

# National Parks & Conservation Magazine

The Environmental Journal November 1976



W.H. JACKS

# The Scandal of the Redwoods: I

**T**HE GREAT SEQUOIA FORESTS of California, both coastal and Sierra, have a cathedral-like quality which moves men toward silence and worship. This was true also of the virgin forests of Douglas-fir in the Pacific Northwest. The high trees of the Appalachians, as the white man first found them, may have had the same power over the human spirit.

The uplift of the naves of the gothic cathedrals of Europe may have been borrowed from the primeval forests of the Continent, which even in the thirteenth century surrounded the villages and small cities of Europe. But be such things as they may, the coast redwood forests are places of wonder and mystery, miraculous in troubled times.

**T**O NEWTON B. DRURY and his associates in the Save-the-Redwoods League, beginning in 1917, we owe the preservation of the monumental groves of *Sequoia sempervirens* in the California state park system. To John D. Rockefeller, Jr., we owe much of the financing which made this preservation possible.

Many efforts have been made down the years to expand the areas protected in the state parks, which constitute only about 2 percent of the original coast redwood forest. In 1946, with Gifford Pinchot as my consultant, I proposed the establishment of a new national forest which would comprise the entire coast redwood belt. As part of the project the state parks would have been greatly enlarged and placed under cooperative state-federal administration.

The entire 2.4 million acres could have been bought for \$173.5 million at that time. *Sequoia sempervirens* regenerates easily in the shade and is well adapted to individual tree selection. The legislation would have required such management. The beauty of the original forest could have been preserved, and a perpetual flow of forest products could have been

obtained from it by proper management.

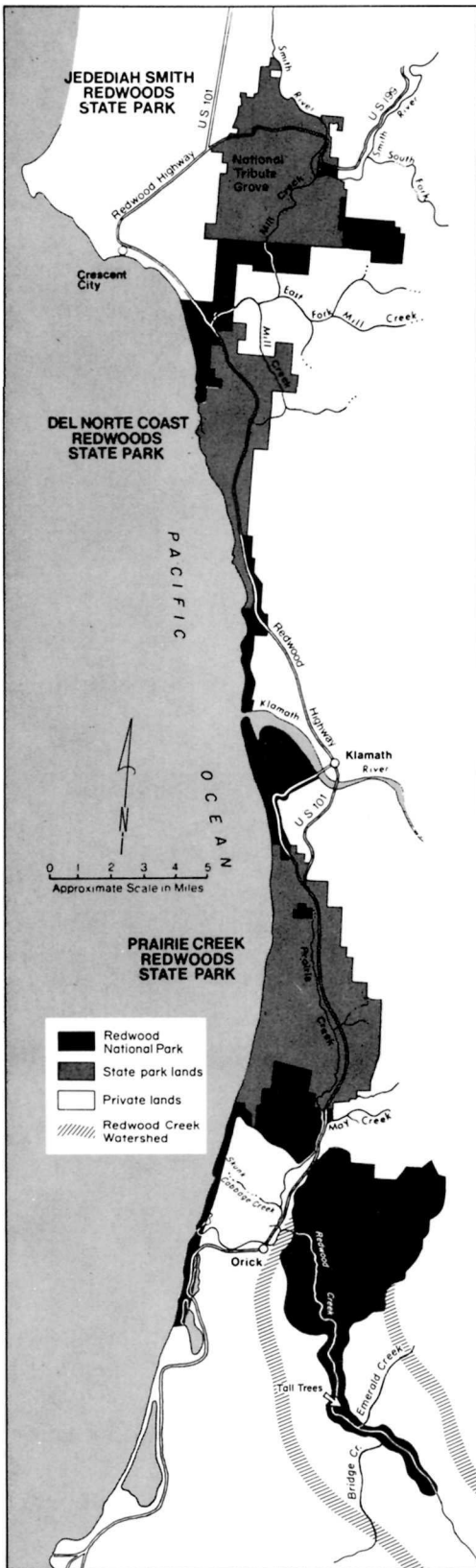
The plans and the legislation were developed in cooperation with the Forest Service, and specifically with Chief Forester Lyle F. Watts and Assistant Chiefs Raymond J. Marsh, Christopher M. Granger, and Leon F. Kneipp. Pinchot obtained the approval of the congressman from the District for the introduction of the legislation by Representative Helen Gahagan Douglas. There were many cosponsors and wide organizational support. Mrs. Douglas ran for the U.S. Senate in 1950 against Richard Nixon, who denounced the legislation as communistic, and Mrs. Douglas was defeated.

**A**T THAT TIME the markets were favorable for Douglas-fir, and redwood was not under pressure. As Douglas-fir was depleted, prices for redwood rose, and the ruthless clearcutting of the sequoias was intensified. The transition took fifteen years and led to a new effort to rescue the redwoods in the form of legislation for the Redwood National Park.

This project was recommended to Stewart L. Udall, who was then Secretary of the Interior, by Dr. Edward C. Crafts, then the recently appointed Director of the Bureau of Outdoor Recreation, formerly Associate Chief of the Forest Service. The legislation was introduced and promoted by Senator Thomas H. Kuchel of California. President Johnson announced his support at a meeting attended by leading conservationists in the Cabinet Room in the White House in 1964; the legislation was passed some four years later.

There were disputes during the formulation of the bill as to the best location of the land to be acquired for inclusion in the park, some favoring the Mill Creek area to the north, and others Redwood Creek to the south. The NPCA testified on invitation in favor of adequate acquisition in both areas.

*Continued on page 31*



Federal Graphics. Adapted from a map by E. H. Rhodes, courtesy of Save-the-Redwoods League.

**Redwood National Park**

# National Parks & Conservation Magazine

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COVER Emigration on the Oregon Trail, by W. H. Jackson  
*In the early years of the nineteenth century a multitude of settlers streamed west. Many, lacking horses or oxen, pulled all their possessions in handcarts across the plains and deserts, through rivers, and over mountains to reach a better life. (See pages 4 and 11.) The farms, railroads, and towns that followed changed the face of the land and swept away the native Indians and much of the wildlife. (See page 14.) The cover sketch of a cavalcade of emigrants is one of a series painted in the mid-nineteenth century by accomplished artist and famed pioneer photographer William Henry Jackson (1843–1942), whose photographs introduced western wonders to many Americans in the East and were instrumental in convincing Congress to set aside Yellowstone as our first national park.*

Eugenia Horstman Connally, *Editor*  
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*a proposal:*

## EMIGRANT TRAIL NATIONAL HISTORICAL MONUMENT

Approximately 750,000 acres of arid but scenic land in Nevada are proposed as a national monument to preserve historic Applegate–Lassen Trail

article by THOMAS H. HUNT  
photographs by ROBERT ADAMS

High above the plain, in the direction of our road, a black, bare mountain reared its head, at the distance of fifteen miles; and ten miles this side the plain was flat, composed of baked earth, without a sign of vegetation, and in many places covered with incrustations of salt. Pits had been sunk in moist places, but the water was salt as brine and utterly useless.

ALONZO DELANO wrote these words in 1849 as he traveled to the gold fields of California along the route now known as the Applegate–Lassen Trail. Except for the reference to pits dug in the alkali dust beside the trail, these same words could have been written by any present traveler describing the view from the southern edge of the Black Rock Desert across the shimmering whiteness of that great, sun-drenched playa toward Black Rock Point.

With only a small exercise of imagination, the vicarious adventurer can close his or her eyes and hear the squeak of ungreased axles, the shouts of sweating teamsters, the bleating of water-starved oxen. Open your eyes again in High Rock Canyon, and emigrant names are almost as legible today as they

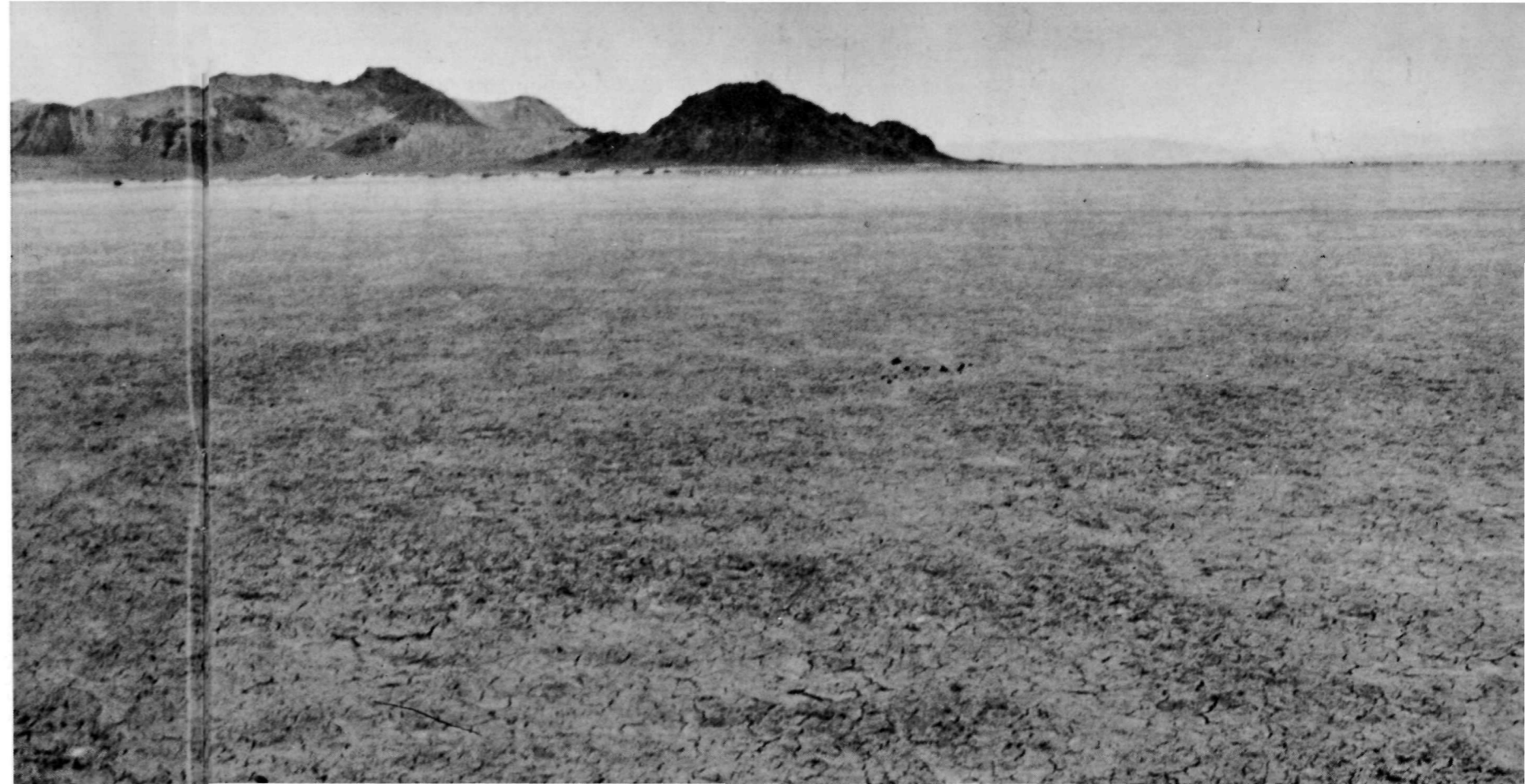
were some 125 years ago when men took the time to paint them on paper-smooth tablets of reddish rhyolite. In an extraordinary way, and due in large measure to the region's isolation, general aridity, and often rugged topography, this fascinating portion of high desert and plateau country survives into our nation's second century little changed from those days when it was seen through the squinting eyes of emigrants and cursed by their sun-blistered lips. Aside from a working ranch at Soldier Meadow, only a few ranch and jeep roads, several derelict out-buildings, and an occasional line of fence posts intrude with hints of later times.

Walk out a short distance onto that dreadful crossing of desert playa that led to Great Boiling

Spring below Black Rock, and you might be walking with Jessy Thornton on his way to Oregon in 1846:

It was a country which had nothing of a redeeming character. Nothing presented itself to the eye, but a broad expanse of a uniform dead-level plain, which conveyed to the mind the idea that it had been the muddy and sandy bottom of a former lake; and, that after the water had suddenly sunk through the fissures, leaving the bottom in a state of muddy fusion, streams of gas had broken out in ten thousand places, and had thrown up sand and mud, so as to form cones, rising from a common plane, and ranging from three to twenty feet in height. It seemed to be the River of Death dried up, and having its muddy bottom jetted into cones by the force of the fires of perdition.

Few places still speak so eloquently of the courage and determination and hardships of the American emigrant as do Black Rock Desert and High Rock Canyon. Given only a slight reading of history, no place permits the ambience of things past to extend more marvelously into the present.



*Black Rock and the sun-baked earth of Black Rock Desert have changed little from the days of the California Gold Rush.*

THE FIRST written account of this region is found in John Fremont's official report on his 1843–44 expedition of exploration to the Far West. In his search for the mythical Buenaventura River, he journeyed southeast through High Rock Canyon and then along the base of the Black Rock range before swinging west to the hot springs at present-day Gerlach, Nevada, and southward to Pyramid Lake. In 1846 a group of settlers from Oregon captained by Jesse Applegate set out to attempt to open a route into southern Oregon and the Willamette Valley that would be both safer and more direct than the old Oregon Trail. They eventually succeeded in laying out a route that struck the already established California Trail at what is now the upper end of Rye Patch Reservoir on the Humboldt River. The first parties of emigrants to Oregon began to pass over the route that same year.

In 1849 Peter Lassen, without actually having surveyed a route,

encouraged emigrants bound for California to take the Applegate Trail as far as Goose Lake in northeastern California, at which point they were to drop south and westward to his ranch in the Sacramento Valley. It is estimated that as many as half of those who came to California in the great gold-rush migration of 1849 used this route. It was originally touted as a shortcut to the gold fields, but in fact it proved to be much longer and won Lassen the enmity of many of that year's emigrants because of the suffering they endured along the way. Because of the bad reputation the trail received in 1849, it ceased to be a major route to California; but it continued to carry emigrants into Oregon through the 1850s and 1860s.

Peter Lassen was to have his name fixed on many geographical locations in California. Ironically, he was killed on a prospecting expedition in 1859 on the slopes of Pahute Peak, within sight of the trail that bears his name.

The Black Rock area is interesting for other historical events as well as for the westward migration that occurred there. The ruins of the ill-fated mining settlement of Hardin City lie at the base of the Black Rock range somewhat to the east of the emigrant trail five miles north of Double Hot Springs. In the 1860s the Black Rock region was the setting of one of the last major Indian uprisings in the West. Soldier Meadow takes its name from this period of Indian troubles, and at this same time Fort McGarry was established farther north near Summit Lake. The High Rock country later became a part of the fabled Miller–Lux ranching empire. For such isolated desert country, this litany of historical events is impressive.

THIS HISTORIC REGION—comprising approximately 750,000 acres of desert playas, volcanic canyons, and sage-covered plateau lands—is now being proposed as an addition to our Na-



*When the intermittent stream in High Rock Canyon dried up, emigrants would dig wells in the sandy stream bed; and usually, they would find sufficient water for their needs. Once water was found, travelers husbanded it with great care.*

tional Park System. It is envisioned as a unit in which the enduring landscape will be kept in its largely primitive and natural state and developed only in such ways as will preserve its historical, educational, and scenic values. It will be a place where people can experience for themselves the West of emigrant times. The landscape and the traces left upon it by the emigrants will be protected and preserved and passed on to future generations. Because of the largely unspoiled nature of the region, the proposed national monument will present the National Park Service with an opportunity to plan and develop a major Park System unit unburdened by the concepts, the imperatives, and the mistakes of previous generations. It will require both sensitivity and imagination to provide public access to the monu-

ment without destroying the values that make it worth preserving.

**I**N ADDITION to its historical interest, the region within the boundaries of the proposed monument offers a fascinating spectrum of topographic and geologic features. The land formations range from sterile alkali mud flats of the Black Rock Desert to the brilliant, red-hued rhyolite canyons of lower High Rock Canyon; from the native rye-grass meadows, intermittent streams, and free-flowing springs of Soldier Meadow and upper High Rock Canyon to the sage-covered expanses of the surrounding plateau. Several of the reputedly largest natural potholes known to exist are found in Fly Creek Canyon.

The region is also rich in archeological remains. The canyons and

mountains contain many caves with signs of prehistoric habitation. Almost any walk in the region will bring the careful observer upon some evidence of Indian occupancy. On one such walk I came across the remains of a sagebrush weir that the natives had erected to aid in trapping rabbits. In the dry climate, such relics persist with remarkably little deterioration.

Elevations along the trail range from 3,800 feet in the Black Rock playa to 6,500 feet in upper High Rock Canyon, but the gradient is so gentle that the rise in altitude is hardly noticeable. It is a country of hot summer days and cool nights. Winter months are typical of high desert country—cold with occasional snowfalls. Snow often lingers on until late spring in sheltered spots in the Black Rock Range and on the surrounding peaks of the Granite and Calico mountains.

In addition to the usual varieties of small desert animals, deer and coyotes live in the area. The Charles Sheldon Antelope Range lies just north of the region, and groups of pronghorn are common. Mountain lions also have been reported. Varieties of tiny fish known as desert dace are found at Soldier Meadow and in many of the other permanent springs and streams. The threatened desert bighorn sheep might be reestablished in the monument; emigrants' journals indicate that they once inhabited the region.

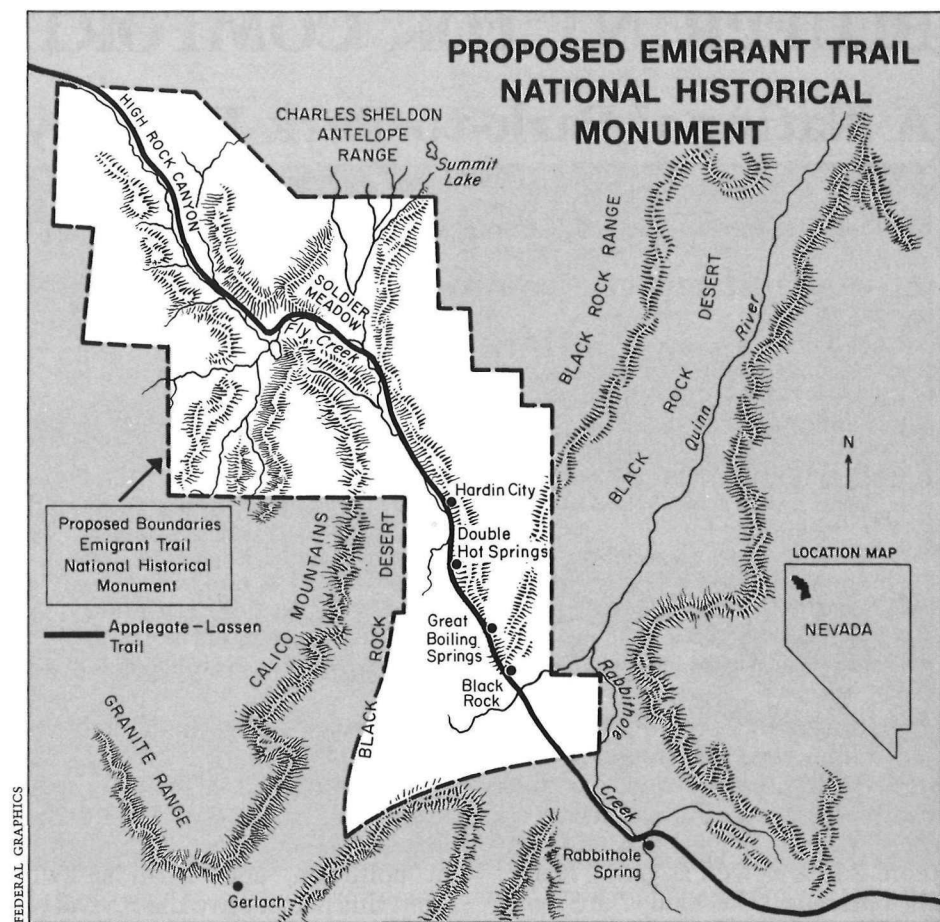
**B**ECAUSE an estimated 90 percent of the land within the proposed boundaries is already in the public domain and under the administration of the Bureau of Land Management (BLM), land acquisition is not expected to be a major obstacle. It is possible that the few private inholdings that do exist could be exchanged for other public lands outside the monument, thus obviating large public expenditures.

However, one factor seriously threatens the future of the proposed monument. The very feature that argued for the opening of the

Applegate-Lassen Trail along the base of the Black Rock Range—the presence of water in the form of hot springs—is the same attraction that now makes the western arm of the Black Rock Desert of considerable interest as a site for geothermal exploration. When the question of geothermal leasing on the desert came up a short time ago, the BLM, on its own initiative and by administrative action, set aside several historic corridors along the routes of the old trails and excluded these corridors from drilling. The Bureau is to be highly commended for taking this enlightened action in the face of considerable pressure from firms that wished to drill in the area. Unfortunately, these original exclusions have now been appealed, and the final decision as to whether they will continue to stand is currently being adjudicated within the Bureau, which is an Interior Department agency. Thus the matter is still in doubt.

The proposed national monument would, of course, include much more than the relatively narrow corridors established by the BLM along either side of the historic trails. The intent of this proposal is to secure a permanent line-of-sight scenic easement along the entire length of the Applegate-Lassen Trail through the monument and to extend that protection to the side canyons of the High Rock complex. Due to the extremely fragile nature of this arid environment, geothermal exploration should not be allowed in the portions of the Black Rock Desert within the proposed boundaries. Several geothermal leases have already been granted along the western edge of the proposed boundary as well as the eastern arm of the Black Rock Desert outside the boundary. There is no basic objection to these leases, provided the drilling operations and any attendant development be carefully supervised. This can be done, and the BLM has the necessary authority to ensure that proper control be exercised.

Aside from the fact that the geothermal potential of the Black



Rock Desert is far from proven and may prove illusory, this is clearly a situation in which historical, scenic, recreational, and educational values should be given preference under any enlightened application of the principle of multiple use of BLM land. Many other regions in the West could be made available for geothermal exploration without causing undue damage to other inherent values, but there is only one Applegate-Lassen Trail through Black Rock Desert.

**S**EVERAL OTHER UNITS within our National Park System are related to the old overland trails. One thinks immediately of Fort Laramie National Historic Site, Wyoming, and Scotts Bluff National Monument, Nebraska. However, in neither of these areas is it possible to preserve traces of the trail through country as it was in the days of the great westward migration. The proposed monument would preserve a significant

section of emigrant trail through a scenic and basically unspoiled western landscape. With this proposal we have a rare chance to honor and commemorate one of the most heroic and moving chapters in our nation's history and in the broader context of human migrations. For this reason many historical societies in California, Oregon, and Nevada and various national conservation groups are supporting the proposal.

The establishment of the Emigrant Trail National Historical Monument invokes enthusiasm; it is a challenge that should be accepted. ■

**Thomas Hunt is a writer and professional artist who has long been interested in the emigrant trails. He is a member of the Committee for the Emigrant-Bicentennial National Monument, 950 Old Trace Road, Palo Alto, CA 94306. Readers interested in supporting this proposal may contact the committee at that address.**

# BLUEPRINT FOR COMFORT:

## A National Park-to-Park Railway

Revival of passenger trains to western parks could provide efficient and comfortable service

by ALFRED RUNTE

When I first heard of the Santa Fe trains running to the edge of the Grand Canyon of Arizona, I was troubled with thoughts of the disenchantment likely to follow. But last winter, when I saw those trains crawling along through the pines of the Coconino Forest and close up to the brink of the chasm at Bright Angel, I was glad to discover that in the presence of such stupendous scenery they are nothing. The locomotives and trains are mere beetles and caterpillars, and the noise they make is as little disturbing as the hooting of an owl in the lonely woods.—John Muir, *Century Magazine*, November 1902

JOHN MUIR's endorsement of trains was overstated, to be sure. Muir himself conceded that "with this wonderful extension of steel ways through our wildness there is loss as well as gain. Nearly all railroads," he said, "are bordered by belts of desolation." Still, had he lived to see the automobiles, roads, and parking lots that presently clog the national parks, his praise for the railroad probably would have been even more enthusiastic. Unlike that of the automobile, the railways' impact was never all-pervasive; they merely skirted the parks or left visitors at their gates, where stagecoaches and, later, motorcoaches transported visitors into the parks.

"Fortunately," Muir said, "nature has a few big places beyond man's power to spoil—the ocean, the two icy ends of the globe, and the Grand Canyon." Today the irony of his conclusion is heightened by uncertainty about the future of planet earth, let alone the Grand Canyon and its counterparts. In this regard restoring full rail passenger service to the national parks may seem a trivial cause by comparison. But again Muir left us an enduring reminder. "When we try to pick out anything by itself, we find it hitched to everything else in the universe." This observation

is no less relevant to technology than to ecology.

Today proper evaluation of the automobile must include its impact on the depletion of petroleum, air pollution, and urban sprawl. From this perspective the revival of full rail passenger service to the national parks is the logical extension of its mandatory rebirth throughout the nation. No longer do knowledgeable Americans question whether travel by car will be curtailed; instead they wonder when and how it will occur. The only practical alternative is a system of public transportation of proven capability in moving large numbers of people safely, comfortably, economically, and with a minimum amount of disturbance to the environment. As in the past, the railroad best fits this description.

RESEARCH by the U.S. Department of Transportation concluded that modern passenger trains are at least ten times as energy efficient as jet aircraft and at least five times more efficient than the average automobile. It follows that a protracted oil embargo by the exporting nations will find Americans either taking trains to the national parks or not visiting them at all.

Any loss of individual mobility must be weighed against the great savings railroads make in the use of the land. The carrying capacity of one track has variously been estimated as the equivalent of a twelve- to sixteen-lane expressway. And a single lane of highway averages 12 feet in width, whereas the distance between the rails of a standard gauge track is but 4 feet 8½ inches.

Before the 1960s, of course, when both land and energy were thought to be ever abundant, such statistics were ignored. The low cost of fuel likewise assured the automobile and airplane preeminence over the passenger train merely on the strength of personal convenience. In the fifty years between 1920 and 1970 the number of daily passenger trains in the United States fell from 20,000 to barely 500, and most of these were but ghosts of their former grandeur and popularity.

On May 1, 1971, the National Railroad Passenger Corporation was inaugurated, a quasi-public company chartered by Congress to assume control of all but a handful of the nation's remaining intercity streamliners. The corporation, popularly known as Amtrak, retained service on five major long-distance routes: Chicago–Seattle, Chicago–San Francisco, Chicago–Los Angeles, New Orleans–Los Angeles, and Los Angeles–Seattle. The subsequent addition of a second train between Chicago and Seattle expanded service in the West to its present configuration.

Another oil embargo, however, would find Amtrak ill-equipped to handle even a small fraction of the visitors who annually enjoy the national parks. Only one major reserve in the West—Glacier—is an official Amtrak station. The situation with regard to Yellowstone is still more revealing of the level to which rail passenger service in the region has declined. Once no less than five major railroads promoted luxury travel to America's first national park on trains such as the *Yellowstone Comet* and *Yellowstone Special*. Two of the lines, the Northern Pacific and Union Pa-

cific, had the competitive edge with spur tracks that terminated right at the park boundary, at Gardiner Gateway and West Yellowstone respectively. Today the closest Amtrak train, the *North Coast Hiawatha*, must transfer park patrons to buses at Livingston, Montana, more than fifty miles north of the park.

The direct rail link to the South Rim of the Grand Canyon, made famous by John Muir's endorsement in *Century Magazine*, is also history. Although the tracks are still in place, not even a freight train apparently has used the line in more than three years. Passengers to the Canyon detrain from Amtrak's *Southwest Limited* at Flagstaff, Arizona, and ride the remaining eighty miles by motor-coach.

Yet it is the parks that author Rufus Steele once christened the "Celestial Circuit"—Bryce, Zion, Cedar Breaks National Monument, and the North Rim of the Grand Canyon—that fare worst of all. During the 1920s, in response to the request of Park Service director Stephen T. Mather, the Union Pacific Railroad opened the reserves of southern Utah and northern Arizona via a combination of rail and motorbus service. A close relationship between the Union Pacific and the parks lasted well into the 1950s and early 1960s. Then, in 1971, with the formation of Amtrak, all passenger service on the main line through Utah came to an end.

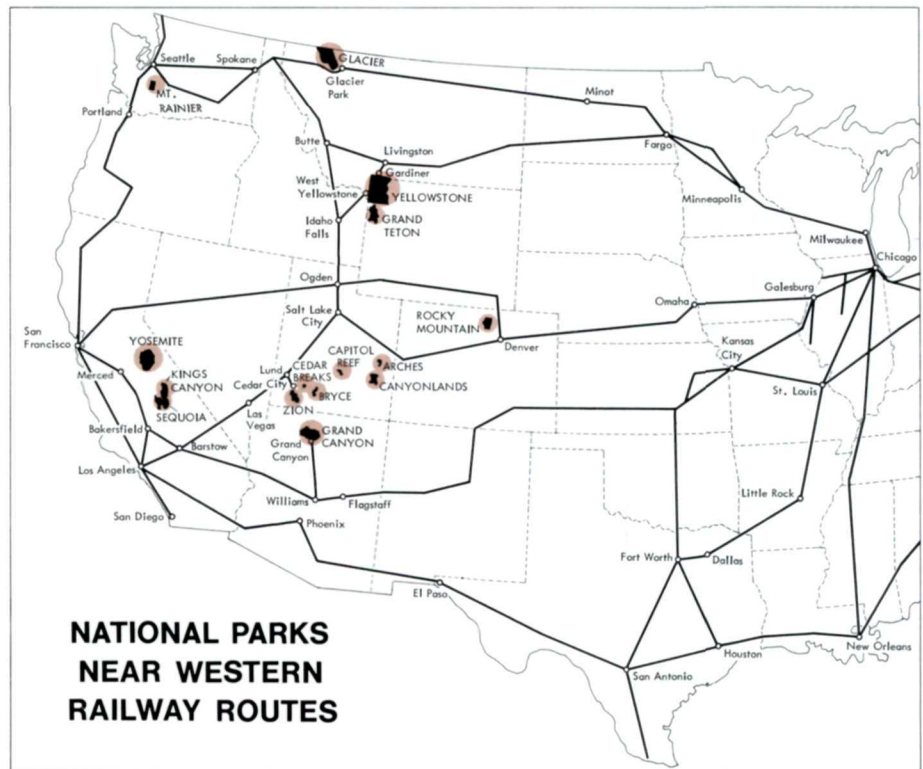
**I**N JANUARY 1976 Region XII of the National Association of Railroad Passengers, a nonprofit consumer organization, petitioned Amtrak for restoration of this route. Surely it is now of even greater importance as the gateway to the "Celestial Circuit," since broadened with the addition of Canyonlands, Capitol Reef, and Arches national parks.

The failure of Amtrak to respond to NARP's petition underscores the lack of preparation for another energy crisis at both the federal and corporate levels. It is therefore fortunate that western railroads



GREAT NORTHERN RAILWAY PHOTO

Rail travelers fondly recall the domeliners of the West. The Empire Builder, the classic streamliner of the Great Northern Railway, is shown here in pre-Amtrak days descending the Rocky Mountains just east of Glacier National Park.



**NATIONAL PARKS  
NEAR WESTERN  
RAILWAY ROUTES**



opened the national parks in the first place and thus, with few exceptions, laid down a system of tracks that is suited to current needs whenever they arise. Direct rail connections to the boundaries of both Yellowstone and the Grand Canyon could be restored by rehabilitating existing branch lines. Similarly, popular entrances to Mount Rainier, Grand Teton, and Rocky Mountain national parks are only a few miles distant from major spurs of the Milwaukee Road, Union Pacific, and Colorado & Southern railways respectively.

At the very least, these tracks must not be allowed to deteriorate. The Yosemite Valley Railroad, completed in 1907, already is long gone; fortunately its right of way survives and the rails could be re-laid, albeit at far greater cost than the restoration proposed by Park Service officials in 1944, the year of its dismantlement.

Adding to existing branch lines, or building entirely new ones, should also be considered. For obvious reasons only the most popular reserves once enjoyed direct rail connections; today all are heavily patronized. No tracks should enter a national park proper, of course. Still, environmentalists themselves have agreed that new construction on the fringes of the reserves is the best hope of offsetting the impact of visitor facilities within the parks.

With railroads, all auto-related facilities could be removed entirely away from the parks and their adjoining environments, in most instances to staging areas with existing parking lots, motels, and other visitor accommodations. An obvious candidate is Williams, Arizona, historically the rail cutoff to the South Rim of the Grand Canyon. In fact, community and state leaders have already considered the possibility of restoring the trains, with Williams once again their point of departure.

Other communities—Livingston, Montana, on the Yellowstone cutoff, for instance—might be encouraged by state or federal help to host similar projects. Yet, although local initiative is commendable,

the logical goal is a rail network that would enable special trains to make a continuous circle of every major national park in the West. Like a string of pearls, most popular reserves are perfectly spaced a day or so apart throughout the region; similarly, all lie near or adjacent to an established rail system. The one significant gap is the Yosemite Valley Railroad between Merced, California, and El Portal. In addition, extension of the Union Pacific's branch line between Lund and Cedar City, Utah, would enhance the system by enabling patrons to detrain closer to Zion, Bryce, and the North Rim of the Grand Canyon.

**W**ITH THESE improvements a host of scenarios becomes feasible. Special trains, for example, might originate throughout the country for tours of the national parks. Similarly, existing Amtrak streamliners could begin emulating their predecessors by providing through cars to Yellowstone and the Grand Canyon. Yet this service would be merely a start. The energy crisis demands that the parks be served not as separate entities, but as an integrated whole. This would best be accomplished by a series of regularly scheduled trains circling among the parks themselves. Cities close to one or more of the reserves, including Denver, Seattle, San Francisco, and Los Angeles, would be logical terminals. The point is to make it possible for any American to visit a single park—or all of them—without being dependent on a car. Perhaps a seasonal ticket, comparable to Amtrak's USA Railpass, could be sold to backpackers, bicyclists, and other enthusiasts for unlimited travel during a specified period. Between points of interest within the parks, where trips are of shorter duration, shuttle buses and motorized trams have already proven their popularity in several parks, especially in Yosemite Valley.

The question then arises: why not buses for entrance to the parks, using existing highways? The reason is that buses lack the carrying

capacity that would be needed to handle both the volume of visitors and their baggage. Nor does the large majority of Americans prefer bus transportation over long distances. There simply is no room to move around, to entertain restless children, or to stretch one's legs in comfort. Trains, with their diners, lounges, and vistadome coaches, are much more comfortable. Their amenities are an obvious prerequisite if Americans are to be expected to support public transportation nationwide, let alone to the national parks.

**R**ESTORATION of full rail service to the reserves holds forth the promise of one final benefit—a revival of the beauty and dignity of the passenger train itself. Like the nation at large, the railroad industry seems to have lost sight of what a streamliner could be and should be. New equipment, notes one recent commentator, has too much the look of "late American airplane." Rail enthusiasts are especially perplexed over the small windows, cramped seating, and airline-inspired fast food menus of Amtrak's latest coaches, commonly dubbed "the Amfleet." In the West the spectre of plasticized trains is further underscored by what seems to be the twilight of the domeliner. An innovation born of the magnificence of the Colorado Rockies, since 1945 its elevated glass-enclosed observation decks have thrilled travelers with an unhindered panorama of the passing landscape. As surely as buses alone cannot pick up the slack in the coming era of energy scarcity, so rail passenger travel will not recapture the hearts of the American people without the features that made it unique. Only when these, too, are restored, may all of us join in rediscovering the truth of that once familiar slogan: "Getting there is half the fun." ■

Since the advent of the energy crisis Dr. Alfred Runte, environmental historian, has been particularly concerned about the necessity of restoring rail passenger service to the national parks.

# THE PROMISED LAND:

## Settling the West

Lured west by the promise of a better life, settlers persevered in spite of hardship and disappointment—and they permanently changed the face of the land

... at the frontier, the environment is at first too strong for the man. He must accept the conditions which it furnishes, or perish.

—Frederick Jackson Turner, 1893

**F**EW ERAS in American history have captured the national imagination as completely as the settling of the West. The colorful figures of Indians, mountain men, pioneers, prospectors, ranchers, and cowboys fill our dreams from earliest childhood. But even more heroic than these cherished stereotypes were the real men and women of the nineteenth century West—the Indians who strove vainly to save their hunting grounds from the tide of white settlement, and the white emigrants who labored valiantly to wrest a life from the vast and harsh land.

By the time of the Louisiana Purchase in 1803, settlers from the East Coast had pushed as far west as the Mississippi River. Many Americans thought that the boundaries of the United States should end at the river, with the newly acquired western lands becoming a permanent "Indian Frontier" through which trade routes to the West Coast could be maintained. But nothing could contain the tide of settlement. Within fifty years the United States had acquired the lands from Texas (Annexation, 1845); Great Britain (Oregon Country, 1846); and Mexico (California and the Southwest, 1848) that were to make her a con-

This series of Bicentennial articles will trace some of the events and diverse cultural influences that forged the distinctive character of our nation—and, as elements of our rich American historic heritage, are represented in the National Park System.



tinental nation. Across this vast land settlers streamed in such numbers that by 1900 nineteen new western states had entered the Union, with three more chafing to do so.

**F**IRST to venture forth in the wake of the Lewis and Clark expedition (1804–1806) were the "mountain men." Spiritual heirs of Daniel Boone and the voyageurs of the 1700s, these trappers and traders followed the beaver into the Rocky Mountains where they lived with the Indians, learned the trails and passes through the mountains, and in exchange for furs traded them the guns with which they would later resist white settlement.

Fired by the stories of the explorers and fur traders, the first settlers set out across the Great Plains in the 1830s and 1840s,

heading for Oregon, whose streams and forests offered the wood and water necessary for home building and whose mild climate promised bountiful crops.

They came from all the settled parts of the country, searching for a more prosperous life. Tearing up roots, they headed west, the bare necessities of life crammed into the covered wagons that would be their homes for the 2,000-mile trek to Oregon and California. With luck, they would find a competent guide at Independence, Missouri, and would make it across the mountains before the snows. An incredibly arduous trip lay ahead, filled with danger, exhaustion, and suffering; and many—particularly women and children—died along the way. Others lost what little they owned, and still more never saw their old homes and loved ones again. But in spite of all hardships they went on, leaving to this day the ruts dug by their wagon wheels in the prairie sod.

Those who followed them came with a fever and a rush. When gold was discovered at Sutter's Mill in California in 1848, prospectors from all over the world raced for the gold fields. A few became millionaires, many more returned home penniless, and yet more pushed on into the Sierra Nevada and the Rockies in the unquenchable hope of striking it rich. However, enough emigrants had started farms, hotels, and stores near the mining camps to create permanent settlements as well as ghost towns; and when deep mining followed the gold panning of the Forty Niners, six new states were added to the Union, starting with California in 1850.

**B**Y THE END of the Civil War in 1865 only the Great Plains remained virtually untouched by settlement. Early named by explorers "The Great American Desert"—for here were no hills, no trees, no rocks—it was, to quote an early settler, "nothing but grass, unending grass, green in spring, dry brownish-yellow in summer, and burnt and black in winter."

Because few streams watered it

and no trees grew there, the pioneers who first crossed the plains were unaware of the richness of the soil, so the plains remained a safe haven for their original inhabitants—the Indians and the bison.

Many Indian tribes inhabited the plains, living in harmony with the land and its fierce seasons. Some, such as the Sioux, Cheyenne, and Nez Perce, had come to the plains centuries before; others, such as the Creek and the Cherokee, were eastern tribes relocated westward in the face of white settlement. Mounted on swift mustangs, they followed the numberless buffalo that supplied meat for food, hides for clothing and shelter, buffalo chips for fuel, bone for arrowheads and needles, sinews for cordage and bowstrings. They worshipped the elements of nature—the earth, the sun, the sky, and the rain—and they believed that the land was for all to share.

To the white man, on the other hand, nature represented a challenge, and the land existed to be exploited for his good. Although attempts were made to buy Indian lands and to negotiate treaties with the tribes, underlying the efforts at legality was the assumption that these nomadic, "savage" people could not really own the land inasmuch as they did nothing to use or "improve" it, so the white man could preempt it with impunity, despite promises to the contrary. In spite of their valiant stubborn resistance, therefore, the Indians were at last forced to surrender their grassland home to an inexorable tide of white settlement and to end their days on reservations.

**T**HE TURNING POINT in the settlement of the plains was the passage in 1862 of the Homestead Act, which offered 160 acres of western land free and clear to anyone who would file a claim, build a dwelling, and farm the land for five years. This offer of free land for the taking coincided with the virtual extinction of the buffalo herds for their hides, the defeat (by 1877) and relocation to reservations of the Indian tribes, and the rapid acceleration of railroad

building westward from the Mississippi.

While towns and homesteads were burgeoning in the wake of the railroads, cattle ranchers from Texas had begun to drive their herds north to the railheads for shipment east and discovered that cattle could winter on the Northern Plains. As the railroads moved westward, therefore, cattle ranches moved north and west to meet them.

To induce settlement along their routes, railroad companies sent representatives to eastern cities

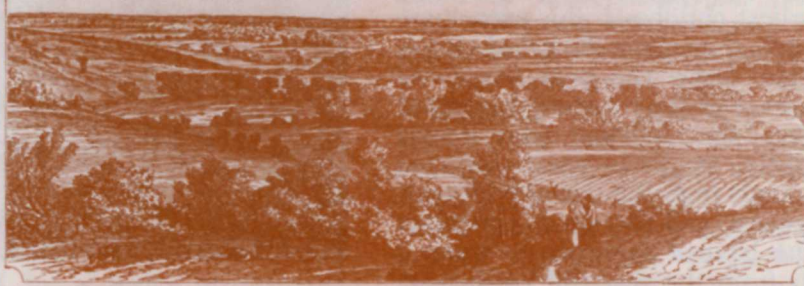
and even to Europe to recruit emigrants, guided their customers to the new boom towns, and settled them on home sites. The new prairie towns—often thrown up in a few weeks of frantic hammering—also advertised their attractions in newspapers printed largely for distribution back East and, by enticing settlers, tried to fulfill their promises of the good life.

In view of these glowing promises, the newly arrived emigrants were ill-prepared for the realities of their new life. To people nurtured by the gentler climate and land-

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scape of the East, life on the prairie was harsh indeed.

Most settlers started out in a dugout or sod house built from chunks of tough prairie sod, with a dirt floor, few—if any—windows, and a sod roof that leaked and sometimes collapsed in wet weather. Water was scarce and had to be carried from distant streams or collected in barrels and cisterns when it rained. Even with the help of the new “sod-buster” plow, it was a backbreaking job to cultivate the prairie; and even then many crops proved unsuited to the soil and climate.

To these hardships were added the great natural scourges of the vast open land: scorching winds that blew ceaselessly in summer, violent electrical storms, voracious prairie fires that raged in autumn, and in winter frightful blizzards that howled out of the north without warning and often lasted for days.

During the early years of prairie settlement other disasters afflicted

the sod house settlers—among them the great drought of the 1880s and the grasshopper plagues of the 1870s, when enormous clouds of grasshoppers descended on the prairie and devoured everything in their path, leaving the land bleak and desolate.

Even more difficult to bear than these hardships were the isolation and loneliness of life on the great, seemingly empty, featureless prairie. Women, often alone for days when husbands went to town, found prairie life especially trying.

For those who survived, however, life gradually became easier. New methods of dry farming suited to the prairie climate, farm machinery, rail transport, grain elevators, refrigerator cars, and above all the introduction of a hardy strain of wheat that could thrive on the high plains—all these innovations made large-scale production of wheat and other marketable crops both possible and profitable. By 1900, therefore, most prairie settlers finally were achieving the

prosperity they had hoped for in “The Promised Land.”

**T**ODAY the dramatic story of the settlement of the West can be traced in more than twenty historical parks, sites, and monuments in the National Park System. Among them are Bent’s Old Fort National Historic Site, Colorado, an early fur trading post; Chimney Rock National Historic Site, Nebraska, a landmark on the Oregon Trail; Golden Spike National Monument, Utah, where the halves of the first transcontinental railroad were joined; Homestead National Monument, Nebraska, site of one of the first claims under the Homestead Act of 1862; and Custer Battlefield National Monument, Montana, where the Sioux made their last stand in 1876.

Now the vast prairie is filled with prosperous farms and cities; and the Indians, the buffalo, and the pioneers who struggled to exist there long since have become the stuff of legend. ■

*Attracted by glowing promises of a better life, disillusioned settlers encountered harsh reality in the prairie sod house.*



# Our American Wildlife: 1776-1976

The story of American wildlife tells of exploitation and encroachment on habitat until recent efforts on behalf of endangered and threatened species

by RONALD M. NOWAK



**W**ITHIN the past few years unprecedented concern has developed for the kinds of animals that man is forcing toward extinction. Although such concern is justified now more than ever before, the problem of endangered wildlife has been with us for at least as far back as the birth of our nation.

Although European man's effects on the fauna of North America were relatively few before 1776 compared with the subsequent two hundred years, some noticeable changes had occurred by then. Elk and bison, which originally had ranged nearly to the Atlantic, had been practically exterminated in the settled region east of the Appalachians. Even white-tailed deer had been wiped out in more accessible areas; and, indeed, most colonies had already established closed seasons on the species. The beaver, because of intensive trapping for its valuable fur, had been exterminated in southern New England and greatly reduced in numbers throughout the colonies. The larger carnivores had been relentlessly persecuted by the settlers as threats to livestock. At the close of the eighteenth century, wolves and cougars were considered rare in all the lowland areas from Massachusetts to South Carolina. The great auk, a flightless sea bird comparable to the penguins, had disappeared from the coast of New England by about 1700, although the species survived elsewhere until 1844.

Only one full species that may have inhabited the territory that today comprises the fifty states is thought to have become extinct before 1776. This is Steller's sea cow, a huge Sirenian discovered by the explorer Bering in 1741 on Russia's Commander Islands and which probably occurred farther east in

the Aleutians. Immediately set upon by meat-hungry sailors, the species apparently disappeared by 1768.

**M**ARINE MAMMALS in general were among the first major wildlife groups to be hard hit by the white man. Their valuable meat, oil, and other products made them economically rewarding to hunt; and because the early American settlers were largely dependent on seafaring, it was natural that marine mammals would be pursued. Basque whalers from France and Spain actually may have reached American waters about the same time as the voyages of Columbus, and New England colonists had established a whaling industry in the early 1600s. Initial emphasis was on the right and bowhead whales, rich in oil and baleen, which could be captured relatively easily near the shore. By the early eighteenth century the great herds along the eastern coast of North America had been decimated. Then American whalers shifted their attention to the sperm whale, which would be the mainstay of the industry during the late eighteenth and early nineteenth centuries. The development of the harpoon gun in 1865 led to exploitation of the larger and swifter blue, finback, and humpback whales. The subsequent decline of these species resulted in heavier hunting of the smaller sei whale. All seven of these species could be considered endangered or threatened by the early twentieth century, and despite international efforts at conservation all may be at their lowest ebb today. One species, the Atlantic gray whale, already has been extinct for at least a century. The closely related gray whale of the Pacific also was heavily hunted and had been

nearly exterminated by the early twentieth century. This species, however, which migrates annually through California waters, made a dramatic recovery following establishment of complete protection in 1938.

One of the first marine mammals encountered by European explorers was the Caribbean monk seal. This species became an important source of oil at an early date and was rare by the nineteenth century. The last record for U.S. waters is of one killed near Key West in 1922, and by the 1960s the species seemed to be extinct. The related Hawaiian monk seal was extensively exploited by European hunters in the nineteenth century. About eight hundred still survive; but they are easily disturbed by human activity, and their future is uncertain.

The Guadalupe fur seal and northern elephant seal were once abundant on the islands and coasts of southern California and Baja California. From the early to mid-nineteenth century many thousands were killed by Russian, British, and American hunters; and before the end of the century both species were believed extinct. Somehow, though, tiny breeding groups of each survived on the Mexican island of Guadalupe off the coast of Baja California. The remnant elephant seals were located in 1892, and eventual protection allowed them to increase to about 50,000 individuals. The presence of the fur seal was not confirmed until 1954, but under protection the population has now increased to about 1,000.

More than two million northern fur seals once bred on Alaska's Pribilof Islands in the Bering Sea. Under Russian and subsequent U.S. administration, the animals underwent intensive commercial exploitation for their skins. By 1890 the herd was so reduced that the United States attempted protection but was confronted with protests from Britain and Japan, whose citizens pursued the seals on the high seas. Finally, in 1911, when only about 130,000 seals remained, international protection was granted; and the herd has since recovered.

The same agreement—among the United States, Russia, Britain, and Japan—also protected the sea otter, which had been subject to unrestricted hunting since its discovery in the Aleutians in 1741. Formerly numbering in the hundreds of thousands and

ranging as far south as Baja California, the species was mercilessly pursued for its fur, perhaps the most valuable of any animal. The sea otter already had been decimated by the end of the eighteenth century; and after another hundred years probably fewer than 2,000 individuals remained. International protection allowed recovery, especially in Alaskan waters where today perhaps more than 100,000 survive. A small group also survived and subsequently increased on the coast of central California.

**I**F EXPLOITATION of marine mammals is considered as having led to one major phase of reduction and extinction, a second such phase would

from skeletal remains found in cave deposits and Indian middens.

Of the birds of Puerto Rico, Mauge's parakeet and the Culebra Island parrot vanished in the late nineteenth or early twentieth century. The Puerto Rican plain pigeon, whip-poor-will, and parrot were severely reduced and today are endangered.

Of all U.S. territory, and indeed of all the world, with the possible exception of the Mascarene Islands in the Indian Ocean, no area of comparable size has suffered so high a modern extinction rate as the Hawaiian Islands. Of the seventy endemic species and subspecies of birds in Hawaii, twenty-three are now extinct and thirty-one are considered endangered or threat-

ened rats, cats, and mongooses. Other small forest birds that suffered from the same general problems are the honeyeaters (four extinct, one endangered), thrushes (two extinct, three endangered), and Old World warblers (one extinct, one endangered). The Hawaiian crow is the only forest bird that seems to have been reduced by direct human hunting.

The endemic flightless rails of Laysan and the Island of Hawaii became extinct when they could not escape introduced predators. Two related flying species, the Hawaiian gallinule and coot, were more fortunate but today are endangered because of human destruction of wetland habitat. Most of the remaining endangered species of the islands are jeopardized by introduced predators and environmental deterioration.

**A** THIRD GREAT PHASE of extinction and reduction involved the unrestricted hunting of mainland species for sport, subsistence, or commercial purposes. Millions of alligators may have inhabited the Southeast two hundred years ago, but by the 1950s only about 200,000 were left. Federal and state protection then was imposed, and the species subsequently increased to an estimated 800,000.

Several species of birds were far more abundant than the alligator but were subjected to intensive hunting at an earlier time, and conservation efforts came too late. The Labrador duck of the Northeast has not been reported since 1875. The Carolina and Louisiana parakeets of the southern states were killed in vast numbers by farmers and for the plumage trade. The last definite records for both occurred shortly after the turn of the century. The passenger pigeon of the eastern deciduous forests probably once numbered in the billions. Its disappearance from the wild by 1900 (a captive lived until 1914) was the result of uncontrolled market hunting.

As the passenger pigeon grew scarce, hunters turned to shore birds for the market. By 1900 such formerly abundant species as the Eskimo curlew, Hudsonian godwit, and golden plover were considered in jeopardy. Most of these species managed to survive until the present, but the Eskimo curlew may not have made it. The great flocks that once blotted out the sun had been



Native Californians lassoing a bear, by Francis Hall after F.O.C. Darley, 1873. Courtesy Library of Congress.

involve island species. Island-dwelling animals usually evolved under specialized conditions, with few or no predators and competitors; thus they are particularly vulnerable to human-induced environmental changes. Moreover, the small size of most islands facilitates rapid and total extermination.

Among the first animals to become extinct after the discovery of the New World were several comparatively large rodents and insectivores on the Caribbean islands. These mammals, of which four species occurred on Puerto Rico, may have disappeared because of a combination of factors, including predation by introduced rats, cats, and mongooses; burning of forests; and hunting. So early did they become extinct that today they are known only

ened. The decline began shortly after Captain Cook discovered the islands in 1778, and some species apparently had disappeared before the middle of the nineteenth century. By 1900, fifteen birds were extinct, and naturalists already were warning that the entire native fauna of the islands was in jeopardy.

Among the hardest hit groups has been Hawaii's own unique honeycreeper family, the Drepanididae, of which fourteen of the forty-seven kinds are extinct and fifteen are endangered. Reasons are not fully known, but one probably was habitat alteration, especially destruction of native vegetation by introduced livestock and other mammals. Other suggested factors include the ravages of introduced bird diseases and predation by intro-

practically exterminated by 1910. A trickle of reports from then to now gives hope to optimistic naturalists.

A bird that is certainly gone is the heath hen, a relative of the prairie chicken once found in the northeastern United States. Hunters already had seriously reduced its numbers by the Revolution, and it entirely disappeared from the mainland about a hundred years later. A protected colony thrived for a while on Martha's Vineyard, but the last bird died in 1932.

In the late nineteenth century, the wearing of bird feathers was in fashion and resulted in intensive pressure on many species. The American and snowy egrets in particular may have been threatened with extinction before enforcement of protective legislation allowed their recovery.

The decline of mammals valuable for subsistence or commerce continued from the time of the Revolution until the early twentieth century. During this period the beaver was nearly exterminated throughout the northeastern quarter of the United States and was considerably reduced in most other places. Subsequent reintroduction and conservation programs have enabled the species to reoccupy much of its former range. Another furbearer, the sea mink of the New England coast, was not so fortunate and had been exterminated by trappers by about 1860.

The plains bison required too much space to be allowed a comeback as a fully wild species. It had been completely wiped out east of the Mississippi River by the 1830s, and by 1900 the only wild bison in the United States were about two dozen in Yellowstone National Park. Belated protection has assured preservation of the morphological species, but the great herds that once covered the plains will never be seen again. Meanwhile, the wood bison survived and was allowed to increase in Canada, but inbreeding with introduced plains bison and other problems have kept this subspecies on the endangered list.

The elk, which is divided into several subspecies, was rapidly killed off as the frontier moved westward. The eastern elk, which at the time of the Revolution still occupied the region from the Appalachians to the Great

### Threatened, Endangered, and Extinct American Wildlife (As of October 1976)

This table lists the vertebrate animals of the fifty states and Puerto Rico that are extinct (X) or have become endangered (E) or threatened (T) during various periods in our history. The threatened and endangered animals in the 1976 column correspond to those so classified by the U.S. Department of the Interior. The author made the classifications of the other columns. In addition, many mollusks, insects, and plants have been listed or proposed as endangered or threatened. Data on extinct fishes were provided by Dr. James Williams, Office of Endangered Species, U.S. Fish and Wildlife Service.

COMMON NAME	SCIENTIFIC NAME	1776	1900	1976	COMMON NAME	SCIENTIFIC NAME	1776	1900	1976
<b>FISH</b>									
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>			T E	Gila Topminnow	<i>Poeciliopsis occidentalis</i>			E
Longjaw Cisco	<i>Coregonus alpenae</i>			E	Fountain Darter	<i>Etheostoma fonticola</i>			E
Blackfin Cisco	<i>Coregonus nigripinnis</i>			X	Watercress Darter	<i>Etheostoma nuchale</i>			E
Deepwater Cisco	<i>Coregonus johanna</i>			X	Okaloosa Darter	<i>Etheostoma okaloosae</i>			E
Agassiz Trout	<i>Salvelinus agassizi</i>			X	Maryland Darter	<i>Etheostoma sellare</i>			E
Lahontan Cutthroat Trout	<i>Salmo clarki henshawi</i>			E	Bayou Darter	<i>Etheostoma rubrum</i>			E
Paiute Cutthroat Trout	<i>Salmo clarki seleniris</i>			T	Snail Darter	<i>Percina tanasi</i>			E
Greenback Cutthroat Trout	<i>Salmo clarki stomias</i>			T	Blue Pike	<i>Stizostedion vitreum glaucum</i>			E
Gila Trout	<i>Salmo gilae</i>			E	<b>AMPHIBIANS</b>				
Apache Trout	<i>Salmo apache</i>			T	Santa Cruz Long-toed Salamander	<i>Ambystoma macrodactylum croceum</i>			E
Humpback Chub	<i>Gila cypha</i>			E	Desert Slender Salamander	<i>Batrachoseps aridus</i>			E
Thicktail Chub	<i>Gila crassicauda</i>			X	Texas Blind Salamander	<i>Typhlomolge rathbuni</i>			E
Pahranagat Bonytail	<i>Gila robusta jordani</i>			E	Vegas Valley Leopard Frog	<i>Rana pipiens fisheri</i>			X
Mohave Chub	<i>Siphanteles mohavensis</i>			E	Houston Toad	<i>Bufo houstonensis</i>			E
Moapa Dace	<i>Moapa coriacea</i>			E	<b>REPTILES</b>				
Pahranagat Spinedace	<i>Lepidomeda altivelis pratensis</i>			X	American Crocodile	<i>Crocodylus acutus</i>			T E
Big Spring Spinedace	<i>Lepidomeda mollispinis pratensis</i>			X	American Alligator	<i>Alligator mississippiensis</i>			E*
Woundfin	<i>Plagopterus argentissimus</i>			E	Green Sea Turtle	<i>Chelonia mydas</i>			T T+
Colorado Squawfish	<i>Ptychocheilus lucius</i>			E	Loggerhead Sea Turtle	<i>Caretta caretta</i>			T T+
Kendall Warm Springs Dace	<i>Rhinichthys oculus thermalis</i>			E	Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>			T E
Grass Valley Speckled Dace	<i>Rhinichthys oculus teliguus</i>			X	Atlantic Ridley Sea Turtle	<i>Lepidochelys kempii</i>			E
Harelip Sucker	<i>Lagochila lacera</i>			X	Pacific Ridley Sea Turtle	<i>Lepidochelys olivacea</i>			T+
June Sucker	<i>Chasmistes liarus</i>			E	Leatherback Sea Turtle	<i>Dermodochelys coriacea</i>			E
Cui Ui	<i>Chasmistes cuius</i>			X	Blunt-nosed Leopard Lizard	<i>Crotaphytus silus</i>			E
Scioto Madtom	<i>Noturus trautmani</i>			E	Puerto Rican Boa	<i>Epicraterus inornatus</i>			T E
Smoky Madtom	<i>Noturus baileyi</i>			X	San Francisco Garter Snake	<i>Thamnophis sirtalis tetrataenia</i>			E
Devil's Hole Pupfish	<i>Cyprinodon diabolis</i>			E	<b>BIRDS</b>				
Comanche Springs Pupfish	<i>Cyprinodon elegans</i>			E	Newell's Manx Shearwater	<i>Puffinus puffinus newelli</i>			T
Tecopa Pupfish	<i>Cyprinodon nevadensis calidae</i>			E	Hawaiian Dark-rumped Petrel	<i>Pterodroma phaeopygia sandwichensis</i>			E
Warm Springs Pupfish	<i>Cyprinodon nevadensis pectoralis</i>			E	California Least Tern	<i>Sterna albifrons browni</i>			E
Owens River Pupfish	<i>Cyprinodon radiosus</i>			X	Brown Pelican	<i>Pelecanus occidentalis</i>			E
Leon Springs Pupfish	<i>Cyprinodon bovinus</i>			X	Common Egret	<i>Casmerodius albus</i>			T
Ash Meadows Springfish	<i>Empetrichthys merriami</i>			X	Snowy Egret	<i>Leucophoyx thula</i>			T
Pahrump Killifish	<i>Empetrichthys latos</i>			E	Hawaiian Goose (Nene)	<i>Branta sandvicensis</i>			E E
Miller Lake Lamprey	<i>Lampetra minima</i>			X	Aleutian Canada Goose	<i>Branta canadensis leucopareia</i>			E
Big Bend Gambusia	<i>Gambusia gaigei</i>			E	Laysan Duck	<i>Anas laysanensis</i>			E E
Clear Creek Gambusia	<i>Gambusia heterochir</i>			E	Hawaiian Duck	<i>Anas wyvilliana</i>			T E
Pecos Gambusia	<i>Gambusia nobolis</i>			E	Mexican Duck	<i>Anas diazi</i>			E
Unarmored Three-spine Stickleback	<i>Gasterosteus aculeatus williamsoni</i>			E					
Utah Lake Sculpin	<i>Cottus echnatus grandipennis</i>			X					
Clear Lake Minnow	<i>Endemichthys grandipennis</i>			X					
Whiteline Topminnow	<i>Fundulus albolineatus</i>			X					

COMMON NAME	SCIENTIFIC NAME	1776	1900	1976	COMMON NAME	SCIENTIFIC NAME	1776	1900	1976	COMMON NAME	SCIENTIFIC NAME	1776	1900	1976
Labrador Duck	<i>Camptorhynchus labradorium</i>	T	X		Hawaiian Mamo	<i>Drepanis pacifica</i>			X	Beaver	<i>Castor canadensis</i>			T
California Condor	<i>Gymnogyps californianus</i>	T	E		Black Mamo	<i>Drepanis funerea</i>			E	Salt Marsh Harvest Mouse	<i>Reithrodontomys raviventris</i>			E
Florida Everglade Kite	<i>Rostrhamus sociabilis plumbeus</i>			E	Crested Honeycreeper	<i>Palmeria dolei</i>			E	Gull Island Vole	<i>Microtus nesophilus</i>			X
Hawaiian Hawk	<i>Buteo solitarius</i>			T	Hawaii Akiola	<i>Hemignathus obscurus obscurus</i>			X	Amargosa Meadow Vole	<i>Microtus glafornicus scirpensis</i>			X
Bald Eagle (lower forty-eight states)	<i>Haliaeetus leucocephalus</i>			E†	Lanai Akiola	<i>Hemignathus obscurus lanaiensis</i>			X	Sperm Whale	<i>Physeter catodon</i>			T
American Peregrine Falcon	<i>Falco peregrinus anatum</i>			E	Oahu Akiola	<i>Hemignathus obscurus lichtensteini</i>			X	Atlantic Gray Whale	<i>Eschrichtius gibbosus</i>			E
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>			E	Akiapolaau	<i>Hemignathus wilsoni</i>			E	Pacific Gray Whale	<i>Eschrichtius robustus</i>			E
Heath Hen	<i>Tympanuchus cupido cupido</i>	T	E	X	Kauai Akiola	<i>Hemignathus procerus</i>			E	Finback Whale	<i>Balaenoptera physalus</i>			T
Attwater's Prairie Chicken	<i>Tympanuchus cupido attwateri</i>			E	Oahu Nukupuu	<i>Hemignathus lucidus lucidus</i>			X	Sei Whale	<i>Balaenoptera borealis</i>			T
Masked Bobwhite	<i>Colinus virginianus ridgwayi</i>			E	Kauai Nukupuu	<i>Hemignathus lucidus hanapepe</i>			E	Blue Whale	<i>Balaenoptera musculus</i>			T
Whooping Crane	<i>Grus americana</i>			E	Maui Nukupuu	<i>Hemignathus lucidus affinis</i>			E	Humpback Whale	<i>Megaptera novaeangliae</i>			T
Mississippi Sandhill Crane	<i>Grus canadensis pulla</i>			E	Hawaii Akepa	<i>Loxops coccinea coccinea</i>			E	Right Whale	<i>Balaena mysticetus</i>			T
Yuma Clapper Rail	<i>Rallus longirostris yumanensis</i>			E	Maui Akepa	<i>Loxops coccinea ochracea</i>			E	Bowhead Whale	<i>Balaena mysticetus</i>			T
California Clapper Rail	<i>Rallus longirostris obsoletus</i>			E	Oahu Akepa	<i>Loxops coccinea rufa</i>			X	Southern California Kit Fox	<i>Vulpes macrotis macrotis</i>			E
Light-footed Clapper Rail	<i>Rallus longirostris levipes</i>			E	Greater Amakihi	<i>Loxops sagittirostris</i>			X	San Joaquin Kit Fox	<i>Vulpes macrotis mutica</i>			E
Laysan Rail	<i>Porzana palmeri</i>	T	X		Oahu Creeper	<i>Loxops maculata maculata</i>			E	Northern Swift Fox	<i>Vulpes velox hebes</i>			T
Sandwich Rail	<i>Pennula sandwichensis</i>	X			Hawaii Creeper	<i>Loxops maculata mana</i>			T	Red Wolf	<i>Canis rufus</i>			E
Hawaiian Gallinule	<i>Gallinula chloropus sandvicensis</i>			E	Lanai Alauwahio	<i>Loxops maculata montana</i>			E	Eastern Timber Wolf	<i>Canis lupus lycaon</i>			T
Hawaiian Coot	<i>Fulica americana alai</i>			E	Molokai Creeper	<i>Loxops maculata flamma</i>			E	Plains Wolf	<i>Canis lupus nubilus</i>			T
Hawaiian Stilt	<i>Himantopus himantopus knudseni</i>			E	Po'o Uli	<i>Melampus phaesoma</i>			T	Texas Gray Wolf	<i>Canis lupus monstrabilis</i>			X
Eskimo Curlew	<i>Numenius borealis</i>	T	E		Ula-ai-hawane	<i>Ciridops anna</i>			X	Mexican Wolf	<i>Canis lupus baileyi</i>			E
Golden Plover	<i>Pluvialis dominica</i>	T			Greater Koafinch	<i>Psittirostra palmeri</i>			X	Mogollon Mountain Wolf	<i>Canis lupus mogollonensis</i>			X
Hudsonian Godwit	<i>Limosa haemastica</i>			E	Lesser Koafinch	<i>Psittirostra flaviceps</i>			X	Southern Rocky Mountain Wolf	<i>Canis lupus youngi</i>			X
Great Auk	<i>Pinguinus impennis</i>			X	Kona Finch	<i>Psittirostra kona</i>			X	Northern Rocky Mountain Wolf	<i>Canis lupus irremotus</i>			E
Passenger Pigeon	<i>Ectopistes migratorius</i>			X	Laysan Finch	<i>Psittirostra cantans cantans</i>			X	Kenai Peninsula Wolf	<i>Canis lupus alces</i>			X
Puerto Rican Plain Pigeon	<i>Columba inornata wetmorei</i>			E	Nihoa Finch	<i>Psittirostra cantans ultima</i>			T	Grizzly Bear (lower forty-eight states)	<i>Ursus arctos horribilis</i>			T
Puerto Rican Parrot	<i>Amazona vittata vittata</i>			T	Ou	<i>Psittirostra psittacea</i>			E	Sea Mink	<i>Mustela macrodon</i>			T
Culebra Island Parrot	<i>Amazona vittata gracilipes</i>			T	Palila	<i>Psittirostra bailliei</i>			E	Black-footed Ferret	<i>Mustela nigripes</i>			T
Mauge's Parakeet	<i>Aratinga chloroptera maugei</i>			T	Maui Parrotbill	<i>Pseudonestor xanthorphyus</i>			E	Sea Otter	<i>Enhydra lutris</i>			T
Carolina Parakeet	<i>Conuropsis carolinensis carolinensis</i>			E	Bachman's Warbler	<i>Vermivora bachmanii</i>			E	Eastern Cougar	<i>Felis concolor cougar</i>			T
Louisiana Parakeet	<i>Conuropsis carolinensis ludoviciana</i>			E	Kirtland's Warbler	<i>Dendroica kirtlandii</i>			E	Wisconsin Cougar	<i>Felis concolor schorgeri</i>			E
Puerto Rican Whip-poor-will	<i>Caprimulgus noctitherus</i>			E	Dusky Seaside Sparrow	<i>Ammospiza maritima mirabilis</i>			E	Florida Panther	<i>Felis concolor coryi</i>			T
Red-cockaded Woodpecker	<i>Dendrocopos borealis</i>			E	Cape Sable Sparrow	<i>Ammospiza maritima nigrescens</i>			E	Ocelot (in U.S.)	<i>Felis pardalis</i>			T
Ivory-billed Woodpecker	<i>Campephilus principalis</i>			T	Smyrna Seaside Sparrow	<i>Ammospiza maritima pelonota</i>			X	Margay (in U.S.)	<i>Felis wiedii</i>			T
Hawaiian Crow	<i>Corvus tropicalis</i>			T	Santa Barbara Song Sparrow	<i>Melospiza melodia graminea</i>			E	Jaguar (in U.S.)	<i>Leo onca</i>			E
Small Kauai Thrush	<i>Phaeornis palmeri</i>			E						Northern Fur Seal	<i>Callorhinus ursinus</i>			T
Large Kauai Thrush	<i>Phaeornis obscurus myadestina</i>			E						Guadalupe Fur Seal	<i>Arctocephalus townsendii</i>			T
Molokai Thrush	<i>Phaeornis obscurus rutha</i>			E						Caribbean Monk Seal	<i>Monachus tropicalis</i>			E
Oahu Thrush	<i>Phaeornis obscurus oahensis</i>			X						Hawaiian Monk Seal	<i>Monachus schauinslandi</i>			T
Lanai Thrush	<i>Phaeornis obscurus lanaiensis</i>			E						Northern Elephant Seal	<i>Mirounga angustirostris</i>			E
Nihoa Millerbird	<i>Acrocephalus kingi</i>			T						Florida Manatee	<i>Trichechus manatus latirostris</i>			T
Laysan Millerbird	<i>Acrocephalus familiaris familiaris</i>			E						Steller's Sea Cow	<i>Hydrodamalis stelleri</i>			X
Kioea	<i>Chaetoptila angustipluma</i>			X						Eastern Elk	<i>Cervus canadensis canadensis</i>			X
Oahu Oo	<i>Moho apicalis</i>			X						Merriam's Elk	<i>Cervus canadensis merriami</i>			X
Molokai Oo	<i>Moho bishopi</i>			E						Key Deer	<i>Odocoileus virginianus clavium</i>			T
Hawaii Oo	<i>Moho nobilis</i>			E						Columbian White-tailed Deer	<i>Odocoileus virginianus leucurus</i>			T
Kauai Oo	<i>Moho braccatus</i>			E						White-tailed Deer	<i>Odocoileus virginianus</i> (other subspecies)			T
Laysan Apapane	<i>Himatione sanguinea freethii</i>			T						Sonoran Pronghorn	<i>Antilocapra americana sonoriensis</i>			T

\* The alligator is not listed as endangered by the Department of the Interior in Cameron, Vermilion, and Calcasieu parishes, Louisiana.  
† Formally proposed for listing.  
‡ Only the southern bald eagle is now listed, but the bald eagle has been formally proposed to be listed as endangered throughout the lower forty-eight states except in Washington, Oregon, Minnesota, Michigan, and Wisconsin, where it would be listed as threatened.



Plains, became extinct by the 1880s. Merriam's elk of the Southwest disappeared shortly thereafter. Conservation efforts saved the other subspecies, and some have been introduced into the former ranges of the extinct kinds.

The pronghorn antelope, tens of millions of which once shared the plains with the bison, had been reduced to a few thousand scattered survivors by 1900. Again, protection came in time, although one southwestern subspecies remains critically endangered. Most other hoofed mammals in the country also were drastically depleted in the early 1900s but have since increased. The common white-tailed deer could be counted among the threatened species of the United States at the turn of the century, and was a subject of Glover M. Allen's classic *Extinct and Vanishing Mammals of the Western Hemisphere*, published in 1942. Intensive management has since produced deer herds that some claim are larger even than in primeval times. Two subspecies are listed as endangered, but even these may be near maximum carrying capacity for their limited ranges.

**I**NTEREST in protecting big game and commercially valuable mammals and birds did not extend to the larger predatory species, and, indeed, their extermination often was advocated as a conservation tool. The deliberate hunting, trapping, and poisoning of the large carnivores might be considered the fourth major phase of wildlife extermination in this nation.

Wolves, bears, cougars, and some other predators generally had suffered along with other animals as the frontier advanced. The carnivores, however, were often more adaptable and maintained a sort of guerilla existence, preying on livestock after their natural food supplies had vanished. Gray wolves disappeared from the eastern half of the United States, except for the northern Great Lakes region, by about 1910. The smaller red wolf remained common in the south-central states until about 1930 but has since nearly succumbed to human persecution and hybridization with the coyote. The two eastern subspecies of the cougar managed to survive in very low numbers and today are listed as endangered.

As the West filled with livestock at the turn of the century, ranchers began

a determined effort to eliminate wolves, grizzly bears, and cougars. Beginning in 1914, they were assisted by an elaborate federal predator control program. By 1930 wolves had been practically extirpated from the West, and significant grizzly populations remained only in the Yellowstone area and in northwestern Montana.

**A**S THE CENTURY wore on, interest in conservation increased, including even the protection of large carnivores. Laws and policies adopted by federal and state governments made it unlikely that any native vertebrate would become extinct because of deliberate and unrestricted killing by man. As concern for wildlife grew, however, and as some species recovered from the general low point reached around 1900, human population and manipulation of the environment also were increasing. The fifth and potentially most devastating phase of wildlife reduction and extinction had begun.

Greater need and improved technology led twentieth century man to penetrate and exploit habitat that once had seemed inaccessible or undesirable. He now found it relatively easy to alter vast areas or modify entire natural drainage systems to his seeming advantage. He also began introducing quantities of pollutants and poisons into the environment. Such activity has been damaging to many species, especially those adapted to limited ranges or conditions.

It would require far too much space to describe the particular problems of each species that has become extinct or endangered because of environmental alteration. Some of these stories are well known, such as the classic cases of the ivory-billed woodpecker, which all but disappeared when the southern hardwood forests it depended on were logged; the whooping crane, which lost its prairie breeding grounds to agriculture; and the California condor, which could not tolerate human disturbance of its nesting and feeding habitat.

Most of the species in the accompanying table that I have not mentioned yet have reached their current status because of human-induced environmental problems. These species seem to fall into four main categories. First are animals that occupied such a

small area that they were exterminated or placed in jeopardy by a particular human project. Most of the fish and amphibians on the list are in this category, as they are or were dependent on small streams or bodies of water. Many of the mollusks, crustaceans, insects, and plants that recently have been granted or proposed for endangered status also are in this group.

A second group of animals includes those that may not be found at just a few sites but are dependent on a limited amount of habitat in a relatively restricted area. Many birds are in this category, especially those requiring wetland habitat, such as the Mexican duck, Florida Everglade kite, Mississippi sandhill crane, and the various clapper rails. Some smaller mammals and reptiles also are in this group.

A third category includes species that may have been found over a vast area but still required a specific kind of vanishing habitat. Examples are the gray and Indiana bats, which must have certain types of undisturbed caves; the black-footed ferret, which declined when man exterminated the prairie dogs it preyed upon; and the red-cockaded woodpecker, which is dependent on a dwindling supply of old pine forests.

The fourth category contains species that occupied a large area and are declining because of pollution or the introduction of harmful pesticides into their food chains. These species include the bald eagle, peregrine falcons, brown pelican, and blue pike.

Habitat loss and environmental deterioration are not limited to the animals just mentioned. All the species discussed in this article, and many others, may face increasing problems of this kind in the future.

**T**HE STRUGGLE against direct and needless slaughter of wildlife was probably the greatest battle of the conservation movement during the second hundred years of our country. The salvation of wildlife habitat will be the major concern of conservationists for the next hundred years.

**With degrees in both history and zoology, Dr. Ronald M. Nowak is particularly interested in endangered species of animals. He has been collecting information on wildlife history for more than ten years, especially that dealing with the larger mammals.**

# COOPERATING ASSOCIATIONS: Frosting on the Cake

Activities of "cooperating associations" enhance interpretive programs at many national parks

by EILEEN LAMBERT

**T**HE GIANT WATERWHEEL was actually moving. We heard the splashing and the heavy creaking of gears turning the stone at Mingus Mill in Great Smoky Mountains National Park. Tales my dad used to tell came alive. I could picture the barefoot boy, with his father and a mule-drawn wagon, at a similar mill where the fee for grinding was a share of the cornmeal.

My husband and I went into Mingus Mill as into another era. Dust motes danced in a ray of sunlight from a high window. A fine powder had settled over everything. We felt rooted in the American past as never before. I bought a bag of the meal, knowing that the cornpone and griddlecakes I would make from it would carry a feeling no supermarket purchase could give. Neither could history books provide such a sense of past time restored, such revelation of forgotten techniques of living that might help us now in an energy-short world.

Uncle Sam running a grist mill? Not exactly. Great Smoky Mountains Natural History Association, a nonprofit, educational society, had paid for the restoration of this intriguing mill and was now milling as much as seventy tons of corn a year and selling the meal to offset part of the operating costs. I began noticing the involvement of this

association in other aspects and activities of the park. Self-guiding nature trail leaflets, for instance, were dispensed from honor-system boxes at ten cents each. Since then I've been learning of important contributions by similar associations throughout the National Park System.

**T**HE ROOTS OF THESE "cooperating associations" reach more than half a century deep. In 1920 Ansel Hall organized Yosemite Museum Association. It obtained a \$75,500 foundation grant for Yosemite National Park's first museum. It became Yosemite Natural History Association in 1925 and was incorporated in 1947. This oldest association is one of the largest independent associations, with about eight hundred active members.

The Yosemite association now furthers environmental education by sponsoring college-level field seminars (five-day learning sessions for a fee commensurate with typical educational costs). Instructors utilize the park to reveal specifics of botany, geology, ornithology, and other sciences. Lessons learned here about ecological challenges, man's impact upon nature, and nature's responses can be useful throughout the world. Among other contributions is the financing of dramatic historical

demonstrations at the Pioneer Yosemite History Center, where visitors can help with the chores and go on an interpretive stagecoach ride. And the association recently donated an eight-inch Celestron telescope with accessories for visitor programs at lofty Glacier Point.

Congress recognized the cooperating association idea in an appropriations act passed June 5, 1920, authorizing the National Park Service (NPS) to accept donations and related contributions from associations for "sundry civil expenses of the government." The associations engage in income-producing activities, such as the sale of publications, and use all profit for the benefit of Park Service programs. Later laws broadened and further defined the associations' role and NPS cooperation with them. Public Law 633, passed in 1946, authorized NPS to contribute manpower, use of space in government buildings, and various logistical support to the associations.

The associations are useful largely because they can quickly respond to the special needs of interpretive programs, which vary complexly from time to time and from park to park. Such details cannot always easily be foreseen in the time-consuming task of federal budgeting and appropriating necessary and wise for basic operations. The associations can give flexibility that adds frosting to the cake. They can produce and manage supplemental funds while relieving government personnel of possible conflicts of interest.

Cooperating associations are easily differentiated from park concessions, which, though authorized and watched over by NPS, are businesses intended to make reasonable profits for their owners. Concessioners supply such visitor services as food; rooms; gas and oil; bus, boat, and horse transportation; souvenirs; and general merchandise. By contrast, associations sell only educational items selected to aid visitors' understanding of the park. All sales items must have NPS approval.

Cooperating associations are

now working in 220 areas of the park system. There are thirty-seven active one-park associations without branches; sixteen associations with sixty-one branches; and two consolidated giants—Eastern National Park & Monument Association, Philadelphia, with agencies in eighty-two areas; and Southwest Parks & Monuments Association, Globe, Arizona, with agencies in forty areas. All concentrate on aiding the Park Service interpretive programs and are continually providing resources not

readily available through government channels.

Agency workshops are held regularly to help agents and executive secretaries solve management problems. James Murfin, of NPS, serves as cooperating associations coordinator; and regional coordinators also help work out relations between associations and the NPS.

A thick government manual, *Cooperating Associations Management Guidelines & Procedures*, gives basic rules. Each association has a board of directors including

private citizens as well as NPS employees. The park superintendent is always on the board of a one-park association, and the association's executive secretary is usually the NPS employee in charge of interpretation. The treasurer is always someone not connected with the Park Service.

**A**LTHOUGH SIMILAR in structure, associations vary widely in origin, history, and program emphasis. Some feature history; others, nature. Some have hundreds of members; others, few. Many charge membership dues of \$2 to \$5 a year; others charge no dues at all. Life memberships range from \$5 to \$1,000. Some have abundant funds and are often looking for worthy projects; others have an abundance of projects and are often struggling for funds.

The gross sales of all the associations in 1975 totaled more than \$7 million, from which they donated more than \$1 million to NPS, bringing to \$7,274,000 their total cash donations to the Service throughout the years. These amounts are in addition to the countless projects and continuing operations of the associations themselves that augment NPS programs.

Many of the associations are so small or so managed that most of their work is done by government employees, making it hard to tell which "hat" a particular employee is wearing at any given moment. The aim is the same, in any event. The Alaska National Parks & Monuments Association, with its office in Anchorage, is so far in this category. It serves four NPS areas. The four superintendents, plus two other NPS people and only one person from outside the Service, constitute the board of directors. The acting president reports they have no other members.

The association in the Great Smokies is a contrasting example. According to its executive secretary, Stanley Canter, it employs more seasonal personnel engaged in visitor contact there than does the government—up to forty—

*At Mingus Mill in Great Smoky Mountains National Park visitors sense an aura of past time restored. The Great Smoky Mountains Natural History Association, a nonprofit educational society, financed restoration of the old mill and still operates it, to the great delight of visitors, who enjoy buying souvenir bags of freshly ground cornmeal there to experiment with authentic pioneer recipes.*



FRED R. BELL, NATIONAL PARK SERVICE

including sales people, millers, and other pioneer craft demonstrators. Most of the living history interpretation at popular Cades Cove and Oconaluftee is presented by association personnel. The association has two year-round employees, a business manager and an assistant. Without the association, Canter says, the park's interpretive program would be reduced by at least fifty percent. It supports research into nature and history; provides part-time library and curatorial help; buys books, equipment, photographic supplies, and artifacts; publishes or makes possible publication of park-related manuscripts. In 1974 its cash contribution to NPS was \$81,000.

This association has also acquired part-interest in certain land needed for the park (the government is legally prohibited from buying part-interest) and is holding the land until complete ownership can be donated or sold at cost to the NPS. Among other associations also helping with land problems is Glacier Natural History Association, Inc., which recently paid delinquent taxes to acquire an inholding in Glacier National Park.

More and more of the associations are hiring their own personnel for expanding functions, after having started out on a "lemonade stand" scale. One of these associations is Shenandoah Natural History Association, which has roots reaching back to Shenandoah National Park's first year of existence (1935-1936), long before the park employed a naturalist or had a visitor center. My husband, Darwin Lambert, then a 20-year-old NPS office worker, initiated an organization of local citizens and park employees that encouraged research, arranged lectures, presented radio programs, and published a quarterly "nature journal," which was sold at ten cents a copy by Civilian Conservation Corps workers at parking overlooks on Skyline Drive. This nature society lapsed with World War II and was followed by a more typical association coordinated by an NPS naturalist.

In addition to publishing and selling pertinent literature in rapidly growing quantities and buying library books and other materials needed by ranger-naturalists, the Shenandoah Natural History Association contributes significantly to environmental education involving public schools near the park. Since 1972 it has been offering an "extra" much appreciated by its members—quarterly lectures or field trips led by experts in various disciplines, often from Washington, D.C. In 1974 it hired its first full-time business manager, and its sales volume is now approaching \$100,000 a year.

The most extensive cooperative-aid program of all is that of Eastern National Park & Monument Association, which has more than 650 voting members and gross sales approaching \$2 million yearly. The association's 1974 annual report lists five pages of approved allotments, including a work/study program at Acadia National Park; furniture for the General Schuyler House at Saratoga National Historical Park; translation of an eighteenth century encyclopedia at Saugus Ironworks National Historic Site; prizes in essay and photo contests in schools around Minuteman National Historical Park; eighteenth century costumes at Independence National Historical Park; canoes and equipment for a canoeing program at Assateague National Seashore; a horse-drawn sugar mill at Virgin Islands National Park; and candle lanterns for night tours of Gulf Islands National Seashore.

As park areas and park visitors increase, the need increases for more cooperating associations. The trend now, however, is to encourage additional branches or agencies of existing associations instead of new one-park organizations in order to minimize operating complexities. Some associations have merged with others.

**T**HE NATIONAL PARKS need all the friends they can get. Worthy programs are being turned down because there is no money in

Park Service budgets to pay for them. Much that really matters may depend on some form of volunteerism. Some hiking clubs and Volunteers in Parks (VIPs) have already set a precedent by doing needed jobs without pay. If more people were keenly aware of the need and felt their help would be welcomed, they might volunteer considerable time.

Membership lists of the associations tend to include persons who are most concerned with park protection and appropriate use. Might not these associations contribute further by serving as liaison between the NPS and people who might help solve park problems? More members could be enrolled by many of the associations; few have pushed recruitment. Some people might be eager to help with trail maintenance. Others might be willing and able to take pressure off the ranger-naturalist staffs by conducting bird walks, geology hikes, wildflower or mushroom talks or walks, or backpack seminars to show novices how to tread lightly and get along in the wilderness. Additional well-qualified volunteers might combine lectures or hikes with research that would help the park. Possibilities seem endless.

Yet there is danger here. Requests by hard-pressed NPS people for cash aid from the associations have been increasing as federal budgets for parks have become less adequate. Balanced judgment is needed. The associations may be favorably constituted to help put frosting on the cake, but federal funds should continue to pay adequately for basic programs.

Regardless of how or whether cooperating associations develop still further potential, the significant enhancement they are already bringing to visitors' national park experiences should be more widely recognized. ■

**Naturalist Eileen Lambert, past-president of Shenandoah Natural History Association, works as a free-lance writer at her home just outside Shenandoah National Park, Virginia.**

# NPCA at work

## MINING IN THE PARKS

### New Law Sets Restrictions

After months of delay on legislation to restrict mining in national parks, the Senate approved a House-amended version and sent it to President Ford just before Congress adjourned. He signed the bill on September 28, 1976.

Although mining is generally prohibited in the National Park System, it has been legal in six NPS units, and conservationists have presented a united front in urging that mining activities no longer be permitted in the park system. In several of the areas—notably Death Valley National Monument—mining operations are causing grave damage to resources.

In invited testimony in both the House and Senate, NPCA had urged that the legislation not only prevent new claims from being filed in the six parks, but also impose a moratorium of several years on any mining operations so that the Interior Department could assess the value of existing valid claims that would have to be purchased by the federal government to halt mining and also could close down invalid operations.

The Senate passed its bill (S 2371) in February 1976 after hearing testimony from environmentalists, mining companies, and Interior Department officials. The Senate approved halting the filing of mining claims in the six units in question: Death Valley National Monument in California and Nevada; Glacier Bay National Monument and Mount McKinley National Park in Alaska; Crater Lake National Park in Oregon; and Organ Pipe Cactus National Monument and Coronado National Memorial in Arizona. Furthermore, the Senate had wanted to restrict mining to already-disturbed land so that operators could continue to mine deeper into disturbed claims, but could not expand laterally. In the meantime, the bill directed the Secretary of Interior to make a two-year study of all existing claims within these units of the park system and to file a report with Congress. The bill also instructed the Advisory Council

on Historic Preservation to report to Congress within two years on all areas of national historical significance that would be affected by mining activities in national parks.

Although the House Interior Subcommittee on Parks and Recreation held hearings in February on S 2371 and reported the bill to the full committee soon thereafter, the legislation did not reach the House floor until the middle of September.

Opponents of the bill had staged a long delaying battle in the full Interior Committee that resulted in major weakening amendments. The committee amended S 2371 to permit mining to continue at rates of production determined by the rates for the past three years, placing no limit on lateral expansion within existing patented claims. But the legislators retained the prohibition on filing new claims. In a last-ditch effort, Rep. Don Young (R-Alaska) succeeded in having 531,000 acres in Glacier Bay National Monument deleted from the bill.

However, when the bill was brought to the House floor, the Young amendment was soundly defeated by a vote of 251 to 110. The House defeated additional weakening amendments but retained the amendment permitting production to continue at current rates, and passed the bill by 352 to 9.

The Senate accepted the House amendments by unanimous consent on September 17. Ford's signature made the bill Public Law 94-429.

## NEW RIVER

### Happy Day!

September 11, 1976, was a happy day for NPCA and other friends of the New River. As NPCA representatives and many others looked on, President Ford signed into law a bill to preserve the New River in North Carolina in its natural state and to prevent the building of a dam proposed by the American Electric Power Company (AEP). The occasion marked the completion of a fourteen-year fight by local residents who were joined by conservation groups including NPCA.

Most recently, NPCA testified upon invitation in both the House and Senate in favor of the legislation, which invalidates a Federal Power Commission license issued to AEP for dam construction and preserves this part of the New—a river that is considered the second oldest river in the world and is one of the few remaining free-flowing streams in the East—by including it in the National Wild and Scenic Rivers System.

The new law, PL 94-907, protects the New River area from a planned mammoth AEP hydroelectric project in Virginia that would have inundated approximately 50,000 acres of historic farmland in both that state and North Carolina and would have flooded the part of the river that the Interior Department had designated a wild and scenic river. (See July 1976, p. 22.) Construction of the Blue Ridge project would have uprooted more than 3,000 people from their homes.

The bill protecting the New River area had passed the House by a vote of 311 to 74 and the Senate by a vote of 69 to 16.

## BICENTENNIAL LAND HERITAGE

### Ford's Park Program

NPCA was represented by Editor Eugenia Connally at President Ford's announcement at Yellowstone on August 29, 1976, of a ten-year, \$1.5 billion program to restore the national park and wildlife refuge systems. Ford presented the program as a bill during the last weeks of this past session, and the bill died when Congress adjourned on October 1.

Ford asked that the money be appropriated in Fiscal Year 1977 but spent over a ten-year period. The Bicentennial Land Heritage Act, as submitted by President Ford to Congress, is divided into four general areas of appropriation requests as follows:

- **Land Acquisition**—\$141 million: This money would come from the unappropriated backlog in the Land and Water Conservation Fund (LWCF)—monies that have been available for appropriation for several years but have not been requested by the Administration previously; \$110 million would go to the National Park Service (NPS) and \$31 million to the U.S. Fish and Wildlife Service (FWS).

*Continued on page 25*

## NATIONAL PARKS SAMPLER

### Big Bend

**GETTING THERE:** From El Paso, Tex., 323 miles to park headquarters at Panther Junction via U.S. 80, 90, and 67 to Alpine, then via Tex. 118. Amtrak stops at Alpine, where cars can be rented.

**GETTING IN:** Free.

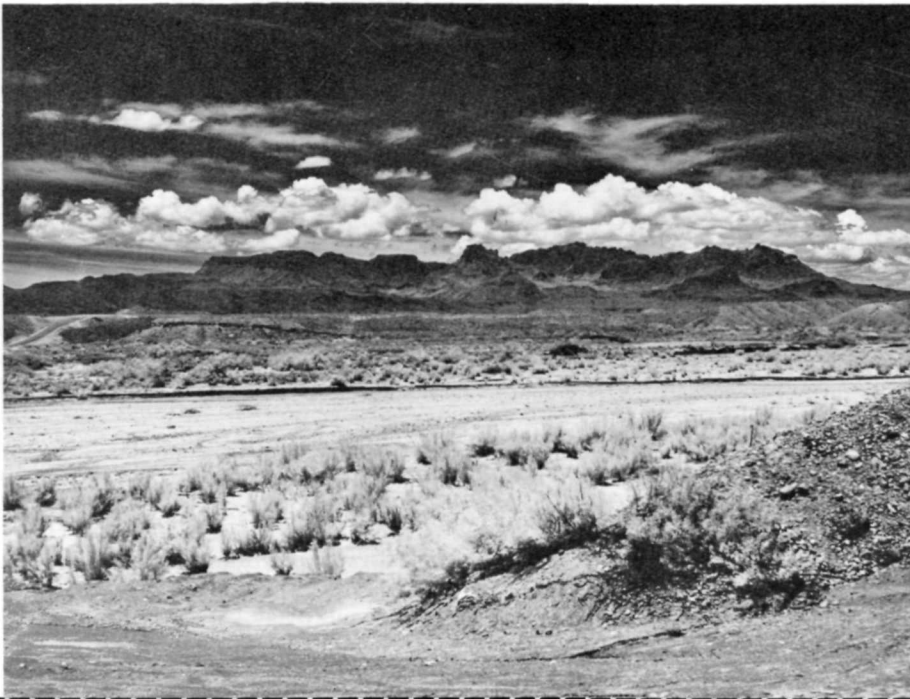
**WHERE TO STAY:** NPS campgrounds (No hook-ups). Overnight lodging at Chisos Mountain Lodge within park (reservations advisable) or outside west entrance of park at Study Butte. Ask superintendent for information on camping fees, backcountry permits (free), and lodging.

**WHAT TO DO:** Hiking, nature study, year-round interpretive programs, self-guiding trails, raft trips on Rio Grande (permit required), fishing, horseback riding (guided trips available). Ask for safety information.

**MORE TIPS:** Superintendent, Big Bend National Park, Tex. 79834.

Within the great curve of the Rio Grande river in Texas lies our finest U.S. desert preserve, Big Bend National Park. In addition to the eerie, beautiful Chihuahuan Desert lands, here you can explore the steep-walled canyons and junglelike rivercourse of the Rio Grande or the juniper-pinyon woodlands of the Chisos Mountains. Rising in stark contrast to arid expanses, the blue-shrouded mountains seem imbued with the mystery of bandit tales and Indian ghost stories. Whiptail lizards scampering across the desert floor, the howling of coyotes, the aroma of creosote bushes—these are some of the impressions of Big Bend, a park that can offer you a great vaca-

tion in any season. Autumn sunshine and air are gentle. November and early December, an off-season for visitors, is an excellent time to watch for wildlife and their young. You might spot Carmen white-tailed deer—found nowhere else in the nation—and javelinas, rabbits, or even a mountain lion. In spring the desert bloom peaks in vast displays of yellow, purple, and red. In midsummer, when temperatures in desert and river plain hover above 100°F, the mountains are especially delightful. The Chisos, isolated by turbulent geological forces, harbor a fascinating variety of vegetation unlike that of the surrounding area. Birdwatchers make exciting discoveries here throughout the year, especially listening for the melodies of Colima warblers, which in this nation nest only in Big Bend. Hikers and horseback riders can take the trail to the South Rim of the Chisos and see vast expanses of Texas and Mexico spread out before them, with the Rio Grande marking the boundary. You can follow park roads to other scenic overlooks such as the one at Boquillas Canyon, where each evening the sun seems to inflame the face of the mighty Sierra del Carmen. Across the river a rustic Mexican village is surrounded by a golden glow. When you come to Big Bend, plan to stay awhile; the spell of this huge land will grow on you.



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#### AFRICA

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## Memo to Members

Dear NPCA Member:

I am increasingly struck by the limited opportunities that are available to the individual citizen to act effectively in the protection of our nation's natural resources. Experience has demonstrated that for this reason among others, it is up to conservation organizations to represent and speak for them.

We at NPCA do just that. For example, NPCA was among the first of the conservation organizations to resort to the courts for the protection of our natural heritage. An early effort in this direction was the injunction suit brought by NPCA against the District of Columbia to prevent the construction of a highway through Glover-Archibold Park in 1960. While our participation in litigation on conservation issues has been limited by a lack of funds, NPCA has been involved in many significant cases. In some it has acted alone; in other instances, it joined with others. Since I am a lawyer, I am mindful of the many times our litigation efforts have been handled by attorneys on a *pro bono* basis. We also utilize other volunteer and foundation-financed professional services when they are available to us.

However, even with some *pro bono* work provided by lawyers, unavoidable out-of-pocket costs make litigation an expensive process. Unfortunately, there have been times when we have been forced to let a case go by that should have been aired in the courts only because we lacked the needed funds.

As a Board member of NPCA, I have a basic general interest in seeing the membership grow, since this is one indication of a strong, relevant organization. I also have a special interest in an increased membership. When we are fighting in the courts or trying to persuade government administrators to take a particular course of action—it is far more impressive to represent a large membership than a small one. Moreover, and equally important, the



dues generated from a larger membership provide NPCA with the additional necessary funds to do our work—including fighting in the courts when other means are to no avail.

This, then, is one more reason why NPCA has launched this special "Get-A-Member" campaign in the pages of the magazine.

To offer an incentive to our members to recruit other members, we developed a special award which you—as a member of NPCA—have an exclusive opportunity to earn.

When you get a member to join on his or her own, or when you give a gift membership, you will have earned a magnificent, quality portfolio of scenes in the national parks that are suitable for framing. The original portfolio contains nine photographs measuring 10 × 12 inches including a 1-inch border. Four are in breathtaking color; five, in dramatic black and white. In July, to commemorate the Bicentennial, we added an additional print of our national symbol—the American bald eagle. It is a reproduction of the painting that graced the cover of the July 1976 magazine. So now the portfolio contains ten beautiful prints.

Should you enlist more than one member, NPCA will update your port-

folio with three additional prints. Each of us who has personally recruited a new member to NPCA now owns one of these portfolios and can personally vouch for its quality. And when we recruited new members, we were able to tell them that they too would receive the portfolio as a bonus. It's just a little extra incentive to point out to your friends.

When you participate in the NPCA Get-A-Member campaign, you will not only help the Association grow, but you will help us cut back in membership building expenses. As you doubtless know, in order for our membership to remain stable we must constantly offset a normal attrition rate. To do this we must reach potential new members through the mail. And while these efforts are successful—they have become increasingly costly. We are trying to cut down on this approach, but we can only do it with your help.

Because you are a member of NPCA, I am supposing that you have a deep and abiding interest in the protection of our National Park System, the natural resources it contains, and other conservation and environmental values. I assume, also, that you have friends who share the same interests. Throughout the year we ask our members to give to various aspects of our work, and we are asking again. Only this time—give a friend. Your friend will like it. So will we. And so will the parks, wildlife, and natural resources that we protect. Thank you.

Sincerely,

Bernard R. Meyer

Member, Board of Trustees

P.S. With Christmas less than two months away, now is the time to think about giving. If you are like me, there are people on your Christmas list that are hard to buy for, and we rack our brains for the perfect gift. Why not a membership in NPCA, which includes a subscription to *National Parks & Conservation Magazine: The Environmental Journal*? And if you give a gift membership instead of enlisting a new member, we will still send you the portfolio as an award! So please, one way or another, use the envelope in this issue today.

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Continued from page 22

• **Development**—\$700 million: This money would be used to implement master plans and refuge unit plans in existing areas, primarily in newly authorized areas that presently have no facilities. Primarily money for new construction, this amount would be divided by giving \$500 million to the Park Service and \$200 million to FWS.

• **City and State Recreation**—\$200 million: This money would be added to the Community Development Block Grant Program administered by HUD, with President Ford's recommendation that the funds be used for recreation and open space park projects in urban areas.

• **Staff and Repairs**—\$459 million: This money would be used for maintenance and staffing to upgrade existing park and refuge areas, especially those where visitor use could be increased. It would be divided as follows: \$259 million for maintenance and repairs (including \$194.3 million for NPS and \$64.7 million for FWS) and \$200 million for hiring 1,500 new employees (including 1,000 for NPS and 500 for FWS).

At meetings in September with high-level officials in the Administration, NPCA staff began to pull together the detailed facts of the President's proposal. The \$141 million for land acquisition (the LWCF backlog) would be used only to purchase areas already authorized for inclusion in the National Park System and the National Wildlife Refuge System.

President Ford's program does not include support for any new additions to the national park or wildlife refuge systems in the lower forty-eight states. The program specifically recommends doubling the acreage in the national park and refuge systems by reiterating Administration support for its 1973 proposal to include 32.26 million acres of federal lands in Alaska in the National Park System and an additional 31.59 million acres in Alaska in the National Wildlife Refuge System. These lands, set aside as federal property in the Alaskan Native Claims Settlement Act of 1971, were studied by the Department of the Interior, and the Administration's recommendation was submitted to Congress in December 1973. Congress has until December 1978 to actually designate these lands for management as parks,

refuges, national forests, wild and scenic rivers, or other designations.

The \$141 million would be applied to an acquisition backlog of 559,608 acres. In regular annual appropriations from the LWCF, Congress has already appropriated \$160.3 million for the two agencies for Fiscal Year 1977. Altogether, the lands already authorized for federal acquisition have a projected cost of \$449.7 million.

Initially it seemed as though the \$700 million for development purposes might be spent for new construction in the parks for facilities that are either not needed, poorly planned and designed, or in the wrong location—as was often the case with development funds spent during the late 1950s and early 1960s in the Mission 66 program. (Mission 66 was oriented toward the fiftieth anniversary celebration of the National Park Service in 1966.)

More recently, Assistant Secretary of Interior Nathaniel P. Reed offered assurances that no new construction would be undertaken without compliance with the Park Service's normal master planning process for NPS units. He indicated that the bulk of construction would occur in relatively newly established areas that now lack facilities altogether. Because the NPS master planning process involves public participation, conservationists' fears were somewhat allayed because at least they would have the opportunity during the process to oppose overdevelopment if the Park Service proposed such plans.

For urban park and recreation programs, President Ford's program, through the Community Development Block Grant Program, would allot \$400,000 per state per year for ten years. Drastically in need of funding to compete with escalating land acquisition and park maintenance costs, the cities in each state would share the \$400,000. By law these community grant funds cannot be earmarked by the federal government when they are allocated and appropriated for the states and cities. Thus the cities would have only President Ford's recommendation that the money be spent for park and recreation purposes. The President's program for parks and recreation does not include state parks.

The portion of the Bicentennial Land Heritage Program that NPCA feels most strongly about, and has sought for

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a number of years, calls for substantial additions to the Park Service's staff and greatly increased maintenance funding, which could be accomplished with the \$459 million proposed for these functions. NPCA's park resource survey and subsequent analysis, "Short-changing the National Park System," and the House Government Operations Committee report entitled "The Degradation of Our National Parks" (H. Rpt. 94-1318) have clearly pointed out the urgent need for sufficient maintenance funding and adequate numbers of people to staff NPS units.

This portion of Ford's program seems to indicate that he realizes the problems caused by insufficient budgetary requests for the Park Service (by his administration and the previous one) and has proposed to reverse the trend of deterioration.

However, NPCA learned recently that the 1,000 personnel proposed for the Park Service in the President's plan include the new personnel allocation for the Park Service as *already approved* by the Interior Appropriations Act for Fiscal Year 1977. Thus the President has proposed to add only 452 people to the FY '77 figure. In addition, it seems that many of the slots in this newly increased personnel

ceiling will be filled by converting various types of temporary positions into permanent positions.

When the President's program was announced, fewer than 25 working days remained in the congressional session; and the President's bill was referred to at least eight different committees. Some Administration officials warned that the bill might be vetoed if Congress approved only part of it or changed it. The resulting speculation that Congress would not approve the program before adjourning was later confirmed.

The characterization of the Bicentennial Land Heritage Program as an all-or-nothing, one-time proposal was further confirmed by indications from high Interior Department officials that conservationists should support the President's program because they will never see the program presented again—at least in this form. The officials indicated that as the budget proposal for Fiscal Year 1978 is submitted in January 1977, and other agencies in the Interior Department and other departments in the federal government seek appropriations, trade-offs would be made that would require a reduction in the park and refuge proposal. Although the plan

shows that NPCA efforts to bring the degradation of our parks to the attention of the Administration have been influential, it also shows that the battle is just beginning.

## CUYAHOGA NPS Drafts Bold Plan

NPCA has commended the Park Service for the bulk of its recent draft plan for future management of Cuyahoga National Recreation Area in Ohio. The draft emphasizes open space preservation and enhancing recreational settings rather than facility construction and formal development. However, NPCA noted that the draft management plan has several kinks in regard to land acquisition and access.

NPCA told Cuyahoga superintendent William C. Birdsell that in general the draft seems to reflect a new awareness on the part of the Park Service about the need to conserve the natural resources of national recreation areas (NRA) at the same time that the agency provides for visitor enjoyment of those resources.

NPCA particularly praised the plan's emphasis on the need for cooperative management of the entire Cuyahoga Valley watershed so as to ensure compatible land uses on the lands surrounding the national recreation area.

NPCA said that the Park Service's highest priority at Cuyahoga should be rapid acquisition from private owners of lands designated as part of the NRA when Congress established this parkland at the end of 1974. Compared with other newly authorized NPS units, Congress has been relatively generous in providing appropriations for land acquisition in Cuyahoga Valley.

However, a lack of NPS personnel to carry out acquisition activities apparently has forced the Park Service to contract with the U.S. Army Corps of Engineers to handle the purchases and negotiations of easements at Cuyahoga. NPCA warned that this situation is almost certain to slow the acquisition process. Noting that the Corps has a record of conflicts and controversies with landowners in Ohio and some other parts of the country, NPCA said that ideally NPS should assume the acquisition role. Cooperation from the local communities and citizens is crucial to the survival of the NPS unit in the relatively urbanized Cuyahoga Valley.



## A Special Invitation From WORLD WILDLIFE FUND

to attend the Fourth International World Wildlife Fund Congress, the first to be held in the United States. The Congress will convene in San Francisco at the St. Francis Hotel from November 28 - December 1, 1976.

The theme of the Congress is "THE FRAGILE EARTH: TOWARD STRATEGIES FOR SURVIVAL," and it represents a unique opportunity for concerned individuals, representatives of government, industry, science and conservation to meet. There will be seminars and special activities.

Prominent speakers will include Russell W. Peterson, Chairman of the Council on Environmental Quality; Dr. Sylvia Earle, marine botanist and head of the world's first team of women aquanauts; Dr. Aurelio Peccei, President of The Club of Rome; Barbara Ward (The Baroness of Lodsworth), President of the International Institute for Environment and Development, and many others.

A special registration fee of \$100 is available for NPCA members. Registration includes admission to all plenary sessions, choice of three seminars, two luncheons, opening cocktail reception, and the Film Festival. Special air fares to the Congress have been arranged on Trans World Airlines (TWA) from major U. S. cities to San Francisco, saving up to 25%. Reduced accommodation rates are available at the St. Francis Hotel.

We urge all NPCA members and friends of World Wildlife Fund to attend the Congress. For further information and a registration packet, write to:



WORLD WILDLIFE FUND

Fourth International Congress  
1319 18th Street, N.W.  
Washington, D. C. 20036  
(202) 466-2160

NPCA said the draft management plan's concept for transportation into and within the park would be a "bold and highly desirable proposal" if properly implemented. NPS proposes expansion of the excursion train runs on the B&O Railroad line complemented by establishment of a shuttle-bus system running into each of the ten units of this recreation area. Use of private autos within the core area of the NRA would be phased out.

However, NPCA charged that the credibility of the Park Service's long-range transportation plans for Cuyahoga is marred by a proposal to construct 1,440 new parking spaces within the NRA. To propose such large-scale development of parking facilities at the same time as proposing to study a phase-out of the private auto is contradictory. NPCA urged the Service to rely on the existing, numerous parking facilities within the NRA boundaries at least until the transportation study for Cuyahoga has been completed.

#### CANAVERAL

### Defending a Barrier Beach

NPCA is pleased that a recent draft statement for management of Canaveral National Seashore in Florida recognizes that mounting pressures for visitor use of the seashore endanger one of the last barrier beach complexes in this nation remaining in a natural state. However, NPCA suggested several important ways in which the statement should be improved.

The draft recognizes that both the historical heritage and the natural resources of the area are of great significance, NPCA Florida representative Walter S. Boardman noted in recent comments on the NPS document.

(The national seashore has a heritage dating back hundreds of years. In the 1500s, the Spaniards named this coastal area "Canaveral," meaning "Cane-covered" or "Place of Tall Reeds." Today the seacoast around Cape Canaveral and the Kennedy Space Center is still an important refuge for wildlife, especially shorebirds.)

Visitation problems center on the barrier beaches and dunes that are critical as the seashore area's first line of defense against the onslaught of the ocean. But the dunes and the fragile vegetation that stabilizes them have a low tolerance for human recreation.

Therefore, in regard to management

objectives discussed in the NPS draft statement, NPCA called for a stronger position on human impacts. The Park Service position statement is to "enhance" natural ecological and geological processes and to "mitigate" human impact on those processes. Boardman remarked that "'mitigate' . . . implies too much compromise. . . . Many operators of off-road vehicles will take this as a license to ride where they please. They will fight politically and in court for the freedom to do so, leaving the park management to 'mitigate' the damage." NPCA said the statement should make it clear that human use will be limited to activities that are consistent with full protection of resources.

The national seashore was established by Congress in 1975, and off-road vehicles are prohibited in areas under NPS control; but the Park Service has not acquired much of the land yet, and use of the vehicles within designated boundaries threatens to seriously impair the seashore resources.

The Park Service and the Volusia County government have taken steps to try to prevent further abuse of the seashore by vehicle operators and others. A small staff at the new park has had to cope with an increasing number of visitors and an overflow of autos.

To help prevent overuse of the seashore's resources, NPCA suggested in its comments that the statement be geared to stimulating recreation under private enterprise outside the seashore boundaries as opposed to facilities within the boundaries. Private enterprises should be assured that they will not have competition from within the park. NPCA lauds the current efforts to develop a comprehensive land use plan cooperatively.

#### GLACIER

### Wild Flathead

The North Fork of the Flathead River flows southeast from the Montana-Canada border, forming the western boundary of Glacier National Park. The Middle Fork of the river originates on the west slope of the Continental Divide, and the South Fork begins in the heart of the huge Bob Marshall Wilderness. Thus, the Flathead passes through much rugged and isolated terrain and has excep-

From the shores of Gitche-gumee . . .



## MINNEHAHA WILD RICE

Longfellow's legend of Hiawatha and Minnehaha is a poetic classic of the Sioux and Chippewa. Long before Longfellow, these Indians had found wild rice, *mahnomonee*, and made it the basic vegetable in their diet.

Minnehaha's people considered wild rice a perfect food: highly nutritious and richly delicious. They were right: 100% natural wild rice has five times the iron of white rice, twice the potassium and protein, and ten times the vitamins B-1 and B-2.

Once, wild rice grew from the Gulf of Mexico to Hudson's Bay, from the Atlantic to the Rockies. Today, it grows only along the Minnesota-Canada border.

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tionally pure waters that are part of a great fishery. The river's beautiful valley is famous for supporting an abundance of wildlife, and it harbors endangered and rare species.

However, in recent invited testimony, NPCA warned Congress that if the pristine qualities of the Flathead are to be protected from serious development threats and if Glacier is to remain one of our greatest wilderness parks, it is crucial that the river be preserved swiftly under the National Wild and Scenic Rivers Act.

Testifying before a House of Representatives Interior subcommittee, NPCA strongly backed HR 10747, a bill to designate 219 miles of river as part of the National Wild and Scenic Rivers System. The bill, introduced by Rep. Max Baucus of Montana, would classify different parts of the river as "recreational," "scenic," or "wild" under the Act. All three categories would require maintaining the river in a free-flowing condition and protecting it for the benefit of present and future generations.

NPCA support for the bill is based on two separate but complementary factors. First of all, observation in the field and extensive investigation by NPCA have confirmed that the river itself is highly qualified for wild and scenic designation. Second, the river and Glacier National Park must be protected from a proposed strip mine just across the Canadian border and from planned oil and gas leasing activities in Montana's Flathead National Forest. NPCA has been working for more than a year to eliminate these two threats.

A Canadian mining company, Rio Algom Ltd., plans to establish a massive coal strip mine on Cabin Creek, a tributary of the North Fork, at a site just eight miles from Glacier park.

NPCA emphasized that the mine would seriously degrade water quality and have adverse effects on the native trout fishery of the North Fork and on wildlife that depend on the river. In addition, pollution of the North Fork would affect the clean waters of Flathead Lake, which is the largest freshwater lake west of the Mississippi.

The oil and gas leasing threat came into the public eye in late 1975 after the U.S. Forest Service (FS) released a draft environmental impact statement (EIS) recommending to the Bureau of

Land Management (BLM) that more than 165,000 acres of national forest land in the North Fork and South Fork areas of the Flathead watershed be leased. After protests by NPCA and others, the FS reduced this recommended acreage to 91,000 acres in the final EIS. NPCA testified that leasing in the remaining acres constitutes a potential threat to the continued viability of the forest and the river as portions of critical habitat for a number of endangered and threatened species. The grizzly bear, classified as threatened, and the endangered Northern Rocky Mountain timber wolf find one of their last refuges in the Flathead Valley. Bald eagles feed in the river.

At press time the BLM had not approved the lease applications in question. Recent legislation prohibited that agency from using any Fiscal Year 1977 appropriations to process or issue the leases in the Flathead; the bill, however, did not prevent BLM from using 1976 funds before October 1, 1976 (the end of the fiscal year).

NPCA stressed that timely classification of all three forks of the Flathead River under the Wild and Scenic Rivers Act by Congress would greatly aid

preservation efforts because it would mean that during any subsequent planning for oil and gas leasing or other development, the FS would have to carefully consider the Act's legally binding mandate to protect the river.

## UNITED NATIONS HABITAT

In the next twenty-five years the world's population will increase from 4 billion to 6½ billion people. More than half of these people will crowd themselves into urban areas—creating even more squalid slums than exist now. The situation in rural areas may be no better; as just one example, in many Indian villages residents drink from the same pond that they use for washing their clothes.

These problems and others were discussed by representatives from 131 countries and 6 national liberation organizations who assembled for HABITAT, the United Nations Conference on Human Settlements held in Vancouver, Canada, from May 31 through June 11. Urban overcrowding and poverty, rural stagnation, housing, the environment, town and city planning and design, and ways people can participate

### Tiger

In 1960 or 1961 (back when the National Parks Association headquarters was located at 1300 New Hampshire Avenue in Washington), an apartment building next door to our offices was torn down. Shortly thereafter, then-Business Manager Katherine Bryan discovered a tiny grey-striped kitten with large green eyes abandoned amid some rubbish in the vacant lot. She carried him back to the office, and from then on "Tiger" was the office cat. He gained a host of friends and established quite a reputation in the capital city.

Many of those who have visited our offices over the years will remember a huge cat lounging in our front lobby who greeted each person who entered with a dubious meow resembling a "quack." Although many will be saddened to learn of Tiger's death on September 6, 1976, they can take much comfort in the knowledge that this fine feline had lived a comfortable and dignified life of sixteen to seventeen years, surrounded by admirers.

No matter whether he was curled up



napping in an "In box" or expressing his indifference to official activities by ensconcing himself regally on a pile of paperwork and refusing to budge, Tiger made his presence felt. Rumors that his approval was a prerequisite to being hired at NPCA were, of course, false, but Tiger did exercise a lot of influence and left his mark in many ways. (Whenever he could find an open ink pad, Tiger even left his personal stamp of approval on NPCA correspondence.)

He is buried in a small garden behind NPCA offices long called "Tiger Park" by employees because of his fondness for it. We miss his morning welcome.

more effectively in decisions and programs affecting their own lives were the major topics of discussion. Running concurrently and in coordination with the official conference was the HABITAT Forum, an informal conference composed of nongovernmental organizations and the interested public. NPCA was represented at the Forum by Herman Field, a professor at Tufts University.

By consensus, the official conference adopted three documents: a declaration of principles, proposed programs for international cooperation, and proposed programs for national action. Many officials and observers regretted the injection into the conference of political questions such as the Arab-Israeli debate concerning displacement and resettlement of refugees. However, the conference did create an increased awareness among the participating countries of global human settlement problems. Each country prepared a report on its human settlements.

The nongovernmental conference gave the opportunity for government officials and private citizens to exchange experience and knowledge about the critical living situation of the world's people. The informal conference emphasized and brought to the attention of the official conference such issues as the world water crisis and the risks of nuclear proliferation.

The international consensus approving the principles of HABITAT will no doubt have some effect on national programs around the world. Much of HABITAT's effectiveness will depend on the strengths and weaknesses of the new HABITAT organization that was scheduled to be created at the United Nations Assembly in late October.

#### PUBLIC WORKS

### Corps Leaps Before Looking

NPCA has expressed opposition to Corps of Engineers projects on the Flathead River in Montana, the lower Snake River in Washington and Idaho, and the Gulf Intracoastal Waterway in Louisiana.

In testimony given on invitation before a House Public Works subcommittee, NPCA recommended against immediate authorization of the three projects pending further studies.

The Flathead River project, as proposed, would entail building levees and a pumping station to combat flooding

on a floodplain near Kalispell, Montana. Noting that the floodplain is relatively undeveloped, NPCA observed that this kind of project would result in increased settlement, necessitating construction of water pollution treatment facilities. The Corps did not include such development in its cost analysis. In view of this fact, NPCA maintains that the Corps should reconsider the alternative of relocating the few people who live on the floodplain. Such an action could be more economical and a more rational manner of managing the floodplain.

On the lower Snake River, as a result of the heavy impacts on aquatic life of construction of a series of dams, the Corps of Engineers has proposed a compensation project. It would include building hatcheries and other facilities to allow commercial and game fish to continue to inhabit the river. In spite of the fact that the Corps admits it has not determined the location or design of the facilities, and despite the fact that it has inadequate data on the wildlife of the area, it has asked Congress to authorize \$45.8 million to acquire land for this project.

Although NPCA understands the seriousness of the situation, we feel that mitigating measures hastily conceived and implemented without adequate information could result in further adverse impacts and greater expense. The Corps should gather more information before moving ahead with this project and should plan projects such as this as part of the original project, rather than waiting until mitigating measures are needed.

Vermilion Lock and Dam in Vermilion Parish, Louisiana, are components of the Gulf Intracoastal Waterway. The Corps of Engineers has proposed constructing a new lock and dam that would be much larger than the originals. In addition, a deeper, wider channel would be dredged to accommodate the barge traffic using the canal. It seems that this is the first of many such projects that will result in an enlarged waterway. Such enlargement should occur only after a careful study of the entire waterway's needs and capacity and environmental impacts. To go ahead with the Vermilion project before knowing whether similar enlargement will take place along the rest of the waterway is presumptuous and economically unwise.

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## conservation docket

**New River:** PL 94-407—A new law makes the New River in North Carolina a wild and scenic river and protects its from damming. The President signed the bill after it passed the House 311 to 74 and the Senate 69 to 16.

**Mining in Parks:** PL 94-429—The House amended S 2371 to permit mining to continue at current levels in national parks but to disallow any new claims. The Senate approved the House amendments; the President signed the bill on September 28, 1976.

**Congaree:** HR 11891—The House and Senate passed a bill to designate 15,000 acres of the Congaree Swamp in South Carolina as a national monument. The bill authorizes appropriation of up to \$35.5 million for land acquisition and would instruct the Secretary of Interior to study park

needs, formulate a management plan, and report back to Congress within three years. The bill was sent to the President for signature and at press time he was expected to sign it.

**Chattahoochee:** HR 3078—The House Interior Committee has approved a bill to designate 6,300 acres along a 48-mile stretch of the Chattahoochee River in Georgia as a national recreation area. The committee authorized \$69 million for acquisition of land; 747 acres will be donated by the state of Georgia. The Chattahoochee flows from the north at Lake Lanier through the heart of Atlanta and is clean enough to swim in and provides the city's drinking water.

**Toxic Substances:** S 3149—This bill is designed to prevent the marketing of chemicals damaging to health or the environment. Polychlorinated biphenyls (PCBs) would be gradually phased out over a two-year period. The Environmental Protection Agency (EPA) would be given the power to

require a manufacturer to test chemical substances if inadequate information on the dangers of a chemical exists or if a risk can be proven. House and Senate conferees agreed on a compromise on the procedure that EPA would have to follow in order to stop manufacture of dangerous chemicals. EPA would give advance notice of an order to stop manufacture. The manufacturer would have 30 days to object and to prove that the stop order should not be issued. An injunction would then be needed to stop the manufacturing. The Ford Administration opposes the legislation, and the possibility of a pocket veto existed at press time.

**Pendleton Park:** HR 15662—Camp Pendleton Marine Corps Base in the state of California would become a 125,000-acre Santa Margarita National Recreation Area under this bill. Rep. Alphonzo Bell (R-Calif.) introduced the bill too late for action in this past Congress, but it will get prompt attention in 1977.

## classifieds

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ARLINE STRONG

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• Public and private school programs (one or two weeks). Winter Environmental Studies, "Nature in Literature," "Outdoor Photography," "Field Biology."

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*Continued from page 2*

**U**NNOTICED at the time, and even now not adequately appreciated, was the clause in the new legislation which authorized the government to acquire interests less than fee in redwood forest lands on all watersheds draining through the national park, including the narrow coastal strip.

This authority still exists, and extends to the entire western slope of the coastal range of mountains in the region of the park, and thus to areas of the forest much larger than those within the national park proper. To Dr. Crafts, with whom I worked closely in the matter, must go the primary credit for the inclusion of this clause in the legislation.

**N**OW, THE TRAGEDY of the coast redwoods, and the scandal of it, is that except for the state parks nothing very substantial has ever come out of all these heroic efforts to protect one of the greatest natural and cultural resources of America. The state parks, which were to have been included in the new national park, have never been transferred. The acquisition of private holdings which was to have been accomplished in fee simple within the park boundaries has not been completed, and the authorized funds have been exhausted.

The establishment of buffer zones around the boundaries of the park, which was to have been accomplished by the acquisition of interests in land or by agreement with the lumber companies, has not been completed; and the destructive impact of unsound logging has proceeded up to the park boundaries.

The power to acquire interests in land less than fee on the critical watersheds has never been exercised. Destructive cutting has continued throughout these watersheds, and all along the main stream and tributaries of Redwood Creek; and erosion and siltation have moved downward into the park itself. They are endangering areas like the Tall Tree Grove, which contains the highest trees in the world.

**T**HE STATE of California has the power—but has not exercised it—to control or stop this clearcutting by regulation under its police power and to require the companies to use ecological methods, which would preclude the damage which is taking place in the park.

The government of the United States could handle the problem in a number of ways: by acquiring interests less than fee in the buffer zones and on the watersheds, such as to empower it to require the companies to use selection methods; by regulating cutting practices on the basis of protection for federal property or the interstate commerce clause; by litigating the issue of damage to federal property in the park; or by seeking an injunction to require the use of ecological methods and thus protect the park, the buffer zones, and watersheds. Why have neither the state nor the federal government acted?

**A** LONG ARRAY of public officials over the years have mulled and stalled: attorneys general, interior solicitors, secretaries of the Interior, directors of the Park Service. The extent of the federal power to exercise a declaration-in-taking for managerial interests has been debated. The authority of the Department to regulate without payment of compensation has been discussed. The question whether, if limited rights were taken, the courts might require reimbursement in fee has been considered at length.

Private organizations have brought suit to compel the Department to exercise its full authority to protect the park, but in view of the refusal of the Office of Management and Budget to approve such action, have been referred to Congress. Others have brought suit against the companies, and the litigation is pending, outcome uncertain.

**T**HE MAIN OBSTRUCTION to federal action has been the OMB. Spurred by Assistant Secretary Nathaniel P. Reed, the Department of the Interior has developed proposals for the regulation of cutting within the critical

areas, but the OMB has refused to endorse them.

Neither federal regulation nor federal acquisition of managerial interests would involve any great risk of significant federal expenditures for the protection of the federal property in the park. Either method—regulation or the acquisition of interests—as well as the injunction process could be directed toward requiring the logging companies to use ecological methods of cutting; that is, to use methods which would protect their own property for the future as well as the present. Indeed, were the companies to be required to manage their own businesses properly, they might wind up as the recipients of considerable governmental largesse, perhaps in the form of taxable capital gains. They would hardly oppose controls for that reason.

**I**N ANY EVENT, the OMB is displaying once again its customary penny-wise, pound-foolish approach to the management of the properties of the American people. The NPCA has been instrumental in revealing the damage occasioned to public property in the parks by the policies of the OMB in restricting maintenance, repairs, police protection, interpretation, and a host of essential services throughout the National Park System.

This is another example of the same thing; the responsibility for the protection of federal property in Redwood National Park would require the government to exercise the controls over cutting on the periphery of the park, and on the watersheds in the redwood forests, which are necessary for that purpose. Even if compensation had to be paid by the government for a putative difference between profits from clearcutting and profits from selective cutting, that difference ought to be paid to protect the public property in the park. We contend, on the contrary, that the proper management of the redwood forests could be more profitable than, or at least as profitable as, the destructive management which takes the form of clearcutting.

We shall return to this vital subject in our next issue.

—Anthony Wayne Smith

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W. J. L. G. K. S.