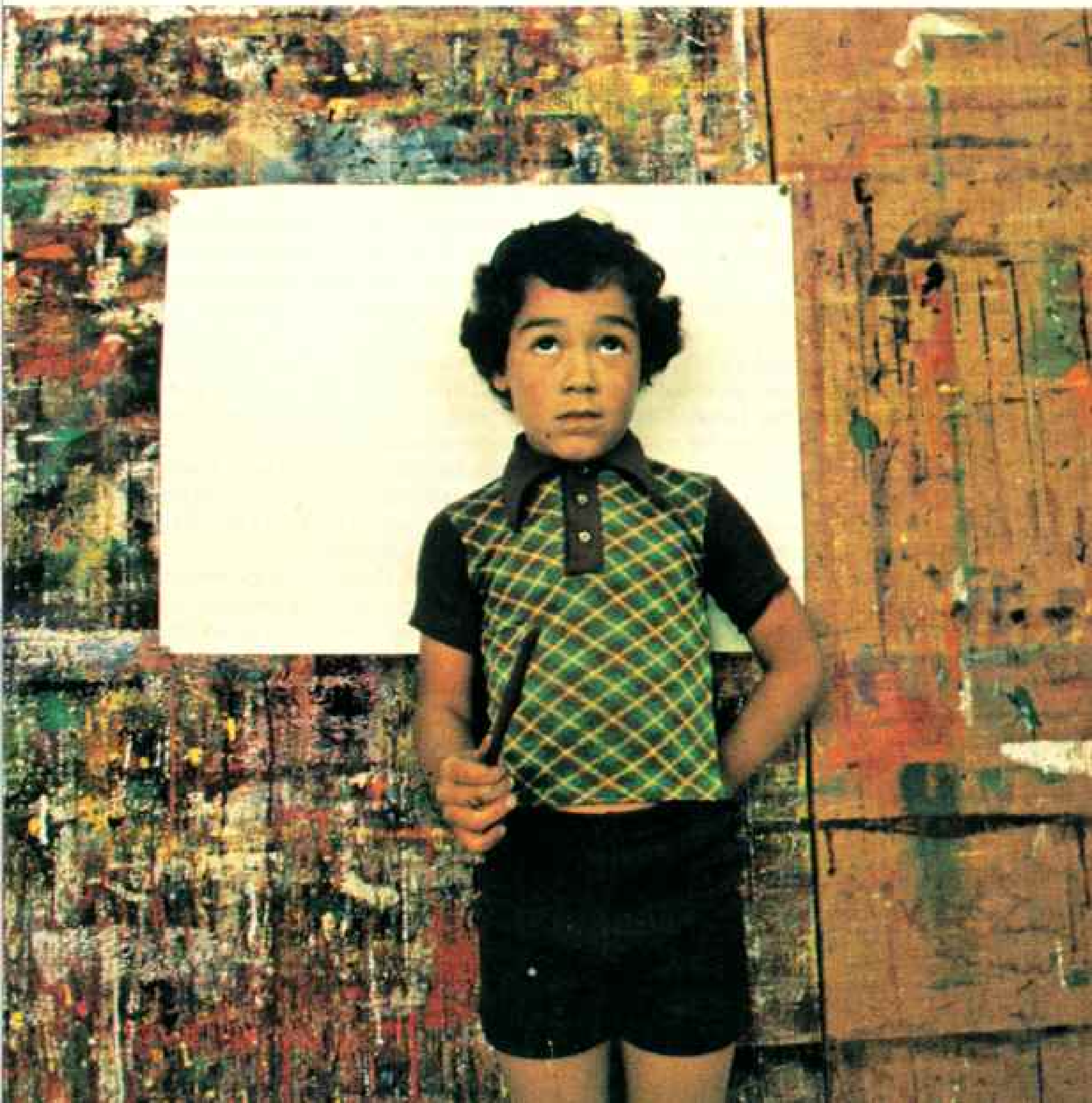
The far-flung riches of the Golden Gate Recreation Area include some 1,700 buildings—houses, restaurants, warehouses, forts, office buildings, and the prison.

With Lloyd Smalley, director of the private, nonprofit California Marine Mammal Center, I peered through broken windows into a cavernous old Army building at Fort Baker, beneath the Golden Gate Bridge.

"They used to store mines and submarine nets in those big concrete pools," Lloyd said. "But they've gone the way of the big coastal guns. Obsolete. Now the Park Service has given us the use of the pools, for keeping porpoises and seals. These creatures have been cast ashore along hundreds of miles of California coast.

"This building next door we'll make into an animal hospital and laboratory. After we diagnose the creatures' illnesses, treat them, and study them, we release them back to the sea. The public will be able to observe—and volunteers can even help—the whole process here."

Other nonprofit groups are launching ever more projects for inclusion in the



National Park Service's Golden Gate city experience. Portions of the Army's historic Presidio—two beautiful square miles of forests and historic sites—have officially become part of the park, and even more of the 200-year-old post may eventually find its way into the hands of the Park Service.

Near park headquarters at Fort Mason, the bustling Fort Mason Center cultural complex has sprung to life, quite incongruously, in old warehouses and pier buildings through which soldiers and supplies were shipped out to the Pacific theater during World War II.

When I stopped by, workmen and volunteers were busy dividing some of the old structures into classrooms and workshops and theaters—space for students of the arts as well as for festivals, fairs, art shows, and public meetings. Virtually all of it is being supported by San Francisco-area colleges, private foundations, business firms, and civic clubs.

While I was visiting Fort Mason Center, director Ann Howell told me that there was even some interest in opening a "halfway house for mental patients learning to reenter society."

A halfway house in a National Park Service recreation area?

Well, yes, and I could see why. "Parks to the people" became the slogan a decade ago when Secretary of the Interior Walter J. Hickel began speaking out for the creation of new national parks in urban areas. He gave a crucial push to the "people" behind the park idea when he directed the Bureau of Outdoor Recreation to come up with plans for the land bordering the Golden Gate. And in San Francisco it has been the people themselves who have largely decided what that catchy slogan would mean.

Community groups of every kind appear regularly before the park's Citizens' Advisory Commission. Thousands of people were polled on what to do, for example, about that grim rock Alcatraz. The verdict: Stabilize it as a historic ruin in "arrested decay."

Alcatraz, in fact, was near the heart of the matter during the years when the concept of urban recreation areas was taking shape.

In 1963 Alcatraz was abandoned as a federal prison. The yearly cost per prisoner had risen to $6,550; virtually everything—even fresh water—had to be transported to the Rock by boat.

For years the vacant prison moldered, until American Indians occupied it in 1969. They offered the government $24 in glass beads and red cloth as payment, claiming the island for an Indian cultural settlement, and as the native Americans' symbolic reprisal for the loss of a continent. The few remaining Indians finally were removed from Alcatraz in 1971.

"That came on the heels of the riots in the cities in the late 1960's and early '70's," said Dr. Edgar Wayburn, San Francisco physician and a prominent member of the Sierra Club. "It coincided with the Army's quandary over what to do with thousands of acres of militarily useless land around the Golden Gate Bridge."

With local congressmen, led by farsighted Phillip Burton of San Francisco, pushing for a park, Dr. Wayburn and fellow conservationist Amy Meyer spearheaded a citizens' coalition. Called People for a Golden Gate National Recreation Area, it included some 65 groups. As Dr. Wayburn explained:

"The coincidence of these events gave conservationists the opportunity to campaign for what we'd long been asking for—a great national urban park stretching from San Francisco to the tip of Point Reyes."

The rest is history.

At Golden Gate, as at Gateway, park officials and supporters are focusing on an issue vital to the success of both parks: improving mass transit to make the parklands available to the tens of thousands of inner-city residents who need them most.

One thing is certain: Whatever directions urban national recreation areas may take, they will have a prime exemplar: the park of the city of the Golden Gate. □

A revelation of sea and sky *at continent's edge unfurls below George Whitehill's hang glider. Golden Gate's cliffs, dunes, forests, and ocean provide the sports-minded with a ready-made playground. "What's attractive about the park is what's already there," one park official says. "Our job is really to polish the jewels."*

The guns of a distant April *trigger Civil War memories at Shiloh National Military Park, a scrap of Tennessee ground witness to a bloody two days in 1862. Casualties numbered almost 24,000; both sides claimed victory. The National Park System contains scores of battle sites and forts, including some two dozen from the Civil War.*

Echoes of Shiloh

By SHELBY FOOTE

GREEN—FIRST THE TENDER, then the deeper green of woods and fields, of grass and leaves, from early spring till nearly Christmas—is one of the two dominants at Shiloh for three-quarters of the year.

The other stays year round: the biding sense of all that happened on these six square miles of Tennessee earth during two early April days, nearly 120 years ago, to alter the destinies not only of the hundred thousand men who fought here, including almost 24,000 casualties, Union and Confederate, but also of those who came after this event, which changed (or, better, failed to change) the course of American history.

Located on the west bank of the Tennessee River, one hundred miles east of Memphis and twenty miles north of Corinth, Mississippi, Shiloh National Military Park is among the best preserved of all our major Civil War battle sites—in part because there was so little *to* preserve of entrenchments, redoubts, and other such "improvements" usually made by troops on ground where they expect to fight. Their absence is very much a part of the story of this first great bloody conflict of that war.

The park today resembles nothing so much as it does a 3,772-acre picnic and recreation area; indeed, it was chosen for those qualities, in March of 1862. A "magnificent plain for camping and drilling," the division commander who selected it—red-haired William Tecumseh Sherman of Ohio—informed his chief, Ulysses S. Grant, after a reconnaissance. Grant's army was driving south, against an adversary on the run since Forts Henry and Donelson fell the month before, up near the Kentucky border.

Five of Grant's six divisions, some 42,000 effectives in all, came up the hundred-foot

yellow-clay bluff at Pittsburg Landing, where peacetime river packets had unloaded their cargoes for Corinth. (Some two miles inland stood the log chapel that later gave the battle its name.) The creek-flanked plateau was rather heavily timbered, except for random twenty- to fifty-acre farm clearings that were to serve as drill fields. The sixth division was six miles downstream (north), and Grant's headquarters were three miles below there. He commuted daily by steamboat to supervise training while awaiting orders to push on south again as soon as his men were joined by 30,000 more under Don Carlos Buell, now on the march from Nashville.

Grant's objective was Corinth, where the Rebels were reassembling to protect the Memphis & Charleston Railroad, the only all-weather supply line connecting the lower Mississippi Valley and the Eastern Seaboard. "The vertebrae of the Confederacy," a former Confederate secretary of war had called it. Grant was eager to move out, but his superior, Henry W. Halleck, cautioned from department headquarters in St. Louis: "Don't let the enemy draw you into an engagement now. Wait until you are properly fortified and receive orders."

Grant rather agreed with one hard-bitten division commander about fortifying: "Our men suppose we have come here to fight, and if we begin to spade it will make them think we fear the enemy." In fact, Grant was convinced the war was about on its last legs.

Picket clashes on the fringes of the position were to be expected; Grant was not alarmed by a step-up of such incidents during the first week in April. Nor was Sherman, there on the scene. On Saturday, April 5, he reported to Grant, "The enemy is

saucy, but . . . I do not apprehend anything like an attack on our position."

Grant passed the word to Halleck, along with the welcome news that Buell's lead division had reached the nearby hamlet of Savannah, with two more expected in the next two days. "I have scarcely the faintest idea of an attack (general one) being made upon us," he informed his superior, "but will be prepared should such a thing take place."

So he said—not suspecting that 40,000 Rebel soldiers were even then bedding down within musket range of his outposts. They had spent the past three days on a march designed to end with a dawn assault on the Federal army camped with its back to a fordless river, hemmed in by boggy creeks, and disposed the peacetime way.

Albert Sidney Johnston, the ranking Confederate field commander, had been assembling all the troops he could lay hands on, with the intention of launching from Corinth a counteroffensive intended to recover all that had been lost in the past two months across the width of Tennessee.

By late March he had 40,000 men, about as many as Grant had twenty miles away at Pittsburg Landing. Buell, he knew, was on the march from Nashville, and his plan was to strike Grant before Buell joined him.

Johnston needed to drill his grass-green recruits, few of whom had ever been in combat—"seen the elephant," as the phrase went. He was jarred into action, however, by a report late Wednesday night, April 2, that Grant, with Buell no more than a couple of days away, had begun a sidelong movement against Memphis.

"Now is the moment to advance, and strike the enemy at Pittsburg Landing," P. G. T. Beauregard advised, as second-in-command. Johnston agreed. Within the hour, orders went to corps commanders to have their men ready to march "by 6 a.m. with three days' cooked rations in haversacks, 100 rounds of ammunition for small arms, and 200 rounds for field-pieces."

Johnston's attack was to be launched by midmorning Friday, but a late start,

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unaccountable delays, and heavy rains that turned the roads to troughs of churned-up mud twice forced postponement. Not until nearly sundown Saturday was the army arrayed in corps-wide lines for the surprise assault.

Convinced that the Federals must have learned of the approach of 40,000 whooping graybacks to the very rim of their position, Beauregard favored returning at once to Corinth. Moreover, he feared that the delay had given Buell's whole force time to reach the field; if so, more than 70,000 bluecoats were in position dead ahead, braced for the shock. "There is no chance for surprise," he declared at a roadside council of war. "Now they will be entrenched to the eyes."

That might be, but the four corps commanders and Johnston himself favored pressing on, whatever the odds. Camped directly in his front with its back to one of America's great rivers, the blue army was hemmed in left and right by Lick and Snake Creeks, which would severely limit its freedom to maneuver. "I would fight them if they were a million," Johnston said.

Rising before dawn—Sunday, April 6—he was about to ride along the line already poised for the attack when Beauregard arrived to plead anew for withdrawal—only to be interrupted by a sudden burst of firing from the twilit woods. The battle had opened of its own accord.

Sherman's and Benjamin Prentiss's divisions, posted farthest forward though they were the two greenest in Grant's army, bore the brunt of the assault. It fell on them with all the surprise Beauregard feared had been lost. Even so, the startled Federals soon rallied; Confederate gains were dearly purchased. The 6th Mississippi took part in five separate charges before it overran the ridge

where Sherman's tents were pitched, and within the hour had just over a hundred survivors out of 425 men.

Losses were heavy on both sides, especially over toward the Union left, where Prentiss's troops, falling back from the original onslaught, came upon an eroded wagon trail along the edge of some woods. They got down into this sunken road to make their stand. "It's a hornets' nest in there!" the graybacks cried, recoiling from charge after charge. Grant, who reached the field by steamboat soon after hearing the boom of the guns, urged Prentiss to "maintain that position at all hazards," and Prentiss replied that he would try.

Confusion was general. Some portions of the Union line stood firm while others scuttled rearward, exposing neighboring flanks. One wounded bluecoat, sent to the rear by his company commander, soon returned, shouting over the uproar, "Captain, give me a gun! This blamed fight ain't got any rear!"

On the Rebel side, an elite New Orleans infantry battalion drew fire from fellow Confederates because of their snappy dress-blue uniforms. Promptly they returned the sidelong volley, and when a horrified staff officer galloped up to tell them they were shooting at their friends, the Creole colonel answered hotly: "I know it. But dammit, sir, we fire on everybody who fires on us."

By midday, thousands of Union skulkers had found refuge on the riverbank, subtracted as effectively from Grant's ranks as if they had been shot or bayoneted. "Such looks of terror, such confusion, I never saw before and do not wish to see again," a late-arriving colonel declared after making his way up the bluff. Among the Confederates there were also those who used up their nerve and faded rearward. Some stragglers plundered Yankee tents; others stopped to gorge themselves on abandoned Sunday breakfasts.

Beauregard set up headquarters in Shiloh Chapel, a small Methodist log meetinghouse. Ironically, some Bible scholars said the name meant "place of peace." Johnston, meanwhile, moved among his charging troops, encouraging them by his presence wherever resistance turned out stiffest. This was mainly along that stretch of sunken road that rimmed the Hornets' Nest, where Prentiss and his men were following Grant's orders to "maintain that position." By two o'clock they had done so for four solid hours, frustrating Johnston's plan of battle to "turn the left flank of the enemy . . . and throw him back on [Snake] Creek, where he will be forced to surrender."

Beyond Prentiss, a brigade from Stephen Hurlbut's division had moved up in his support, occupying a four-acre peach orchard now raining pink petals under the roar of the batteries. Johnston thought taking this position might unhinge the Union left and lead to its collapse. "Men, they are stubborn; we must use the bayonet," he told his blown, discouraged troops. He removed his hat for recognition and stood in the stirrups.

"I will lead you!" he cried, and started his horse forward at a walk.

The guns amid the peach trees stepped up their roaring as he drew nearer. A mass of cheering graybacks went with him, into and through the orchard and the confetti-fall of petals, in pursuit of retreating bluecoats. The position was secured.

Johnston came out smiling broadly, although there were rips in his uniform, where bullets had nicked him. "They didn't trip me up that time!" he said gaily, shaking a dangling boot sole. Presently, however, an aide saw him reel in the saddle. "General! Are you hurt?"

"Yes, and I fear seriously," Johnston said.

He was taken into a nearby ravine, his right boot full of blood from a severed femoral artery. Johnston died there, in the shade of a large oak.

That was about 2:30. Beauregard ordered the news of Johnston's death withheld, and charges against the Hornets' Nest continued. Prentiss by now had repulsed 11 full-scale assaults, but the 12th, supported by 62 guns, forced his surrender.

By that time, though—5:30—sunset was

barely an hour away. Regrouping, the graybacks surged forward once more before Federal artillery forced them back. The long day's fight was over.

Beauregard, now in command, retired to Sherman's bed of the night before, in a tent near Shiloh Chapel. He wired Richmond that his army had scored "a complete victory, driving the enemy from every position."

Grant knew better. His command had been pushed back three miles, with one division captured and the other four reduced to little more than half strength. But Buell's lead division had arrived; two more would debark from transports before sunrise, and his own sixth division would come up within the hour. In short, no fewer than 25,000 reinforcements would be on hand for battle in the morning. "Tomorrow," he told a staffer, "we shall attack them with fresh troops and drive them, of course."

And so it was that Beauregard, preparing to resume his drive Monday morning, was himself attacked.

By early afternoon the Confederates were back where Sunday's battle had opened; Beauregard saw clearly that the fight could have but one end. Skillfully he disengaged and put his army on the march south. A wintry storm, with hailstones large as partridge eggs, helped to discourage pursuit.

The great Battle of Shiloh was over, with both armies in their original camps: one at Corinth, the other at Pittsburg Landing.

But not in the same numbers. In the war's bloodiest encounter to that time, 23,741 of the 100,000 troops engaged had been killed or wounded or were missing; close to 11,000 Confederates and just over 13,000 Federals. Casualties came to roughly 24 percent—the same as at Waterloo, nearly fifty years before. Yet Waterloo had marked the end of something, whereas Shiloh was more of a beginning, with other Waterloos to follow. From Shiloh on, Grant said later, "I gave up all idea of saving the Union except by complete conquest."

What remains, these hundred and seventeen years later, is the field itself, those six square miles of green, evocative landscape stretching back from the Tennessee River bluff. One change, in addition to the paving of the roads for the convenience of visitors—more than half a million a year—is the Shiloh National Cemetery, established in 1866, where some 3,600 Federal soldiers are interred under gently curving rows of headstones, two-thirds of them unknown.

The Confederates lie close to where they fell, some 1,400 of them, all unknown, half in a single large burial trench, the rest in four others near where the fighting was hottest, so that the Union burial details would not have far to drag them.

Two days after the battle Beauregard sent a message under a flag of truce, inquiring about recovering his dead. Grant replied that the matter had been attended to.

Visitors stroll among the peaceful headstones, or shudder at the thought of what those burial pits contain, after a visit to park headquarters for a look at the small museum and a twenty-minute film that explains what led up to—and away from—the great conflict here.

Handout maps guide them to landmarks, such as the tall stump of the oak under which Albert Sidney Johnston breathed his last; the Peach Orchard, replanted periodically, tree by tree, to preserve its original beauty; Bloody Pond, alongside the Hornets' Nest, where wounded soldiers from both armies crawled to drink while the fighting raged around them, and, drinking, stained its waters with their blood.

They see these things and others, many others, including Shiloh Chapel, rebuilt and still welcoming worshipers every Sunday, though it certainly did not do so on *that* Sunday, when the air was alive with screaming metal. Walking along the Sunken Road, visitors comprehend how important a couple of inches of cover can be to a man with .58-caliber soft-lead bullets coming at him by the bushel, and perhaps can also appreciate one young Rebel veteran's words in a letter to home folks, his baptism of fire behind him. "Oh God forever keep me out of such another fight," he implored, though he

hastened to add, "I was not scared I was just in danger."

As for the strategic or historical importance of this first great battle of the western theater, some would say that the South lost the war here—meaning her last chance to win it. Johnston's all-out, go-for-broke attempt to reverse the flow of conquest, begun by Grant two months before at Donelson, could be seen as a military parallel of the Confederacy's political effort to hold back the surge of history, dominated increasingly by northern industrial concerns at the expense of southern agrarian interests. Both failed, Johnston here at Shiloh, where he gave his life in the attempt, and the South over the course of the next three years, into that other April, when the Confederacy itself expired at Appomattox.

In time, the victors acknowledged that the Rebels had fought bravely for a cause they believed was just, and the losers agreed it was probably best that the Union had been preserved. Only then could we become what we had never really been before: one people.

Still the field remains—Shiloh and the memory it evokes of those who fought here, with courage as immeasurable as the suffering. Cock an ear some calm day in the woods or fields or on the grass-carpeted lip of that tall bluff, and you may hear, behind the stillness, the cries of battle mingling the deep-throated Union roar with the weird halloo of the Rebel yell, the boom of guns and the rattle of musketry, fading to give way at last to the groans of the wounded, blue and gray, and the singing of the bone saws. . . .

All this is there for those who know how to listen for it. One of the great satisfactions a historian, professional or amateur, derives from his work, provided he has done it truthfully and well, comes after he has put the work behind him. Once he has studied and written of an event in relation to the ground on which it happened, that scrap of earth belongs to him forever. To some extent he even feels he owns it. In that sense, Shiloh can be yours too, if you want it. □

JOHN MORAN

For greater detail, see **Close-Up: U.S.A.** *maps in March 1973 and June 1974 issues.*

Produced in the National Geographic Art Division by Leo Zeberth with Smejinka Stefanoff. Researched and compiled by Patricia Harrison with text by Cynthia Barry. Maps painted by Jaime Quintero.

WASHINGTON

(1) **San Juan Island NHP** salutes peace maintained by United States, Great Britain, and Canada since 1872 boundary dispute

(2) **North Cascades NP:** Glaciers, icefalls, waterfalls—wild alpine landscape

(3) **Ross Lake NRA:** This mountain-ringed reservoir and the Skagit River bisect North Cascades NP

(4) **Lake Chelan NRA:** Stehekin Valley's fjordlike lake adjoins North Cascades NP

(5) **Coulee Dam NRA** features 130-mile-long Franklin Delano Roosevelt Lake

(6) **Olympic NP:** Spectacular scenery—mountains, rain forest, and seashore

(7) **Klondike Gold Rush NHP:** Traces history of prospectors embarking from the West Coast for Alaska goldfields in 1898

(8) **Mount Rainier NP:** Glaciers flank ancient volcano above vast fields of high mountain flowers

(9) **Fort Vancouver NHS** was western headquarters of fur-trading Hudson's Bay Company, 1825-60

(10) **Whitman Mission NHS:** Established by Dr. and Mrs. Marcus Whitman to care for the Indians

OREGON

(11) **Fort Clatsop N MEM** marks winter camp of Lewis and Clark, 1805-06

(12) **John Day Fossil Beds NM** preserves plant and animal forms millions of years old

(13) **Crater Lake NP:** Multicolored lava walls of collapsed Mount Mazama encircle cobalt blue lake

(14) **Oregon Caves NM:** Water-carved passages wind through marble bedrock

CALIFORNIA

(15) **Redwood NP** nurtures ancient trees, the world's tallest

(16) **Lava Beds NM:** A labyrinth of volcanic chasms; this natural fortress protected braves in the Modoc Indian War, 1872

(17) **Whiskeytown NRA** attracts backcountry and water-sports enthusiasts

(18) **Lassen Volcanic NP** surrounds most recently active volcano (1914-21) in contiguous U. S.

(19) **Point Reyes NS:** Surf-washed beaches and steep cliffs, with colonies of seabirds and sea lions

(20) **Muir Woods NM:** A living memorial to naturalist John Muir that preserves virgin stand of redwoods $

(21) **John Muir NHS:** Home of the pioneering conservationist and writer $

(22) **Golden Gate NRA:** Urban park features ocean beaches, giant redwood groves, and trips to Alcatraz

(23) **Fort Point NHS** epitomizes 19th-century brick-and-granite forts

(24) **Yosemite NP:** Spectacular granite cliffs jut from broad, wild-flowered meadows $

(25) **Devils Postpile NM:** Nature fashioned a giant pipe organ of towering basalt columns

(26) **Kings Canyon NP:** Mighty river canyons and High Sierra summits dominate this rugged wilderness $

(27) **Pinnacles NM:** Hiking and climbing amid 1,200-foot volcanic-rock spires in chaparral wilderness $

(28) **Sequoia NP:** World's largest living things share park with Mount Whitney, highest U. S. peak south of Alaska $

(29) **Death Valley NM**—lowest point in Western Hemisphere—drops 282 feet below sea level

(30) **Santa Monica Mountains NRA** guards a craggy range that rises from heart of Los Angeles*

(31) **Channel Islands NM:** View migration of gray whales, large rookeries of sea lions, seals, and nesting seabirds

(32) **Joshua Tree NM** features plants named by westward-trekking Mormons, desert animals, colossal rock piles

(33) **Cabrillo NM:** Honors Portuguese explorer. Lighthouse with marine natural-history displays overlooks spectacular harbor

—NEVADA—

(34) **Lehman Caves NM:** A maze of marble tunnels and galleries studded with stalactites and stalagmites

(35) **Lake Mead NRA** lures vacationists to waters backed up by Hoover and Davis Dams

CELEBRATING THE SPLENDOR AND HISTORY OF OUR LAND

Mountains, redwoods, valleys drowned in wild flowers, bears. Such images come readily to mind at the mention of national parks. But there are also: opera on a summer's night, glassware being blown in the 17th-century manner, fortifications built before the Pilgrims thought of leaving England, and Indian dwellings built before Europeans surmised a New World.

More amazing, perhaps, than the 77 million acres under National Park Service care is the diversity to be found among the 320 units at all points of the compass.

Visitors can trace military history from the Continental Army's first major victory at Saratoga to its final glory at Yorktown. Or the Civil War from Harpers Ferry to Fort Sumter to Confederate high tides at Antietam and Gettysburg—and to the end at Appomattox.

There are trails for the stroller as well as rough terrain for the backpacker. Visitors can go fishing or boating, learn history or culture, or simply loaf the cares of work away on a beach, a grassy slope, or by a quick, clear stream.

Some set out primarily to view magnificent scenery. Others plan to sample as many experiences as possible. For vacationists, advance planning will ease the journey and may be necessary. Reservations for campsites or lodging may be required, in some cases as long as four months in advance.

Colors indicate major attraction of national park areas

(6) Natural (11) Historical (22) Recreational

The categories above are not mutually exclusive; historical areas may also be scenic and recreational, etc.

Abbreviations used in listing

MP	Memorial Parkway	**NMP**	National Military Park
NB	National Battlefield	**NM**	National Monument
NHP	National Historical Park	**NP**	National Park
NHS	National Historic Site	**NRA**	National Recreation Area
NL	National Lakeshore	**NR**	National River
N MEM	National Memorial	**NS**	National Seashore

Symbols indicate visitor services and activities

$ Entrance fee[1]	Food service	Riding
Handicapped access	Boating	Swimming
Lodging	Fishing	Winter activities
Camping	Hiking	Living History[2]

[1]Persons over 62 may obtain free a lifetime Golden Age Passport, which covers admissions and allows a 50 percent discount on some recreation-use fees.

[2]Living History Programs help communicate the park story through live demonstrations of historic features of a park.

NOTE: Some new parks, as indicated by asterisks (*), are not yet ready for visitors, and older parks are continuously being improved. To take an active part in their development and protection, write for the free brochure "How to Help Plan a Park." Address:

The National Parks and Conservation Association
1701 18th Street, N.W.
Washington, D. C. 20009

For additional information write:
National Park Service, U. S. Department of the Interior
Washington, D. C. 20240


0 KILOMETERS 200
0 STATUTE MILES 200
For greater detail, see
Close-Up: U.S.A. maps in
March 1973 and October 1977 issues
MONTANA
Helena
Billings
IDAHO
Boise
Pocatello
WYOMING
Cheyenne
Ogden
Salt Lake City
Provo
UTAH
Denver
COLORADO
Colorado Springs
Pueblo
La Junta
Albuquerque
Santa Fe
NEW MEXICO
Roswell
ARIZONA
Phoenix
Tucson

IDAHO

(1) **Nez Perce NHP:** Auto route loops through land that evokes the story of Chief Joseph's tribe

(2) **Craters of the Moon NM:** Drive and hike over volcanic landscape of cones, caves, and lava

MONTANA

(3) **Glacier NP:** A high, snowy wilderness shelters grizzlies and bighorn sheep

(4) **Fort Benton:** 1846 fur-trading post and river port

(5) **Grant-Kohrs Ranch NHS:** Restored ranch re-creates daily life in frontier cattle era

(6) **Big Hole NB** displays howitzer fired in 1877 Nez Perce clash

(7) **Bighorn Canyon NRA:** Canyon walls soar above 71-mile-long reservoir

(8) **Custer Battlefield NM:** Tombstones now stand where U. S. 7th Cavalry fell to Sioux and Cheyenne onslaught

WYOMING

(9) **Yellowstone NP:** Patriarch of parks erupts with geysers, abounds with wildlife

(10) **Devils Tower NM:** An 865-foot volcanic pillar

(11) **John D. Rockefeller, Jr. MP:** Scenic 82-mile corridor links Yellowstone and Grand Teton

(12) **Grand Teton NP:** Spectacular peaks loom over valley of Jackson Hole

(13) **Fossil Butte NM:** Fifty-million-year-old fossils of fish remain from sea that once covered the area

(14) **Fort Laramie NHS:** Bluecoats and bugles re-create post's role as guardian of westward-bound pioneers

UTAH

(15) **Golden Spike NHS:** Restored tracks and locomotives recall completion of first transcontinental railroad in 1869

(16) **Timpanogos Cave NM** weaves spell of an underground world

(17) **Arches NP:** Nature chiseled sandstone portals and strange pedestals

(18) **Canyonlands NP:** Colorado and Green Rivers snake through great mesas, gorges, buttes, and pinnacles

(19) **Capitol Reef NP:** Buckling of earth's crust created awesome barrier capped by rock domes

(20) **Cedar Breaks NM:** Hike rim of lofty Pink Cliffs

(21) **Bryce Canyon NP:** Bizarre pinnacles, colossal figures in richly colored rock

(22) **Zion NP:** Awesome cliffs enclose a wilderness valley and rushing river

(23) **Glen Canyon NRA:** Man-made Lake Powell fills deep gorges

(24) **Rainbow Bridge NM:** Stone arch soars 309 feet

(25) **Natural Bridges NM:** Protects three spans of sandstone more than 225 million years old

COLORADO

(26) **Dinosaur NM:** Scientists chip away stone to reveal fossils of giant reptiles

(27) **Rocky Mountain NP:** Snow-clad peaks straddle Continental Divide

(28) **Colorado NM:** Bobcats and bison roam rockscape

(29) **Black Canyon of the Gunnison NM:** Gloom pervades depths of 2,700-foot chasm

(30) **Curecanti NRA:** 40 miles of cold-water lakes

(31) **Florissant Fossil Beds NM** tells story in stone of 35-million-year-old plants and insects

(32) **Bent's Old Fort NHS:** Outpost on the Santa Fe Trail

(33) **Great Sand Dunes NM:** At 700 feet, tallest in the U. S.

(34) **Hovenweep NM:** Stone towers built by Indians 700 years ago

(35) **Yucca House NM:** Indian ruins not open to the public

(36) **Mesa Verde NP:** Breathtaking trails descend into well-preserved cliff dwellings of vanished Indians

ARIZONA

(37) **Pipe Spring NM:** Site of fortresslike ranch built by Mormon settlers

(38) **Navajo NM:** Three large cliff dwellings of pre-Navajo people

(39) **Canyon de Chelly NM:** Red sandstone alcoves hide ancient Indian villages

(40) **Grand Canyon NP:** The mile-deep chasm offers unrivaled grandeur and reveals two billion years of geologic history

(41) **Wupatki NM:** Ruins of Indian farmers' 11th-century pueblos

(42) **Hubbell Trading Post NHS** sells supplies on Navajo reservation

(43) **Sunset Crater NM:** A 1,000-foot-high volcanic cone

(44) **Walnut Canyon NM:** Cliff dwellings crouch beneath limestone ledges

(45) **Petrified Forest NP:** Fallen trees turned to stone; part of the Painted Desert

(46) **Tuzigoot NM:** Remnant of 92-room Indian pueblo

(47) **Montezuma Castle NM:** An almost intact cliff dwelling

(48) **Tonto NM:** Cliff homes hewn by Indian farmers 600 years ago

(49) **Hohokam Pima NM:** Indian ruins not open to the public

(50) **Casa Grande Ruins NM:** Three-story Indian structure

(51) **Organ Pipe Cactus NM:** Striking desert flora

(52) **Saguaro NM:** Giant cacti bloom in spring

(53) **Fort Bowie NHS:** Footpath leads to headquarters of U. S. campaigns against Apache

(54) **Chiricahua NM:** Curious stone pillars rise among forested mountains

(55) **Tumacacori NM:** Adobe mission served Indians and Spanish colonials

(56) **Coronado N MEM:** View the route of first Spanish explorers in American Southwest

NEW MEXICO

(57) **Aztec Ruins NM:** Misnamed homes of ancient Pueblo Indians

(58) **Capulin Mountain NM:** Explore the crater floor of volcano active 7,000 years ago

(59) **Chaco Canyon NM** contains Pueblo Bonito, largest of the ancient Pueblo ruins

(60) **Bandelier NM** offers nightly campfire talks in summer on ancient cliff dwellers

(61) **Pecos NM:** Ruins of Indian village and Spanish churches

(62) **Fort Union NM:** Remains of three forts on Santa Fe Trail

(63) **El Morro NM:** Indians and Spaniards carved graffiti on Inscription Rock

(64) **Gran Quivira NM:** Indian pueblo and Spanish-mission ruins

(65) **Gila Cliff Dwellings NM:** One-hour walk to Indian cave houses

(66) **White Sands NM:** Dried-up lake leaves desert vista of gypsum dunes

(67) **Carlsbad Caverns NP:** Awesome dimensions and fanciful formations such as "whale's mouth" and "frustrated lovers"

For greater detail, see **Close-Up: U.S.A.** *maps in March 1974 and October 1974 issues.*

—NORTH DAKOTA—

(1) **Fort Union Trading Post NHS:** Only foundations of this fur-trading center survive

(2) **Theodore Roosevelt NP** offers horse rental and backcountry camping along the Little Missouri River S

(3) **Knife River Indian Villages NHS:** Five Plains Indian settlements

—MINNESOTA—

(4) **Voyageurs NP:** Canoeists paddle northern lakes, once fur traders' highways

(5) **Grand Portage NM** re-creates a wilderness fur post where traders and explorers met

(6) **Pipestone NM:** See how Indians made tobacco pipes from soft red stone still quarried here

—SOUTH DAKOTA—

(7) **Jewel Cave NM** glitters with many-faceted calcite crystals—a treasure for spelunkers

(8) **Mount Rushmore N MEM:** Sixty-foot granite faces of four Presidents sculpted into mile-wide cliff

(9) **Wind Cave NP:** Rare honeycomb formations below, herds of bison above

(10) **Badlands NP:** Coyotes prowl erosion-scoured buttes and gullies S

—NEBRASKA—

(11) **Agate Fossil Beds NM:** Trail leads to exposed layers of prehistoric animal bones

(12) **Scotts Bluff NM:** Oregon Trail landmark rises 800 feet $

(13) **Homestead NM:** Site of one of the first claims under 1862 free-land law that peopled the prairies

—IOWA—

(14) **Effigy Mounds NM:** Animal-shaped mounds of prehistoric Indians; burial grounds

(15) **Herbert Hoover NHS:** Birthplace, restored boyhood neighborhood, and gravesite of 31st President

—KANSAS—

(16) **Fort Larned NHS:** Key Santa Fe Trail army outpost in Plains Indians campaigns

(17) **Fort Scott NHS:** Reconstructed army post on "permanent" Indian frontier"

—MISSOURI—

(18) **Jefferson National Expansion Memorial NHS:** Visitors to St. Louis ascend 630-foot steel arch, symbolic gateway to the West

(19) **George Washington Carver NM:** Birthplace of black agronomist who developed by-products of peanuts and cotton

(20) **Wilson's Creek NB** interprets crucial Civil War battle through self guiding loop drive

(21) **Ozark National Scenic Riverways:** Includes 140 miles along Current and Jacks Fork Rivers

—OKLAHOMA—

(22) **Chickasaw NRA:** Man-made Lake of the Arbuckles , fresh and mineral springs

—ARKANSAS—

(23) **Pea Ridge NMP:** Fighting that kept Missouri in the Union raged around restored Elkhorn Tavern S

(24) **Buffalo NR:** One of the few free-flowing, unpolluted rivers in lower 48 states

(25) **Fort Smith NHS:** Once the Indian resettlement and law-and-order center for wild Oklahoma Territory

(26) **Hot Springs NP:** Bathe in soothing thermal water in wooded mid-city spa

(27) **Arkansas Post N MEM:** Marks first settlement in lower Mississippi Valley

TEXAS

(28) **Lake Meredith NRA:** Canyon in the windswept Panhandle shelters a 20-mile-long lake

(29) **Alibates Flint Quarries NM:** Visit, by prearranged tour, Canadian River site of Stone Age toolmakers

(30) **Chamizal N MEM:** Amphitheater presentations celebrate U. S.-Mexican settling of 99-year-old boundary dispute

(31) **Guadalupe Mountains NP:** Once seabound fossil reef now a forested sky island

(32) **Fort Davis NHS:** Living history demonstrations on Overland Trail military post **S**

(33) **Lyndon B. Johnson NHS:** Birthplace, ranch, and gravesite of 36th President

(34) **Big Thicket National Preserve:** A biological crossroads of bayou, forest, and upland

(35) **Big Bend NP:** Jagged peaks cup a lofty basin, and vast gorges shadow the winding Rio Grande

(36) **Rio Grande Wild and Scenic River** cuts deep limestone canyons*

(37) **Amistad NRA:** Dam on Rio Grande impounds reservoir for swimming, fishing, and boating

(38) **San Antonio Missions NHP** preserves four Spanish colonial churches along San Antonio River*

(39) **Padre Island NS:** Gulf Coast barrier island shelters 350 bird species, other wildlife

(40) **Palo Alto Battlefield NHS:** Americans and Mexicans fought here in 1846*

LOUISIANA

(41) **Jean Lafitte NHP:** Visit New Orleans French Quarter or bayou lair of buccaneer Lafitte*

For greater detail, see **Close-Up: U.S.A.** *maps in August 1973 and February 1977 issues.*

WISCONSIN

(1) **Lower St. Croix National Scenic River** attracts boaters and fishermen

(2) **St. Croix National Scenic River:** Rapids and calm waters alternate for 200 miles

(3) **Apostle Islands NL:** Twenty wooded isles cluster in Lake Superior

MICHIGAN

(4) **Isle Royale NP:** Timber wolves, moose, and hikers share wilderness island

(5) **Pictured Rocks NL:** Lichens and minerals paint 200-foot bluffs

(6) **Sleeping Bear Dunes NL** overlooks Lake Michigan and Glen Lake

ILLINOIS

(7) **Lincoln Home NHS:** Lincoln left here for the White House

INDIANA

(8) **Indiana Dunes NL:** Beaches, bogs, and 180-foot sand mountains

(9) **George Rogers Clark NHP:** British defeat here secured "Ohio country" for newborn U. S.

(10) **Lincoln Boyhood N MEM:** Abe grew up on this farm

KENTUCKY

(11) **Mammoth Cave NP:** Explore 180-mile cave system, world's longest

(12) **Abraham Lincoln Birthplace NHS:** Memorial near Hodgenville encloses symbolic log cabin

(13) **Cumberland Gap NHP:** Follow Daniel Boone's route over the Alleghenies

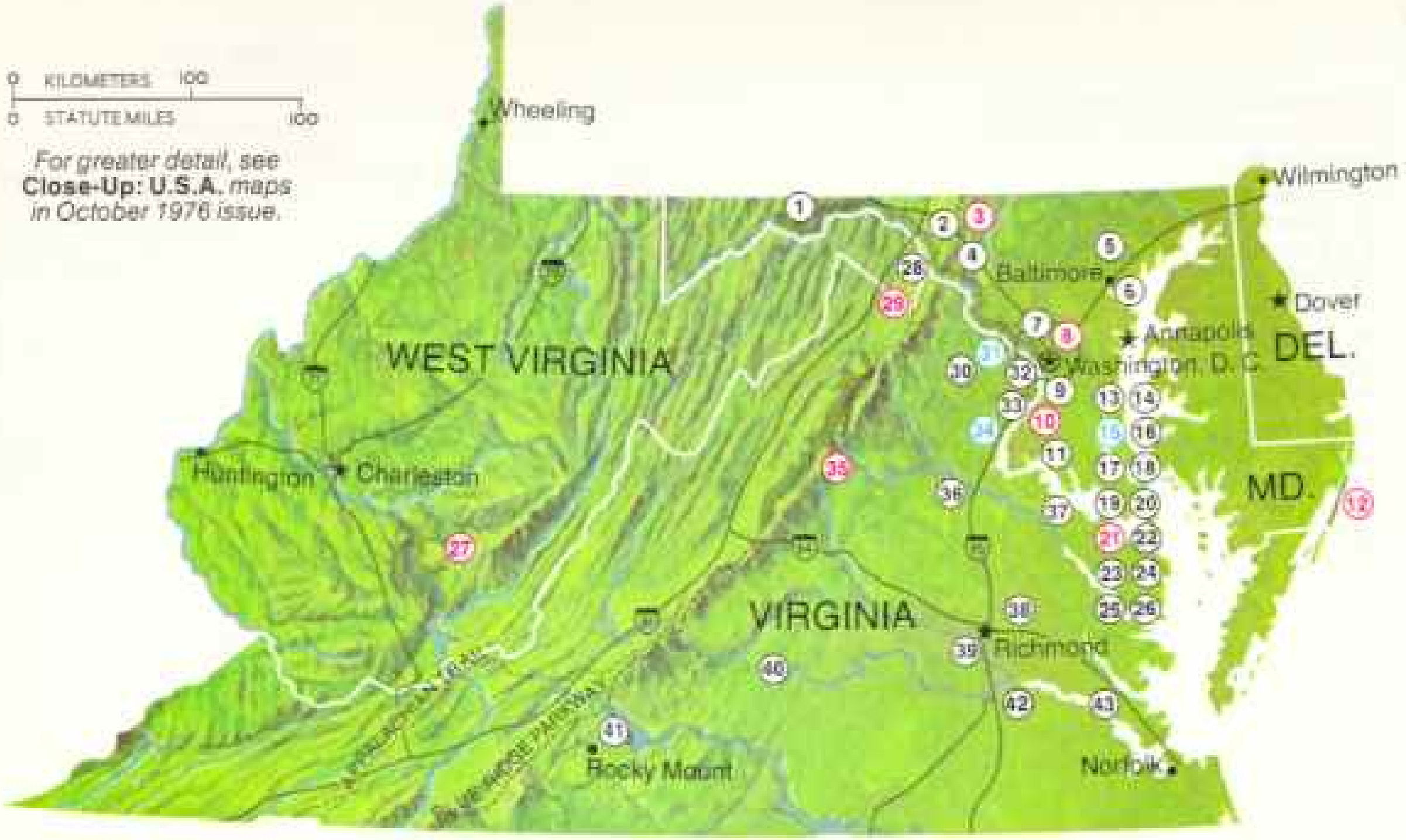
OHIO

(14) **William Howard Taft NHS** preserves 27th President's birthplace

(15) **Mound City Group NM:** Burial mounds and earthworks of ancient Hopewell Indians (200 B.C.-A.D. 500)

(16) **Perry's Victory and International Peace MEM:** Massive column honors hero of 1813 Lake Erie battle

(17) **Cuyahoga Valley NRA:** Rural link between Cleveland and Akron includes historic Ohio & Erie Canal



—MARYLAND—

(1) Chesapeake and Ohio Canal NHP: Hikers and bikers follow 184-mile towpath from Washington, D. C., to Cumberland, Md.

(2) Antietam NB: Eight-mile route ranges where Civil War battle raged

(3) Catoctin Mountain Park: Scenic vistas, environmental study, mountain crafts

(4) Monocacy NB: Site of Confederate victory. Closed to public

(5) Hampton NHS: Lavish 18th-century mansion and formal gardens S

(6) Fort McHenry NM and Historic Shrine: Bombardment in War of 1812 inspired "The Star-Spangled Banner"

(7) Clara Barton NHS: Home of American Red Cross founder

(8) Greenbelt Park: Forest oasis 12 miles from Washington

(9) Fort Washington Park: Cross drawbridge to 1824 fortress

(10) Piscataway Park: Jog or stroll on paths framing Potomac River

(11) Thomas Stone NHS, now being restored, memorializes signer of Declaration of Independence*

(12) Assateague Island NS: Wild ponies roam barrier-isle wildlife refuge S

—WASHINGTON, D. C.—

(13) Ford's Theatre NHS: Plays light the stage, but Lincoln's flag-draped box remains ever empty

(14) Frederick Douglass Home: Twenty-room house of 19th-century black spokesman

(15) John F. Kennedy Center for the Performing Arts presents dramas, concerts, operas, and films

(16) Lincoln Memorial: Statue of Great Emancipator draws homage from thousands yearly

(17) Lyndon Baines Johnson Memorial Grove on the Potomac: A living memorial of white pines

(18) National Capital Parks: More than 300 historical sites, from Potomac shores to manicured city squares

(19) National Mall ties Washington Monument to Capitol Building

(20) National Visitor Center at historic Union Station

(21) Rock Creek Park: Sylvan solitude in heart of city

(22) Sewall-Belmont House NHS: Center for women's rights from 1920 to the present

(23) Theodore Roosevelt Island: Memorial in the Potomac to 26th President

(24) Thomas Jefferson Memorial: Under Monticello-like dome stands 19-foot statue of third President

(25) Washington Monument: Ride to top of flag-ringed, 555-foot obelisk for panoramic city view S

(26) White House: Scheduled tours through home of Presidents

—WEST VIRGINIA—

(27) New River Gorge NR whips up hair-raising white-water runs*

(28) Harpers Ferry NHP restores Civil War-ravaged town, site of John Brown's raid

(29) Appalachian National Scenic Trail twists 2,000 miles from Maine to Georgia

—VIRGINIA—

(30) Manassas NB Park: Rebels twice defeated Union troops

(31) Wolf Trap Farm Park for the Performing Arts: Outdoor theater set in rolling hills and woods

(32) Arlington House, The Robert E. Lee Memorial: Mansion surveys National Cemetery and Potomac

(33) George Washington MP: Drive along Potomac

(34) Prince William Forest Park: Camp in renewed forest springing from depleted farmland

(35) Shenandoah NP caps crest of Blue Ridge S

(36) Fredericksburg and Spotsylvania NMP: Four major Civil War battlefields

(37) George Washington Birthplace NM: Working colonial farm

(38) Richmond NB Park recalls fighting for Confederate capital

(39) Maggie L. Walker NHS: Home of black paraplegic who was first female bank president*

(40) Appomattox Court House NHP preserves village that witnessed surrender of South S

(41) Booker T. Washington NM: Birthplace of black educator

(42) Petersburg NB: Site of ten-month Union siege

(43) Colonial NHP includes Yorktown, Jamestown, and 23-mile parkway to Williamsburg

— TENNESSEE

① **Fort Donelson NMP:** Site of Union's first major Civil War victory

② **Shiloh NMP:** Self-guiding tour of site of Union victory

③ **Stones River NB:** Marks start of Union offensive to split the Confederacy

④ **Big South Fork NR and NRA:** Free-flowing arm of the Cumberland

⑤ **Obed Wild and Scenic River** runs through Cumberland Plateau

⑥ **Great Smoky Mountains NP:** Most visited national park still offers solitude on trails and high Appalachian peaks

⑦ **Andrew Johnson NHS:** Home of the 17th President S

— NORTH CAROLINA

⑧ **Blue Ridge Parkway** follows Appalachian Mountain crests

⑨ **Guilford Courthouse NMP:** Battle here was prelude to end of Revolutionary War

⑩ **Wright Brothers N MEM:** Marks historic flights S

⑰ **Kings Mountain NMP:** Patriots won decisive Revolutionary War victory here

⑱ **Ninety Six NHS:** Remains of star-shaped colonial fort

⑲ **Congaree Swamp NM:** Last stand of virgin and mature southern bottomland hardwoods

⑳ **Fort Sumter NM:** Civil War's first shots were fired here

— MISSISSIPPI

㉑ **Brices Cross Roads NB Site:** Civil War cavalry battle

㉒ **Tupelo NB:** Battle fought to break Union supply line

㉓ **Natchez Trace Parkway** follows Indian trail

㉔ **Vicksburg NMP:** Union victory here split Confederacy

— ALABAMA

㉕ **Russell Cave NM:** Archaeological record of 9,000 years

㉖ **Horseshoe Bend NMP:** Andrew Jackson defeated Creek Indians, 1814

㉗ **Tuskegee Institute NHS:** Students built campus of this black college

— GEORGIA

㉘ **Chickamauga and Chattanooga NMP:** 355 shoulder arms on display

㉙ **Kennesaw Mountain NB Park:** Still intact Rebel earthworks failed to halt Sherman's march

㉚ **Chattahoochee River NRA:** Relax in wild setting near Atlanta*

㉛ **Ocmulgee NM:** Prehistoric Indian platform mounds

㉜ **Andersonville NHS:** Site of compound for Union prisoners

㉝ **Fort Pulaski NM:** Climb ramparts bombarded by Union guns S

㉞ **Fort Frederica NM:** British citadel and settlement during Anglo-Spanish struggle

㉟ **Cumberland Island NS:** Beaches, live-oak forests

— FLORIDA

㊱ **Gulf Islands NS:** Enjoy swimming, fishing, touring old forts S

㊲ **Fort Caroline N MEM:** 1564 fort of French Huguenots

For greater detail, see **Close-Up: U.S.A.** *maps in November 1973 and October 1975 issues.*

⑪ **Fort Raleigh NHS** portrays story of Lost Colony S

⑫ **Cape Hatteras NS:** Famous lighthouse guards "graveyard of Atlantic" S

⑬ **Cape Lookout NS:** Lonely chain of barrier islands

⑭ **Moores Creek NMP:** Patriots routed Tories in 1776 battle

⑮ **Carl Sandburg Home NHS:** Poet's secluded farm, Connemara

— SOUTH CAROLINA

⑯ **Cowpens NB:** Here Patriots turned near defeat into victory

㊳ **Castillo de San Marcos NM:** Guarded St. Augustine S

㊴ **Fort Matanzas NM:** Spanish stronghold

㊵ **Canaveral NS:** Lagoons, marshes, beaches

㊶ **De Soto N MEM** honors early Spanish explorer

㊷ **Mar-A-Lago NHS:** Lavish 1920's mansion. Not open to the public

㊸ **Big Cypress National Preserve:** Swamp ecosystem

㊹ **Biscayne NM:** Marine world of bay and ocean

㊺ **Everglades NP:** Flamingoes, alligators, lush vegetation S

㊻ **Fort Jefferson NM** once guarded Florida Strait

MAINE

① **St. Croix Island NM:** Harsh winter defeated French colonization attempt, 1604

② **Acadia NP:** Sea washes rocky coast of Mount Desert Island and picturesque Schoodic Peninsula

NEW HAMPSHIRE

③ **Saint-Gaudens NHS,** in Cornish, displays the home, studios, and gardens of famed sculptor **$**

MASSACHUSETTS

④ **Springfield Armory NHS:** Museum of U. S. military small arms and foreign weapons

⑤ **Lowell NHP** illustrates the impact of the industrial revolution through restored buildings*

⑥ **Minute Man NHP** in Concord commemorates the "shot heard 'round the world" that ignited Revolutionary War **$**

⑦ **Salem Maritime NHS:** Climb to the cupola atop the Custom House; scan Derby Wharf **$**

⑧ **Longfellow NHS:** The poet penned his best known works in this Cambridge house, once Washington's headquarters **$**

⑨ **Saugus Iron Works NHS:** Blacksmith works in forge of reconstructed 1640's ironmaking village

⑩ **John F. Kennedy NHS:** Brookline birthplace and early boyhood home of 35th President **$**

⑪ **Boston NHP:** A roll call of history—seven sites along the Freedom Trail **$**

⑫ **Adams NHS:** Quincy home of four generations of Adamses, including two Presidents **$**

⑬ **Cape Cod NS** protects beaches, woodlands, and marshes of outer cape **$**

RHODE ISLAND

⑭ **Roger Williams N MEM,** in Providence, recognizes pioneer in religious freedom

NEW YORK

⑮ **Fire Island NS:** Visitors enjoy fishing, clamming, swimming, walking, bird-watching along unspoiled shore

⑯ **Sagamore Hill NHS:** Secluded estate, crammed with books and hunting trophies, retains spirit of Theodore Roosevelt **$**

⑰ **Castle Clinton NM:** Through this edifice eight million immigrants embarked on new lives

⑱ **Federal Hall N MEM** recalls building where Washington took oath as first President and where the Bill of Rights was signed

⑲ **General Grant N MEM:** Tomb of President who created first national park—Yellowstone, 1872

⑳ **Hamilton Grange N MEM:** Alexander Hamilton, first Treasury Secretary, cherished the Grange as retreat from buffetings of public life

㉑ **Statue of Liberty NM:** Some 20 million immigrants sailed past this 152-foot gift from France

㉒ **Theodore Roosevelt Birthplace NHS:** On October 27, 1858, in this four-story brownstone, the 26th President was born **$**

㉓ **Gateway NRA:** City dwellers escape to the beaches, marshes, and islands of one of the first urban NRA's

㉔ **Eleanor Roosevelt NHS:** A pastoral retreat. Not open to public

㉕ **Home of Franklin Delano Roosevelt NHS** memorializes the birthplace, "Summer White House," and grave of 32nd President **$**

㉖ **Vanderbilt Mansion NHS** displays style of the gilded age, 1880-1900, when tycoons built great estates **$**

㉗ **Martin Van Buren NHS:** Retirement home of 8th President

㉘ **Saratoga NHP:** A walking-and-auto tour describes a turning point of the Revolutionary War

㉙ **Fort Stanwix NM:** Here Americans repelled British invasion from Canada in 1777

㉚ **Theodore Roosevelt Inaugural NHS** witnessed swearing in of new President hours after McKinley's death **$**

PENNSYLVANIA

㉛ **Upper Delaware Scenic and Recreational River:** Trout fishing and canoeing*

㉜ **Delaware Water Gap NRA:** Outdoor activities and scenic beauty amidst rural stillness

For greater detail, see **Close-Up: U.S.A.** *maps in March 1975, July 1975, and January 1978 issues.*

37 Fort Necessity NB: Washington's only surrender occurred in this first battle of the French and Indian War (1754)

38 Eisenhower NHS: Home of 34th President. Closed to public

39 Gettysburg NMP: Pastoral quiet reigns where crucial, bloody Civil War battle raged

40 Hopewell Village NHS: Tour through restored 19th-century ironmaking hamlet

41 Valley Forge NHP: Soldiers' huts recall winter ordeal

42 Thaddeus Kosciuszko N MEM: Philadelphia lodgings of designer of Saratoga defenses

43 Edgar Allan Poe NHS: In this house he wrote many of the eerie tales that thrill millions*

44 Independence NHP: Visit the Liberty Bell, Independence Hall, City Tavern

NEW JERSEY

45 Morristown NHP: Here Washington and men endured two harsh winters
S

46 Edison NHS preserves inventor's West Orange laboratory and 23-room Victorian mansion, Glenmont S

33 Delaware Wild and Scenic River is heart of Delaware Water Gap NRA*

34 Allegheny Portage Railroad NHS traces unusual method of overland transportation in early 1800's—railroad cars raised and lowered on giant inclined planes

35 Johnstown Flood N MEM: On May 31, 1889, South Fork Dam broke; 2,200 people perished in the ensuing disaster

36 Friendship Hill NHS: Albert Gallatin's stone house on edge of wilderness reflects love of nature*

ALASKA

(1) **Noatak NM** holds promise for archaeologist and wilderness enthusiast alike*

(2) **Cape Krusenstern NM:** Like pages of history, 114 beach ridges chronicle 5,000 years of Eskimo life*

(3) **Kobuk Valley NM:** The Great Kobuk Sand Dunes edge westward about an inch a year, engulfing boreal forest*

(4) **Gates of the Arctic NM:** Migrant caribou traverse tundra in region north of the Arctic Circle*

(5) **Bering Land Bridge NM** marks remains of link that funneled man from Asia into North America*

For greater detail, see **Close-Up: U.S.A.** *map in June 1975 issue.*

0 KILOMETERS 400
0 STATUTE MILES 400

(6) **Denali NM:** Adjacent to Mount McKinley, it bears the Eskimo name of the peak—"The Great One"*

(7) **Mount McKinley NP:** North America's highest mountain; grizzlies, wolves, and caribou

(8) **Yukon-Charley NM** celebrates the heyday of gold-rush fever*

(9) **Wrangell-St. Elias NM:** Rivers, glaciers, and mountains typify Alaska's wilderness*

(10) **Lake Clark NM** lures the adventurous to see two dozing volcanoes, high glaciers, and waterfalls*

(11) **Katmai NM:** Volcanic eruption in 1912 created ash-filled Valley of Ten Thousand Smokes

(12) **Kenai Fiords NM:** Glaciers emanate from Harding Icefield; inlets offer shelter to seals, otters, and birds

(13) **Glacier Bay NM:** Tidewater glaciers calve awesome icebergs into the sea

(14) **Klondike Gold Rush NHP:** Hikers climb rugged Chilkoot Pass in steps of 1898 prospectors

(15) **Sitka NHP:** Exhibits of 18th-century Russian colonial life, craft displays of Tlingit Indians

(16) **Aniakchak NM:** Thirty square miles of volcanic craters*

HAWAII

For greater detail, see **Close-Up: U.S.A.** *map in April 1976 issue.*

0 KM 100
0 STATUTE MILES 100

(1) **Haleakala NP** preserves Haleakala Crater and shields fragile ecosystems of Kipahulu Valley

(2) **Puukohola Heiau NHS:** Ruins of King Kamehameha's monumental Temple on the Hill of the Whale

(3) **Kaloko-Honokohau NHP** interprets Hawaiian culture*

(4) **Puuhonua o Honaunau NHP** protects former place of refuge, a sacred sanctuary

(5) **Hawaii Volcanoes NP** rumbles with mighty Kilauea and Mauna Loa, both active

GUAM

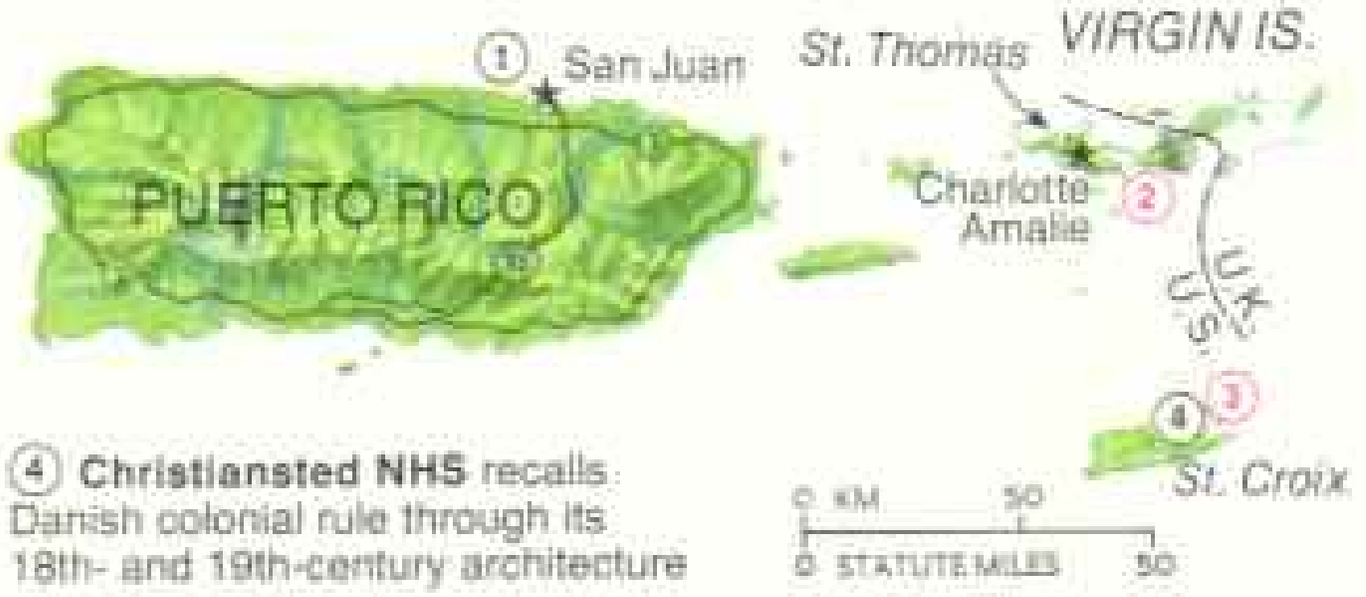
(1) **War in the Pacific NHP:** Victory here helped assure Japanese defeat in World War II*

PUERTO RICO AND VIRGIN ISLANDS

(1) **San Juan NHS:** Massive 16th-century Spanish fort guarded New World sea-lanes

(2) **Virgin Islands NP** covers more than half of St. John Island—a tropical jewel

(3) **Buck Island Reef NM:** Snorkelers explore underwater trail through tropical reef



(4) **Christiansted NHS** recalls Danish colonial rule through its 18th- and 19th-century architecture

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Risen and shining, *a black bear snacks on greens during a spring shower in Glacier National Park. The glacial action that gouged a stronghold for wildlife in northwest Montana continues today, though greatly diminished.*

Spring Comes Late to Glacier

By DOUGLAS H. CHADWICK

FOR THREE DAYS the mountains have been talking. Maybe I shouldn't be here now, the ground shakes so, and the hillsides are torrents of moving snow and ice. But the wolverine is here—I have seen him—and the eagle, and suddenly the bear. . . .

The great bear stops and presses her nose to a crack in the melting avalanche rubble. Buried beneath the spring slide may be the carcass of a bighorn sheep or mountain goat. There is more than just herself to feed this new season. As she sweeps aside a clot of snow, two cubs, one deep brown, the other the color of sun on wheat, catch up to her and begin small explorations of their own.

All at once the mother grizzly whuffs and rears up. Does she smell me close by? That shaggy head turns so wide and high above the ground, the muzzle works the wind, and as I wait, breathing tightly, everything that strikes my senses seems to become charged with new intensity.

I see:

Tier after tier of cliffs rise above the bears and me. The north-facing ledges are still trellised with snow in late May, but the south-facing ledges shine with meltwater and the green spears of lilies and grass shoots. On the frost-broken soil lie tufts of fur from the shedding winter coats of animals come to graze this new growth.

Below us is a lake, cobalt colored. Shards of ice float on one end of it. Near the other end, two goldeneye ducks, one male and one female, leave merging wakes. And all around us are white ridges and spires, incandescent beneath a sun that rises higher above them each day and looses still more avalanches up toward the valley's headwall.

I see:

Earth, air, fire, and water mixing anew in this mountain-rimmed bowl. It is the ancient alchemy of creation and re-creation.

The she-bear drops back onto her front feet, walks across the snow, and disappears into a forest of small spruce and fir. After some time the hair on my neck settles down, but the mountains still remain for me a little higher, the valleys just a bit wider than before. It is like the sensation you get when, to wash off the sweat of a hot spring hike, you stand beneath a glacier-fed waterfall and then leap back out into the day. You feel as if in some ways you have not been truly awake until just now.

The awakening. How long we have waited for it! For nearly half the year Montana's Glacier National Park has lain sleeping like its bears deep under the snow. Across a million Rocky Mountain acres, a third of which towers above tree line, there were only the white sounds of winds sifting snow, the scrunch of hooves and clawed pads in powder, ice moaning and creaking in the rivers and lakes as the temperature sank to 40° below zero F.

But now, at last, it has come, the annual reenactment of the time when the vast Ice Age glaciers that cut these many-faceted peaks retreated and the colors of life spread up the mountainsides. Not that winter, having claimed the crown of the continent for so long, is easily dispossessed. On May Day I was sinking through snow up to my hips in the Grinnell Valley.

Hours spent shirtless, when snowfield-reflected sunlight burns the tip of your nose, can be followed by violent windstorms, hail, or even a thick snowfall anytime through early July. Like the ptarmigan, weasels, and snowshoe rabbits, whose coats become mottled as they change from winter white to summer brown,

Scouting the trail, *an avalanche lookout leads the way for a plow during spring clearing of the Going-to-the-Sun Road, which climbs toward the Continental Divide and 6,649-foot Logan Pass. Slides are an ever present danger.*

you feel somewhere between seasons.

"It's that time of year when you can't decide whether to pack hiking shorts or long underwear, suntan cream or extra gloves, rock boots or your skis," said Don Scharfe, a Kalispell, Montana, climber. I met him one day while trekking to a high plateau known as Granite Park.

"So what's the best solution?" I asked this experienced outdoorsman.

"Carry them all, I guess," he replied, shrugging as well as he could with a large pack on his shoulders.

The people who probably keep the closest eye on this season's fast-moving, fickle weather are the members of Glacier's road crew. Each year when other park personnel are busy readying campgrounds, mending washed-out bridges, clearing trails, and processing a late spring blizzard of applications for summer jobs, it is the task of this handful of men to open the Going-to-the-Sun Road.

Glacier's central and most spectacular travel route was now a slide-tracked snowfield with drifts up to sixty feet deep as it curved up toward the Continental Divide.

Foul weather had forced the crew down off the hill two days earlier, and now with four men operating heavy machinery and two on full-time avalanche lookout, it took them most of the morning just to clear through fresh snow and new slides back up to where they had been. Toward noon the crew was finally making headway when supervisor Claude Tesmer radioed in to report that the rapidly rising temperature was making the snowpack unstable.

As the crew retreated once again down the hill to safety, I asked rotary-plow operator Dennis Holden what had passed through his mind when a 1974 avalanche carried him 600 feet down the mountain.

"It's kind of funny, but my first thought was that I was going to miss the play at the community college that night." He paused. "Then I remember just wanting to breathe."

Bulldozer operator Russ Landt watched Dennis disappear beneath the cataract of snow five times. But when it came to a stop, Dennis's body was free, and with bruises here and there and a few stitches in one leg, he made it to the play that evening.

With the Going-to-the-Sun Road not yet open, the shortest route for me to the other side of the Lewis Range was U. S. Highway 2, paralleling Glacier's southern boundary. The first part of my morning drive took me up west-facing slopes past rich forests of larch and Douglas fir.

The Middle Fork of the Flathead River, running high and brown alongside the highway, brought back memories of spring hikes when small, clear streams crossed in the cool of morning would become boiling torrents of snowmelt, mud, and floating snags after a hot day. I would have to swim back across a creek I had leaped over in the morning, or else wait until the next morning to cross.

Before noon I crossed the divide at Marias

At the peak of daring, *a hotdogging skier soars spread-eagle before landing on a mountainside. Those who play in the park's one million acres—as well as those who just stand and gaze—must keep their distance and respect the park's original residents, the animals. Among them are unpredictable and potentially lethal grizzlies.* DOUGLAS H. CHADWICK

Pass, and the narrow valleys of the west slope were replaced by a landscape wider and drier and a thousand feet higher on the average. Snowy crests of limestone tilted above foothills where aspen groves had just started their green-up, and prairie grasses were brightened by early pasqueflowers, yellow bells, and moss campion.

This is big-sky country; the beginning of the Great Plains. "When I scrambled up to the top of Rising Wolf Mountain, I could see all the way to Great Falls with binoculars. That's about 150 miles east of here," Dick Mattson, a friend who works as a park ranger-naturalist, told me when I visited him in his East Glacier ranger station.

Rummaging through his file of historical documents, Dick showed me how most of the eastern half of Glacier Park was created out of lands formerly used by Blackfeet Indians, whose reservation adjoins the park's entire eastern boundary.

That afternoon as clouds continued to pile up over the mountains, the dark-bellied sky crackled with jagged light and Thunder strode back into the land. He had been away since fall, and to celebrate his return—for who but this mighty sky spirit sends rains to make the berries full and the sweet grasses tall across the plains—the Blackfeet always opened the medicine pipe bundle. As the hides of elk and grizzly bear were unwrapped, many songs were sung. Berries were ceremonially planted, and a flute called the birds back into the country.

As today, the loons were always among the first to arrive, followed by the meadowlarks, and then the grebes, mergansers, swallows, and their hunters, bald eagles and falcons. The bundle is still opened each spring, and the songs are still sung, though not as many know the words now.

The park is a cafeteria *to its abundant wildlife. Bighorn sheep browse on spring grass (**top**). A mule deer stretches for lichens, one of its few winter food sources (**left**). Spring shoots attract a snowshoe rabbit (**above**). Appetites are keen when new foliage replaces winter's meager diet of dried vegetation. Protein-rich plants give females strength for the final phase of gestation and milk production.*

In the Two Medicine Valley one day, I sat alone near a stream edged with soon-to-blossom currant bushes. A hundred feet or so upstream was Trick Falls, so named because in autumn, when the water is low, the cascade comes through a hole in the cliff. I prefer its other name of Pitamakan Falls.

Pitamakan (Running Eagle) was a virgin warrior-woman who fought alongside widely feared and respected Blackfeet men. I knew that warriors sought their visions in just such places as this waterfall. Although white men, myself included, are not nearly as comfortable talking about powers to be found in the hills, I couldn't help but wonder how many of us sense something greater than ourselves here, especially at this time of metamorphosis and renewal.

Something. . . .

It needn't be the size of Thunder. It can be in fragrances, nearly forgotten over winter, of moist earth and tart pine and sap bursting from bud seams and alder catkins. It is there too in the tiny calliope hummingbird that once hovered around my bright red parka. And it is in the pregnant elk I saw lying on the mosses of the forest floor. She was alone, that great lady, but perhaps felt more like two things than one.

Power dwelt close by that day in the Two Medicine Valley as the wind and sun raced each other down the bluffs, and I listened to the deep sound of the falls and felt it thrumming in the rocks beneath me. Alone and undisturbed, I dozed off, and when I awakened, it seemed for a moment as though it were the day before Pitamakan led her band to raid Sioux ponies. Or it could have been a thousand springtimes before that, or a thousand in the future.

A national park holds such places—and possibilities—as this. Away from the demands of human society, time can be measured on a different clock, the one that moves at the rate forests grow and bighorn sheep etch trails into the mountains. In some of Glacier's Precambrian argillite rocks you can even make out ancient wave-caused ripple marks, mud cracks, and time-weathered imprints of raindrops—perhaps from the coming of Thunder a billion cycles ago.

Your head reels as you think of the earth spinning through its seasons, years, ages . . . to focus your thoughts, you try to remember the exact date today. I can tell you. It is four sunrises since the elk calves arrived, spindly and spotted with white.

"The babies!" Kathy Keller exclaimed when I casually asked, "What's new?" She was on duty at the Apgar Information and Visitor Center. "There are Canada goslings on some of the lakes and fawns along the Camas Creek Road," she continued. "I went canoeing down McDonald Creek about six o'clock this morning, and I saw baby ducks swimming along the edges of the river backwaters."

I decided to hike up some rocky slopes in the Swiftcurrent Valley and look for bighorn lambs. It was mid-June. The Going-to-the-Sun Road had at last been opened, and when I arrived at Logan Pass, I found myself in the middle of a spontaneous spring festival.

Fueled by the bright sunshine and a top-of-the-world feeling, dozens of visitors climbed steep snowbanks and coasted down with whoops and cries of "Gangway!" Some slid on plastic bags. Others turned turtle and rode their slick jackets. One fellow shot downward atop a cafeteria tray, another astride a canoe he had untied from his car top, and an older matron careened alongside them both sitting in a plastic laundry tub spraying snow and laughter everywhere.

***The peace** that comes with solitude finds a hiker ascending a well-worn trail as spring yields swiftly to fall. More and more visitors seek such experiences in parks like Glacier. And so the dilemma: How can multitudes enjoy together what is best enjoyed alone?* DOUGLAS H. CHADWICK

Above the glissaders cross-country skiers practiced telemark turns while downhill skiing enthusiasts soared off high jumps they had constructed from packed snow so that they could, in the words of one Canadian teenager, "get some air." They got some. From where I stood, I saw whole mountains pass under their skis.

The party was still in full swing when I departed and traveled on to the Swiftcurrent Campground in the Many Glacier area to look up subdistrict ranger Terry Penttila. With a sharp eye and a degree in wildlife biology, Terry usually knows the whereabouts of critters such as the bighorn lambs I hoped to watch. In May this ranger enjoyed long trips to search for the tracks of rare timber wolves, sporadically sighted in Glacier and its Canadian sister park, Waterton Lakes. Now, however, his duties had somewhat expanded.

When I found him in his office, Terry was busy telling a woman holding a squalling baby in her arms that he sincerely hoped a campsite would be available soon.

A foreign visitor was requesting a map and directions when the park radio interrupted him and crackled news of a black bear seen running above some hikers. "Say again," Terry spoke into his walkie-talkie. "Black bear or a dark grizzly? Who saw it? How far up the hill?" The radio was squawking answers when a man from Michigan burst through the door to announce that his wife had sprained her ankle.

"Terry," I shouted as he hurried past his suppliants to check on the bear sighting, "maybe I'll see you in the fall." I'm not at all sure he heard me.

Summer, it seemed, had come at last to this part of the park. But as Glacier's superintendent, Phillip Iversen, once mentioned to me, if you hike uphill far enough, you can always find spring somewhere in this country—almost until the day the first fall snow comes. In July I took my ice ax and climbed the side of Mount Siyeh.

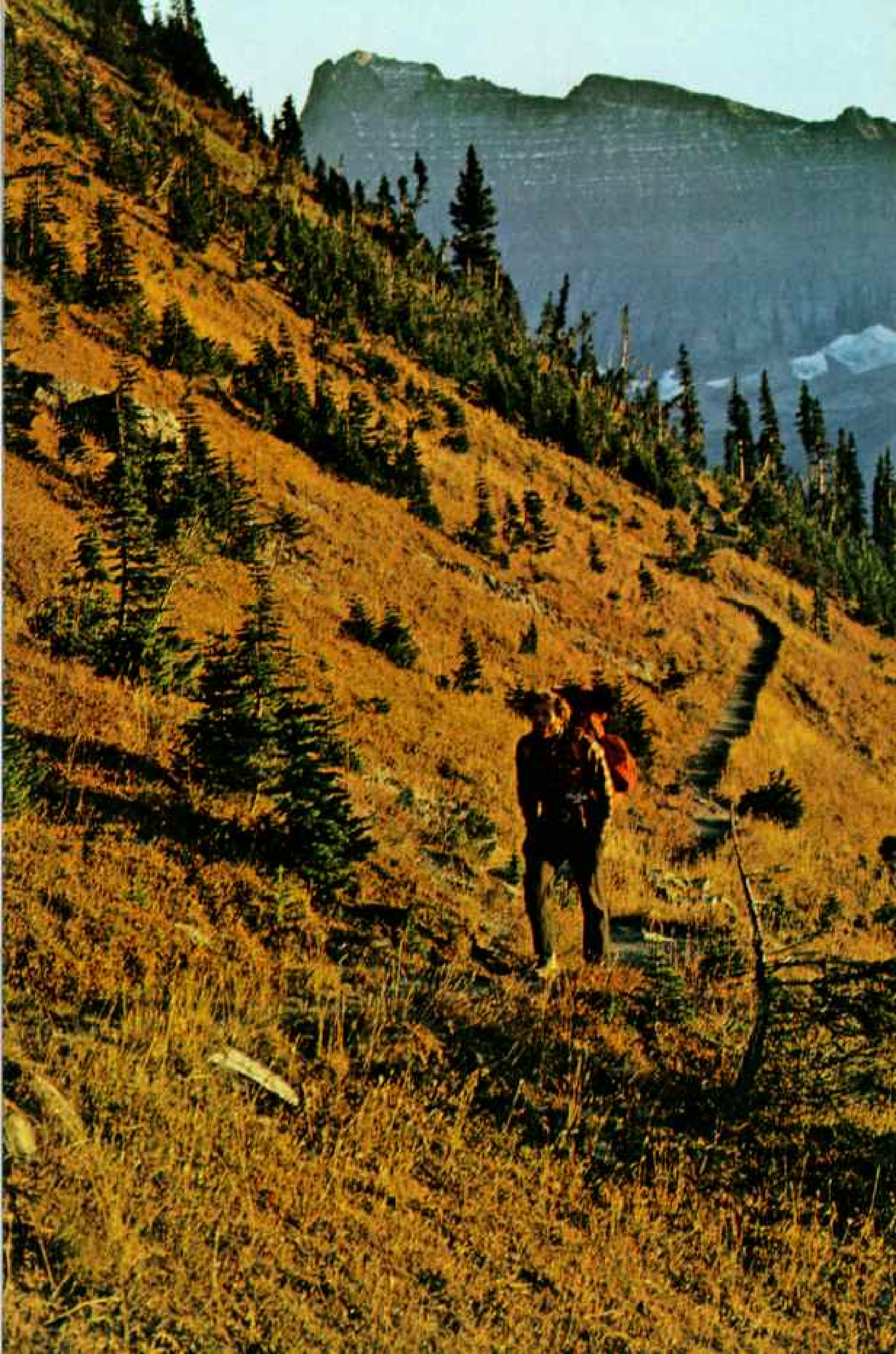
At 6,000 feet I saw where marmots and ground squirrels had burrowed up through layers of snow to reach the sunlight upon emerging from hibernation. At 7,000 feet bud-filled branches sprang up from the snow as vibrations from my passing tread loosened them. Lilies and spring beauties unfolded petals at the snow's edge.

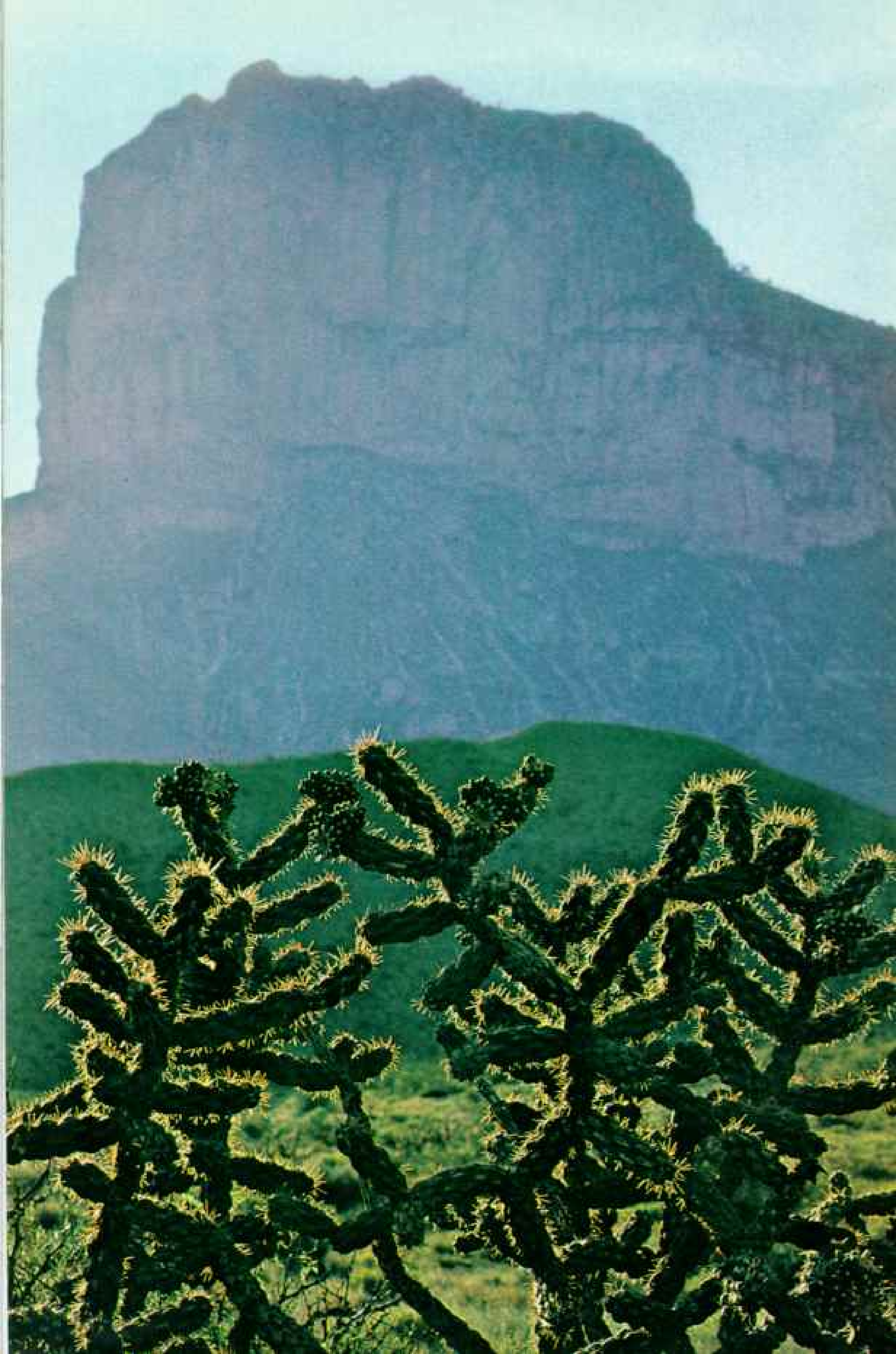
Before I passed 8,000 feet, a storm front moved in below me. I crab-crawled in the fog over loose talus and up fractured rock I had to hold together to climb.

Then, almost as quickly as they had formed, the clouds evaporated into the evening. Only a few tatters remained when I reached 9,000 feet and looked across the St. Mary Valley to the upthrust red escarpments of Triple Divide Peak. The mountain was still snowbound, but I knew that spring was melting its way toward the top until one day, perhaps not until August, snow crystals on the very crest would turn liquid.

From one side of the mountain the water would flow north all the way to Hudson Bay and the Arctic; from another side, westward to the Pacific; and from a third face, across the Great Plains and down the Mississippi into the Gulf of Mexico.

An impressive watershed. I envisioned that one red mountain sending clear water and reflections of the high country throughout the globe. Yet I knew that by the time each drop of liquid found union with its destined sea, its place of origin in Glacier Park would probably be lying under new snow once again, waiting silently for the season of rebirth. □





Guadalupe's Trails in Summer

By EDWARD ABBEY

FROM GUADALUPE PEAK, 8,749 feet above sea level, highest point both in this national park and in what Texans refer to as the largest unfrozen state in the Union, we peer south through wind and haze toward Mexico and the Sierra Madre . . . the Mother Mountains. But they are obscured by dust and distance. We do, however, have a fine view of the Pecos Valley to the east, dry salt lakes to the west, the mountains of New Mexico to the north. And the harsh bright blue of the sky overhead.

High lonesome country, this west Texas. Arid plains, glaring salt flats, rough and rugged desert mountains, bitter winds, snow in winter, heat and drought in summer, and a long, long way from anywhere. El Paso lies 110 miles to the west, Carlsbad, New Mexico, 55 miles to the northeast, Pecos 80 miles to the southeast, and tiny Van Horn 55 miles to the south.

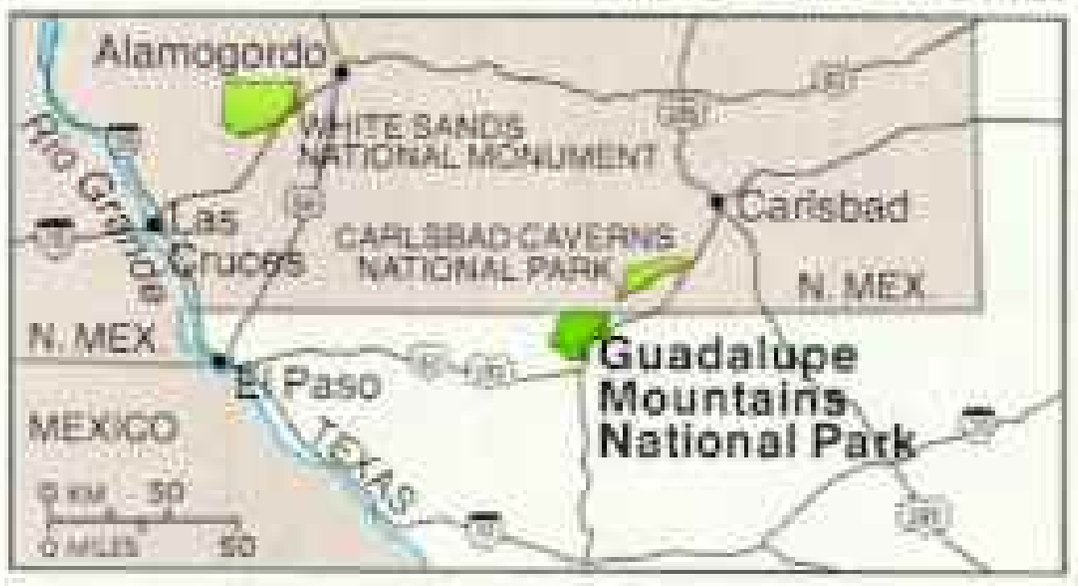
There's nothing in between but creosote bushes, saltbushes, lizards, jackrabbits, vultures, and rattlesnakes—at least four species. Plus these anomalous mountains rising like islands from the vast Chihuahuan Desert. And a few tough Texans, a few more even tougher beef cattle. (Chop with cleavers, chew with steel dentures; that's local slumgullion stew.)

Such an environment breeds a cantankerous variety of human. For instance: In a nearby town, I was told, the service-station owner once refused to sell gasoline to strangers unless their cars wore Texas license plates. Why? Because foreigners just had no business nosing around.

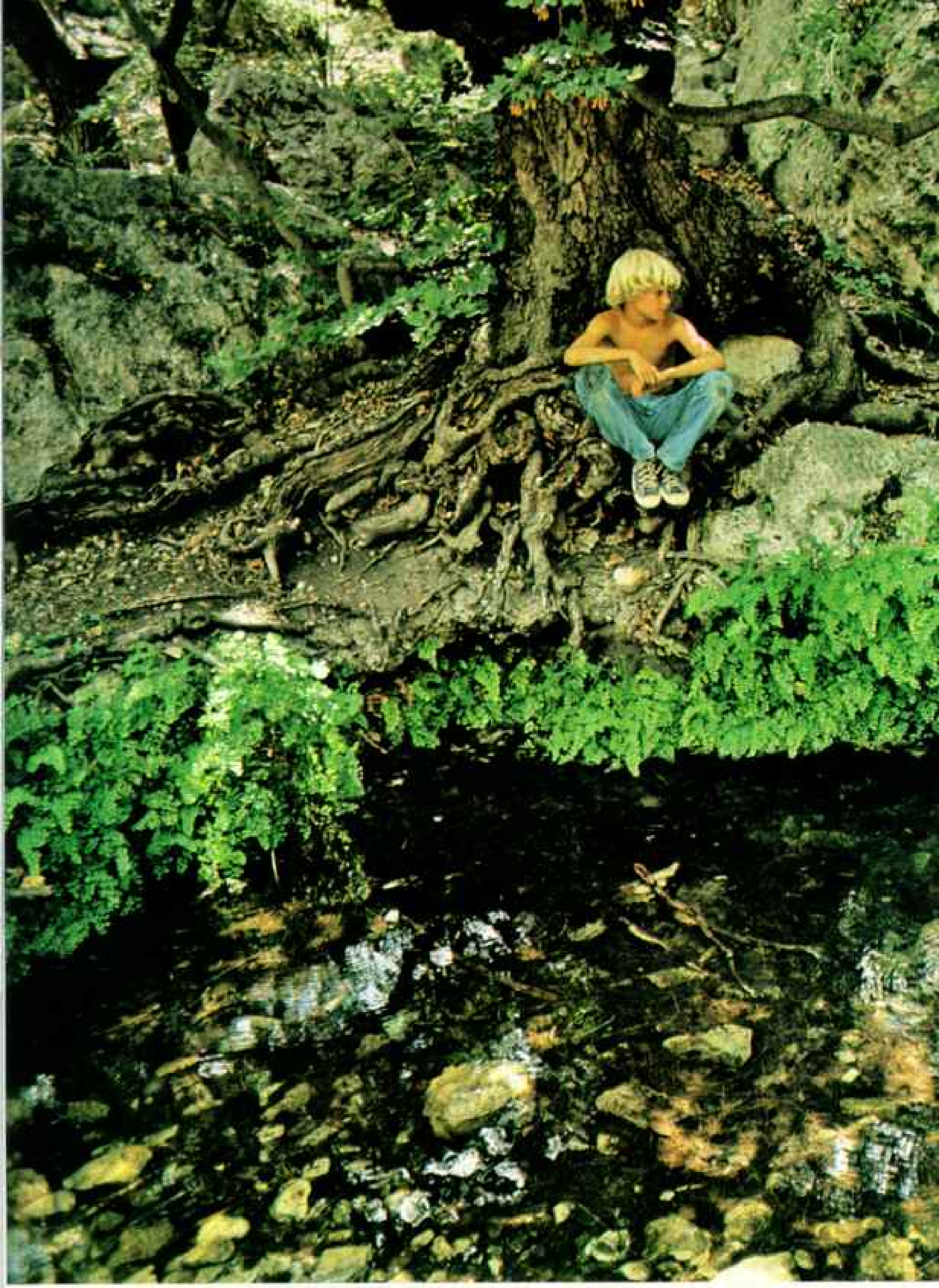
Another story: About four years ago a local rancher, 79 years old, was riding alone in the rocky foothills when his horse stumbled, broke a leg, and fell on top of the old man, breaking one of *his* legs as well as a few ribs. Trapped beneath the thrashing horse, the old man unholstered his revolver and shot the animal. Then he drew his knife and cut his way free from the 1,200-pound carcass. He crawled three miles over rock, through brush and cactus, to the nearest road and waited there for two days without food or water until somebody finally came along in a pickup truck. The old rancher was furious because nobody had found him sooner.

Such people do not adapt easily to tourists; Guadalupe Mountains National Park, opened in 1971, is still regarded as an affront by a few of its neighbors, who would rather see cows on its hills than humans.

Up here on the peak, though, I can't see anybody in any direction. The registration log testifies that quite a few others, mostly Texans, have been here, but the wind, cold



Gibraltar of the desert, *El Capitan stands guard behind a bristling cholla. Guadalupe Mountains National Park in Texas embraces one of the world's largest exposed fossil reefs, with El Capitan at its prow. The desert below is fried country in summer: tough on boot leather, hard on the unprepared.*



In the quiet oasis of Smith Spring, man must tread gently to preserve the

fragile ecosystem. Camping, forbidden here, is permitted elsewhere in the park.

***A crazy jumble** of plants proliferates in the Guadalupes, which support both arid-land species like the lechuguilla (**facing page**) and moisture-needing trees like the madrona, which sheds its bark (**below**) rather than its leaves.*

even in July, discourages loitering. Worse is the heat of the desert below, 98°F according to the thermometer in my old jeep.

It wasn't easy hiking way up here, but I suppose it was worth it. The trail up, through Pine Spring Canyon, climbs more than 3,000 feet in about five miles. The foot trail is old, dim, primitive, little more than a deer path marked by stone cairns. My wife and I each carry a gallon of water, most of it drunk on the way.

Looking south, we feel as if we're on the bridge of a great stone ship. The Guadalupe Mountains are wedge shaped, with Guadalupe Peak near the apex. One mile ahead and 700 feet lower is the bow of the ship, a spectacular escarpment called El Capitan. From that point the world falls away for a dizzying 1,000 feet straight down. It reminds me of Toroweap Overlook in Grand Canyon. But here the rock walls are corroded and rotten. Park regulations at Guadalupe make the point: "Do not climb the cliffs." The limestone is unstable and considered unsafe even for technical climbers. A bat might hesitate to crawl about there.

The bats, by the way, are not doing well, here in the heart of bat country. Thirty years of agricultural pesticides apparently have produced a classic vicious circle: As the bats eat poisoned insects, their mortality rises; with fewer bats to consume them, insect populations increase—and farmers apply more insecticide to their fields, indirectly poisoning more bats. The great clouds that once fluttered every twilight from Carlsbad Caverns and others in the Guadalupe Mountains area have dwindled to swarms.

The Guadalupe Mountains are the exposed portion of an ancient upthrust reef, and, as would be expected, the limestone contains many caves, though they are not open to the public. Regulations permit entry "only to qualified speleologists engaged in investigations which have demonstrable value to the National Park Service in its management and understanding of the park."

Not that it matters much to us at the moment. There is enough wilderness on the surface—most of the park's 76,293 acres. Guadalupe has 63 miles of primitive trails but little in the way of roads. U. S. Highway 62-180 passes through the southeast edge of the park for six miles; a few old trail roads, much too rocky and high-centered for modern automobiles, approach the eastern canyons and wind through the desert *bajadas*—alluvial slopes—on the west side. But that's all.

The wind continues to blow, unrelenting. A local woman told me it always blows in west Texas. Must be hard to get used to, I suggested. We never get used to it, she said; we just put up with it.

The sun is lowering into a mass of clouds on the west. Time to get off this overexposed peak. We stumble down the dim deer path of a trail into the twilight of the canyon. The

naked walls of El Capitan loom above us now. We grope through a jungle of pine and oak, loose stones and prickly pear, saw-toothed sotol and rasp-edged basket grass, down to the smoked coffeepot, blackened skillet, bacon and beans, and sleeping bags that we call home for the night.

Next day, with loaded packs and the morning sun on our shoulders, we struggle up the rough switchbacks of what's called Bear Canyon Trail. Our starting point was a watering place known locally as The Pinery, once a stop on the Butterfield Overland Mail. My wife and I carried five gallons between us—42 pounds—an unpleasant burden, but necessary. We planned a two- or three-day hike up to the rim of the main range, across the forested interior, down into South McKittrick Canyon in the northeast quarter of the park—where a spring-fed stream promised water (though not an approved source)—and out to the highway, about twenty miles.

The climb to the rim, 2,000 feet in little more than a mile, on a trail consisting mostly of cactus and awkwardly angled stones, took four hours. We called it the four-hour mile. Step by step we left the desert heat behind, reduced our tiring load of water, and reached finally the shade of the first ponderosa pine.

We rested for a while, then followed the primitive trail into the woods, going down into a unique area called The Bowl. This part of the Guadalupe range is well forested. We walked through stands of ponderosa pine, white pine, and Douglas fir, and here and there a few rare aspen. This is a relict forest, a holdover from the Pleistocene epoch, when cooler, moister conditions prevailed here.

Hidden deep in this island forest is a herd

of about a hundred elk. The native elk were exterminated by the early settlers, then reintroduced in 1929. Far less numerous than the mule deer, elk today range in small, scattered bands, sometimes leaving the area in search of water.

Where there are deer and elk, there should be lion—mountain lion. But *Felis concolor* is scarce here, killed off to protect livestock. Guadalupe's 119 square miles are not enough to keep the cats, also known as cougars, from ranging beyond park boundaries and getting into trouble with ranchers.

Desert bighorn sheep are gone, killed off by hunters, and black bear, never abundant, are now rare. The bighorn would do well, but would be costly to reintroduce—several thousand dollars per animal.

We camped that night in a grassy clearing near the trees; we weren't sure where, for we had lost the trail. We ate a cold supper of nuts, cheese, jerky, and fruit. It was water more than anything else that we thought about; we had only two gallons left.

In the morning we found the trail again, on McKittrick Ridge. The views from this high ridge are spectacular, and—except for

CAFE

Sturdy as the land, *84-year-old Bertha Glover runs the weathered Pine Springs Cafe by the only highway that nips into the park. The government has acquired her property by eminent domain, but she retains lifetime rights. With her Chihuahua, Pancho, for company, she sells snacks and pumps gas. "If I was to sit down and quit, I'd just mildew," she says.*

our dwindling water supply—we would have been reluctant to return to the lowlands. We camped the second night at an official site on the rim of South McKittrick Canyon—out of the wind, with a spacious view to the east.

Now definitely dry, we started off next morning down the trail: a 2,000-foot descent over loose stone and gravel, in an endless series of switchbacks. Thirst occupied our thoughts. But our loads were lighter, gravity was with us, and we could see, far below, the sparkle of running water.

It tasted, when at last we got there, as good as it had looked from above. With canteens full, we strolled easily down McKittrick Canyon, under oaks, bigtooth maples, and Texas walnut trees. The canyon was lively with birds—more than 200 species have been identified in the park—and tracks of mule deer crisscrossed our path everywhere.

With its unusual blend of environments, McKittrick Canyon is home for many birds, animals, and plants, including a species of columbine found nowhere else in the world. Here the Chihuahuan Desert intermingles with pine-oak woodlands of the mountains and the shortgrass prairie of the High Plains.

Wealthy petroleum geologist Wallace E. Pratt, who built a lodge in the rugged canyon, recognized the uniqueness of the region and donated much of the land that today forms the core of Guadalupe Mountains National Park.

When we reached the roadhead, an obliging motorist gave us a ride back to our base at Pine Spring Canyon. On our last day at Guadalupe we drove seven miles of winding jeep road to the abandoned Williams ranch house, at the mouth of Bone Canyon, under the grand western escarpment of the Capitan Reef.

The one-story frame house sits creaking in the wind, splintering under the sun, its windows covered over. We investigate the disintegrating corral, an old shack, a rusted water tank, a truck with wooden-spoked wheels. Relics from the 1920's. The only sound in this sun-drenched scene is the moaning of the desert wind.

Standing amid these derelicts, one contemplates that former way of life. Sixty miles by dirt road to Van Horn, the nearest town. Saturday afternoon at the picture show. Return by starlight to the homestead. Feed the animals, milk the cow. Inside the shack, trim the wick of a kerosene lamp. Survival chores. A hard life? No doubt. But, as one whose boyhood was spent in that kind of life, I can think of worse.

We climb into Bone Canyon, so named for fossil souvenirs of the Permian period, at least 225 million years old, an incomprehensible gulf of time. Geologic fantasies . . . but right there beneath my hand, embedded in solid rock, lie the fossilized forms of trilobites, brachiopods, crinoids—unfathomable bits of life and time.

A rusted waterline, bent by floods, leads to a small spring high in the canyon. We follow the pipe to the water. A couple of cottonwood trees stand by the spring, leaves trembling in the breeze. We fill our canteens from the trickle under the rock.

We sit for a long time in the shade of the blessed trees, listening to canyon wrens, to the scream of a red-tailed hawk high against the cliffs. We watch the sun go down beyond dry lakes of salt and the far mountains. This is a harsh, dry, bitter place, lonely as a dream. But I like it. I know that I could live here if I wanted to. If I had to. □

Autumn—Season of the Smokies

By GORDON YOUNG NATIONAL GEOGRAPHIC SENIOR EDITORIAL STAFF

"NO DOUBT ABOUT IT," Superintendent Boyd Evison told me emphatically. "This park is one of the greatest chunks of unspoiled territory left in the East."

The view from his office window bore him out. On that day in late October, Great Smoky Mountains National Park flamed with brilliant hues. Cold air coming down from the north had pushed out the smoky haze that gives these mountains their name. Each color-splashed peak stood clear, free of the Great Smokies' usual "smoke."

I had admired that spectacular Tennessee view a decade earlier. Now I was finding that the enduring mountains had changed little—but the task of keeping them unspoiled looms larger.

Over the past ten years, visitors have increased by almost 50 percent, sometimes overstressing roads, campgrounds, and even backcountry trails. Some 11½ million people enjoyed the park last year, according to Park Service estimates.

Animal problems have multiplied as well. The number of wild pigs has steadily increased to perhaps 2,000. As they root for food, they plow up plants, meadows, and trails. And a prolific insect, the balsam woolly aphid, is eradicating Fraser firs.

The supreme gift that this sprawling park offers is a taste of the wilderness life. I sought that experience, hiking a section of the Appalachian Trail, which runs through the park. In the first hour I came upon more than twenty other hikers, where once I had spent half a day without seeing anyone.

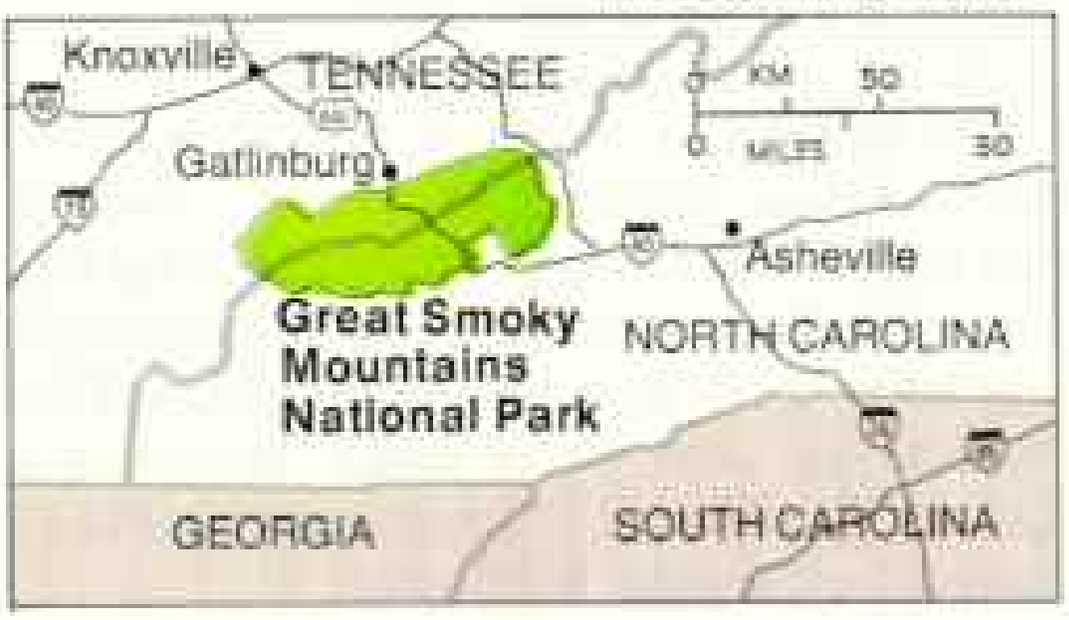
There are now so many hikers that park officials have put in a central reservation system, allocating campsites, to hold down the impact on backcountry ecology.

Many of the park's black bears also enjoy the backcountry. "We're enforcing bear regulations more vigorously now," said Stuart Coleman, resource management specialist at the park. "But handling bears has always been a problem. Some animals work the trails, trying to bluff backpackers into giving up their food. Many a lunchtime sandwich gets thrown beside the trail to distract an insistent bear."

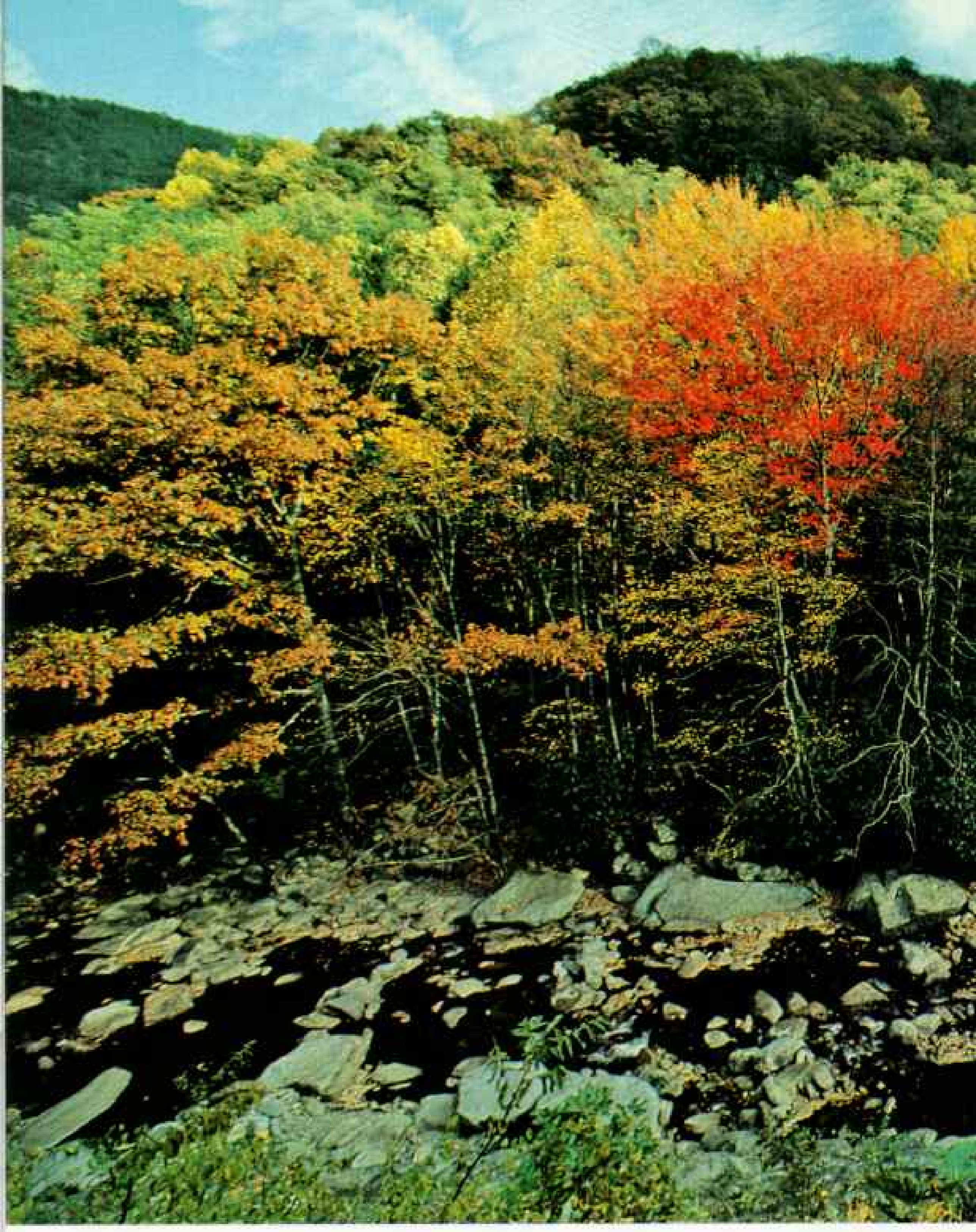
Campers must, according to park regulations, hang their food pack on a rope stretched high between two trees. "Some bears have become rope chewers," Coleman went on, "biting the rope where it's tied around the tree to bring the pack down. Some shake a tree furiously, hoping to knock the pack off the rope."

Then he grinned. "At least one big critter—we have several reports of this—climbs high in the tree, launches itself into space, and grabs the pack on the way down."

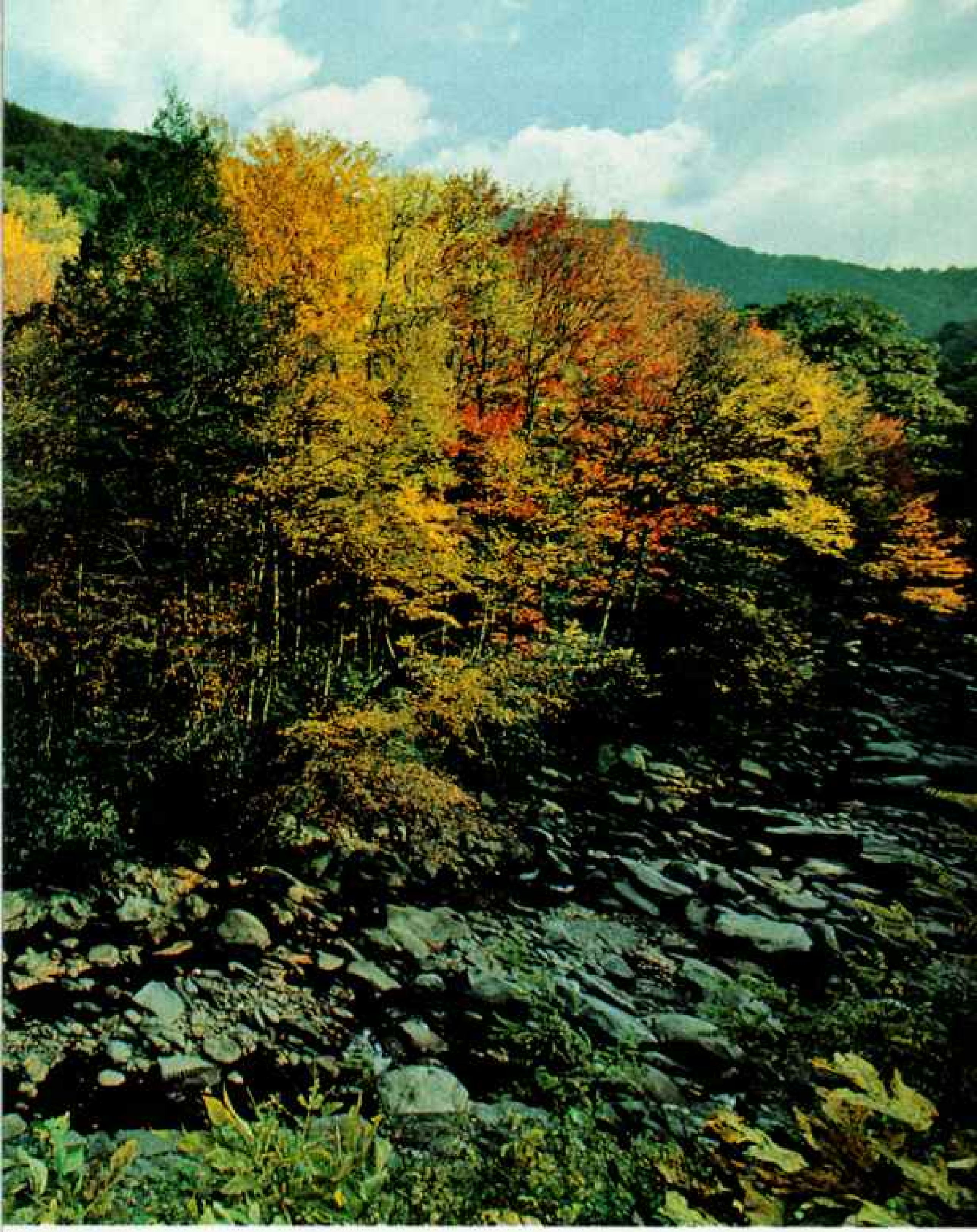
Most visitors, however, stay close to their cars. The Park Service tries to introduce one and all to the joys of nature. Superintendent Evison has firm ideas about the wilderness experience. He has removed the traffic light that dangled at an intersection near park headquarters and limited the mowing of vegetation along park roads. "Those kinds of things were saying the wrong thing about a natural *(Continued on page 147)*



Focused on the Smokies, *two bikers share the most heavily visited national park with the 11½ million who come yearly. One reason: More than a quarter of the nation lives within a day's drive.*

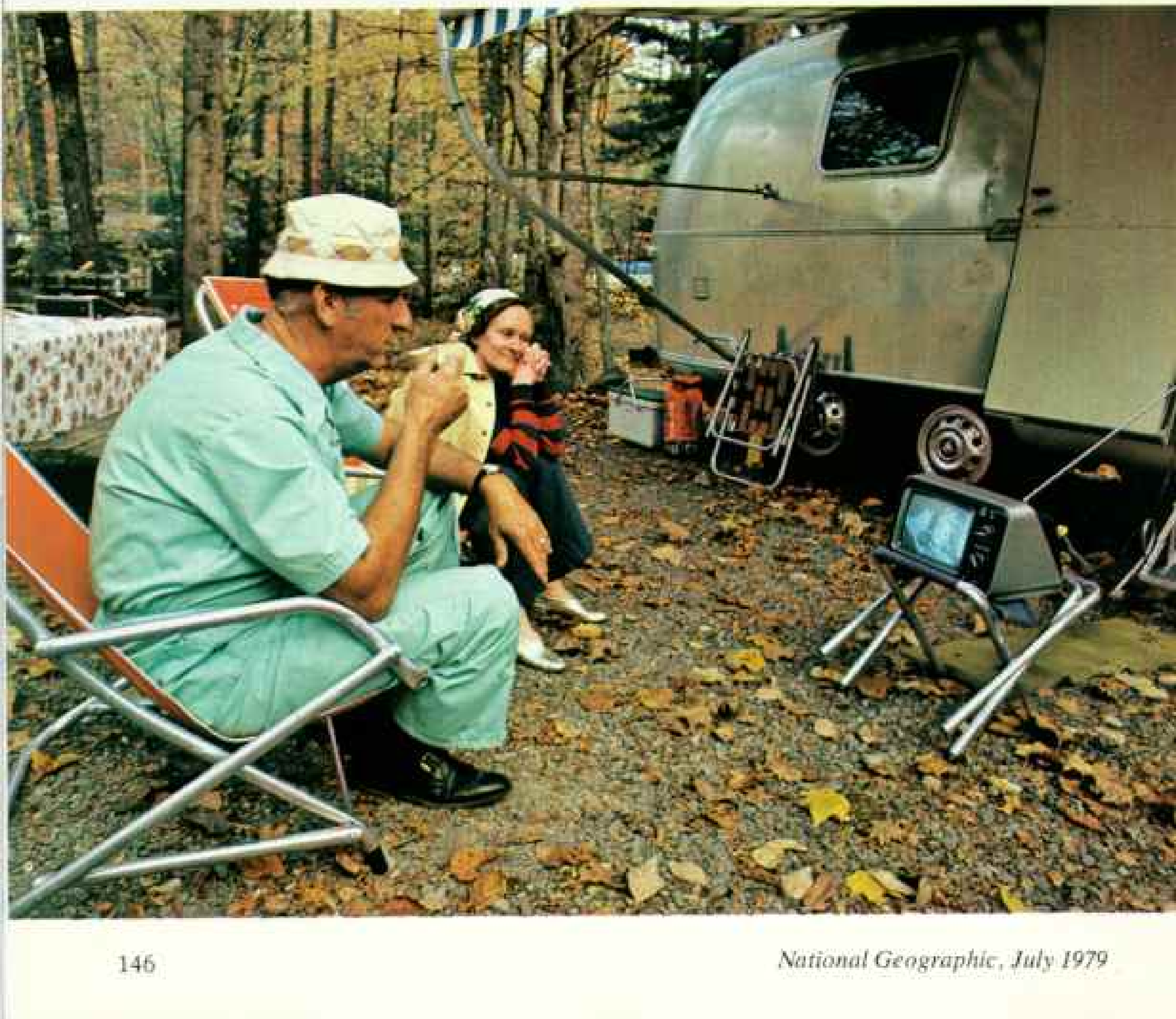


Fall's self-consuming flame *bursts from the flanks of mountains wrinkled by time and weather. Gently wrapped in a smoky haze deriving mainly from high humidity and hydrocarbons exuded by the lush foliage, the Smokies are among the highest peaks in the Appalachian Mountains. More than*



130 species of trees thrive in this largest virgin hardwood forest in the United States. Beech, birch, ash, black oak, and elm fill forests threaded by rivulets and trout streams. Naturalist John Muir passed this way in 1867 in his search for the "wildest, leafiest, and least trodden way."


QUIET
WALKWAY



Getting away from it all . . . almost. *Cars whiz by a sign* ***(left)*** *that marks a quiet trail off a small parking lot—instant wilderness for the motorist. The living color of the Smokies decorates the outdoor living room of Bob and Liz Tate* ***(below)****, who have visited this campground for the past decade.*

(Continued from page 142) area like this," he told me.

His triumph is a series of short, gentle trails called Quiet Walkways. Each leads from a tiny parking area—tiny to ensure that only one or two families will use a trail at the same time. A trail may wander beside a stream or wind behind a ridge. There, beyond the sight and sound of passing traffic, even a tenderfoot can come close to nature.

Another measure of the Smokies' wildness: The park is widely recognized by scientists throughout the world as an international biosphere reserve—a region of exceptional variety in habitat and species. Call it a yardstick against which to measure earth's deterioration as population and pollution grow.

And call it a great green classroom. Trainees at the Job Corps Civilian Conservation Center learn construction trades while they improve park facilities. Western Carolina University and the University of Tennessee both conduct park-ecology courses here, and Maryville College operates a center for environmental education. In the Uplands Field Research Laboratory the goal is to make National Park Service custodianship even less disruptive to flora and fauna.

Many motorists drive the 11-mile loop around Cades Cove. They slow to watch deer gambol in the cleared fields and to absorb the sense of what pioneer life must have been like here in the old days.

I marveled at the work that went into the log cabins and mused to Ed Trout, Park Service historian, about the infinite patience of the pioneers.

"Someday, when automobiles are obsolete and everyone gets around by supersonic plane," he replied, "our descendants will be saying the same thing about us—wondering at our patience in spending all those hours on the highway, getting here."

Most visitors make pilgrimages to the high-perched parking area on Forney Ridge. From there a trail winds its way upward to the highest point in the park—6,643-foot Clingmans Dome, crowned by a lookout tower. The trail is broad and paved; millions of feet walk upon it each year. Handicapped people in wheelchairs also share the view of endless mountain ridges that rewards anyone who climbs Clingmans Dome.

But few visitors penetrate the park's rugged easternmost region, known as Cataloochee. This is hikers' country. Only a few short paved roads enter this part of the park, and each ends at a campground. Farms existed in here once—but to work those sloping fields, a farmer must have hoed with one hand and hung on with the other.

October evenings arrive early in the Great Smokies, for the mountains block the setting sun. As the campground view outside the window of my motor home grew dark, I sipped coffee and prepared to spend my final night in the park.

Less than an hour later, something woke me; a distant, bass drum sort of boom. Was it a bear swatting one of the campgrounds' bear-proof trash cans? Then my motor home began to rock.

Nervously, I waited. The rocking ended, and I wiggled back into my sleeping bag, the mystery still unsolved. It *must* have been a bear, I told myself—wedging itself under the motor home, looking for food. Through the night I tossed and wondered, but I'll never know.

Superintendent Evison and all his rangers can rest easy now.

I've had my wilderness experience. □

Grand Teton—A Winter's Tale

By FRANÇOIS LEYDET

UNTO the utmost bound of the everlasting hills. The Biblical phrase echoed in my inner ear while my eyes swept the Wyoming horizon: low hills far to the north; the forested flank of Shadow Mountain to the east; the dark flattened bulk of Blacktail Butte to the south; and over there to the west, utterly dominating the scene as much by their sheer drama as by their superior height, the Tetons.

The full forty-mile sweep of the range was spread before me, ancient crystalline rocks encrusted with snow and ice, sparkling in the winter sun, steep-sided and sharp-spired, surging skyward from the flat valley floor of Jackson Hole like a gigantic tidal wave suddenly halted and frozen an instant before it broke.

Quintessential mountains, these Tetons. Lofty, majestic, haughty, hypnotic—I searched my vocabulary for descriptive adjectives. All fit, none sufficed. I stood knee-deep in virgin snow, the collar of my sheepskin jacket turned up against the February wind that poured down from the crest of the Tetons. I was out of sight and hearing of the main north-south highway through Grand Teton National Park. The only sound was the faint hiss of wind across the snow. I felt small, alone, and mortal; looking up at the Grand Teton, I could empathize with a Biblical shepherd who thought of less awesome heights as "everlasting hills."

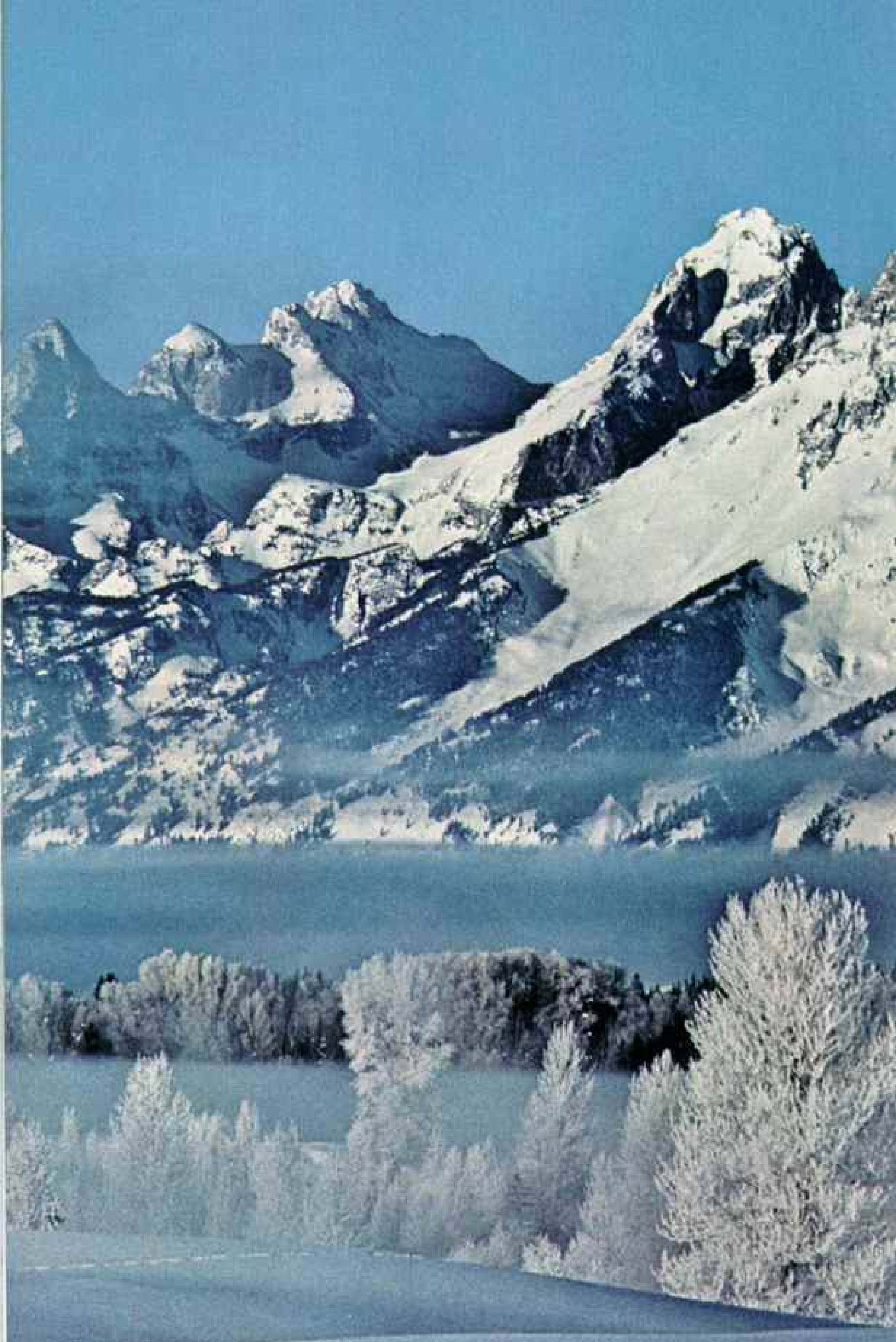
Still, I knew these Tetons were *not* everlasting. Old they were in human terms—they had soared there long before the first bands of men roamed the African savanna. Yet they were young as mountains go, less than nine million years old.

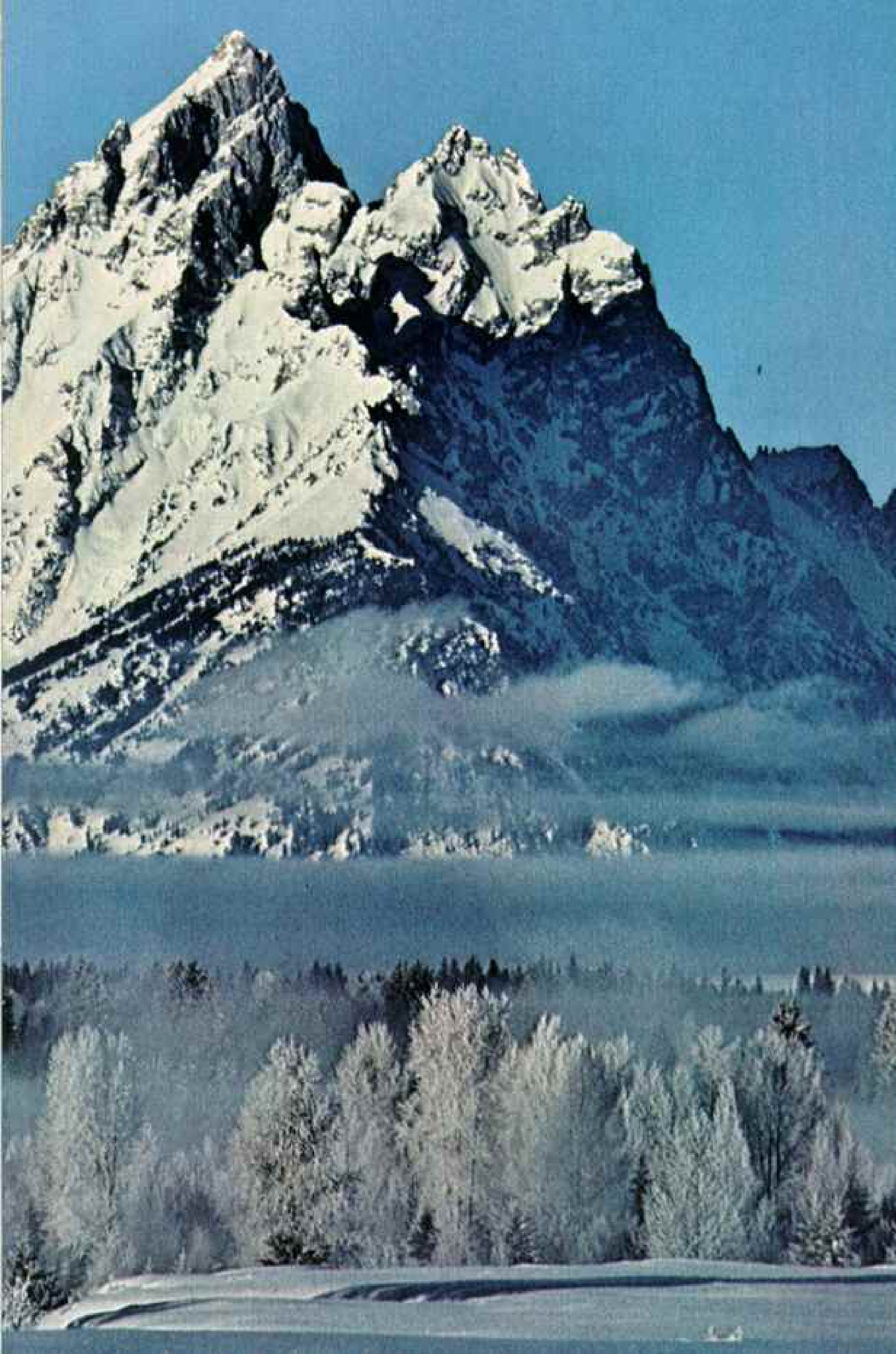
And just as the child carries within him the seeds of his eventual demise, so were these upthrust masses of rock already marked with the processes of their dissolution: their canyon heads gouged by glaciers, their gneisses and schists scarred by frost and thaw and rain.

From where I stood, I could see some of the glaciers, remnants of the Ice Age, perched on the sides of Grand Teton and Mount Moran. In the snow-mantled valley the Snake River flowed behind a screen of tall cottonwoods and dark spruces. Naked rock, ice, gravity, running water—the drama of erosion unfolded as imperceptibly as the sloughing off of dead cells from the skin of my hand. In an absolute sense the Grand Teton was no more everlasting than I.

The mortality of mountains. The mortality of a man. Somewhere in between, on the cosmic timer, the mortality of a species. Before me, on a partly frozen backwater

Some must die *during the yearly migration of elk from surrounding high country to the National Elk Refuge near Grand Teton National Park. Here coyotes have stripped the carcass of a bull (**right**). Elk find some protection from westerly winds under the lee of the Tetons (**overleaf**). But the snow is deep and forage scarce.*





named the Blacktail Ponds, three regal white birds cruised slowly, single file. Half a century ago this little flotilla would have represented nearly 5 percent of the population of trumpeter swans in the country. Once a common migratory species, the great birds had declined in the forty-eight states to a low of 66 in 1933. Now protected, trumpeters here number about 800, most of them where Idaho, Montana, and Wyoming meet. But having lost its migratory instinct, the species could yet succumb to disease, a nesting failure, or a severe winter.

Earlier, driving out to the park, I had passed the National Elk Refuge. During the trapper era, elk migrated farther south, where the climate was milder; later, white men's fences barred their way. Now their annual trek ends on the outskirts of the town of Jackson, and when snow conditions prevent grazing, the starving elk are fed alfalfa pellets, like so many cattle, by refuge personnel. Without the refuge they would die; yet it occurred to me that this was a kind of winter ghetto for the elk, and the pellets their welfare checks and food stamps.

Why such somber musings on this bright winter day, surrounded as I was by the quiet glory of Grand Teton National Park? Why could I not just take joy in the tranquil procession of these surviving swans and absorb the serenity of the everlasting hills? Why must I look for unsettling connections between geologic erosion and the mortality of living things? Why? Because the serenity was fragile and the connections were real.

These swans, pausing now to probe the water with gracefully arched necks, had won a reprieve. But it had been estimated, I knew, that the proliferation of mankind's numbers and activities was causing the extinction, somewhere in the world, of at least one species of plant or animal every day, and that the rate of this biological massacre was speeding up. The end result was bound to be an environment with less beauty, variety, and solace for mankind, at the least. No one knows the final price for the broken fabric of the biosphere.

In his impact on the world, man has been compared to a geologic force—only his changes are far swifter and more devastating than the relentless chiseling of the face of the Tetons by ice, wind, and rain.

The serenity of the scene before me, up here above Blacktail Ponds, was in part a gift of the season: The park's back roads and campgrounds were snowed in, the Snake free of boaters. In summer four million or so visitors descend on the park.

"Many of them don't seem to know what they're looking for here," a young park ranger had told me. "They hurry through as fast as the traffic jams will allow, snap a few pictures, then hurry on to Yellowstone, where I suppose they do the same thing. I guess they're just getting away."

Getting away, more than likely, from the urbanized and largely unnatural environment in which most of us spend our lives. And returning home, all too likely, with the complacent feeling that because the many splendors of Grand Teton National Park had been "saved," because the trumpeter swan had been "saved," because the elk had been "saved," it matters less what ecological havoc is wrought back home.

God save us from environmental tokenism, I thought with a shiver due only in part to the icy wind. And before turning my back on the shining Tetons, I said a silent prayer that before all was lost a more gentle human race might learn to treat the planet like a park! □

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BOTH BY JONATHAN BLAIR

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JULY 1979 THROUGH DECEMBER 1980

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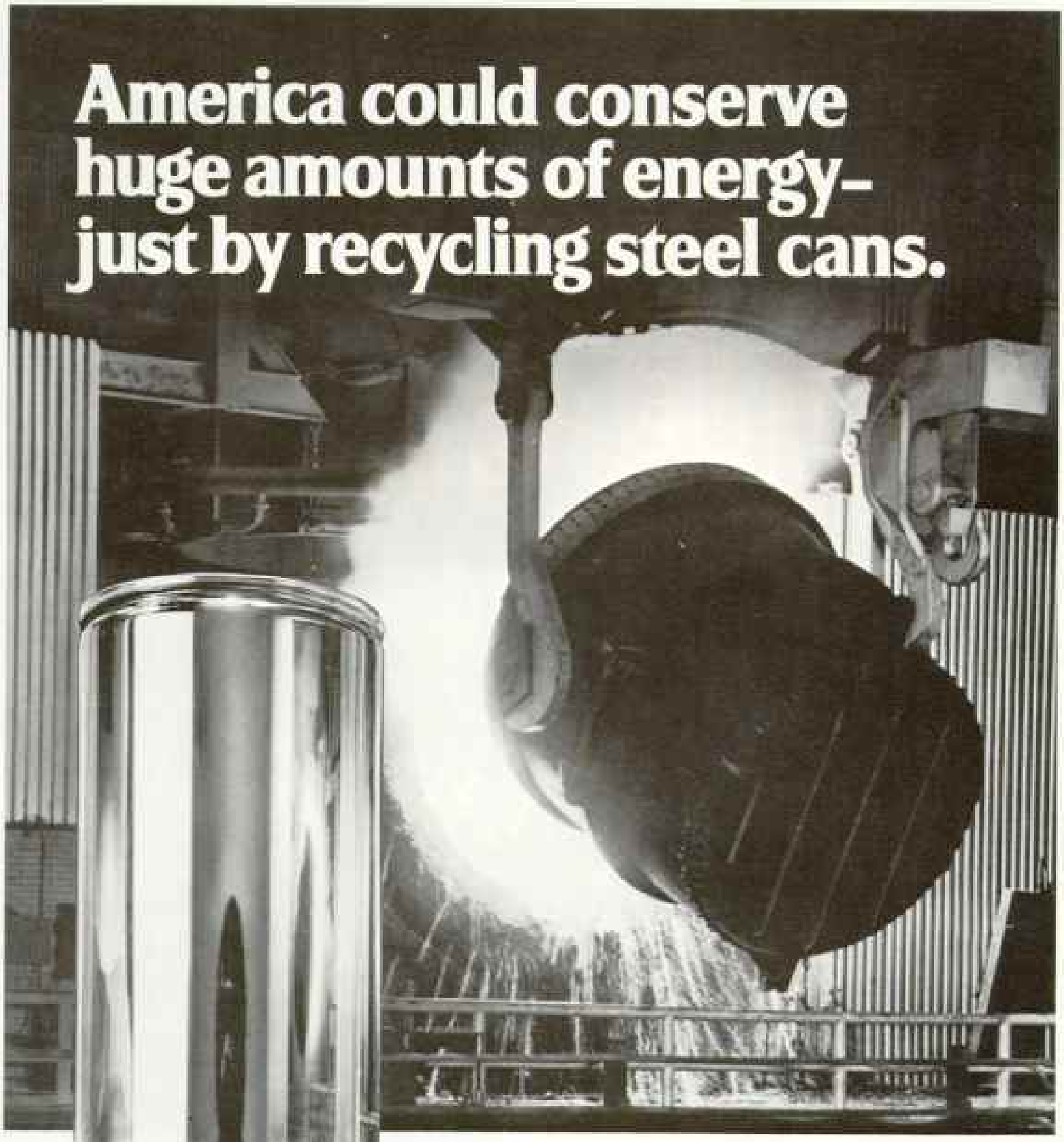

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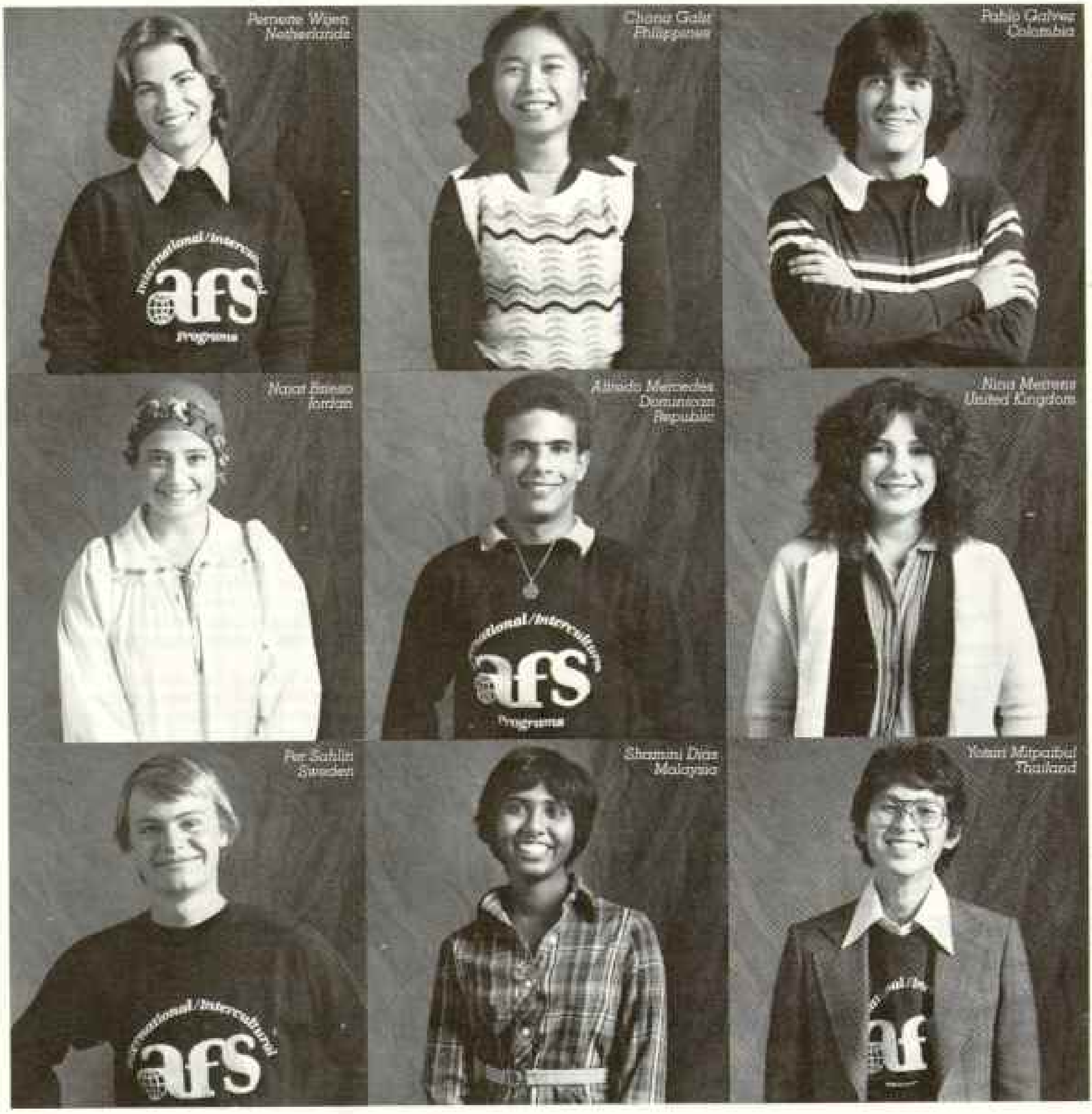

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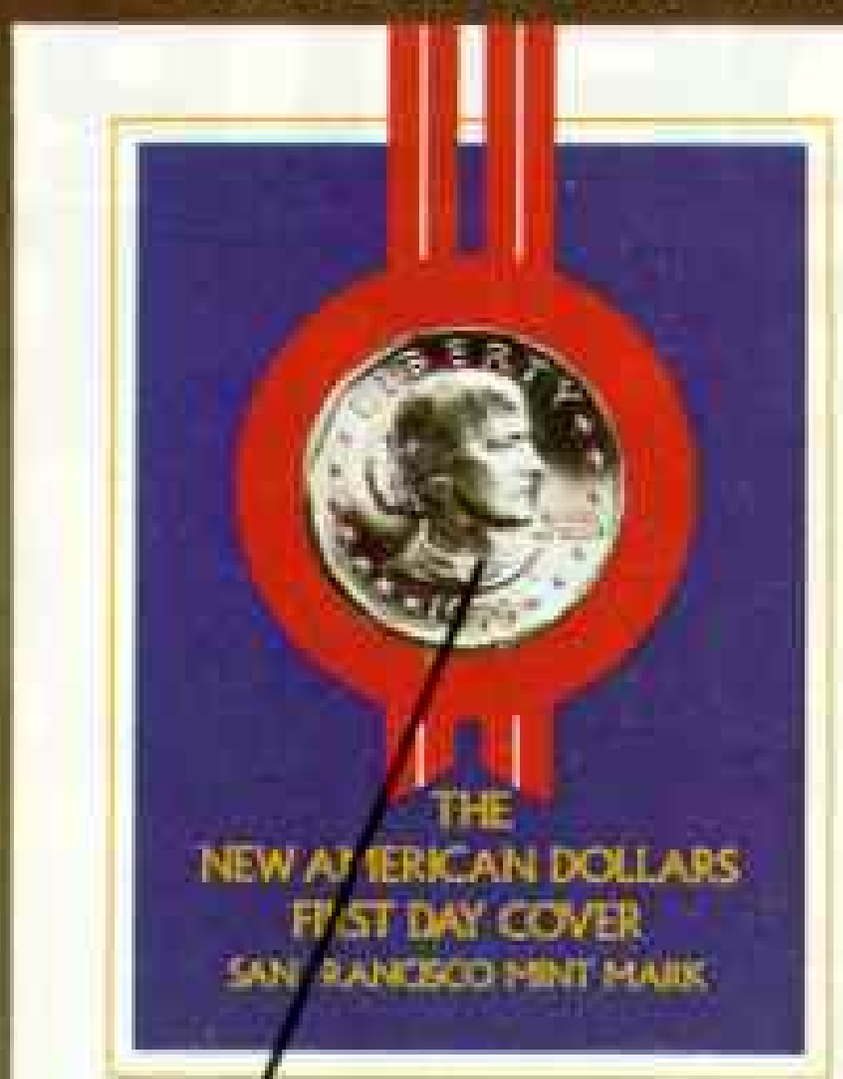

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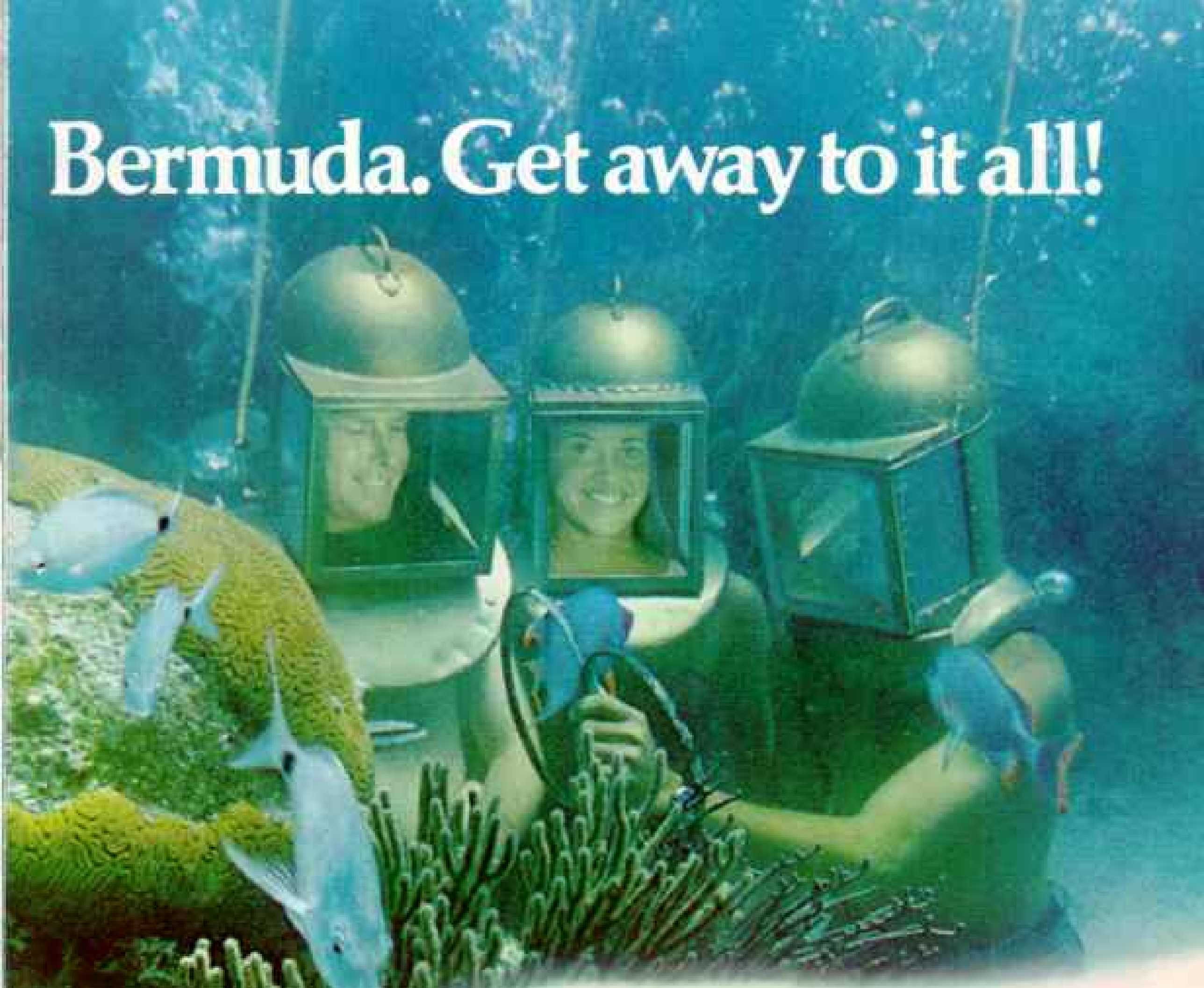

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Gulf

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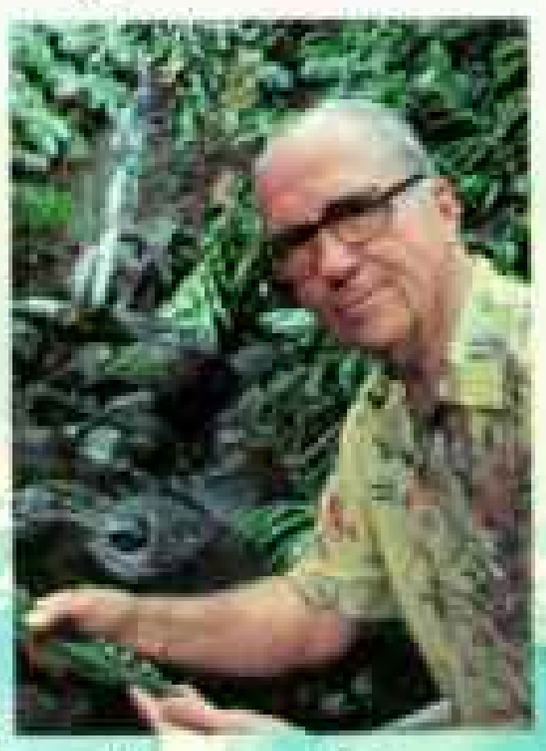
When their settlement was unearthed, a saga unfolded. Readers shared the thrill of discovery—as they often do—in the pages of NATIONAL GEOGRAPHIC.

"There's a story on the Islands that when the gods finished making the rest of the world, they took the best of everything and made Hawaii."

James A. Michener



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On Kauai, the westernmost of all the islands, are the twin falls at Wailua. With its lush vegetation and cobalt blue water, it's no wonder they call Kauai "The Garden Isle."

The Banzai Pipeline. When the surf's up off the north coast of Oahu, it looks just like a pipe of water, rolling towards land. Only experts dare venture inside.

Kilauea Crater on the Big Island is spectacular. It is said that Pele, the ancient volcano goddess, now calls its fire pit her home.

Fly the friendly skies of United®

United and the people of Hawaii invite you to learn the true meaning of "aloha" on a vacation in the Islands. On your way to Hawaii and back, you will enjoy United's exclusive Royal Hawaiian Service. For information, call your Travel Agent or United. Partners in Travel with Western International Hotels.

PENTAX SYSTEM 10.
THE FIRST 110 SLR AS PRECISE AS A FINE WATCH AND ALMOST AS SMALL.

It might make you feel good to know that if you sometimes think you are hard to satisfy, we believe we are almost impossible to satisfy. Ever.

This attitude was the reason we spent years and millions of dollars seeking a way to drastically improve the 110 camera, to make it the perfect traveling companion.

The new Pentax System 10 is the first 110 SLR (single lens reflex) with interchangeable lenses, a power winder, a dedicated auto flash and a host of accessory filters, close-up lenses, lens shades and carrying case.

We've overcome the limitation of the fuzzy 110 picture.

In fact, System 10 produces pictures which can be enlarged with incredible clarity to 8 x 10", 11 x 14", or even larger. An astounding claim, but true.

The image is razor sharp, crystal clear and free of perceptible grain.

What also makes System 10 unique and so astonishing is its incredible lack of size and weight, coupled with the most sophisticated SLR technology.

It measures 2-1/5 x 3-9/10 x 1-4/5" and weighs less than 6 oz.

System 10 is designed to be the ideal complement to your 35mm SLR. The whole system can fit in a small area of your current camera case (or handbag). And it's the perfect camera for the times you just don't want to carry a 35mm SLR around, like when you're traveling, hiking, or strolling on the beach.

Now with the Pentax System 10, you'll never again have to say "I wish I had my camera with me."

Pentax System 10. Available in limited quantities only at select fine photographic stores.

For more information, write: Pentax System 10, P.O. Box 2585, Littleton, CO 80161.

PENTAX®
SYSTEM 10™

41% BETTER EPA ESTIMATED GAS MILEAGE IN OUR MOST EXCITING PONTIAC PHOENIX EVER.

What a difference a model year can make.

That's all it's taken for our all new 1980 Pontiac Phoenix to score 41% better EPA *estimated MPG* over its 1979 counterpart. (Based on a comparison of 1979 and 1980 Phoenix models with standard powertrains.* The highway percentage increase is 42%.)

24 **37**

EPA ESTIMATED MPG* HWY ESTIMATE

It's all the more exciting when you consider these 1980 Phoenix mileage estimates.

Remember: Compare the circled *estimated MPG* with that of other cars. Your mileage may vary depending on speed, trip length and weather. And your actual highway mileage will probably be less than the highway estimate. Mileage slightly lower in California.

But great mileage is just the beginning. Phoenix has been redesigned from the ground up. Choose the rakish new five-passenger Phoenix Coupe or versatile Phoenix Hatchback.

You get an exciting new chapter of Pontiac driving fun. Front-wheel drive. Rack and pinion steering. MacPherson strut front suspension.

Another exciting thought. You get even more standard features than on our well-equipped '79 Phoenix. New standards like, radial tuned suspension, integral body-color bumpers, load floor Hatchback carpeting, dome lamp switches on all the doors and much more.

That's more Pontiac.

Buy or lease the all new Phoenix now. It's going to be quite a year. *Phoenix is equipped with GM-built engines produced by various divisions. See your dealer for details.

MORE PONTIAC TO THE GALLON

GM

INTRODUCING
THE NEW FUEL-INJECTED, SIX CYLINDER,
PLUSH, LUSH, CELICA SUPRA.

Supra

THE POWERFUL PLEASURE.

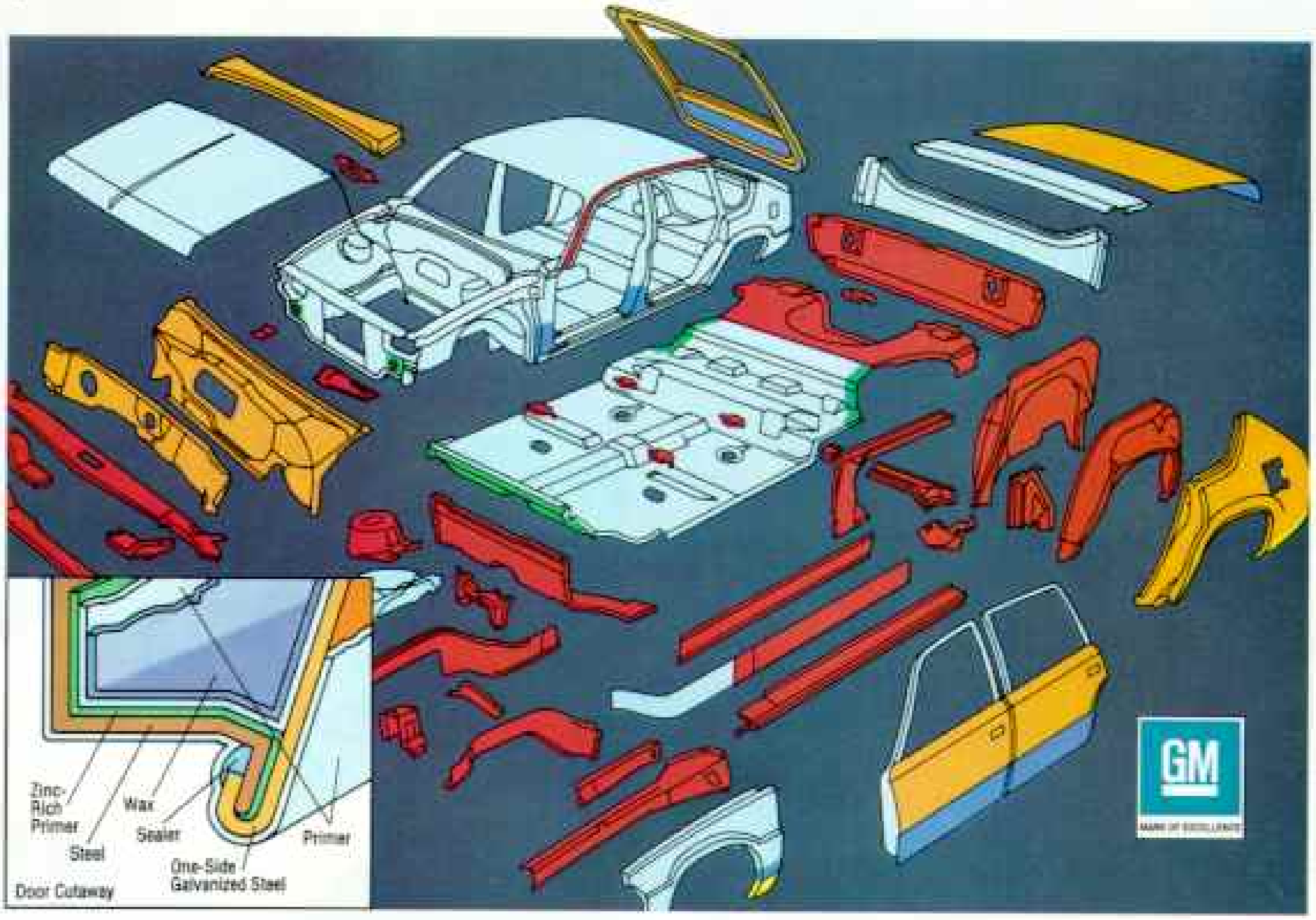
YOU
GOT IT.

TOYOTA

Standard equipment: 6 cylinder, fuel-injected engine, 5-speed overdrive transmission, air conditioning, power assisted 4-wheel disc brakes, and power windows. Also available with 4-speed, overdrive automatic transmission, cruise control, and sunroof.

GM's New Front-Wheel-Drive Cars

Designed for durability. With everything you see in color to help make them last.



The new front-wheel-drive Chevrolet Citation, Pontiac Phoenix, Oldsmobile Omega and Buick Skylark have a mission. They're designed to fight rust tooth and nail so they'll last and look good for a long, long time.

Take a look at our diagram. Everything you see in color represents an area that has been protected by one or more corrosion-resisting treatments. All metal surfaces, including the light blue, have received a durable prime coat.

In addition, the red and orange areas are special metals like galvanized steel (one or both sides) or Zincrometal.®

The dark blues represent special sealers and waxes to help keep moisture away from sensitive metal areas.

The greens are additional primers rich in rust-inhibiting zinc.

And yellow represents plastisol materials designed to help protect exposed painted surfaces against stone damage.

What's more, these new cars use a larger proportion of galvanized steel than any other GM car. And in areas that are particularly vulnerable to corrosion, we even protect the galvanized. A quick glance at the cutaway diagram of a typical door will show you just how much goes into it to fight rust.

We're proud of the new Chevrolet Citation, Pontiac Phoenix, Oldsmobile Omega and Buick Skylark. We want to help them retain their good looks.

Look into buying or leasing at your GM dealers today.

GM's Front-Runners for the '80s.

Chevrolet Citation, Pontiac Phoenix, Oldsmobile Omega, Buick Skylark.

After all these years,
she says nothing I do could surprise her.

A diamond is forever.

The ring shown (enlarged for detail) is available for about $4650. The price may change substantially due to differences in diamond quality and market conditions. Your jeweler can show you other diamond jewelry starting at about $300.

DeBeers.

Free. The kit that will move you, in no uncertain terms, to a decision on a company airplane.

Hundreds of successful companies of all sizes could tell you about the advantages of owning a company airplane.

But how can you be sure a business airplane would be a good investment for your company?

Send for the free Beechcraft Business Flying Kit.

It's specifically designed to help you, step-by-step, take a realistic look at whether a company airplane can help solve your business travel problems.

And it promises you up-front answers to real questions you have about owning a company airplane. How do you determine the need for one? How do you select the right size aircraft? What financing plans are available?

The kit even helps you determine the actual net capital cost to your company of a business airplane like the Beechcraft Super King Air shown here.

And this year, the kit has been updated and expanded with new information that makes objectively evaluating a company airplane even easier.

We'll be the first to concede that a company airplane isn't right for everyone. But once you've read the free Beechcraft Business Flying Kit, you'll know if it's right for you.

Send for it today.

Write on your company letterhead to: Beech Aircraft Corporation, Dept. A, Wichita, Kansas 67201. Ask for our free Business Flying Kit, and please mention if you're a pilot. If you'd rather call, make it collect and ask for Dick Schowalter, Jr. 316-681-7072.

Member of General Aviation Manufacturers Association

Beechcraft

The jetprop Beechcraft Super King Air. The world's best selling turbine powered airplane. It can carry 8 to 15 people in boardroom comfort at nearly half the speed of sound.

Know any friends who want to learn to fly? Tell them about the General Aviation Manufacturers Association **Take Off** Sweepstakes. They could win a $50,000 airplane just for earning their private pilot license. Have them call TOLL FREE, 24 hours a day, any day and ask for the BEECH "TAKEOFF" operator: USA 800-447-4700 (in Illinois, 800-322-4400).

The Story Of The Handsome Prints.

To make a long story short, we invite you to bring your next roll of 35mm film to a convenient Fotomat Store, drive up to the window and ask for:

Series 35 Custom Color Prints.

You'll get back a fistful of 35mm prints that are even handsomer than our good-looking regular-size prints. Bigger, too — 4 x 6 instead of 3½ x 5.

Only our most experienced photo-finishers, in a separate section of our own Fotomat labs, do Series 35 work.

They take a bit longer with the negatives. And fuss a bit more over the detail. Then print your pictures 37% larger, with your choice of a borderless glossy or studio finish.

For this extra care and quality you pay a little more. And wait a few days longer. But we think you'll be happy.

Ever after.

FOTOMAT.

SCOUTS® GO TO CAMPSITES THAT COULD CAUSE ORDINARY CARS TO GO TO PIECES.

Scout II. Makes its own campsite with mini-tent option.

Scout Traveler. Giant cargo area has over 103 cu. ft. of space for even bigger loads.

Most folks go camping to get away from it all. And in a car, that's hard to do—you just can't get very far away. But an International® Scout can. Scout is designed strictly as a sports/utility vehicle, with the rugged temperament to get you to the best spots—out of horn-honkin' range of ordinary cars.

Fancy footwork. At the point where cars give *out*, Scout's 4-wheel drive kicks *in* to keep you going. Good ground clearance, and a sturdy steel box frame that's welded instead of riveted let Scout cover rough territory easily. A short wheelbase permits tighter turns and responsive handling.

Plenty of "pull." Scout's giant cargo space really holds the gear. And heavy-duty axles and suspension are built to handle heavy loads. Up front is the same engine we use in our 2½-ton trucks—so towing is no problem.

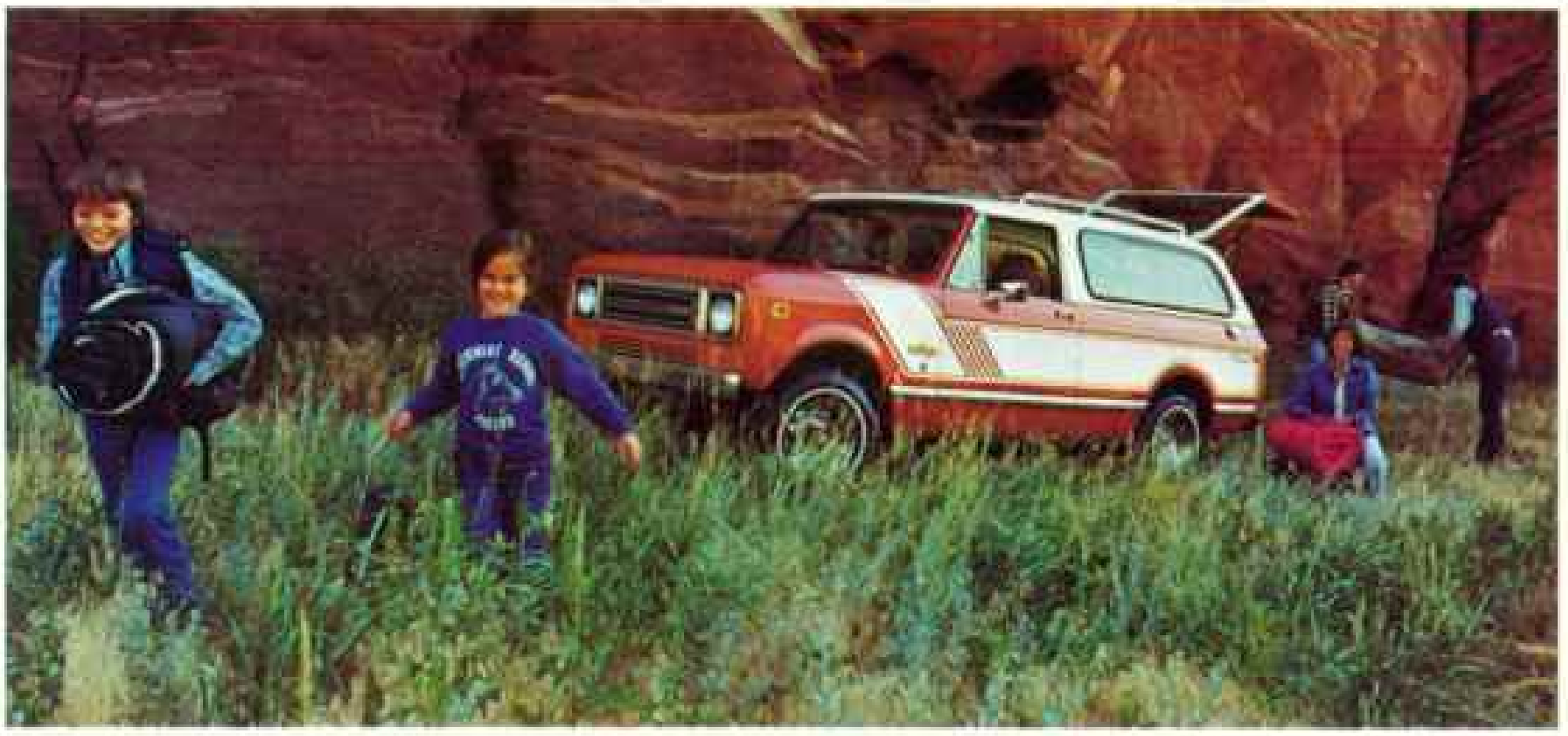
Four camp champs. The basic Scout II is always a wise choice. But also check out the extra roomy and powerful Traveler.® The extra-sporty SS II. And Terra,® our versatile pickup.

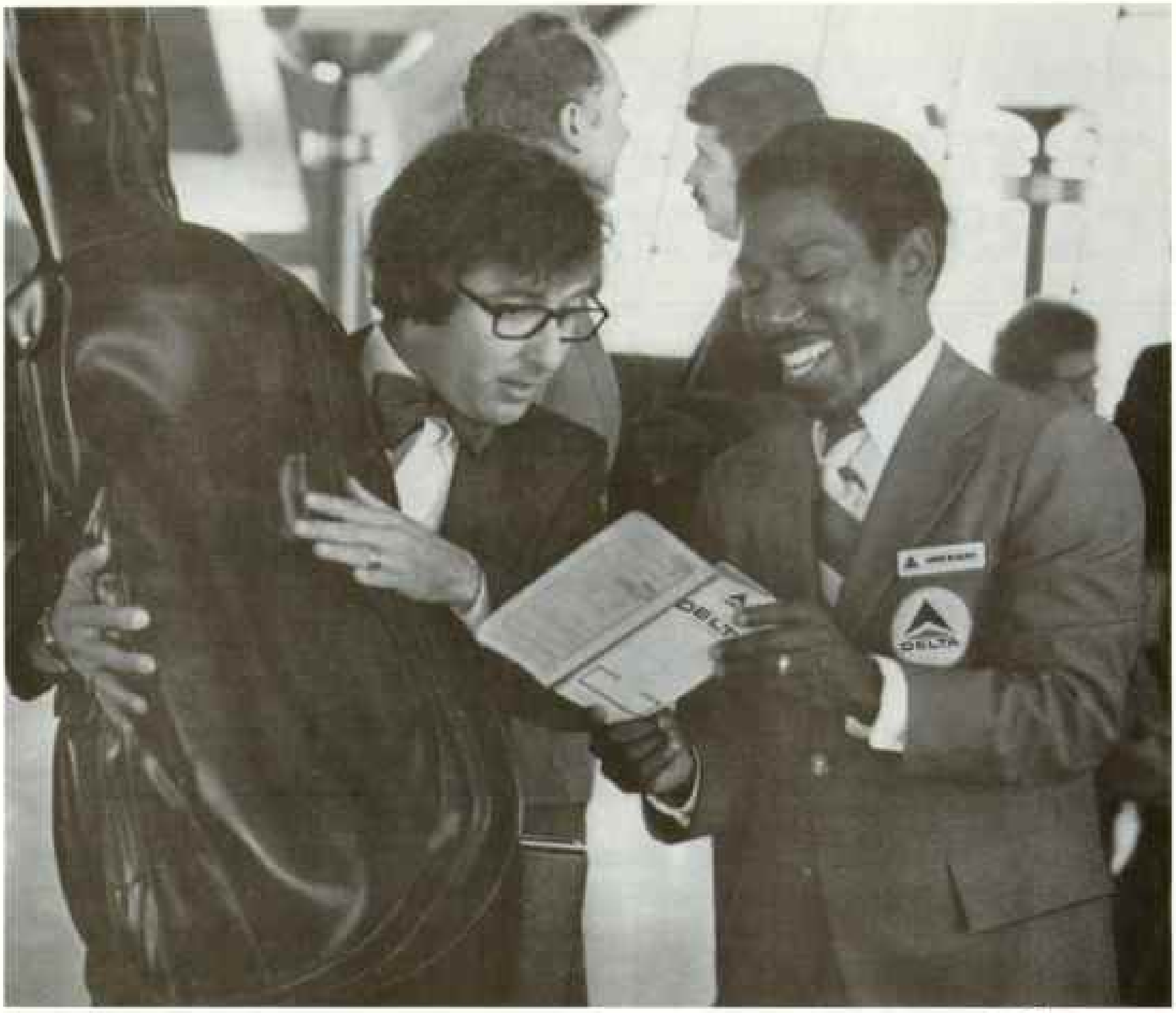
So don't settle for ordinary campsites any longer. Test drive a Scout at your International Harvester Scout dealer. Because anything less is just a car.

INTERNATIONAL HARVESTER

SCOUT.®

Anything less is just a car.





Delta is an air line run by more than 33,000 professionals. One of them is Aaron Blakeney.

In his 9 years with Delta, Aaron has worked on the airport ramp, behind the ticket counter, and at the boarding gates.

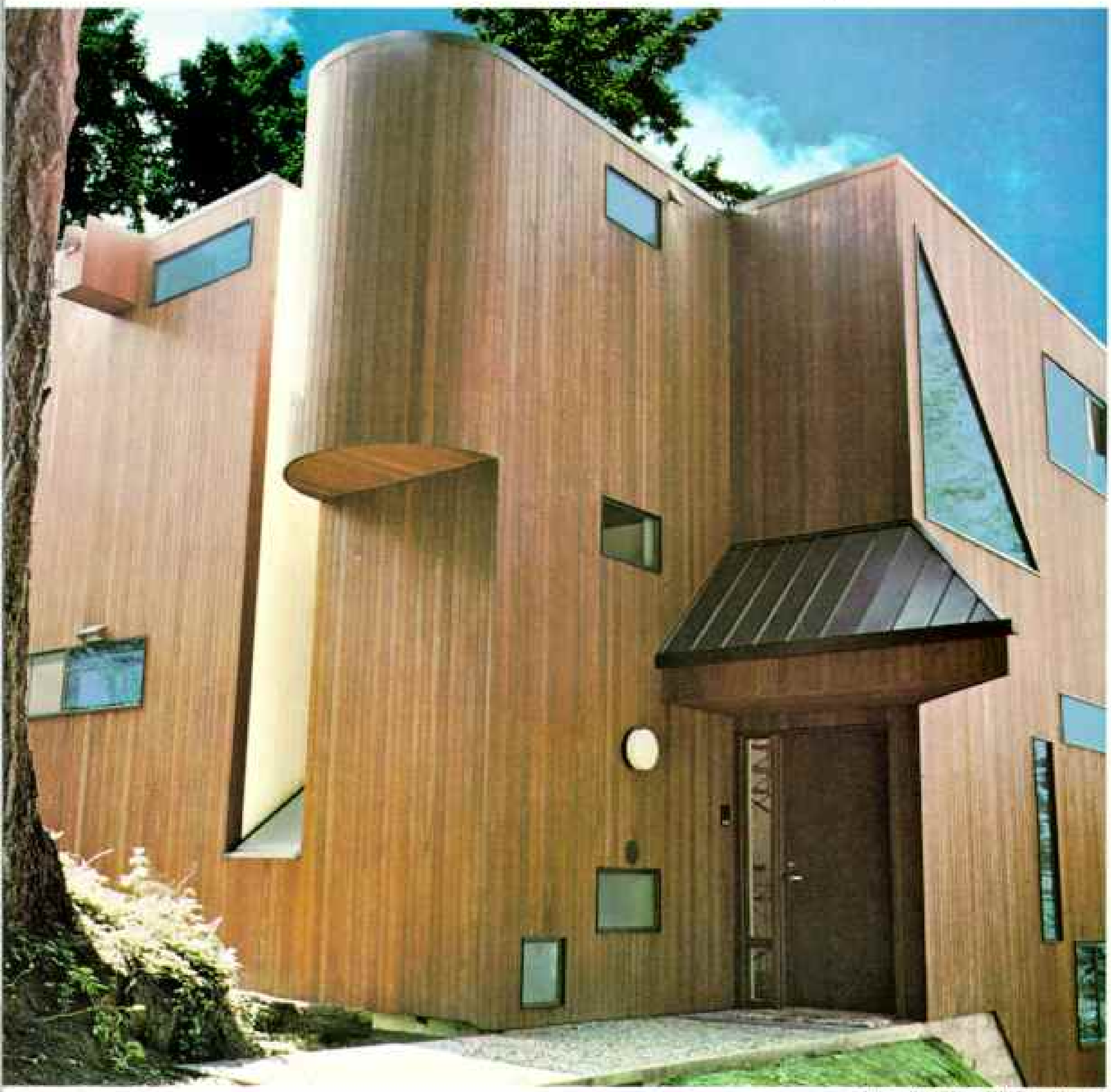
Now he's a red coat, a Passenger Service Agent. A man-in-the-know who's all over the airport, looking to lend a hand with baggage, tickets, connections, directions, whatever will make your trip easy come and easy go.

When you watch Aaron Blakeney at work, you see what makes Delta the all-pro airline. It's the spirit of service that just won't quit.

Delta is ready when you are.®

This is Delta's Wide-Ride® L-1011 TriStar. The "living room" cabins are 8 feet high, 19 feet wide. You fly in quiet luxury.

Beauty that's more than skin deep.



Architect: Wendell Lovett, FAIA, Seattle, Washington

Olympic Oil Stain not only enhances the natural beauty of wood, it protects it, too. And keeps it protected for years to come!

Olympic *penetrates* wood with rich linseed oil and pigments to protect from within. Not all stains do. That's why Olympic is guaranteed against cracking, peeling or blistering no matter how cold and wet or how hot and dry the weather gets.

See all 66 colors at your Olympic Dealer. He's in the Yellow Pages. Or write Olympic: Dept. C, P.O. Box 1497, Bellevue, WA 98009.

Penetrates to protect wood beautifully.