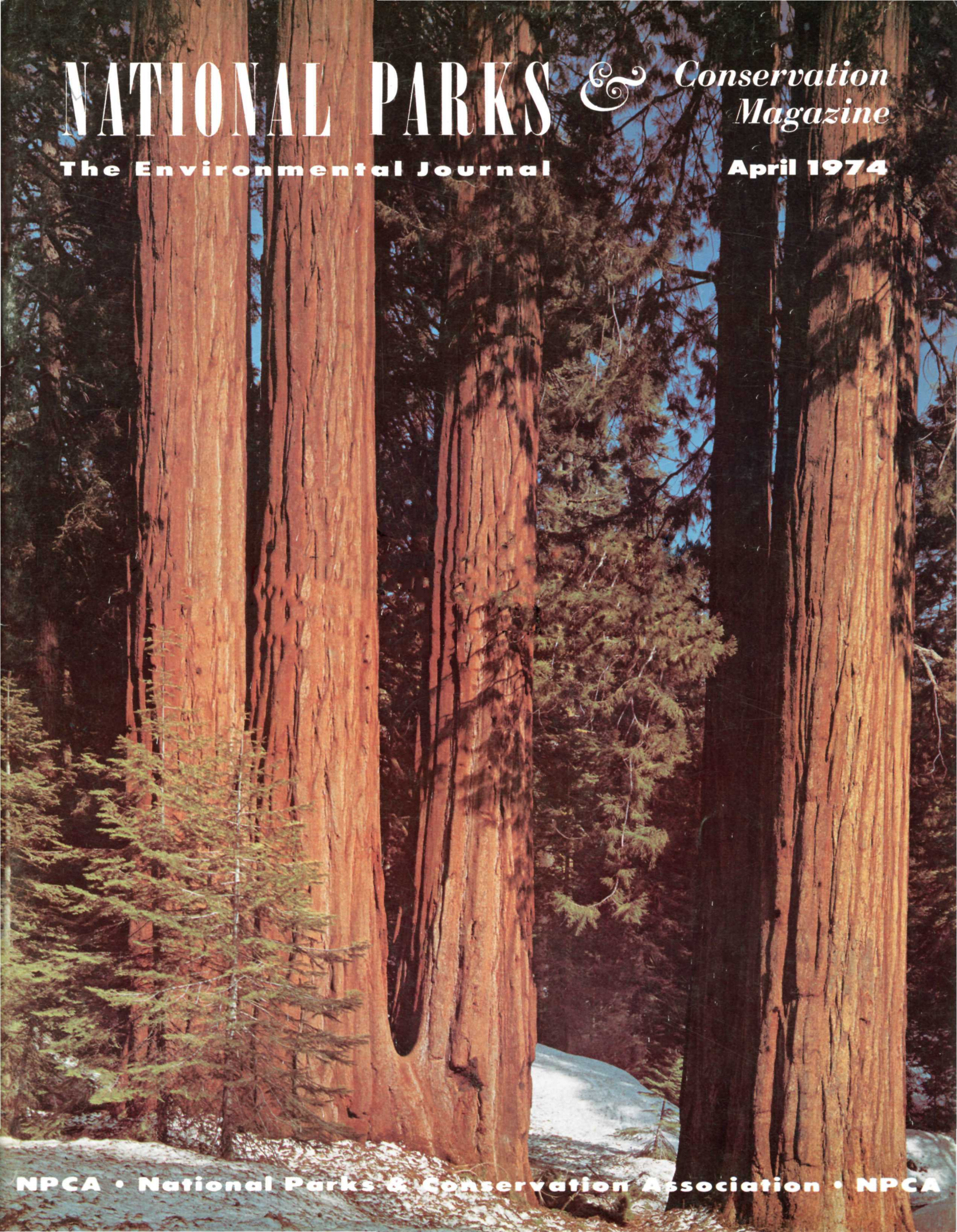
NATIONAL PARKS & *Conservation Magazine*

The Environmental Journal

April 1974



NPCA • National Parks & Conservation Association • NPCA

The Love of Nature

AGAIN THE CYCLE of the years, and Spring. Bloodroot and adders-tongue return to woods and pasture, the lilting song of meadowlark, the clangor of redwing. At night the chorus of the frogs floods through the marshes. A horned owl rides the moonlight.

Suppose a civilization founded on the love of nature (and man within it); on responsibility, no longer on conquest.

These green meadows would as now be lushly verdured, cattle within them (not in feed lots), not too many. This clear stream, rare now, would be the usual thing; waters everywhere clean as the virgin planet knew them. You shall cup your hands and drink from them anywhere, refreshed.

The winds that stir this valley, far from the urban smoke; let them blow across the earth, across the seas, crystal again.

CLIMB UPWARD from the river, through wooded slopes. Here tall old trees, covered with moss and years, high as cathedral columns, lift their green. The young forest waits beneath to fill their places. Mushrooms in rainbow colors dot the earth and live with fern. And yet these forests yield their harvest to the forester's hand.

In a nearby town an integrated mill makes lumber, structural timber, poles, posts, paper, and liquid fuels. Across the land a thousand others like it serve the moderate needs of men for wood and wood products. But still the forests, managed with love and wisdom, stand unharmed.

Or walk through carpets of spring-beauty, cowslip, out to fields. The plow has turned the redolent earth again. Grackles follow the tractor, later the swallows. Imagine a world where soils are built, not lost, where a shrewd care for wasp and beetle holds the destructive weevil in restraint, and poisons are no longer spread upon the land. Here noduled clover, barn manure, tinctured not burned with minerals, nourish the deep fertility of earth.

The fields and forests teem with animal life. Muskrat and rabbit draw the following fox. The wolf and panther hold the white-tailed deer in check (the land is spacious now). Men watch as poets, artists, not with guns, sparing the quarry and the predator alike; each human life is far too short for learning first-hand all the woodland ways, the customs of the fields.

NEARBY ARE GROUPED the houses and the barns. We store our grain in granaries as always, fill the silos; but machines lighten the labor, joyous work in open air and changing weather, leisurely, and done within leisure, industrialization wedded to agriculture, fruitfully. The people love the land, the abundance of their earth, the grain and milk and meat their labor yields.

Above the farms and towns the mountains rise. Here you may walk in wilderness complete. Remoteness meets you in the distant hills. Silence shall find you, deepened by sound or waterfall, or stirring trees, or eagle's cry. Darkness enfolds the night, washed by moonlight, pierced by starlight. Astronomers watch the skies again all night, untroubled by glare of cities.

Tried and found wanting were the factory farms. Cash wages palled as travel outlays pinched. And yet the patriarchal mode was gone: protective custody and unpaid work for women and children. A dozen men and women form a group to lead a common life and work the land; as many children of all ages learn of work, of books, of industries, of trees. Here is community.

WITHIN THE TOWN the countryside is served, yet townsmen lean upon the land's abundance, meet in schools and colleges, pursue the sciences and arts. Libraries yield their wealth of knowledge; music and drama play in field and hall. For there is leisure here for all; time for learning, taking part, enjoying; time to reside in beauty, search for wisdom. The economic needs of men are met. Five thousand persons are enough to make a town. And here again is community.

Also within the towns the factories hum. Here the industrial purpose is at last fulfilled: to ground a life of leisure, sufficiency, security, freedom. Behind us now the frenzy, avarice, anxiety of acquisition. We have asserted strong

Continued on page 35

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NATIONAL PARKS & *Conservation Magazine*

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COVERS Sequoias, Monarchs of the Mountains, by Ed Cooper
The giant sequoias are survivors of an ancient lineage of huge trees that grew over much of the earth millions of years ago. As European settlers moved west, the Big Trees were exploited by logging and by collecting of specimens. However, with the establishment of Sequoia National Park and later Kings Canyon, they were protected from such exploitation. But then the trees faced the new danger of overprotection from natural ground fires. Consequently, the slopes where new sequoias might have taken root became impenetrable thickets of other species of trees and brush that hindered the growth of sequoia seedlings and became a fire hazard to sequoias of all ages. To correct this situation, the National Park Service now conducts controlled burning in Sequoia–Kings Canyon national parks, to the benefit of the magnificent Big Trees.

National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and to protecting and restoring the whole environment. Life memberships are $500. Annual membership dues, including subscription to National Parks & Conservation Magazine, are $100 sustaining, $50 supporting, $15 contributing, and $10 associate. Student memberships are $8. Single copies are $1.50. Contributions and bequests are needed to carry on our work. Dues in excess of $10 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to Association headquarters in Washington. When changing address, allow six weeks' advance notice and send address label from latest issue along with new address. Advertising rates are available on request from headquarters in Washington.

weathered american chestnut trunk
jack jeffers photograph

MOUNTAIN MONARCHS

article and photographs by J. Y. BRYAN

Sequoia and Kings Canyon national parks protect the world's most spectacular trees

EACH YEAR the giant sequoia's reputation as the largest of all living things brings visitors by the hundred thousands to Sequoia and Kings Canyon national parks. Then the diversity of other attractions in that area brings thousands back. Last year just under two million people streamed through their gates.

Sequoia and Kings Canyon have a boundary between them less because of difference than because of having been established at different times under different circumstances—Sequoia in 1890 and Kings Canyon in 1940. Administered as a unit, they also are visited as such; and the range of attractions they jointly offer enhances interest in both. Together they encompass some 845,000 acres along the western face of the High Sierra, an area substantially larger than Rhode Island.

These two parks not only preserve our greatest trees, but they include some of our highest mountains. They extend to the knobby spine of the Sierra where one of the vertebrae is Mt. Whitney, 14,495 feet in altitude, and at least six others rise above 14,000 feet. Thus these parks offer some of the most spectacular scenery within the contiguous United States. Approximately 85 percent of the two parks qualifies as wilderness penetrable only by trail.

The giant sequoia in its way is equally as spectacular as the rugged mountains. Although the related coast redwood *(Sequoia sempervirens)* attains a greater height, the giant sequoia *(Sequoia gigantea)* of the High Sierra is thicker trunked and hence more massive. However, the giant sequoia possesses a fragility that its size seems to belie. Certain conditions must be met for it to survive. Extreme cold kills it. So does extreme drought. It requires balanced annual alternation between moist and dry periods. It grows best only between altitudes of 5,400 and 6,600 feet.

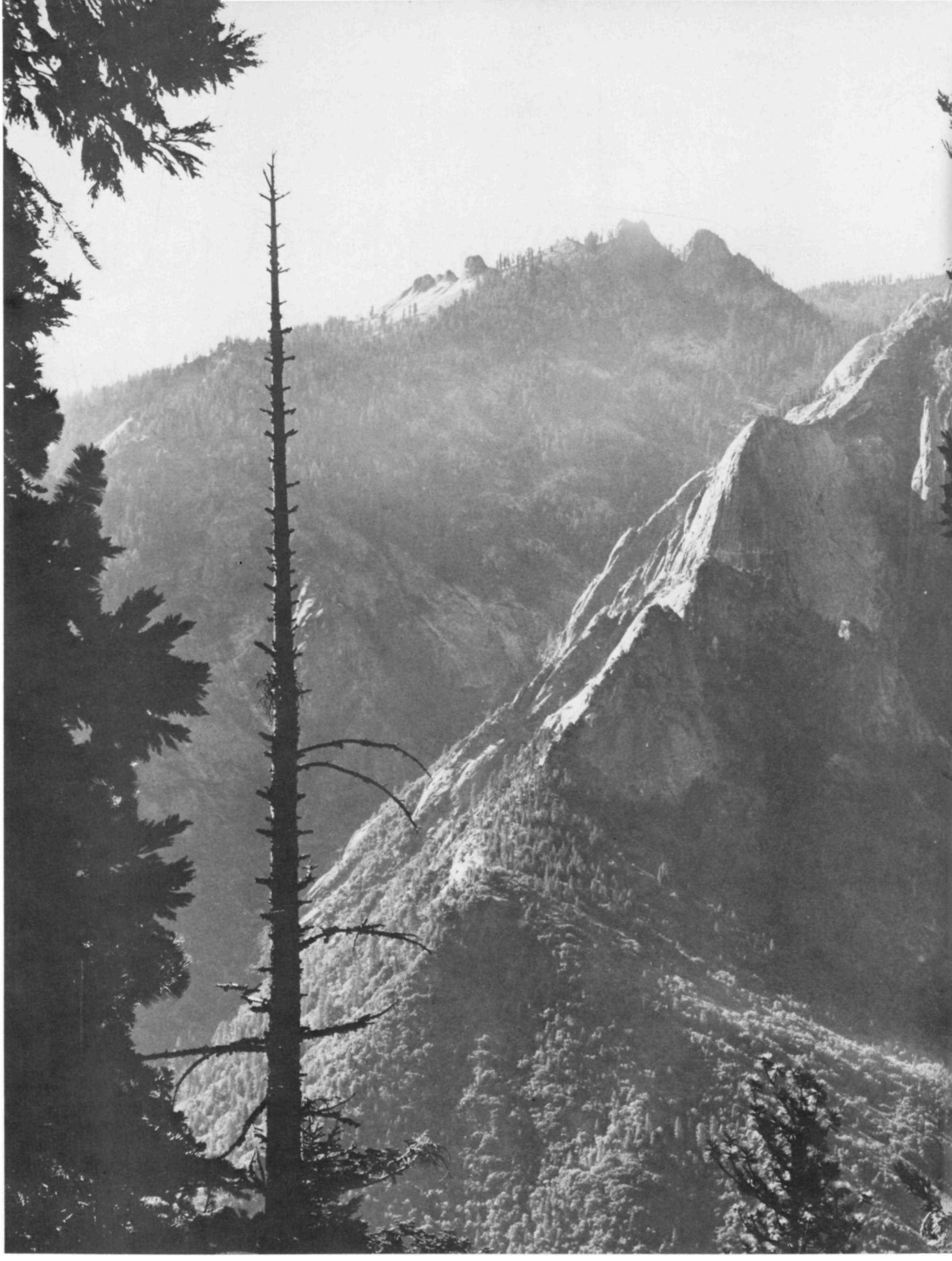
Under ideal conditions the giant sequoia may grow well over a hundred feet in height while still a mere infant little more than a century old. Even after becoming adult and ceasing to increase in height, its massive trunk continues enlarging each year, thus lifting vast amounts of water and nutrients toward the sky for conversion into new wood and foliage.

After the giant sequoia attains full height of 250 to 275 feet, its weight and shallow root system can become a hazard. Any tilt developed by softened earth near a meadow or spring or stream that has nourished its growth may bring it crashing down. Great weights of snow or force of wind may also tip it over.

The sequoia forest must have occasional fires to burn away undergrowth and accumulated forest litter and duff if the Big Trees are to regenerate. Resembling flakes of oatmeal, their seeds are amazingly small and light, averaging 91,000 to the pound. They germinate and become established best in mineral soil cleared of understory competition and enriched by the recycling of nutrients of burned undergrowth. Recent test fires ignited under control in selected areas in Sequoia–Kings Canyon national parks resulted in the appearance of 13,000 to 40,000 seedlings per acre, whereas no seedlings at all appeared in adjacent, unburned areas.

Although young sequoias are susceptible to destruction by fire until they have grown tall and have shed their lower branches and lifted their crowns far above the undergrowth, the adult sequoia has high resistance to fire. The bark on mature trees is so thick, so porous, so heat resistant, and their branches and crowns are so far above the forest floor that ground fires can lick around them without igniting them unless more flammable trees such as white fir fall against them and burn there with prolonged intensity, which could sear the bark in that spot. Lightning that strikes them can also scorch them severely. However, adults are susceptible to severe fire damage if other trees and brush grow tall around them; then if a fire starts, the other trees serve as

Sequoia cluster around forest spring.



a fire-ladder to ignite the giants' crowns and kill them. Fire, then, serves a natural and important role in the sequoia ecosystem—not only to expose the mineral soil for the establishment of sequoia seedlings, but also to keep the understory cleared of vegetation that could fuel a catastrophic crown fire. In fact, fires have occurred frequently over the centuries from natural causes. Virtually all mature sequoias show char marks where conflagrations have gnawed at them without destroying them.

The giant sequoia's resistance to decay is also astonishing, a result of its unusually high content of tannic acid. Each grove has in or near it fallen monarchs that change little decade to decade until freezes, thaws, rains, and the pocketknives of "admirers" open crevices for insects and mold to make some impression.

The longevity of mature sequoias is proverbial. Tree-ring counts indicate that the hardiest trees may live well over 3,000 years. There are living trees in both parks that were already more than two hundred feet tall when the Persians swarmed out of Asia to sack Athens in 480 B.C. They were adding to their stately girth when the Athenians rebuilt their city in marble and established a society possessing a brilliance whose light still glimmers among us. They were attaining more portly girth when Jesus emerged from Nazareth, when Rome completed its rise and began its long decline, when the Arabs carried the banners of Islam to the Atlantic and the far Pacific, when the Vikings first probed our shores, when the Spanish looted the treasures of the Americas, when the British established colonies here. They stood through every sort of calamity until enterprising

Man has been both destroyer and protector of the Big Trees in Sequoia and Kings Canyon

The sequoia forest must have occasional fires to burn away undergrowth and forest litter because sequoia seeds are established best in mineral soil cleared of burned undergrowth. Man in his role of protector of the Big Trees conducts controlled burning in the sequoia groves of Sequoia and Kings Canyon national parks. On the opposite page smoke from a forest fire fills the surrounding area. However, man has not always been so enlightened in his use and management of the sequoia forest. Mark Twain Stump, below left, marks the place where one of the Big Trees was cut down in 1891 to supply specimen sections to museums in the East—a frivolous end to one of nature's most majestic creations. Below right is Tharp's Log, a hollow sequoia converted into a cabin a century ago by Hale D. Tharp, the area's first white inhabitant. Tharp, an enterprising soul, also used the log as a refreshment stand for early forest visitors.

countrymen of our own brought the clack of axes and scream of sawmills among them. In the late 1800s many sequoias were felled for ignominious use as shakes, fence posts, and grape stakes. Their wood was not good for much else. Some of the most magnificent trees were cut for the absurd purpose of sending cross sections to the East for exhibition.

Fortunately we did have a few countrymen like John Muir and George Steward who were able to persuade others that destruction of these giant trees was a national disaster. The first President to sign legislation designed to preserve giant sequoias was Abraham Lincoln. In 1864 he took time from the cares of our deadliest war to sign a law setting aside the Mariposa Grove and Yosemite Valley for inalienable preservation. But two more generations were to pass before large-scale destruction elsewhere was stopped. Now 92 percent of the sequoia groves are publicly owned and protected, and the remaining 8 percent seem in no danger.

Nearly all visitors pay homage to the biggest tree, General Sherman in Giant Forest, the largest and most famed grove of sequoias on earth. That tree is indeed awesome. When last measured scientifically, it proved to be 30.7 feet in diameter at the base and 101.6 feet in circumference. Its total mass is calculated at 50,100 cubic feet, for it towers 272.4 feet above ground and is 17 feet in diameter 120 feet from the base. One branch 130 feet from the ground measures 6.8 feet in diameter, rises 150 feet, and is therefore in itself probably more massive than any native tree east of the Mississippi. The General Sherman tree deserves all the admiration it gets.

The nearest rival of the General Sherman tree for magnitude is the General Grant tree in Grant Grove somewhat over thirty miles by road to the northwest. General Grant has a base diameter 2.6 feet larger but tapers more abruptly. Because it also has a more symmetrical crown, approximately the form of a monstrous spear and because the entire tree can more easily be seen from base to crown, it impresses the visitor as a more handsome specimen—the Beau Brummel of the big woods.

Foot trails winding through the forest surrounding both these giants provide for leisurely walks that can allow closer acquaintance with the forest community. Along the trails are various points of interest, from old log cabins to Telescope Tree—which, though entirely hollowed by fire from base to crown, continues like a living chimney or telescope to grow at a healthy rate.

The chief meadows, too, have around them a filigree of footpaths with revelations to offer about mountain forests, their history, and their intimate daily life. Such meadows are swampy mountain basins that retain moisture in depth during the long summer drought when less than an inch of rain may fall. They serve as reservoirs providing for the sequoia's enormous thirst. Groves of massive sequoias, therefore, are more likely to occur near such dependable sources of moisture than on bouldered hills where less water is trapped.

At right, General Grant Tree, Kings Canyon National Park.

Fine examples of these groves of sequoias are apparent along footpaths around Crescent Meadow, Huckleberry Meadow, and Log Meadow. To circle through the forests around them is to secure a memorable appreciation of the magnitude of vital force represented in clustered sequoias. Among oddities most visited along the way are an old settler's cabin and Tharp's Log, a hollow sequoia converted into a cabin a century ago. The area's first white inhabitant, Hale D. Tharp, lived in it while summering his cattle in the meadows. Without benefit of Madison Avenue training, he also converted it into a refreshment stand serving early forest visitors.

Cedar Grove in Kings Canyon—one of the most beautiful havens in either park—and Giant Forest in Sequoia are rich in wildlife because they are surrounded to great depth by protected park areas open only to foot or saddle traffic. Deer and bear are the most conspicuous of the wild inhabitants, but only in early morning, late evening, and after dark. They are chiefly visible, too, at points far from the shouts, tobacco smoke, and flash cameras of visitors with no feeling for animal reaction.

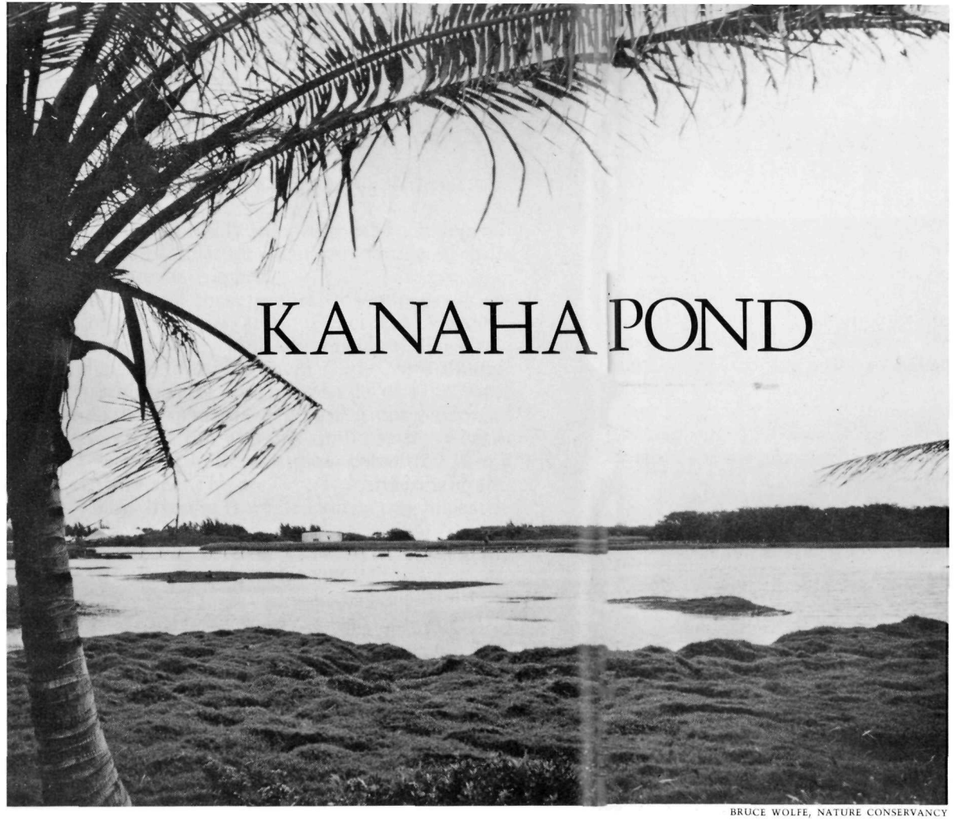
In addition to bear and deer, several creatures of a more shy and secretive nature also live in the parks. Among the comparatively rare species given some chance of survival if they do not venture outside the parks into adjoining regions open to trappers and hunters are bighorn mountain sheep; cougar; the swift, elusive fisher; and the strong, cunning wolverine. Birds in great variety also are plentiful in these parks. Those most commonly observed are Stellar's jays and ravens, but many others enliven scenes far from roads and campgrounds. Apart from birds migrating through, nesters range in size from the tiny hermit warbler and various hummingbirds to the majestic golden eagle. To enthusiastic birders the giant trees are upstaged by the songsters among them.

But most visitors are awed by the incredible, mighty Big Trees. Each living sequoia becomes inspiration to anyone who will let it. Each is a monument to the tenacity of life. Each allows us in its presence to acquire a new recognition of strength in the vital process. As we are but differing expressions of that process, our visits to the mountain homes of the sequoia permit us to share a little in their stature, their endurance, their strength, their magnificence. ■

J. Y. Bryan teaches photography at the University of California in Riverside. His photography has taken him all over the world, and he is currently traveling abroad in connection with a forthcoming book. A recent *Sunset* book on Mexico contains many examples of his fine work.

"Each living sequoia becomes an inspiration to anyone who will let it. Each is a monument to the tenacity of life."

KANAHA POND



BRUCE WOLFE, NATURE CONSERVANCY

vital habitat for Hawaii's endangered coot and stilt

The key habitat for the endangered Hawaiian coot and Hawaiian stilt is itself endangered by a proposed sewage treatment plant

by JACK STEPHENS

KANAHA POND WATERFOWL SANCTUARY in Hawaii is located between the principal harbor and the main airport on the island of Maui, in the shadow of the West Maui Mountains and Mount Haleakala. The pond is the home of the world's largest population of the endangered Hawaiian stilt and is a key habitat area for the endangered Hawaiian coot. Each fall and winter migrants from Asia and North America visit the pond. These seasonal visitors include shorebirds such as the golden plover, ruddy turnstone, sanderling, and wandering tattler; dabbling ducks such as the pintail, shoveler, and baldpate; and diving ducks.

Most of the large ponds in the Hawaiian Islands have been dredged or filled for development purposes in recent years. Because of this destruction of waterfowl habitat and because the very survival of two endangered species may in large part depend on the existence of Kanaha, the pond is vital as a natural area. In fact, late in 1971 the Department of Interior registered the pond as a natural landmark, one of only two registered in Hawaii.

Kanaha Pond is also historically significant. In the early 1700s Kapiiohookalani, King of Maui, ordered the construction of twin fish ponds, one of them present-day Kanaha Pond. Stones for the walls of the ponds were passed from hand to hand for half a mile by a long line of workmen, many imported from the island of Molokai, according to legend. The ponds were used for storing and fattening fish, because Hawaiian custom prohibited catching or eating fish from the sea during the yearly three-to-five-month breeding season. However, it was permissible to eat fish taken from freshwater ponds.

In the early 1800s King Kamehameha, the first king to bring all the islands of Hawaii under the control of one ruler, named the ponds Mauoni and Kanaha after the son and daughter of Kapiiohookalani. Until the early 1900s the ponds produced great quantities of mullet. The water was clean, and natural springs filled the ponds and continuously overflowed through an open ditch in Kahului Harbor. However, when the harbor was dredged about 1910, Mauoni Pond was filled and is now occupied by oil storage tanks and industrial yards. When Mauoni was filled, part of the overflow drainage ditch was also filled, which has caused Kanaha Pond to have an offensive odor during the summer months when the more shallow areas dry up.

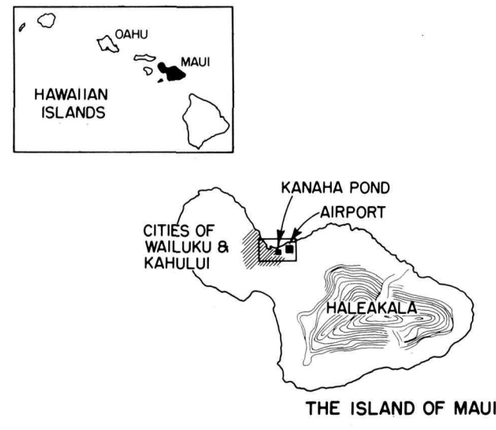
With the decrease in use of the ponds for the raising of fish, their importance as a bird refuge emerged, and Kanaha Pond has functioned primarily as a waterfowl and shorebird sanctuary since the turn of the century. Before World War II Kanaha Pond was owned by the Hawaiian Commercial and Sugar Company. During World War II, as an act of patriotism, HC&S donated land, which included Kanaha Pond, to the U.S. Navy. In 1951 the Hawaiian government formally designated the pond as a bird refuge.

In 1959 the state legislature appropriated $15,000 to improve the area, and the Maui County government appointed a Citizens Advisory Committee for Kanaha Pond Bird Sanctuary and Beach Park. In cooperation with several county and state agencies, the committee prepared a master plan for improvement of the 280-acre area. In 1961 the state legislature appropriated $100,000 to prepare improvement plans and by 1964 the first stages of planning were ready for implementation. The long-range plans called for bird-feeding stations, observation areas, and a picnic area, and the experimental dredging of a portion of the ancient Hawaiian pond in an attempt to eliminate the offensive odor of the summer months.

At this point the Department of Land and Natural Resources was required to request permission from the Department of Transportation to allow improvement of the sanctuary. The pond and surrounding area had been set aside for public recreation and wildlife purposes under a revocable permit issued by Hawaii's Department of Transportation in accordance with the terms of the quitclaim deed that conveyed the property from the U.S. Navy to Hawaii. Under provisions of the deed, if the property were used for any purpose other than airport business, it had to have approval from the navy and the Federal Aviation Administration (FAA). Accordingly the request for improvements was referred to the FAA, which in turn urged draining or filling of the pond on the grounds that the birds of Kanaha might constitute a hazard to aircraft.

This response signaled the beginning of a decade-long struggle for the preservation of Kanaha Pond. In 1965 Eugene Kridler, Administrator of the Hawaiian Islands National Wildlife Refuge for the U.S. Bureau of Sport Fisheries and Wildlife, conducted an extensive survey that concluded that birds from Kanaha Pond do not fly high enough to present a danger to aircraft. In spite of this study the FAA would not soften its stand or release the funds for improvement of the pond until 1972, when a study similar to Kridler's conducted by ornithologist Dr. Andrew J. Berger revealed similar results.

As a result of Berger's study, the FAA and the state government signed an agreement in 1973 that would allow for construction of protective moats and nesting places, dredging to eliminate the summertime



NORMAN K. CARLSON

The Hawaiian stilt [Himantopus himantopus knudseni *(Stejneger)*] is a *moderate-size shorebird (11½ to 19 inches in length, including bill) with a sharply contrasting color pattern—black above, white below, with very long red legs. The stilt makes its living in shallow marshes and ponds, wading in the water with long, graceful strides, picking up insects with its slender, straight beak from the water's surface or from floating weeds.*

odor, and improvements to the observation shelter. The agreement was signed on condition that the improvements would not increase the number of birds in the sanctuary.

Now, after their long battle to save the pond, conservationists are fighting yet another threat to the bird sanctuary. The Maui County government has selected a 19.3-acre area between Kanaha Pond and the ocean as the site for a new sewage treatment plant. The county hopes to obtain a $4.4 million federal grant for initial construction of the plant, which is expected to cost a total of $7 to $9 million.

Plans for the plant call for disposing sewage into four injection wells adjacent to the pond. Conservationists fear that leakage of effluent from the wells could upset the ecological balance in the pond, and that over a long period of time sewage pollution of the pond could kill the organisms the birds depend on for food. Their concern is well founded because two test wells drilled at the site have failed to seal, and after the wells were supposedly sealed by concrete, mud came up around them.

Among the Kanaha Pond Citizens Advisory Committee members who observed the leakage around the test wells were Robert P. Bruce, hydrologist and retired manager of East Maui Irrigation Co., and Dr. Howard Powers, retired geologist of the U.S. Geological Survey. Mr. Bruce and Dr. Powers observed the tests conducted by a contractor retained by the county and then made studies of their own. They concluded that the county-sponsored tests were not adequate to clear up many of the questions raised by conservationists. It must be noted that the advisory committee had been appointed by county officials. However, the county selected the Kanaha site for the sewer plant without consulting the committee. As it turned out, committee members as well as other volunteers spent more time evaluating tests made at the pond than the county did.

Alternatives exist to the county's plans. Government property is available for construction of the treatment plant both east and west of the proposed site. The eastern site is only about 4,000 yards from the pond, whereas the western site is a mile distant and separated from the pond by Kahului harbor. Maui conservationists are virtually unanimous in favoring the western site. But county officials argue that if a new site were selected, new plans would have to be drawn up, which would increase costs and delay construction.

In spite of citizen protests against the site selected by the county, both the County Planning Commission and the State Board of Land and Natural Resources unanimously approved the site. Because any capital project involving federal funds must be approved by the U.S. Environmental Protection Agency, a report was submitted to EPA about the proposed sewage treatment plant. EPA then announced approval of the treatment plant site, although the county had not reported the leakage of the sealed test wells in its report to the EPA. After EPA's announced approval so many citizens groups protested and presented sound counter-arguments to the county's findings that the agency withdrew its initial approval. However, it did not give a final disapproval of the site. The county's original plans may yet be approved if EPA gives its blessings by determining that there will be no serious environmental consequences.

Kanaha Pond continues to be as endangered as the Hawaiian coot and the Hawaiian stilt; and the fates

NATURE CONSERVANCY

EUGENE KRIDLER, BSFW

The Hawaiian coot [Fulica americana alai *(Peale)*] *is a dark, slate-gray ducklike bird with a white bill, white patches under the tail, and a large, white bare area on the forehead. The coot lives in wetland areas like Kanaha Pond where it bobs for food such as water plants, seeds, mollusks, and worms. When the coot forages on land, it will eat small reptiles and mice in addition to its regular diet.*

of all three may be inextricably interwoven. According to the Department of Interior's 1973 edition of *Threatened Wildlife of the United States,* a statewide census in 1972 showed only 352 remaining Hawaiian coot and 1,366 remaining Hawaiian stilt, markedly fewer numbers than were found in previous censuses. This same edition cites one of the major reasons for decline of these two species as the destruction of marshes and ponds, and it specifically mentions the importance of Kanaha Pond in the preservation of these two species.

In light of this importance, Maui County's insistence on building a sewage treatment plant that might destroy the life of the pond seems particularly absurd. But even if the location of the plant were changed, FAA and airport interests still control the pond's and the bird's fate. The number of coots and stilts at Kanaha will not increase as long as the terms of the 1972 compromise remain in effect. It is difficult to understand why the FAA would insist that the numbers of birds at Kanaha be limited when several independent studies have shown that the birds ordinarily do not fly high enough to interfere with aircraft. An increase in the numbers of coots and stilts would surely not make them fly higher!

Kanaha Pond was built in the 1700s to protect native spawning ocean fish. No such spirit of conservation has captured the imagination of key FAA and county officials regarding the pond, the coot, or the stilt in recent years. Seventy different types of birds inhabited the Hawaiian Islands when they were discovered by European settlers. During the past 150 years, twenty-four native birds have become extinct, and twenty-seven other species are on the verge of extinction. Probably no place in the world has lost more of its native bird life than the Hawaiian Islands. Of all the native bird species of the United States considered to be greatly endangered, half are native to the Hawaiian Islands. If we fail to protect their habitat, two more esthetically and scientifically valuable Hawaiian birds may be lost to future generations. ■

Jack Stephens, a freelance writer, lives on the island of Maui in Hawaii. He has a keen interest in nature and science, and for more than eleven years he has frequently visited Kanaha Pond. When the pond became threatened ten years ago, he began writing about the issue for a variety of publications.

HELP SAVE KANAHA POND

Under the terms of the new Endangered Species Act of 1973 (see NPCA at Work, March 1974, page 28), the federal government now, for the first time, has full authority and duty to protect the critical habitat of native endangered species. Therefore, members concerned about the survival of the Hawaiian coot and the Hawaiian stilt can write the Office of Endangered Species urging that they take appropriate action to ensure protection of the natural ecosystem of Kanaha Pond Waterfowl Sanctuary on the island of Maui in Hawaii as vital habitat for these endangered species:

Mr. Keith M. Schreiner, Chief
Office of Endangered Species
Bureau of Sport Fisheries and Wildlife
Department of the Interior
Washington, D.C. 20240

PRAGMATIC ALLIANCE

Western railroads and the national parks

by ALFRED RUNTE

Especially in this time of fuel shortages, restoration of railroad service to our national parks could provide a means of safe, comfortable, efficient vacation travel —just as it used to

ONLY A FEW YEARS ago a gasoline shortage would not have been so threatening to national park travel as it is today. As late as 1960 Americans could still choose among many elegant passenger trains with daily arrivals and departures from in and near most of the great western reserves. My first exposure to this popular service came in 1959 on the South Rim of the Grand Canyon. Every day the picturesque Santa Fe station was flanked by long strings of silver Pullmans, filled to capacity for the busy summer season. These trains were reminiscent of the turn of the century, when every major western railroad played a crucial role in the establishment, protection, and improvement of national parks. Of course the managers of the lines were not being altruistic or environmentally conscious; their aim was to promote tourism and thereby increase profits. Still, preservationists recognized the value to the reserves of an alliance with a powerful corporate group committed to similar goals, if not from similar motivation. Tourism at that time, however encouraged, provided the national parks with a solid economic justification for their existence. No argument was more vital in a nation unwilling to accept scenic preservation at the cost of business achievement.

Awareness of railroad officials about the potentials of scenic preservation began as early as 1871 with the campaign to create a national park in the Yellowstone wilderness of northwestern Wyoming. The firm of Jay Cooke and Company, promoters and financiers of the Northern Pacific Railroad extension project, took an active interest in legislation for this reserve. Company officials persuaded park proponents to support completion of the railroad simultaneously with the opening of the park. In this vein, Nathaniel Pitt Langford, the noted Yellowstone explorer, publicly expressed a need for the line as a direct means of making the "wonders" of Yellowstone "speedily accessible" to tourists. It was not until 1883, however—eleven years after the establishment of Yellowstone National Park—that a spur track of the Northern Pacific reached Cinnabar, Montana, three miles from the northern boundary of the preserve. Nevertheless, the initial efforts of Jay Cooke and Company to win congressional approval for the park were instrumental in its creation.

As scenic preservation gathered support, other western railroads followed the lead of the Northern Pacific in promoting the establishment and publicity of national parks. Lobbyists for the Southern Pacific Railroad campaigned for the Yosemite, Sequoia, and General Grant reserves, all of which were set aside during 1890 in California's High Sierra. Indeed, the company soon became one of the most vigorous sponsors of natural scenery in general and West Coast national parks in particular. In 1898, its passenger department was the original founder of *Sunset Magazine,* a monthly periodical expressly designed to entice industry and tourism to states served by the Southern Pacific, especially California. Subsequent issues contained lavish illustrations, highly descriptive articles, and romantic advertisements about Yosemite Valley, the Sierra redwoods, and other national park attractions accessible via Southern Pacific trains. One of the most frequently published scenes was of tourist-laden stagecoaches being driven through the Wawona Tunnel Tree in Yosemite's Mariposa Redwood Grove. With such wonders of nature as magnets for travel, the Southern Pacific Railroad profited from scenic reserves in California for many years.

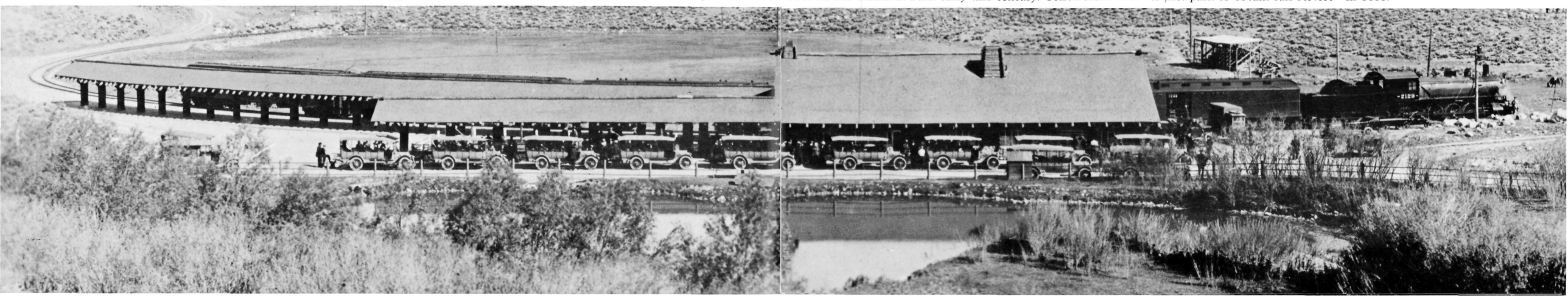
Arizona's Grand Canyon provided the Santa Fe Railway with a similar golden opportunity. Travel to the chasm was facilitated in 1901 with the completion of a spur track up to the South Rim from the mainline at Williams, a distance of approximately sixty miles. No longer were curiosity seekers forced to endure long and tiring stagecoach rides under the desert sun. In 1908 publicity efforts received another welcome boost when President Theodore Roosevelt proclaimed the Grand Canyon a national monument. Finally, in 1919, at the request of Santa Fe officials and preservationists alike, Congress elevated the reserve to full national park status.

No railroad, however, was more devoted to the national park idea than the Great Northern. In large part this devotion was due to the tireless support of Louis W. Hill, who succeeded his noted father, James J. Hill, as president of the road in 1907. Completed in 1893, the Great Northern Railway served the border states from Minnesota to Washington, passing through the jagged Montana Rockies enroute. For years these mountains had been a popular retreat for a few well-to-do sportsmen and tourists. Finally, agitation arose to have a portion of the region—the Glacier wilderness in the northwestern part of the state—set aside as a national park. Because the tracks of the Great Northern bordered the area in question, Louis W. Hill supported the plan with great enthusiasm as part of his railroad's ongoing "See America First" campaign. He noted that U.S. citizens were encouraged to spend their travel dollars elsewhere—in the Swiss Alps or the Canadian Rockies, for example—simply because equally spectacular mountainscapes at home were not properly protected and promoted. In obvious agreement with that contention, Congress approved the Glacier National Park bill in May 1910.

As Louis W. Hill and other railroad officials recognized, however, more than the mere creation of national parks would be required to turn American eyes from foreign to western scenery. A prerequisite was the availability of "proper" tourist facilities. Especially important were grand hotels that catered to the wealthy, who made up the majority of travelers during this period. For this reason western railroads regarded hotel management as an important adjunct of passenger train service to the reserves. The Santa Fe, for example, opened its famous El Tovar hotel on the South Rim of the Grand Canyon in 1904, just three years after the track to the chasm was completed. The Northern Pacific began building a string of houses in Yellowstone as early as 1886. Yet no accommodations were more grand or complete than those provided for Glacier visitors by Louis W. Hill and the Great Northern Railway. Between 1911 and 1915 Hill supervised the construction of three huge lodges and a dozen Swiss-style alpine chalets in the Montana park. Impressed by the importance of these structures in attracting visitation, a noted correspondent concluded in 1916 that "were it not for the Great Northern Railway, travel through Glacier Park would be practically impossible."

Preservationists were equally concerned about how to increase park tourism, but for a very different reason than the quest for profits. Behind their anxiety lay the recognition that, in the final analysis, the survival of the reserves clearly hinged on the number of people who claimed direct benefits from scenic preservation. The point was driven home dramatically in 1908 when the city of San Francisco mounted a vigorous campaign to dam the Hetch Hetchy Valley—a spectacular gorge located within Yosemite National Park—for municipal water storage. Working

A string of motor coaches awaits passengers of the Northern Pacific at the Gardiner, Montana, entrance to Yellowstone National Park early this century. Yellowstone was the first park to obtain rail service—in 1883.



early promotion

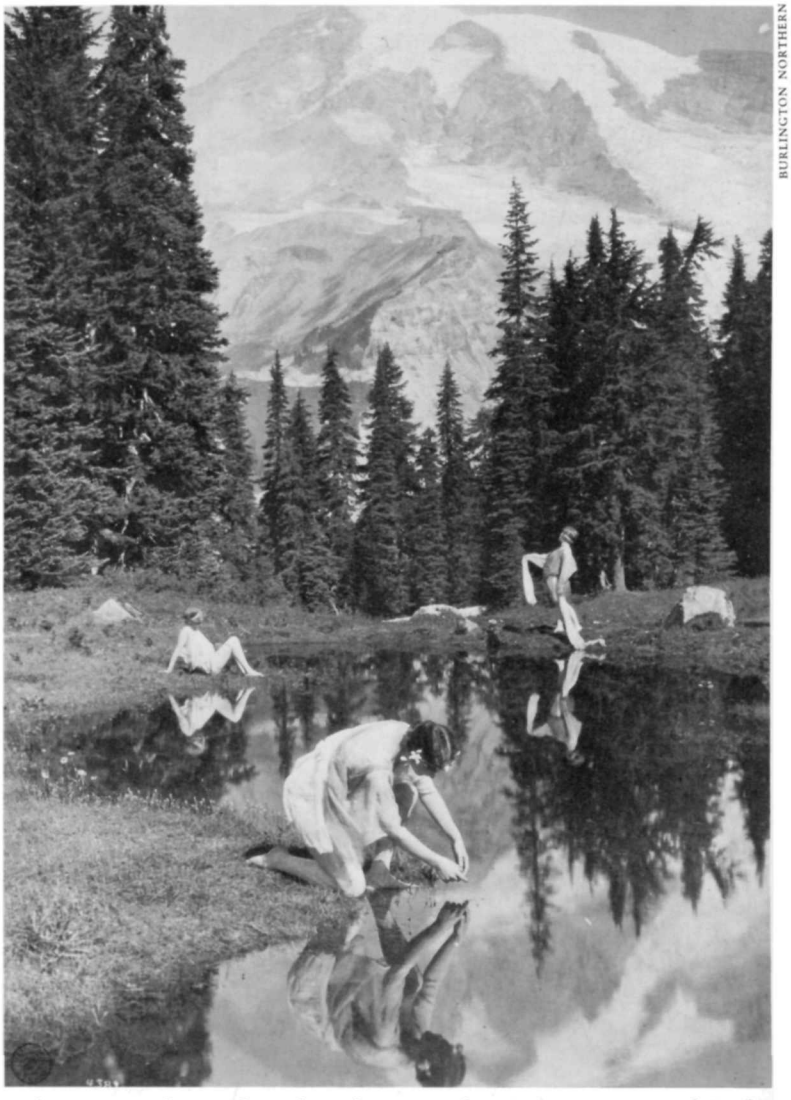
Compared with advertising practices nowadays, early promotion was obviously naïve. These promotional materials indicate some attitudes toward the natural environment that seem strange to us today. They emphasize the romantic appeal of natural scenery but seem to consider it as a curiosity or at best a majestic backdrop for a stage set—to be admired from a distance.

Both railroads and preservationists promoted visitation to the national parks, the former from an unabashed profit motive, the latter in order to gain public support for the new parks.

NATIONAL PARK SERVICE

Stagecoach at Wawona Tunnel Tree, Yosemite National Park, 1911

McClure's Magazine, December 1910



BURLINGTON NORTHERN

"Alpine nymphs at the edge of Fairy Lake, Rainier National Park"

against preservationists was a powerful numbers argument. Dam proponents were quick to point out that only a few hundred "nature lovers" enjoyed Hetch Hetchy during any one summer season, whereas in contrast fully 750,000 San Franciscans would benefit from the reservoir year-round. Lacking an equally convincing perspective, preservationists recognized the serious vulnerability of their position. The geography of tourism was still largely against them. Every national park, including Yosemite, was in the West, far removed from traditional vacationlands and resorts in the East, and this at a time when only a few Americans were sympathetic with purely ecological justifications for scenic preservation. As John Muir—whose California-based Sierra Club led the fight against the dam—sadly commented: "Nothing dollarable is safe, however guarded."

Responding in agreement, preservationists nationwide called for stronger efforts to demonstrate the solid economic possibilities of the national parks for outdoor recreation. Most of them felt that additional roads and hotels in the reserves were a far more acceptable compromise than dams, power lines, aqueducts, and other more scenically destructive intrusions. Allen Chamberlain, a leader of the Appalachian Mountain Club in Boston, was most emphatic on this point. The Hetch Hetchy example, he maintained, was a clear indication that preservationists must work even harder "to stimulate public interest in the national parks by talking more about their possibilities as vacation resorts." Only if more people "could be induced to visit these scenic treasurehouses," he concluded, would they "come to appreciate their value and stand firmly in their defense."

Western railroads were the logical source of support for such a campaign. Not only were they at the height of their corporate power and political influence, but, more importantly, their equal desire to boost tourism in no way endangered the integrity of the park system. Richard B. Watrous, secretary of the American Civic Association, obviously had this point in mind when he defined travel promotion as the only "dignified exploitation of our national parks." As a result, during the summer of 1911 he urged preservationists nationwide to publicize "the direct material returns that will accrue to the railroads, to the concessionaires, and to the various sections of the country that will benefit by increased travel." As the times clearly indicated, he concluded, railroad cooperation was especially "essential" as "one of those practical phases of making the aesthetic possible."

It remained for Secretary of the Interior Walter L. Fisher to give these views government sanction. In demonstration of his support, in September 1911 he convened a special national parks conference at Yellowstone to discuss all major problems facing the reserves. The meeting turned into a heartening victory for supporters of the national park concept. Invitations to attend were confirmed by a large group of western railroad officials, a clear indication that preservationists were being heard. Fisher's opening remarks were equally revealing. Speaking before a growing assemblage, he praised railroad support as a form of "enlightened selfishness" entitled to the "grateful recognition" of all park advocates. Company executives returned this compliment with further promises to assist the government in upgrading reserve facilities, including hotels, roads, and trails. As so many preservationists had hoped, the Yellowstone conference established beyond doubt the firm commitment of western railroads to national park improvements and publicity efforts.

During the next several years this dedication was exhibited in a flurry of national park promotion. Western railroads as a group spent hundreds of thousands of dollars on advertising brochures, complimentary park guidebooks, and full-page magazine spreads, some in luxurious color. Still, competition among the rail lines was keen, especially when World War I boosted the "See America First" campaign through restrictions on European travel. The Northern Pacific, for example, hailed itself as the "Yellowstone Park Line," a misnomer inasmuch as by this time two other large railroads, the Burlington and Union Pacific, also served the reserve from the east and west entrances respectively. The Great Northern Railway was even more bold. At first its logo advertised service as "The National Park Route," but finally, in admission of the obvious, the slogan was changed to "Glacier Park Route." Nevertheless, no railroad failed to capitalize on at least one other popular reserve. Service to Mount Rainier National Park in Washington, for example, was provided by the Great Northern, Northern Pacific, and Milwaukee Road. By this time the Santa Fe was also a major carrier to the California High Sierra parks via its San Joaquin Valley track between Los Angeles and San Francisco. Losses to the Southern Pacific Railroad from this competition were partially offset by its proximity to Crater Lake National Park in Oregon, whose fame increased with each passing year.

Fortunately for park visitors, however, railroad competition often was tempered by helpful cooperation. Beginning in 1915, for example, travelers to Yellowstone could approach the reserve via one line, say the Northern Pacific, then depart on either the Union Pacific or Burlington, all on the same ticket. Responsibility for this convenience was due in large part to the gentle arm-twisting of Stephen T. Mather, California millionaire, member of the Sierra Club, Assistant to the Secretary of the Interior in charge of national parks, and founder of the National Parks Association (now NPCA).

Convinced that publicity remained the key to more public support for the reserves, Mather nurtured the alliance between preservationists and western railroad officials at every opportunity. The financial response of the lines continued to be overwhelming, in the expectation of course that monetary goodwill would flow in both directions. In 1915 the Santa Fe and Union Pacific railroads combined to spend $500,000 on national park displays at the San Francisco Exposition. The Union Pacific's contribution was a detailed model of Old Faithful Inn and Old

SANTA FE RAILWAY

Santa Fe's first train to the Grand Canyon, September 1901

NORTHERN PACIFIC

Passengers detraining at Gardiner traveled into Yellowstone by stagecoach in the 1880s.

NORTHERN PACIFIC

During the 1930s, from June to September, travelers transferred from train to buses at Red Lodge, Montana, for the 64-mile drive over Red Lodge High Road to Yellowstone.

Faithful Geyser in Yellowstone. Right on cue, approximately every hour, the miniature "wonder" erupted in a jet of water, just like its original counterpart more than a thousand miles away. Visitors, as expected, were delighted by this unusual display. More importantly, from a conservation perspective, the exhibit reminded people of the beauty of the national parks and how they might be reached. This purpose was also the goal of the *National Parks Portfolio,* a stunning publicity volume containing pictures and descriptions of all the major preserves. In 1916 seventeen of the western railroads contributed $43,000 toward publication of the first edition, which afterward was sent to 275,000 carefully selected scholars, politicians, chambers of commerce officials, newspapermen, and others most likely to boost the national parks.

Preservationists were also active. Spurring them on was their loss of the Hetch Hetchy Dam controversy in December 1913. Instilled now with the conviction that similar raids were inevitable, they hoped to avoid further defeat through the establishment of a separate government bureau to promote and protect all national parks. Therefore, as the railroads helped stimulate support through increased visitation, preservationists worked for the establishment of the National Park Service, which Congress finally approved in August 1916. In recognition of his proven skill and interest in park affairs, Stephen Mather was appointed as first director of the new organization.

In addition to publicity efforts, Mather turned his attention to park system additions and improvements. He was particularly concerned about the Southwest, whose scenic significance was represented by only one major federal reserve, the Grand Canyon. In 1919, however, he won approval for Zion National Park in southern Utah, a spectacular gorge often described as "The Yosemite of the Desert." In 1924 a neighboring wonderland, Bryce Canyon, also received park status. However, both areas lacked good roads and overnight lodging facilities. Moreover, the future Cedar Breaks National Monument, between Bryce and Zion, and the North Rim of the Grand Canyon, approximately seventy-five miles to the south, were in the same predicament. In search of an organization to alleviate this problem, Mather once more rekindled the successful alliance between rail executives and preservationists. This time he approached the president and board of directors of the Union Pacific Railroad and asked them to take charge of tourist needs throughout the entire region.

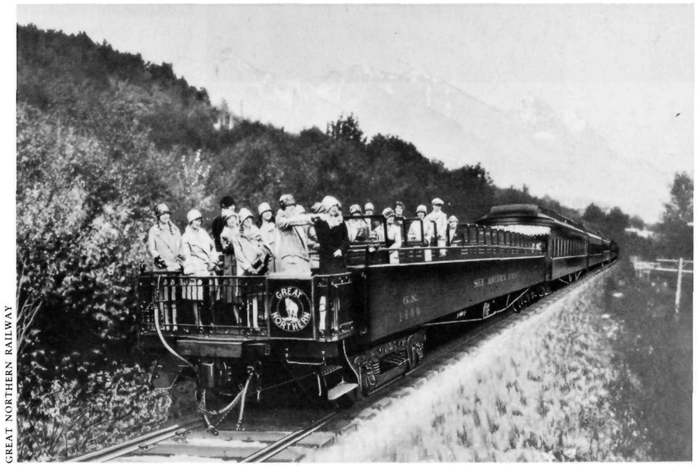
The response of the Union Pacific was everything Mather had hoped for, and more. Along with widespread advertising campaigns in the best tradition of national park promotion, the railroads did everything possible to improve tourist convenience. To shorten the distance to the reserves a branch line was built from Lund, on the Los Angeles/Salt Lake City mainline, over to Cedar City, just north of Zion. At Cedar City passengers were transferred to company-supplied buses to be taken on package tours of all four wonderland areas. Finally, the Union Pacific constructed new lodges in each reserve. Perhaps the most elegant of these buildings—the Grand Canyon Lodge on the North Rim—was dedicated in 1928. For the first time since 1904, when the Santa Fe had opened its El Tovar hotel on the South Rim, both sides of the chasm had comparable service.

Stephen Mather's death in 1929 brought an end to his work, yet his primary goal to increase park visitation had been achieved. More than three million people saw the national parks and monuments that

passengers to the parks

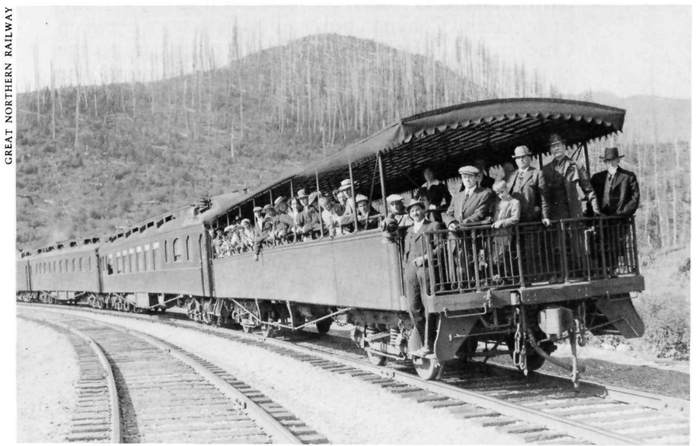
From the 1880s to the 1960s trains provided comfortable and convenient access to many national parks in the West. Passengers were transported from the train to their hotels at first by stagecoach, later by motorcoach.

In many places old tracks are still there; trains could once again carry passengers to the parks, and concessioner buses could provide bus tours and shuttle service within parks.



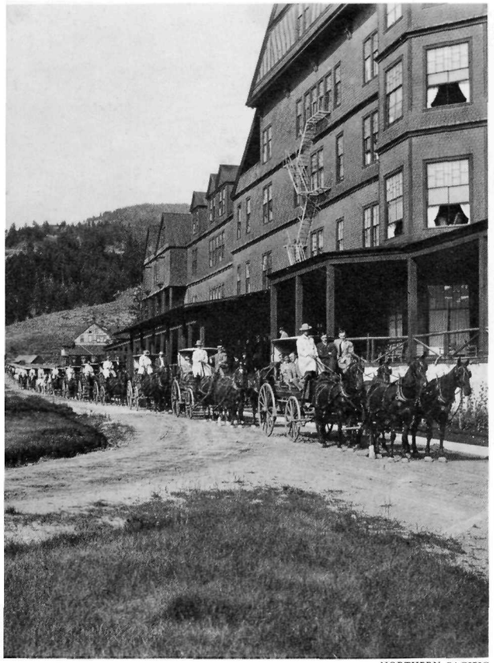
GREAT NORTHERN RAILWAY

"See America First." During the 19-teens and 1920s, Great Northern Railway, serving Glacier National Park in Montana, added open observation cars in July and August of each year. These cars were popular with the passengers.

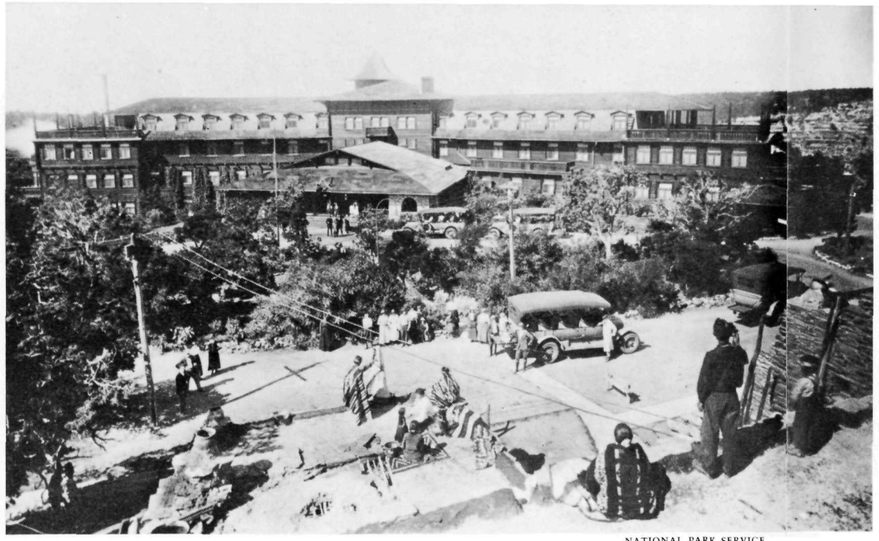


GREAT NORTHERN RAILWAY

Mammoth Hotel, Yellowstone

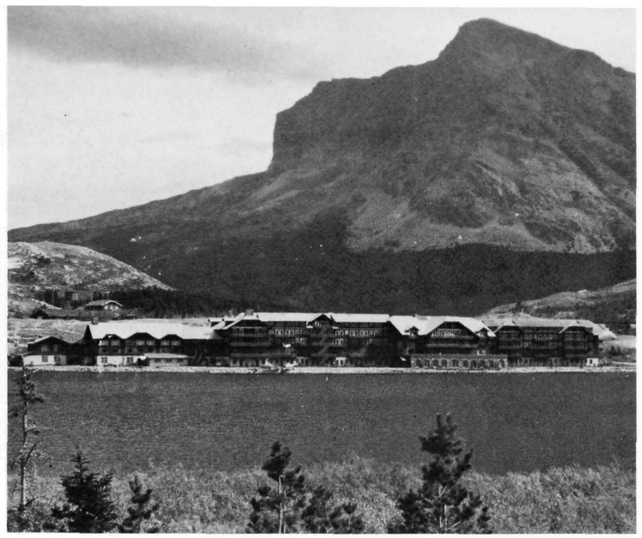


NORTHERN PACIFIC



El Tovar, South Rim, Grand Canyon

NATIONAL PARK SERVICE



Many Glacier Hotel, Glacier National Park

GLACIER PARK COMPANY

Grand Canyon Lodge, North Rim

NATIONAL PARK SERVICE

elegant lodges

In the early days of establishment and promotion of the national parks, the railroad companies built grand hotels, rustic lodges, and alpine chalets in several western parks, including Grand Canyon, Yellowstone, and Glacier. The railroads considered luxury accommodations as a necessary adjunct of train service, which was patronized mainly by wealthy passengers. Nowadays, we realize that overnight accommodations and other services are better located outside the parks or in nearby towns, where they will not damage the natural environment of the parks and will benefit the local economy. As concessioner-operated facilities are gradually phased out of the parks, grand old structures like these could be utilized by the Park Service as museums or visitors centers.

year, almost a tenfold increase since he had taken office as director of the Park Service in 1916. Railroad executives were appreciative of his success, as were most preservationists, who rejoiced in the security that popularity brought to the scenic reserves.

Mather's successors were equally successful, in spite of the Great Depression and the trials of the World War II period. Yet the end of that conflict was the real signal for western railroads and the National Park Service to resume travel promotion to the wonderland preserves. Lavish full-color ads reappeared in magazines like *Holiday* and *National Geographic,* inviting tourists to once again experience the splendor of the national parks as part of a railroad vacation in the West. Some of the lines even reaffirmed their traditional relationship to the reserves with park-inspired names for new trains and luxury equipment. On the Santa Fe Railway, for example, the streamliner "Grand Canyon" provided daily service between Chicago and Los Angeles, with through cars to the chasm via the spur track from Williams, Arizona. The Union Pacific added the "National Parks Special" for seasonal traffic to the southwestern parks and further responded with the "Yellowstone Special," whose summer runs ferried patrons between the west entrance of the reserve and connecting mainline trains at Salt Lake City.

Similar service prevailed on all western railroads throughout the 1950s. During the next decade, however, one by one the lines discontinued train after train going to the national parks and their vicinities. Of greatest importance in this decision was the overall decline in nationwide rail passenger travel. The railroads, of course, were partially to blame for this drop themselves, having decided to curtail passenger trains in favor of far more profitable freight operations. Yet, in fairness to the railroads, it is true that the federal government began huge subsidies to the automobile industry via the highway trust fund for construction of an interstate highway system and other freeways; and the resulting surge of automobile traffic—and airline travel as well—undoubtedly took a significant toll of rail patronage in the West. For the first time in almost a century most of the national parks were without decent rail connections.

In view of the present energy crisis, the restoration of adequate rail passenger service to the reserves is imperative. Whichever way the fuel problem works out—whether it is resolved or remains a long-time fact of life—rail transportation to distant national parks like Yellowstone and the Grand Canyon is a must. If more fuel becomes available in the immediate future, the cars, campers, and off-road vehicles in competition for space will continue to devastate environments of the national parks and their surrounding areas. On the other hand, if the anticipated decline in park visitation reaches dramatic proportions, scenic reserves far removed from urban areas might once more face threats to their existence as visitation numbers no longer seem to justify to many Americans continued preservation efforts, inasmuch as most people tend to support only what is of direct personal benefit.

As in the past, railroad transportation could help solve both dilemmas. Should the major problem of the national parks remain one of too much automobile traffic, passenger trains could again provide a viable alternative to necessary restrictions on individual mobility via the family automobile. If a continuing fuel shortage prevents automobile travel to the national parks, however, passenger trains, with their superior carrying capacities and maximum fuel efficiency, could be crucial in making the parks accessible to all people—including those who otherwise might lose interest in protecting inaccessible wonderlands.

Today's reality, however, is far different from that when railroads were in their heyday. For one thing, nowadays our society has a more sophisticated understanding of ecological needs and is more receptive to the concept of preservation of natural environments for their own sake. For another thing, for many years preservationists have realized that luxury resort-type accommodations and other services are inappropriate inside our great natural national parks and monuments. National Parks and Conservation Association in particular has long urged that any new overnight accommodations and other concessions be built outside the national parks and that existing developments be gradually phased out where possible. Moreover, NPCA has consistently urged the use of long-line rail transportation to the national parks, where accommodations and other services would be conveniently located adjacent to the parks or in nearby towns, with regularly scheduled bus trips available into the parks. (See March 1974 issue of this Magazine, page 2.)

Americans as a whole have long been reluctant to consider transportation alternatives to the family car, but recent experiments with minibus service in Yosemite Valley and other parks have proven popular. Now, more than ever, we must begin to take steps to change our pattern of transportation usage, and perhaps now the American public is willing to consider alternatives. Travel by train is fast, safe, comfortable, enjoyable, and relaxing; with increasing cost of fuel, it will no doubt prove also to be cheaper than automobile travel.

Once again the public good and the railroads' need for profitable operations demand a pragmatic alliance—and the restoration of trains like the "Grand Canyon" and the "National Parks Special" to their former glory. ■

Alfred Runte, a PhD candidate in American environmental history at the University of California at Santa Barbara, where he is specializing in the history of the national park idea, has written extensively for American conservation journals, including *The Conservationist, American West,* and *National Parks and Conservation Magazine.* He has also recently co-authored a new environmental studies textbook, *Man and Land,* to be published soon by Hamilton Publishing Company, Santa Barbara.

Exploring Earthman's World

Exploring Earthman's World is a series of essays, co-edited by Darwin Lambert and the editors and published intermittently, which is intended to foster the kind of man-earth relationship that will lead to creative ecological harmony.

by DARWIN LAMBERT

MAN and NATURE FOREVER

WHILE LIVING IN ALASKA I met a newcomer who told me he'd fled worsening pollution in New York, searched the West for a place without discarded beer cans, and was now transferring his hope to the North. His approach was playful, and I offered to search a bit with him. He became a valued reporter on the newspaper I edited, and on weekends we explored outward from Juneau. One Sunday we entered a canyon so unaffected by man that a bear neither ran nor attacked but hid so close we smelled its body odor. My friend's hope visibly rose, but then, even here, he found two of the offending artifacts.

If we packed them out, I lightly suggested, the entire canyon would be pure for him. But for the moment he'd lost his playfulness. What really bothered him was the "blasted whoevers" that littered. He insisted the cans be displayed beside the waterfall where we'd eaten our lunch; only thus might they contribute, "perhaps through generations," toward a better human attitude. "Meanwhile," he said with an enigmatic grin, "I'll have to be heading on north—soon as I save a few dollars."

Puzzled, I tried for months to hold him. Did his beer-can game make sense or didn't it? Could it be a way of acting out environmental fears too deep to reveal directly, a way of joking against danger? He admitted concern for his journalistic-literary career but maintained that, to do his best work, he had to feel right with nature, couldn't be part of a society that scorned the natural earth. Following one long evening of argument, I awoke with a dream-picture of him on horseback as a medieval knight, maybe Galahad or Parsifal. It seemed as I lay sleepless that, just as those knights had sought the holy grail, this new one sought the absence of tha' *un*-holy grail, the cluttering can.

Of course many of us oppose littering, but his quest went far beyond. He put his career, his life, into the game. Vaguely the quest mirrored half-conscious stirrings in me and set me studying half-forgotten classics and exploring recent works in psychology and anthropology. I discussed findings with him, trying to pinpoint his motivation. Certainly he had hold of something—the key theme of *Homo sapiens,* though often disguised, had always been man-nature relations.

Hunting-fishing societies disguised the theme in ritual magic, but it came through, for example, in the Alaskan natives' seal-goddess who, when appropriately respected, provided food animals and forever returned the animal-souls to life so their flesh could be eaten again and again. Planting societies found immortality in the springtime resurgence that was dependably productive as long as they gave ritual respect to the earth-goddess. Nature (often mystically personalized as super-nature) did indeed pervade everything human, deeply influencing us all.

The New Yorker listened tolerantly but with a veiled twinkle like that of the Mona Lisa. He'd never needed to understand "all that well"; he'd simply felt "in his bones" the drive to play his strange game.

I went on studying. The first city-civilization absorbed earlier man-nature relationships, then linked human government with the order of the heavens, patterned it after the sun, the moon, and the five planets then being regularly observed moving among fixed stars. Somewhere along this course one cosmic god was recognized as creator and potential harmonizer of heaven and earth.

Then science began by-passing symbolism and approaching nature directly, finding facts and organizing them in demonstrable theories. Soon we were combining natural processes in complex technologies utilizing natural materials. We gloried in prosperity and population. Yet dissatisfaction also multiplied, and earth's limited supply of raw materials was threatened as was the capacity of air, water, and land to absorb or recycle wastes, such as beer cans.

A fresh focus on the source of our survival, our creativity, our fulfillment was obviously needed. Too many people supposed the new relationship belied the old, instead of just showing other facets of the same reality. Too many people supposed we were becoming independent of nature, even of super-nature, whereas in truth science and technology are merely ways of understanding and cooperating with nature—as are mythology, art, poetry, religion—wrong only, as was our own rock-fisted right arm, when misguided.

Deep inside where directions and drives are born, we were beginning to approach—factually, ecologically—the long-ago vision of the one cosmic god interrelating everything. Yet several generations might indeed be required for a new attitude to transform society—even after we recognized the necessity of building such deep-rooted support behind the front lines of environmental action. The wandering New Yorker might indeed pioneer a useful path, subject to later improvement, through the man-nature labyrinth that confronted the twentieth century—especially if he stimulated others along the way as he'd stirred me.

I told him I'd no longer argue with his quest. He grinned his enigmatic grin, and some weeks later, having saved a few dollars, he headed on north. "I feel there *must* be a place without beer cans," he said, "up along the Yukon—or somewhere beyond." ■

Darwin Lambert published a magazine of natural and human history from 1937 to 1942 and has been a newspaper editor in Virginia, Nevada, and Alaska. Since 1964 he has devoted full time to studying, experimenting with, and writing about the man-earth relationship and is known internationally for his concept of *earthmanship.* His work has appeared in *Reader's Digest* and in various other American and European publications. He is author of several books including *Timberline Ancients* and *The Earth-Man Story.*

VIPs at Scottsbluff National Monument.

VOLUNTEERS in the PARKS

by JAMES W. CORSON

Volunteers in the national parks experience great personal rewards and help the parks by donating their time, knowledge, and talent

On March 1, 1872, Yellowstone National Park was established as the world's first national park. Since then the national park system has grown to include 298 natural, historic, and recreational areas that cover more than thirty million acres. To adequately preserve and protect these areas and at the same time provide programs that enhance the park experience for visitors understandably demands much of Park Service personnel. Therefore, to supplement the efforts of regular park staffs, the Volunteers-in-Parks (VIP) program was established by an act of Congress in July 1970. The response has exceeded all expectations.

Young people volunteer to gain job experience in the conservation field, to acquire college credit in their major field of study, or simply to contribute to the cause of environmental awareness. Many other VIPs choose the enjoyment of park volunteer work over a salaried position elsewhere. Older volunteers also have many reasons for joining beyond the wish to serve the cause of conservation. They may want to settle into retirement gradually, reenter a community, escalate a hobby, or just try something they have had a yen to do for many years.

Some VIPs bring history to life by dressing in period costume and interpreting through example and dialogue how people lived at different times in America. At Scottsbluff National Monument on the Oregon Trail in Nebraska, volunteers of different ages share a historical hobby with each other and with park visitors through a living history project centered around a Conestoga wagon. This project has just completed its third season. Most of the original fourteen volunteers are still demonstrating the daily life of a pioneer family crossing the Great Plains with a simple outdoor presentation in period costume, aided by artifacts from the park collection. The smell of salt pork and sourdough pancakes cooking over a buffalo chip fire guarantees that visitors become involved in at least one aspect of this piece of history. More than 250 park visitors have viewed this presentation during one Sunday demonstration.

Volunteers may want to assist in a variety of historical, archeological, and natural science projects. For several years the Park Service has sponsored a series of archeological digs at Fort Vancouver National Historic Site in Washington State. The fort was the western headquarters of the Hudson's Bay Company from 1825 to 1849. It was also the hub of trading activities for the Pacific Northwest and a U.S. military reservation from 1849 to 1949.

In 1973 thirty-nine students of classical archeology from the Multnomah School of the Bible in Portland, Oregon, participated as volunteers in excavating the remains of the belfry used at the Hudson's Bay Company post in 1845. Bell towers were integral parts of daily life at old Fort Vancouver because few people owned watches; work routines, meal times, and alarms were all marked by ringing the bell. The Park Service was interested in this project because of the planned reconstruction of the old Hudson's Bay post.

While the Park Service was benefiting from the students' labors, the students were acquiring invaluable field experience in preparation for an archeological expedition to Israel. They stripped a large area of ground at the presumed location of the belfry and removed soil from ten-foot squares in regular increments as an aid to sorting artifacts and recording stratigraphic data. They had to remove a thick layer of U.S. Army trash before finding the old fort surface. This layer made the digging a difficult task because it contained everything from a World War I railroad track to the remains of junked World War II vehicles. The students eventually were able to locate the subsurface remains of the belfry, which is now being described and analyzed for reconstruction.

Volunteers have also contributed much to the national park experience, through interpretation of programs in natural science and natural history. Mr. Von Del Chamberlain, Chief of the Presentation of Education Division, National Air and Space Museum, Smithsonian Institution, initiated a successful program for volunteers when he inquired about the need for astronomers in the National Park Service's interpretive efforts. Mr. Chamberlain contacted astronomers who would be vacationing in national parks.

Initially twelve astronomers volunteered and fifty-six parks from Maine to Florida to California requested their assistance; but the astronomers could cover only a dozen parks.

In 1974 Mr. Chamberlain hopes to broaden the program by setting up a small series of seminars to work with regular Park Service personnel and teach them the fundamentals needed for a "sky talk." This instruction by members of the American Astronomical Society will be assisted by a small grant from the National Science Foundation, but the labor will still be volunteer.

Environmental education is another area in which the spirit of the VIP program, as well as its legal authority and coverage, has provided opportunities and benefits, some predictable and others with more reach and power than anyone would have anticipated.

In Atlanta in 1971, the director of an environmental education conference sponsored by the U.S. National Commission for UNESCO, Raymond Kohn, and the Chief of Interpretation at Kennesaw Mountain National Battlefield Park, near Atlanta, Ray Guerdes, wondered what would happen if they tried to enlist student volunteers to study in the national park. Locating interested students was an easy matter and soon a group was meeting regularly to learn about environmental problems from various park experts and Atlanta educational personnel. This core group of students felt they had a responsibility to share what they had learned with other young people. A plan dubbed STEP (Students Toward Environmental Participation) was developed to allow them to do this. The Park Service would provide students with further training in environmental awareness and the students in turn would train younger students in the school system.

What started as a dozen students who volunteered to study in a nearby national park has mushroomed into a program that has gained national and international recognition. STEP programs are underway in at least nineteen states and an increasing number of school systems in urban and nonurban areas alike are expressing an interest in beginning programs of their own. STEP received a commendation from the National Commission for UNESCO, which sponsored a cooperative seminar at Lake Geneva, Wisconsin, where American students taught STEP concepts and actions to students from nations around the world. [For information on STEP, write Mr. Ray Guerdes, Southeast Regional Office, National Park Service, 3401 Whipple Ave., Atlanta, GA 30344.]

Volunteers also have helped their national parks in the area of resource management. In 1973 Olympic National Park in Washington State initiated a program to reduce the impact on backcountry environment caused by the Park Service's use of aircraft and pack stock to supply rangers and trail crews. This new approach to an old problem involved eight college students who carried the supplies in by backpack. The program was named the "Sherpa Program" after the famous Himalayan porters.

The work of the students was impressive. They supplied the rangers stationed at Seven Lakes Basin and Enchanted Valley, hauled garbage out of Cat Basin and off the ocean beaches, packed old telephone wire out of the Elwha, hauled cedar puncheon for the Sand Point Trail at Lake Ozette, and packed 450 pounds of trail maintenance equipment from Deer Lake to Heart Lake. Another task was a cooperative project with another volunteer work party. The second group was restoring and cleaning up backcountry campsites in the Cameron, Doeswallips, and Grey Wolf drainages. The Sherpas packed supplies in to the clean-up group and packed accumulated trash back out. The Sherpa project was so successful that it will be expanded during the 1974 season.

Many volunteers have discovered their own niche at a nearby park. VIPs demonstrate quilting, weaving, and other crafts at the Old Courthouse at Jefferson National Expansion Memorial in St. Louis, Missouri. Volunteers usher at the Wolf Trap Center for the Performing Arts near Washington, D.C. Volunteer biologists study everything from seals at Glacier Bay, Alaska, to ants at Big Bend National Park in Texas. A VIP architect records historic buildings at Salem Maritime National Historic Site in Massachusetts. And in the back rooms of parks across the country volunteers sew historic costumes, catalog library and photo files, and wash, catalog, and sometimes assemble archeological specimens.

In 1973 approximately 8,000 volunteers working in 160 of the National Park Service areas donated a total of 254,580 hours of their time, equivalent to at least one million dollars' worth of service, to the parks and their visitors. But as one young VIP wrote at the end of his service at the park, ". . . instead of you thanking me, I should thank you. I'm sure VIP did more for me than I did for VIP." ■

James W. Corson has been national coordinator for the VIP program since 1972. He has also served in various Park Service areas including Mount McKinley, Glacier, Sequoia, and Kings Canyon national parks; Colonial National Historical Park; and Cape Cod National Seashore. His new assignment is regional chief of interpretation for the North Atlantic Region in Boston.

TO BECOME A VIP

If you wish to become a VIP in a nearby park, apply directly to the park where you wish to work by using the short Standard Form 170, which is available at most federal personnel offices and post offices. Be sure to indicate any special interests or skills you want to use or develop. If you are under the age of eighteen, attach the written consent of your parents to the form.

While serving as a volunteer you may be reimbursed for some incidental expenses such as uniforms, local transportation, meals. You will be covered by the government against injuries and against tort claims (personal liability) on the job.

NPCA at work

Pipelines vs. wildlife U.S. environmentalists have worried for some time about how the projected Trans-Alaska pipeline, scheduled for construction beginning this spring, will affect caribou. Their fears were intensified by recent news about the obstruction of the migrations of 400,000 reindeer in the Taimyr Peninsula above Northern Siberia by a Soviet natural gas pipeline. NPCA President A. W. Smith has suggested to Russell Peterson, Chairman of the Council on Environmental Quality (CEQ), that CEQ initiate exchanges between U.S. and Soviet scientists and resource management specialists concerning pipeline operating problems in both countries.

The Soviet pipeline runs about 200 miles from the natural gas areas surrounding Messoyakha northeast to Norilsk, where it fuels the metal industries. The twin pipeline was constructed four to six feet off the ground and thus has prevented reindeer from migrating across the arctic tundra to new pastures. Scientists from the Far North Institute of Agriculture proposed three years ago that the pipes be bent at intervals to create gates under which the reindeer could pass. However, according to the Communist Youth League newspaper *Komsomolskaya Pravda,* construction officials built just a few underpasses on the first line and then provided no underpasses for a second parallel line. Reindeer wandered through the first set of pipes and could not find their way past the second set. Trapped, disoriented wild reindeer began running along the pipeline until they reached the main streets of Norilsk. Others were killed by poachers who reportedly "literally feast along the pipeline; despite strict prohibitions, they ambush the animals and sometimes go openly to the pipes with rifles." After three years scientists finally convinced developers of the need to build more underpasses, but at this point one pipeline still has only four gates and the other just one. Reindeer are the main livestock on the barren Taimyr Peninsula. *The New York Times,* which published the story in the U.S., said protests of Soviet scientists demonstrated an environmental consciousness that is increasingly apparent in the Soviet Union.

Although the U.S. Interior Department issued a permit earlier this year for construction in Alaska of the controversial 789-mile pipeline between Prudhoe Bay and Valdez, it is hoped that precautions will be taken to lessen the dangers to large caribou herds of the North Slope. Some vague safeguards were included in the Trans-Alaska Pipeline Authorization Act (P.L. 93-153); these few references were possible because environmentalists blocked granting of the permit for four years, protesting inadequate assessments of both environmental effects and alternatives to the Prudhoe Bay–Valdez route. Caribou could be threatened by loss of habitat and spilling of toxic substances on forage, as well as by disruption of their movements. The Interior Department recently announced that it has hired an engineering firm to monitor the pipeline's environmental effects.

In view of the mutual problems of the United States and the Soviet Union, President Smith suggested that CEQ utilize a network of scientific exchange groups established pursuant to the Nixon-Podgorny agreement of May 23, 1972. President Smith, who serves on an advisory group to CEQ, stressed that the usefulness of such exchanges could be increased by making them action-oriented rather than merely informational.

CHARLES J. OTT

Cape Cod Natural Landmarks In February NPCA proposed three outstanding salt marsh-estuarine ecosystems on Cape Cod for inclusion on the National Register of Natural Landmarks. The areas nominated by NPCA are Nauset Marsh in Orleans and Eastham; Pleasant Bay (including little Pleasant Bay) in Orleans, Harwich, and Chatham; and the Barnstable Marsh–Harbor–Sandy Neck Complex in Barnstable. NPCA's proposal represents the first step toward getting these areas officially registered.

The Register of Natural Landmarks is a list of areas having "geological or ecological values of such distinctive quality as to be of national significance." The National Park Service maintains the list, which currently is being updated to include new areas on the Atlantic Coastal Plain.

A Registered Natural Landmark area is not covered by any federal restrictions; the federal government does *not* gain ownership. The owners of the registered area receive a bronze plaque, and the area then remains registered as long as it is preserved in a natural state.

NPCA has provided substantial evidence to support our belief that the

Nauset Marsh, Barnstable Marsh, and Pleasant Bay ecosystems contain significant ecological and social values that deserve and need national recognition. However, the NPS and the Center for Natural Areas of the Smithsonian Institution, which is compiling data on these areas, need all available information. Specifically needed are expressions of the values and unique qualities of the areas and references to, or copies of, scientific studies done on any of the three areas. This information is essential because these Cape Cod ecosystems will be "judged" against areas throughout the Atlantic Coastal Plain. Individuals having such information should send it, for our submission to the Center for Natural Areas and the NPS, to Program Coordinator, NPCA, 1701 18th Street, N.W., Washington, D.C. 20009.

Mount Rainier hearings The future of Mount Rainier National Park, Washington, and of its fragile alpine ecosystems in particular, was the issue at two hearings that the Northwestern Regional Office of the National Park Service conducted in mid-January. NPCA presented statements at both the master plan hearing and at the wilderness hearing.

NPCA supported master plan proposals to close certain park roads, remove a 62-site campground, freeze development of new parking lots, and initiate transportation research on mass transportation systems as alternatives to automobile traffic in the park. We also supported setting up a backcountry management plan to reduce impacts on alpine meadows. NPCA rejected a proposed aerial tramway inside the park in the Sunrise area because the environmental impact of its construction would outweigh gains in reduced visitor impacts. The Association recommended prohibiting use of DDT or other hard pesticides in the park.

At the wilderness hearing, NPCA offered suggestions to alter and strengthen the existing proposal, which would designate 85 percent of the park as wilderness. In each of five wilderness units defined by the plan, NPCA suggested additions, including bringing the wilderness boundaries closer to existing road rights-of-way to eliminate any opportunity for unwanted development.

NPCA member Irving Clark of Seattle participated in the master plan hearing, and member J. M. Peterson of Olympia represented the Association at the wilderness hearing. We are grateful for the time and efforts of these friends in the Northwest.

Law of the Sea A. W. Smith, NPCA President, recently participated in another series of meetings of the Advisory Committee on the Law of the Sea (LOS). The Advisory Committee is working with the State Department to formulate the U.S. position for presentation at the Third United Nations Conference on the Law of the Sea in Caracas, Venezuela, during the summer of 1974. Mr. Smith is one of the only conservationists represented on the committee, which is composed mostly of representatives from industry and science.

Questions covered during the January meetings included whether complete management authority for the "living marine resources of the sea" should belong to the coastal states; whether there will be an international ocean authority; whether the LOS treaty will address ocean pollution; and the problem of enforcement of regulations and adjudication of disputes.

President Smith objected to giving coastal states complete authority over marine animals in their waters, because in many cases it is the coastal states that exploit marine animals, for example, through overfishing. This provision, moreover, would not protect endangered species. President Smith also urged that the LOS treaty address ocean pollution. He believes that international agreements on ocean pollution must be even more far-reaching than the treaty devised in November 1973 at the International Conference on Marine Pollution in London. That treaty was signed by seventy-nine nations and, if it enters into force, would regulate only ship-generated pollution including oil, chemicals, sewage, and garbage.

Following these meetings, President Smith submitted a draft article dealing with the protection and utilization of the seas to be considered for incorporation into the official U.S. position prior to the Caracas conference.

New threat to marine mammals In January NPCA expressed to Robert W. Schoning, National Marine Fisheries Service (NMFS) Director, our opposition to a permit application to tag cetaceans (including the fin, sei, minke, and sperm whales) and to kill small odontocetes (porpoises and dolphins). Subsequently that agency denied the permit application of Dale W. Rice, an employee of NMFS, which is a component of the National Oceanic and Atmospheric Administration (NOAA). However, when the permit was denied, the expedition in question was already underway under the sponsorship of the International Whaling Commission (IWC) and with partial NOAA funding. Mr. Rice is on the boat, but is not actively participating.

NPCA objected to both portions of Mr. Rice's application for a scientific research permit under the provisions of the Marine Mammal Act, and protests the current implementation of such plans. First of all, the project involves the tagging of up to 500 whales with marks to be recovered in commercial whaling operations now being conducted by Japan and Russia. NPCA referred to the fact that the U.S. Congress has called for a negotiated moratorium on commercial whaling. In addition, at the 1972 U.N. Conference on the Human Environment at Stockholm, the U.S. government took the lead in proposing a ten-year moratorium on whaling and has steadfastly pursued this policy in subsequent meetings of the IWC. This experiment depends on the killing of more whales in order to recover tags. Therefore, partial NOAA funding implies endorsement of an activity that the U.S. has opposed and most other nations find objectionable pursuant to the Stockholm resolution.

NPCA also finds no stated justification for the second part of the project, the killing of an unlimited number of small odontocetes for the purpose of providing "scientific specimens" to other countries for unexplained uses. Thus a large number of these animals might be killed for—at best—nebulous reasons. This is clearly contrary to the intent of the Marine Mammal Act.

NPCA commends the National Marine Fisheries Service for rejecting the permit application. However, the fact that this project is underway represents a callous disregard for the public interest and appropriate procedures. NPCA has urged immediate corrective action, requesting that Mr. Rice and all U.S. funds be recalled.

Tussock moth controversy The Environmental Protection Agency (EPA) recently granted the U.S. Forest Service an exemption from the general ban on the use of DDT (dichloro-diphenyl-trichloroethane), provided the Forest Service determines that the pesticide is necessary this summer as an "emergency" control for the tussock moth infestation in the Pacific Northwest. As we reported in December 1973, EPA denied a similar request a year ago. Earlier this year NPCA joined with other conservation groups and the U.S. Bureau of Sport Fisheries and Wildlife in publicly opposing the new Forest Service request for an exemption.

Although recognizing the severity of the tussock moth infestation in the Blue Mountain region of the Pacific Northwest, NPCA stated at the EPA hearings that the planned use of approximately 500,000 pounds of DDT as a control measure is unacceptable. Readers will recall that EPA canceled all registrations for the use of DDT in 1972 with the exception of export, public health, and quarantine uses. Voluminous evidence is available attributing fish kills and population declines among certain avian species to DDT. Associated with the buildup of DDT in human tissue is the occurrence of carcinogenous tumors, changes in liver metabolism, effects on sex hormones by activated enzymes, and certain nervous disorders. Therefore, emergency exemptions for the use of DDT normally should be limited to those public health hazards of such vector-borne diseases as typhus and malaria which pose a direct threat to human lives.

The tussock moth is a natural component of many coniferous forest types of the western United States. The irony of the projected use of DDT is that the insect has many natural enemies including disease organisms, birds, and insect parasites and predators. Inasmuch as DDT is nonspecific, it hits friend as well as foe, often wiping out a predatory insect that has been able to control a pest better than DDT ever could. The killing of predators also increases the likelihood of future infestations due to wild population fluctuations. Reducing the extent of areas subjected to monoculture may prove a

viable management measure to maintain the diversity and stability of natural forest ecosystems.

A nuclear polyhedrosis virus and a bacterium, *Bacillus thuringiensis,* are two microbial agents that seem to have been major factors in causing tussock moth population collapse in the past. Major buildup and outbreak periods of the moth population occur in roughly three-year cycles, with outbreaks usually subsiding abruptly by the third year. We are now in the third year of the unusually high buildup of the moth population. The natural virus has been detected on all sample test plots in the infested area, offering some hope that the virus will be able to overcome the tussock moth outbreak this spring. However, it will still be necessary to prepare for operational use those known and biologically safe controls whose long-range benefits accrue both economically and ecologically. Such must be the direction of public policy on pest control in the future.

River of No Return Wilderness As the result of public hearings held by the U.S. Forest Service, NPCA strongly supported a 2.3-million-acre wilderness proposal for the Idaho and Salmon River Breaks primitive areas and contiguous lands in central Idaho. The proposal includes an area slightly larger than the state of Delaware, including portions of the Boise, Challis, Salmon, Payette, Nezperce, and Bitterroot national forests. The two primitive areas are separated by the Salmon River, a candidate for inclusion in the National Wild and Scenic Rivers System.

A Forest Service report describes an array of rugged mountains, deep canyons, glacial lakes, and tranquil basins. The proposed wilderness also has some of the nation's highest quality fisheries, which include Chinook salmon, steelhead, and cutthroat trout. Wildlife populations are exceptional and diverse, including bighorn sheep, mountain goat, moose, deer, and elk. The peregrine falcon, bald eagle, osprey, and sage grouse may occur in small numbers.

The so-called "River of No Return Wilderness" is considered the greatest wilderness expanse in the lower forty-eight states. The Idaho Primitive Area alone is the largest such area in the country. The Wilderness Act of 1964 provides that all existing primitive areas and contiguous lands that are potential candidates for wilderness designation *must* be studied and any recommendations must be forwarded to Congress by September 3, 1974.

At the request of NPCA President Anthony Wayne Smith many Idaho members submitted letters for the official hearing record expressing their special expertise and viewpoints on the River of No Return Wilderness proposal. NPCA thanks these members and others for their active support for preservation of an outstanding segment of our natural wilderness heritage.

Listing the grizzly NPCA recently requested the Bureau of Sport Fisheries and Wildlife to immediately list the grizzly bear as an endangered or threatened species in the coterminous United States under the Endangered Species Act of 1973. In making this request, NPCA noted that the world community determined in February 1973 at the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife that the grizzly bear is threatened throughout North America. Based on this determination, NPCA

urged the immediate listing of the bear to provide additional substantive protection for the bear in at least the lower forty-eight states.

NPCA also noted the conflicting evidence on the status of the grizzly bear presented by biologists in the National Park Service and in the Bureau of Sport Fisheries and Wildlife. The intent of the new Endangered Species Act of 1973 is clearly to give the benefit to the animal when survival is in question. NPCA hopes that the act, for which we have worked so diligently and for which the Department of the Interior deserves much credit, will provide the necessary protection to ensure the survival of the grizzly bear in the Yellowstone ecosystem in particular.

NPCA suggests that any members who wish to list the grizzly bear population segment in the coterminous states under the Endangered Species Act of 1973 should write to Mr. Lynn A. Greenwalt, Director, Bureau of Sport Fisheries and Wildlife, Washington, D.C. 20240.

Redwoods and clearcutting NPCA has urged the Secretary of the Interior to exercise the discretionary authority provided him by statute to protect Redwood National Park in northern California from adverse logging practices on forest lands adjacent to the park. NPCA is aware that clearcutting has continued to expand throughout these adjacent lands, and particularly within the Redwood Creek drainage, with ever-increasing risk to the stability of the park ecosystem. One timber interest alone reportedly is clearcutting upper watershed regions of Redwood Creek at the rate of 600 acres per year in a "cut-and-get-out" operation having the aura of logging practices of the nineteenth century.

The Secretary of the Interior was authorized by the Redwood National Park Act to acquire "less-than-fee" interests in land. NPCA President A. W. Smith recommends the acquisition of interests in all upslope lands above the park, including the entire coastal strip. "Less-than-fee" interests approximate management easements. Thus the Secretary has the authority to specify types of timber harvesting practices and systems that would have minimal environmental impact on the park. When properly used, for example, the single-tree selective cutting system affords this advantage. The system was used in the Redwood Creek basin until around 1964, when clearcutting became the dominant cutting practice. Regardless of the harvesting system used, however, authority would still be needed to identify and protect particularly fragile areas where no cutting should be allowed or where cutting should be delayed at least until such time as adequate research data would be available to facilitate making a sound decision. The National Park Service is now just starting a research program to monitor the effects of

timber harvesting activities on the Redwood National Park ecosystem.

NPCA's concern is substantiated by a Department of the Interior report prepared by a study team of experts who claimed that "Two general categories of Park resources are presently endangered—the Redwoods and associated vegetation, and the water quality and aquatic ecosystem of Park streams and particularly Redwood Creek."

Big Thicket National Preserve Testifying on invitation recently before the U.S. Senate Subcommittee on National Parks and Recreation, NPCA urged expansion of acreage to be protected in the proposed Big Thicket National Preserve in east Texas. The Association recommended the inclusion of 110,000 acres as opposed to the 84,550 included in a bill passed by the House last December.

Calling these lowlands a "natural area of national significance," NPCA stated during the February hearings that the larger area is necessary to adequately preserve unique plant and animal habitats in Big Thicket. (For a description of the diversity of life in Big Thicket, as well as the depletion of its resources, see "The Big Thicket: A Texas Treasure in Trouble" in the January 1974 Magazine.) The key to preservation of the Big Thicket lies in adequate watershed protection, without which many areas would be subjected to much pollution and siltation. To prevent a situation in which pollution from unprotected areas could ruin lands in the preserve, NPCA recommended adding five new areas to the proposed preserve.

NPCA endorsed a provision for the "legislative taking" of lands, which means fixing the price of most of the preserve lands at the time of the bill's passage. The security of lands that already are included in the national park system is marred by private inholdings, and funding needed to acquire these interests across the country is staggering. Therefore, it is important to provide for legislative taking of lands in any new park or preserve. This provision would reduce the impact of land value inflation on the cost of the new Big Thicket National Preserve, and would curtail exploitation of natural resources, especially timber resources in presently untouched areas.

NPCA protested a delay of five years in relation to the proposal's wilderness provisions and urged the Senate to call for completion of wilderness review within two years to prevent further degradation of Big Thicket.

The hearings on this controversial issue drew statements from a large group. Because of strong pressures from the competing factions, the Senate version of the Big Thicket proposal should be voted on early this year.

A CITIZEN'S VOICE IN GOVERNMENT

Organizations like the National Parks and Conservation Association, which enjoy special privileges of tax exemption, may not advocate or oppose legislation to any substantial extent.

Individual citizens of a democracy, however, enjoy the right and share the responsibility of participating in the legislative process. One of the ways citizens of a democracy can take part in their government at state and federal levels is by keeping in touch with their representatives in the legislature; by writing, telegraphing, or telephoning their views; by visiting and talking with their representatives in the national capital or in the home town between sessions. Every American has two senators and one congressman with whom he may keep in contact in this manner.

The best source of information for such purposes is the official CONGRESSIONAL DIRECTORY, which can be bought through the Government Printing Office, Washington, D.C. 20402. It tells you who your senators and congressmen are and lists the membership of the various Congressional committees. It also gives full information on the personnel of the various executive bureaus of the government whom one may contact about administrative programs and policies.

The CONGRESSIONAL DIRECTORY for the First Session of the 93rd Congress is available in three editions, prices of which include postage: bound in hard cover, $6.80; paperback, $5.50; and thumb-indexed, $9.35.

news notes

James C. Charlesworth We regret to inform members about the death on January 21, 1974, of our long-time friend, James C. Charlesworth, of Upper Darby, Pennsylvania. Dr. Charlesworth was a member of the NPCA Board of Trustees from 1960 to 1974 and served as chairman of the Nominating Committee for ten years.

Dr. Charlesworth, a prominent political scientist, was president of the American Academy of Political and Social Science from 1935 to 1971. In 1939 he joined the faculty of the University of Pennsylvania where he became a professor emeritus in 1970. In 1955 and 1956 he took leave from the university to serve as Secretary for Administration under Governor George M. Leader.

Dr. Charlesworth was a veteran of World War II and holder of the Legion of Merit. He was the author of numerous books and articles in the field of political science; many of these attracted international acclaim.

Dr. Charlesworth was an avid hiker and enjoyed farming in Oxford, Pennsylvania. He was active in the Philadelphia Trail Club and in the Horse-Shoe Trail Club, which is a part of the Appalachian Trail Club.

Camping on alpine meadows
Overuse of fragile areas in national parks is a growing problem which recently prompted the relocation of a campground situated on the Lake O'Hara meadows in Yoho National Park, Canada. L. H. Robinson, Director of the Parks Canada western region, announced that results of a study by the Canadian Wildlife Service demonstrated that unless camping on the meadows near Lake O'Hara is banned completely the area may never recover. Like many parks, the Yoho National Park has experienced a sharp increase in visitors in the last decade.

An alpine meadow cannot tolerate intensive use due to the vulnerability of tundra plants. A concentration of tents and people for a sustained period of time quickly kills the ground cover and allows no time for regeneration. Fire circles destroy not only the vegetation but the soil below, leaving bar-

ren patches. It might take tundra plants as long as fifty years to recover from such a situation. Campgrounds should be situated in areas that are more resistant to damage.

Reconsideration of locations for campgrounds may become an international trend in high altitude areas. The U.S. National Park Service proposed in recently introduced master plans to close certain campgrounds located in fragile alpine meadows, including selected sites in Mount Rainier and Rocky Mountain national parks. (See "Mount Rainier Hearings" in NPCA at Work.)

New Old Problems for Old New River One of the world's oldest rivers is threatened with destruction by a relatively modern though practically obsolete technology—pumped storage for hydroelectric power. Winding its way north from the mountains of western North Carolina, through southwestern Virginia and across West Virginia to its confluence with the Gauley to form the Kanawha, the beautiful New River is one of only a handful of relatively pollution-free rivers remaining in the eastern half of the United States. The New is regarded by geologists as the world's second oldest river—over 100 million years old. Only Egypt's Nile is older.

NPCA members may remember the article from the August 1971 issue entitled "Blue Ridge Dams: The 'Pollution Dilution' Approach," which described early efforts to oppose the so-called Blue Ridge project, a massive, double-dam pumped storage hydroelectric project proposed for the New River near the Virginia–North Carolina border by the Appalachian Power Company. Although its supporters have proposed the project since 1962, necessary licenses for construction have never been issued. The final environmental impact statement was issued in June 1973.

Although it recommended the project, the environmental impact statement pointed out a number of adverse effects that would result from damming the New River. This project would inundate more than 43,000 acres of rural countryside including a natural, free-flowing stream surrounded by rolling hills and forested mountains, resulting in the loss of wildlife habitat, farming, fishing and canoeing, hunting, hiking, and forestry. Many local residents would be forced to move, yet the sparsely populated area would experience a rapid influx of people both during and after construction. "More of the complexities, sophistications, and adversities of an urbanized society would doubtless intrude in this predominately rural area. What is now bucolic would become busy." (FPC-PWR-2317, p. 71.)

While past action concerning the proposed Blue Ridge project related primarily to the Federal Power Com-

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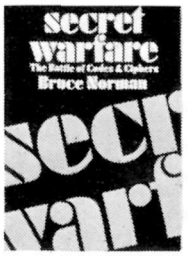

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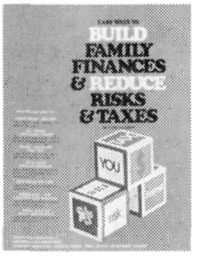

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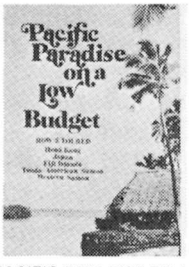

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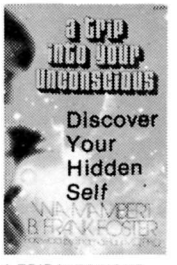

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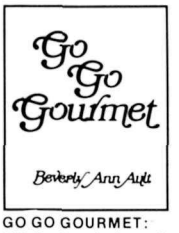

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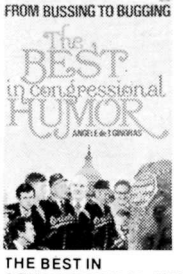

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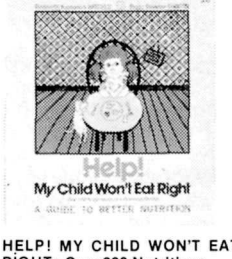

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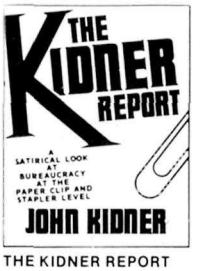

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mission (FPC) and its administrative procedures for review and hearings on the project, recent attention has shifted to the Congressional arena. In the House-passed Water Resources Development Act (October 12, 1973), Congressman Wilmer Mizell (R-NC) was successful in having an amendment included that would require the Corps of Engineers to prepare a study on the conservation, recreation, and preservation uses of the New River and would prevent development on the river for two years after the report's submission to Congress. Congressman Mizell stated that "to blindly and meekly sacrifice irretrievable, invaluable, and incomparable natural resources on the altar of 'power crisis' emotionalism is to sacrifice our own power of will and reason and perspective."

Despite strong support for this amendment in the House, the Senate failed to go along. On January 22, 1974, as the Senate considered its version of the Water Resources Development Act, Senator Sam Ervin (D-NC) argued forcefully in support of this same amendment on behalf of himself and Senator Helms (R-NC). However, the

amendment met with strong opposition from the Senate Public Works Committee and Senator William L. Scott (R-Va) in particular. Senator Scott, who supports the Blue Ridge project, successfully contended that the Senate should take no position on the New River proposal but should merely defer action to the FPC. (The amendment was defeated 51 to 31.) There is only a slight chance that the amendment could be included in the conference committee's compromise version of the bill. However, both Congressman Mizell and Senators Helms and Ervin have introduced bills to provide for the inclusion of the New River in the Wild and Scenic Rivers System, which would prevent construction of the Blue Ridge project.

Additional legislation has been introduced by Congressman Mizell specifically to prohibit the construction of the Blue Ridge project. Whether either of these legislative proposals can be enacted before the FPC grants the required licenses to the Appalachian Power Company will determine the future course of this nation's oldest river, the New.

ORVs in California desert The controversy over the use of off-road vehicles (ORVs) continues to involve more environmentalists, ORV industry spokesmen, and government officials. A group of conservationists has filed suit in Los Angeles Federal District Court to halt increasingly destructive off-road vehicle recreation on 25,000 square miles of land administered by the U.S. Bureau of Land Management (BLM) until adequate measures are taken to protect the California desert's environmental, cultural, and historical values.

The coalition of environmentalists, scientists, and historians filed suit in January against the BLM, alleging that the BLM's "Interim Critical Management Program" for recreational uses of

the California desert violates a host of federal laws including the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and the Endangered Species Conservation Act of 1969. This plan opened approximately 24,000 square miles of the desert to ORV use and closed approximately 1,000 square miles, or 3 percent. Although most of the open area is open only on designated roads and trails, BLM admits it cannot provide enforcement. The BLM interim plan was put into effect last November in reaction to pressure both from conservation groups including the NPCA (December 1973 NPCA at Work) and from ORV users. Readers will recall that NPCA demanded in October that the BLM prepare and distribute publicly an environmental impact statement, as required by NEPA before undertaking any "major federal action." The BLM subsequently issued the "interim" plan without preparing an environmental impact statement but indicated that they intend to prepare one for a comprehensive, long-range desert management plan that will take several years to complete. The group of conservationists bringing suit maintains that the interim plan, which will be effective for up to five years, constitutes a "major federal action." It constitutes the first general granting of official permission to ORV operators to use any area of the 450 million acres of BLM lands throughout the nation.

The fragile ecosystems of the California desert harbor rare and endangered plant and animal species that are imperiled by abrasive traffic by motorcycles, dune buggies, and four-wheel drive vehicles. (See "The California Desert: Crisis in a Ravaged Land," December 1973 Magazine.) Scientists are concerned by soil erosion, a dust problem, physical destruction of plants, and widespread loss of wildlife habitat. Historians point to a growing black market for Indian petroglyphs that are drilled and blasted from rocks.

Although few would dispute that all Americans are entitled to choose their own modes of outdoor recreation, many also feel that some restrictions must be put on ORV use. Dr. Robert Stebbins of the California Museum of Vertebrate Zoology says, "Unless ORVs are better controlled, the beautiful and productive California Desert could become as barren as the Sahara."

conservation docket

Recent Congressional action of interest to NPCA members has included:

House Committee Reorganization: The House Select Committee on Committees has undertaken mark-up of its working draft report on the proposed jurisdictional shifts in committee responsibility (see Conservation Docket, March 1974). The Select Committee seems to have agreed, on a tentative basis, to place the jurisdictions over parks, wilderness, public lands, and wildlife in the new (proposed) Energy and Environment Committee rather than in the proposed Agriculture and Natural Resources Committee. Conservationists generally would prefer *not* to see these jurisdictions in the control of the Agriculture Committee, which has *not* often been favorably disposed toward natural resource protection (i.e., new park, wilderness, and wildlife refuge proposals). Rather, conservation interests might benefit more if these and other environmental subjects were placed under the jurisdiction of either an Environment and Energy Committee or a separate, standing Environment Committee.

Land Use: The House Rules Committee has voted to postpone indefinitely (virtually killing the bill) House consideration of the Senate-passed land use bill (HR 10294) backed by environmentalists and, up until early February, by the Administration. The bill called for a $800 million grant-in-aid program to the states to develop their own programs for promoting orderly growth and development without imposing federal regulations. The Administration now favors a weaker bill proposed by Sam Steiger (R-Ariz) for federal guidelines with no provisions for the implementation of land use programs by the states. Environmentalists are deeply disappointed that the government has allowed pressure from business, developers, and industrial groups to mediate critical decisions for the purpose of short-term gain when those decisions will have long-range repercussions on the public's welfare and the quality of the environment.

New Senator: Senator Howard M. Metzenbaum (D-Ohio), newly appointed to fill the unexpired term of Attorney General (former Senator) William B. Saxbe, has been assigned to the Subcommittees on Parks & Recreation; Minerals, Materials, and Fuels; and Water and Power Resources of the Senate Committee on Interior & Insular Affairs, as well as to the Science and Astronautics Committee.

Water Resources: In January the Senate passed S 2798, the Water Resources Development Act, better known as the Omnibus Rivers and Harbors and Flood Control Act. The House had previously passed HR 10203, a similar bill. The conference committee has since agreed to the necessary compromises; barring a Presidential veto like the veto of a similar bill during the 92nd Congress, this "pork barrel" legislation could become law soon. This bill contains a new feature for water resource legislation, a two-stage project authorization plan. Under the plan, Congress would initially authorize only the so-called advanced engineering and design of a project. Upon completion of this first stage, with any recommendations or modifications, Congress would then be asked to authorize final construction. Completion of an environmental impact statement would be required prior to the second phase Congressional authorization.

One of the specific projects authorized by the Act, as reported out of conference, will be the requirement for a full and complete study of the future water resource needs of the Washington, D.C., metropolitan area, including the adequacy of present water supply and the feasibility of utilizing water from the Potomac Estuary. These requirements were contained in an amendment successfully added to the bill by Senator Charles McC. Mathias (R-Md) in an effort to ascertain justifications both for and against the proposed Sixes Bridge dam on the Monocacy River in Maryland.

New River: Since the defeat of the proposal to require a Corps of Engineers study of the recreation and preservation uses of the New River in North Carolina and Virginia prior to authorization by the Federal Power Commis-

sion (FPC) of the Blue Ridge pumped storage project (see News Notes), efforts have been renewed to seek wild and scenic rivers classification for the threatened portion of the New River. The Senate Interior Public Lands Subcommittee held a hearing on S 2439 recently to designate a portion of the New River for inclusion in the wild and scenic river system. Although the House Interior Parks and Recreation Subcommittee had previously held a similar hearing last October, a report from the Interior Department expressing its recommendation on such designation for the New River is essential to move the legislation along. However, during the Senate hearing on the New River the Interior Department spokesman testified that Interior would prefer to withhold its recommendation until after the FPC had ruled on the pumped storage project. The Department's reluctance to issue a report and recommendation for the New River proposal may spell the demise of this free-flowing stream, which is over 100 million years old.

Strip mining: The full House Interior and Insular Affairs Committee has finally begun mark-up of the Surface Mining Control and Reclamation Act (HR 11500) as reported jointly from the Subcommittees on Environment and Mines and Mining in November, 1973. The Senate passed its version of the bill, S 425, on October 9, 1973. Some of the provisions of the current version of the bill, which environmentalists consider important, are as follows: a provision to establish a $2.50 per ton reclamation fee on strip mined coal; regulation of the surface effects of underground mining; the provision by which regulatory agencies may designate areas as unsuitable for strip mining; the requirement that stripped areas be returned to their approximate original contour; the requirement that permanent spoil banks be eliminated on steep slopes; the requirement that erosion control practically eliminate adverse impact on streams and lakes; provision for simultaneous control by both state and federal regulatory agencies; and the requirement for the preservation of alluvial valley floors. This latter provision is of particular significance for the arid western states which are both vulnerable to extensive strip mining operations and severely restricted by hydrologic constraints. Industry and utility interests have mounted strong opposition to the same provisions supported by environmental interests.

classifieds

Continued from page 2
control, yes, we the people, over the impersonal agencies, the corporations, bureaus, that once had ruled our lives by profit and computer. The standardization of necessities in settled but adequate variety makes possible the time and quietude for handicraft in ornament and artistry. Stability of model, pattern, process, tools, permits of smaller plants, integral one with another by locality, directed by automation, maintained by people skilled in machines. And people live and work together here; workplace and residence are close; community is here.

WE LEARNED to break the grip of profit, privilege, and expansion as the groverning values of our corporate management, and to assert an ecological and humanitarian conscience. This was to be done by democratic law. And so, we trained ourselves again in governmental process, in wards and counties, caucuses and parties, in legislatures, courts, executive and budget. The corporate structures served us well to stabilize prices, uplift wages, moderate profits, relate production to demand, and site and size our industries to serve the needs of man.

The giant cities now are open, curbside parking gone, sent overhead; suburban traffic halted at the city line; travelers transferred to coach and rail; public transit within the city; alternate streets removed for parks and gardens; the trees and birds restored. Offices and factories have spread in part to smaller towns; but population has continued to decline, and neither town nor city presses on the land. People have space for living once again.

Across the world, proliferation halts. Among the great catastrophes that brought regeneration were the famines. Long years ahead far-sighted students saw the danger; but contemporary faith in techniques clouded vision; industrialization, green revolution, hydropower, irrigation—all these would usher in an age of balance without effort; but not so. Five hundred million deaths reproved the bland assurances. And private agencies, drawing on public funds, offered the clinics and the moral education which brought stability, and then a slow decline to numbers balanced with the land.

The oceans have been restored. Poisons no longer flow from rivers to the seas. The winds no longer carry their dreadful burden of lead and pesticides. The whales have now returned, even the great blue whale, long thought extinct. The ocean fisheries are thriving, gravely depleted through the famine years; stern measures by determined international agencies brought back abundance and protect it now for all. And from these efforts also arose world legislatures, courts, executive and fiscal institutions, the public structure of world peace and order.

Belatedly we learned of power from sun and wind. All roofs are tiled with solar cells, unless indeed we plant green gardens there. We learned the ratio of sun to men. We learned, when once we put our minds to it, to store the energy against the dark and through the winter's dusk. We supplement our roofs with liquid fuels from woods, another solar engine. And winds turn windmills: lazily, because there is no haste; stability and balance are the words.

Community lives in the cooperative farms, in the neighborhoods of towns and cities, offering both freedom and security. Community flowers in groups of friends, in labor unions, even professional societies. Nations perhaps can be communities. Compelled by the technology of transportation and communication, but sought more deeply by the human heart, the world community is born. World law within the democratic process makes its way from land to land. The churches rise again around the world; in western lands white spires in villages. The community of the spirit unites the lesser societies. All this is but a vision of the future.

IN THESE GRIM DAYS of the very real present we wrestle still with multiple catastrophe: the menace of tyranny (even at home); the threat of nuclear annihilation; a stifling urbanization; the danger of economic or technological breakdown; famine and overpopulation; the possibility of disastrous viral epidemics; a probable genetic deterioration of the human species; the extinction of many species of plants and animals, including the basic food grains; and the destruction of the life-support systems of the planet.

But Springtime is hope. The new green rises from the earth in resurrection. The robins are rubies in the fields; the mockingbirds drop music from the skies. Nature may teach us that all life is one. The emotional counterpart of that essential knowledge, the love of nature (and man within it), may help to guide us toward salvation.

—Anthony Wayne Smith