

National Parks & Conservation Magazine

The Environmental Journal

February 1978



Rural Life: Worth Preserving

The protection of units of the National Park System like Cuyahoga Valley National Recreation Area will require land use measures on the periphery. Saving areas critical for wildlife, timberlands, wetlands, farmlands, and historic preservation against urban sprawl will also require such measures. The open countryside must be protected as an essential part of the human habitat. We reprint the following essay (© The Washington Post) as a major contribution to that cause.—A.W.S.

I HAD BEEN invited by a friend to judge the costumes at a Halloween party which was held in the restaurant he opened last year in Shepherdstown, West Virginia, a few miles from Harper's Ferry. Since I already had a long-standing invitation to spend a weekend with him and his wife, I killed two birds with one train ride, and spent three magnificent fall days in bucolic surroundings only 50 miles or so from Washington.

I had already spent most of October working on a book in northwest Connecticut, where the Berkshires spill over from Massachusetts with one last lofty heave of their shoulders, and again the surroundings were bucolic. In both places I was not merely in countryside, but in countryside that is still deeply rural in its ways: a farmer building his own dry stone bridge over a small river in Connecticut; a farmers' auction that is held weekly in West Virginia. Yet almost in touching distance was the huge urban and suburban sprawl that stretches down the East Coast, so I began to think about the survival of the countryside and of rural life in a (so far) ever-expanding urban environment.

We have got into the habit of thinking of farming as something that is done only "way out there" on vast acreages that are remote from city life. Most of the farming stories in our big city media are about what we uglily call agribusiness, and therefore we lose the sense that town and country can live closely in touch with each other. W. H. Auden once said that the Eighteenth Century—in other words, before the Industrial Revolution—was the last time when town and country were in a fitting relationship with each other. One knows what he meant, but it is not all so bleak.

I first became strikingly aware of this in Britain in 1964. Owing to the coincidence of several unusual circumstances, the general election that year was something like a presidential campaign. The two new party leaders, Harold Wilson and

Alec Douglas-Home, criss-crossed the British Isles as they showed themselves to the British people, and as a political columnist I followed them for eight months. I thought that I knew my country well, but for me and my colleagues our travels were an eye-opener.

There is so much countryside left in Britain, even though the population is now approaching 60 million in a total area much smaller than that of Colorado, and what is possible there must be possible elsewhere. Town and country are in some relationship with each other.

SO MY VISITS to Connecticut and West Virginia interested me, for in these cases one is not talking about the huge ranges and even feed lots of the West, or the great ranches and rice fields of Texas, or the vast orchards of California. One is talking of farms that a person and not an organization can farm, and of the rural life, still associated with the city, which is sustained around them. It is worth reminding ourselves that this still exists, and that we can make up our minds to save it.

Let us begin with public transport, for it is essential to rural life. The part of Connecticut where I stayed is served by a bus line called Bonanza. It is used by the people I was staying with to get to and from New York, a journey of three hours, and I used it also to send a manuscript to a magazine in New York, which in turn sent the galleys back to me by bus. These galleys were addressed to me "c/o Collins Diner, Canaan, Conn." There one waits for the bus, knowing that one will not miss it, since the driver comes into the diner for a cup of coffee. This is rural life.

I went to West Virginia by train, a clean, punctual, busy train with two cafeterias on it, but it was when we drove several times from Shepherdstown to Charles Town, and came to four railroad crossings in 10 miles, that I was reminded of the essential role which trains used to play in rural life. One could go, and so went, anywhere by them. Cars are no substitute, both because a good and reliable train service is an immense convenience, and because it ties rural communities together as cars never do.

They also tie the country and the town to each other in a way that cars on a freeway do not do. It simply was not as pleasant, it did not mean as

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National Parks & Conservation Magazine

The Environmental Journal Vol. 52, No. 2, February 1978
NPCA · National Parks & Conservation Association · NPCA



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COVERS Chiricahua National Monument, by Russell D. Butcher
Eons of erosion have sculpted the huge buff-colored pinnacles, turrets, and balanced rocks that cover the western slopes of the mountains in Chiricahua National Monument. The largest balanced rock in the monument (front) dwarfs the human figure scaling its base. Organ pipe formations (back) amaze visitors shortly beyond the Visitors Center. (See page 4.)

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A lush island in a sea of desert, the Chiricahua Mountains of southeastern Arizona offer some startling and delightful surprises

article & photographs by RUSSELL D. BUTCHER

Arizona's Chiricahuas

NONE OF THE photographs my wife and I had seen quite prepared us for the incredible landscape of Chiricahua National Monument on the western flank of the Chiricahua Mountains of southeastern Arizona. Nor was there a hint of what lay ahead as the paved highway from Willcox left the vast desert grassland of Sulphur Spring Valley and entered the mouth of Bonita Canyon.

A mile beyond the entrance to the monument one reaches the attractive stone Visitor Center that blends so well into the surrounding oak woodland. From there the road enters a narrower stretch of the canyon, and the scenery suddenly changes. Rank upon rank of enormous pinkish-buff pinnacles, pillars, turrets, and weird monolithic shapes cover the steep slopes. Where vertical fracturing of the rock has produced a series of close-ranked columns, huge organ pipe formations tower far above the shady groves of Arizona cypress.

Five or six miles farther on, the road ends high up in the Chiricahuas at Massai Point. The panorama from there is spectacular—across a seemingly endless array of eroded rock figures. In the distance, some two thousand feet below, stretches the expanse of Sulphur Spring Valley and the jagged crest of the Dragoon Mountains, forty miles away.

Delightful trails lead from Mas-

sai Point, looping many miles through what has long been called "the Wonderland of Rocks." Our first hike was on one of those perfect late-winter mornings, with cool, dry air and bright, warm sunshine. At first we wound down, through a fragrant open forest of pinyon pines, junipers, and oaks, and along an intimate side valley where a few tall Chihuahuas pines, alligator junipers, and gracefully spreading cypresses grow. For a little way the trail parallels a dry stream bed that flows with water only during periods of winter rain and snow or after heavy summer storms when lightning cracks down upon the mountains and deafening thunder echoes in the canyons.

Beyond the sheltered valley and around a bend, the trail led us into the much wider and deeper Rhyolite Canyon, where sweeping views of rock formations surrounded us in all directions. Some of the columns above us had been weathered into angular shapes, almost as if deliberately carved by man. For nearly a mile we hiked down-canyon.

At a fork in the trail, we turned into Echo Canyon. Here the cool shade provides ideal conditions for the majestic cypresses—some of which are a hundred feet tall with trunks from two to three feet in diameter. At a darkly wooded spot called Echo Park we sat for a while

on the needle-covered ground beneath the trees and listened to the gently whispering wind and the distant twittering of tiny bushtits.

The climax of our hike came next. The trail suddenly switch-backed steeply out of the narrow gorge, giving us views of gigantic fractured boulders and flat-topped rocks stairstepping up the mountainside. Tall Apache pines, rising from the canyon bottom, were sidelighted by the slanting sun, their long needles glistening against the shadowed cliffs.

The skillfully engineered trail, dating from the CCC days of the 1930s, then winds through a maze of intriguing passageways and ledges. Here we peered through a window or there through a narrow

slot that neatly frames little vignettes of the landscape. Picturesque, low-growing Mexican pinyon pines, junipers, and clumps of red-barked manzanita resemble the manicured shapes and arrangements of a Japanese garden.

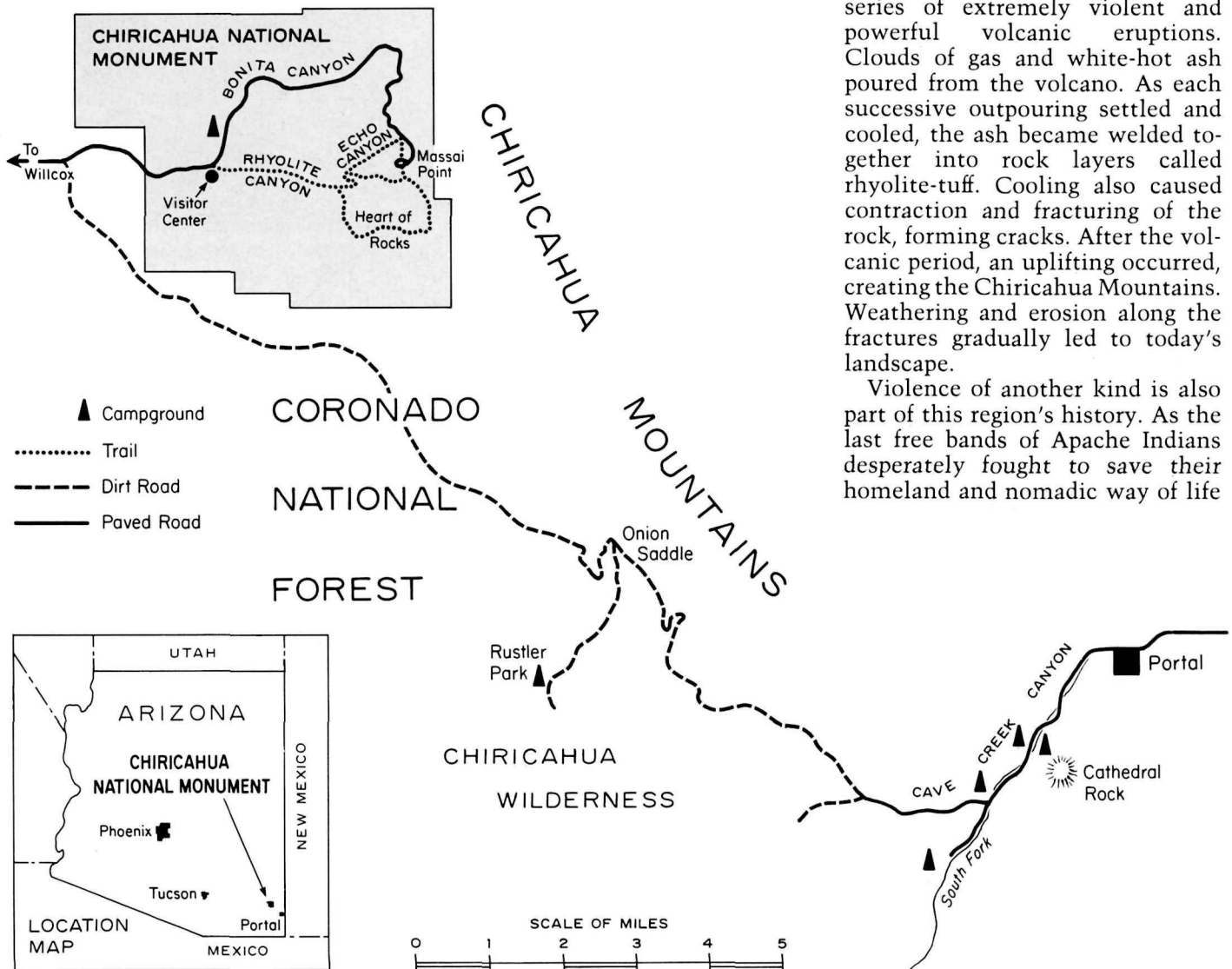
ANOTHER MEMORABLE visit to the monument was in the company of a friend from Norway who had never before seen the American Southwest. On that warm spring day we took the longer, five-hour loop trail, and by early afternoon we had reached the amazing Heart-of-Rocks, where the greatest array of formations rose all around us. As we picnicked on one of the flat-topped rocks, we felt surrounded by a vast audi-

ence of giant spectators; we, the actors, were performing for their silent amusement.

Nearby we discovered the largest of all the balanced rocks—an immense block weighing many tons is somehow still perched on its narrow pedestal that rests on a massive base. Even a human figure scaling the side of the formation fails to convey a meaningful sense of its size. We wondered how long it would be before the rock crashes upon the tall pines below.

“How did such an *unbelievable* place ever happen?” our Norwegian friend wanted to know. Geologists say that the history of what we see in Chiricahua National Monument dates back 20 to 25 million years ago, when this region was jolted, burned, and smothered by a long series of extremely violent and powerful volcanic eruptions. Clouds of gas and white-hot ash poured from the volcano. As each successive outpouring settled and cooled, the ash became welded together into rock layers called rhyolite-tuff. Cooling also caused contraction and fracturing of the rock, forming cracks. After the volcanic period, an uplifting occurred, creating the Chiricahua Mountains. Weathering and erosion along the fractures gradually led to today’s landscape.

Violence of another kind is also part of this region’s history. As the last free bands of Apache Indians desperately fought to save their homeland and nomadic way of life

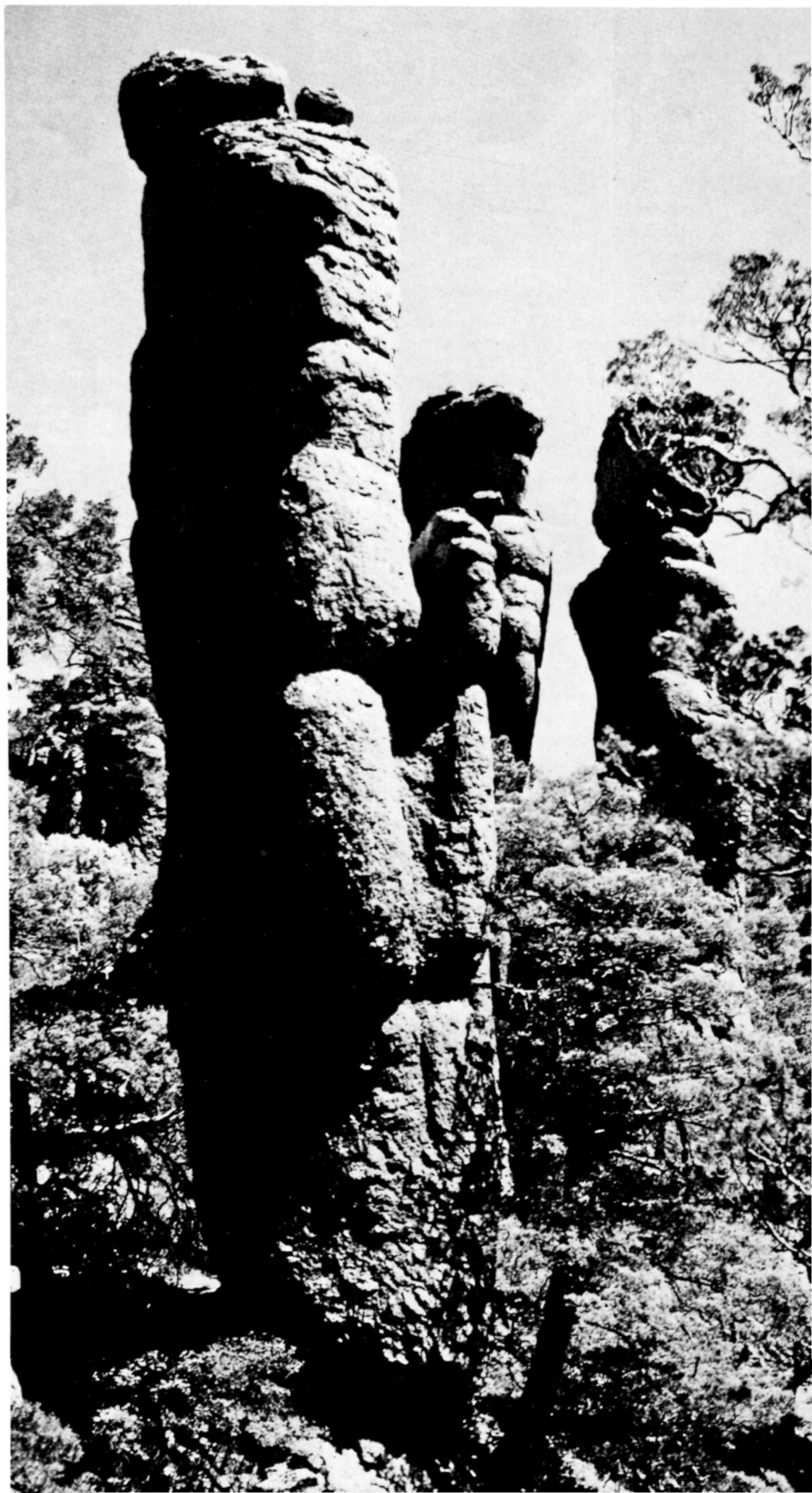


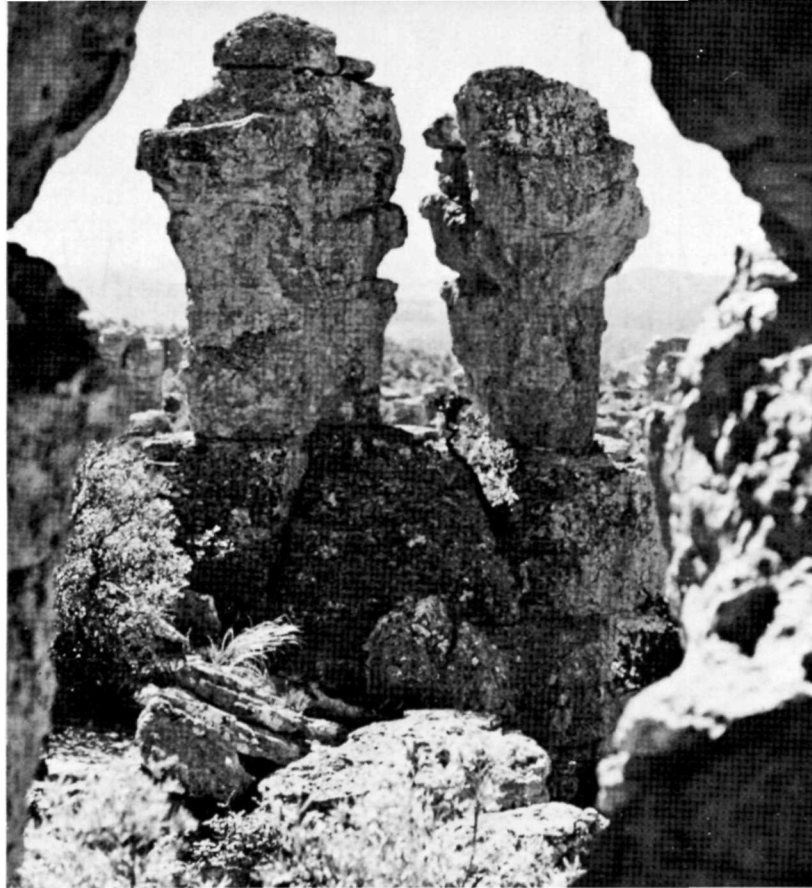
from the onrushing tide of the white man in the 1860s, 1870s, and early 1880s, rugged mountain terrain such as the Chiricahua Mountains provided ideal hiding places. From there the Indians frequently attacked ranchers, prospectors, and stagecoach travelers—spreading fear, destruction, and bloodshed.

One of the most prominent headlands of the Chiricahuas, just northeast of the monument, resembles a huge reclining profile of an Indian's face; and it is named in memory of the courageous Apache leader Cochise, who initially wanted to make peace with the white man. In 1861, though, Cochise recoiled like a rattlesnake after being falsely accused of kidnapping a white child. For years thereafter he and his band of warriors ravaged white settlements and disrupted stagecoach travel all across southeastern Arizona. U.S. military forces finally forced peace with Cochise in 1872, and the Indians were placed on a reservation.

The more militant Apaches—frustrated with the white man's negligence and cruelty—repeatedly escaped from the reservation and created havoc. In 1885 Geronimo escaped and led a band of fifty warriors on a series of bloody raids. It was a sickly and thoroughly exhausted group of Apaches (twenty-four men and fourteen women and children) that succumbed to a final surrender on September 5, 1886, and a humiliating exile in Florida.

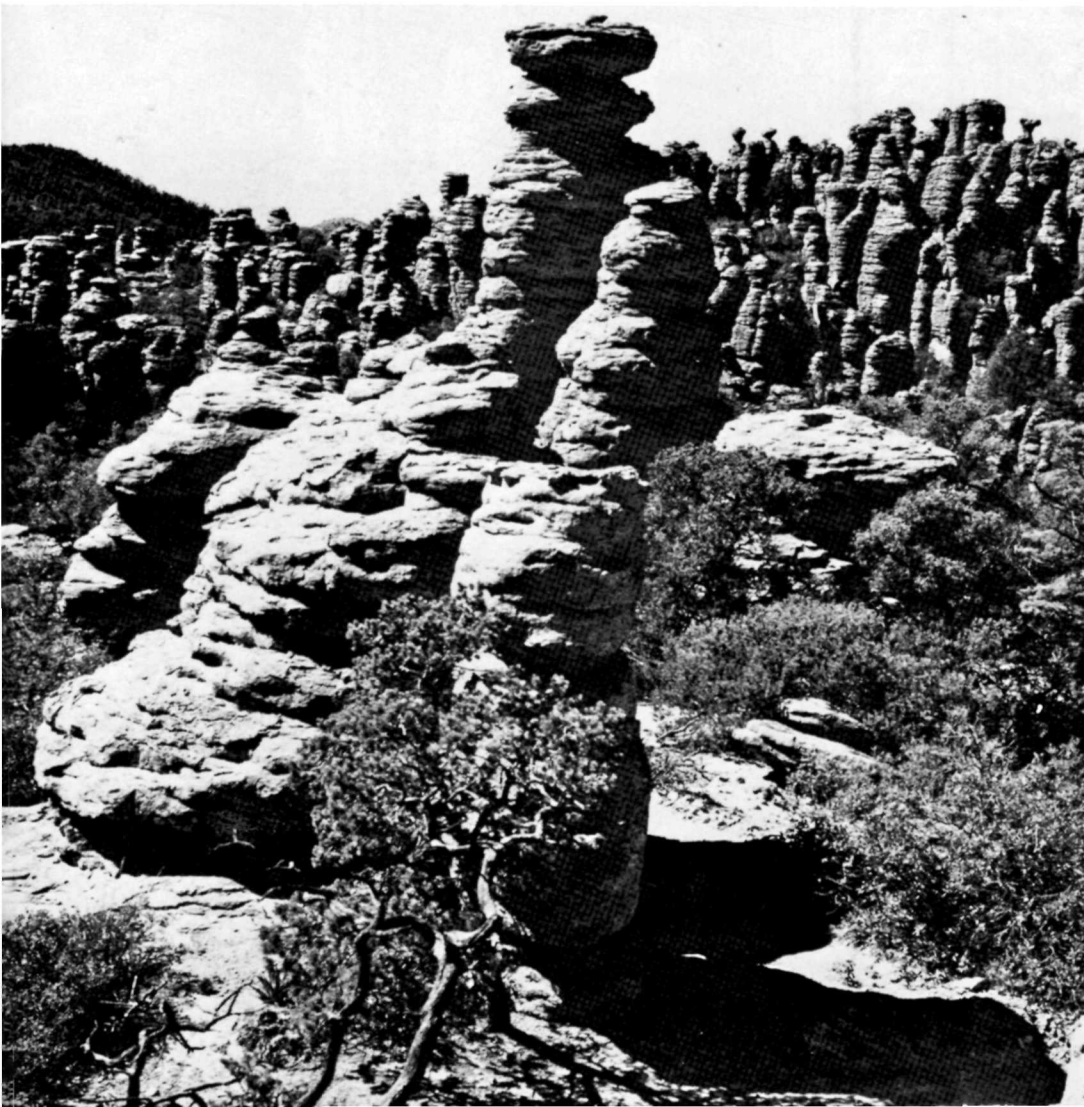
Like ancient Roman ruins, rock pillars rise above the trees. But man did not build these monuments. Erosion along cracks caused by cooling and slow uplifting of ancient volcanic deposits gradually sculpted the rock into the many strange shapes we see today in Chiricahua National Monument.





Punch and Judy in the Heart-of-Rocks area.

Picnicking in the Heart-of-Rocks, we felt surrounded by an audience of giants.



One of the last Chiricahua Apaches to roam free was "Big Foot" Massai. In 1892, after stealing a horse from a nearby ranch, he rode up into the Wonderland of Rocks, where his pursuers lost his trail near the point now bearing his name.

The 10,645-acre national monument was established in 1924 and was administered for a few years by the U.S. Forest Service in conjunction with the surrounding unit of Coronado National Forest. Today the National Park Service offers an interpretive program that includes exhibits at the Visitor Center and two self-guiding nature trails that explain something of the plant life of the mountains.

A SHORT DISTANCE outside the monument a dirt road (usually closed part of the winter) branches southeastward from the paved highway, winds over the crest of the Chiricahuas at 7,600-foot Onion Saddle, and drops quickly to one of the most beautiful and spectacular canyons anywhere in the

An inviting trail winds for miles through evergreen oak woodlands in Cave Creek Canyon's South Fork in Coronado National Forest on the east side of the Chiricahua Mountains. This lovely canyon is popular with birders and scientists the world over for its rich variety of plant and animal life. It should be designated a National Zoological Area.



NATIONAL PARK SERVICE

desert Southwest. Cave Creek Canyon's towering pink and buff rock walls and formations rise a thousand to two thousand feet above the peaceful riparian woodland of sycamores, oaks, junipers, and pines. As its name implies, caves of endless variety have been weathered out of the massive cliffs.

Many people have come to know Cave Creek Canyon on the eastern side of the Chiricahua Mountains because of the American Museum of Natural History's Southwestern Research Station there. Students and scholars come from all over this country and the world to study various aspects of the natural environment from hummingbirds to scorpions. Many a Ph.D. dissertation has been written there.

One of the most interesting trails begins at the end of the road in the canyon's South Fork. Crossing and recrossing the creek, this path winds for miles through groves of Arizona white and silverleaf oaks, Apache and Chihuahuahua pines, junipers, cypresses, big-toothed maples, and here and there an Arizona madrone and clumps of dagger-leaved Schott's yucca. Seemingly out of place growing amid the shaded forest, this yucca blooms with a stalk of creamy white flowers in early July.

It is to the South Fork that birders come from near and far in hope of catching a glimpse of the rare coppery-tailed trogon. This colorful bird migrates from Mexico in late spring to nest in just a few of the mountain canyons of southeastern Arizona. In October 1977 ornithologists made another exciting sighting. From October to December four magnificent eared trogons of Mexico were residing in the canyon until the supply of madrone berries gave out. This was the first sighting of this bird in the United States.

Other especially interesting birds are the painted redstart, red-faced and olive warblers, Arizona woodpecker, and the striking blue-throated and Rivoli's hummingbirds. More than 250 species of birds

have been recorded in the Chiricahuas.

The Forest Service provides a number of campgrounds scattered along pleasantly wooded sites in the canyon. At the tiny settlement of Portal, at the canyon's mouth, excellent and attractive accommodations are provided at Cathedral Rock Lodge and the more rustic Cave Creek Ranch. (Advance reservations are suggested.) It is not unusual for guests there to see white-tail deer, javelinas, and an occasional coatimundi—a long-tailed, long-snouted relative of the raccoon. Three species of skunks inhabit the mountains, and five species of rattlers live in or near the Chiricahuas.

As one of America's most popular birding areas and one of the most diverse biotic communities in the entire National Forest System, Cave Creek Canyon is currently the subject of a great debate. Environmentalists and research biologists from all over the country are concerned about the human impact on the area's fragile ecosystem and are urging the Forest Service to designate Cave Creek watershed as a Wildlife Habitat Management Area (WHMA) and the South Fork as a National Zoological Area. On the other side of the controversy are ranchers, hunters, and trappers and some nonwilderness recreationists who bitterly oppose regulations in the Coronado National Forest that might restrict their activities.

District ranger Bernard H. Brunner says that development of an overall land management plan for Coronado National Forest (which includes ranges in southeastern Arizona) has not yet started and that the schedule for doing so is not complete. But, he says, in the beginning stages of land management planning members of the public will be urged to participate. Designating the Cave Creek basin as a wildlife habitat management area and the South Fork as a zoological area will be considered along with other alternatives.

It is hoped that the wildlife will

soon receive greater protection under state law. In particular, the populations of furbearing mammals (bobcats, coatis, and foxes) have been greatly reduced by a sharp upsurge in trapping.

AS I LOOK up at towering Cathedral Rock, dramatically sidelighted in the morning sun, a comical roadrunner is strutting about a prickly pear cactus in search of lizards and a Gambel's quail is calling from the top of a mesquite. Without a doubt, Arizona's Chiricahuas are among the most fascinating of all the many mountain ranges that rise one after another across the hundreds upon hundreds of square miles of the desert West. We agree with Earl Jackson (in his little book, *The Natural History Story of Chiricahua National Monument*) that this range is "one of the 'mostest' places that . . . [we] love on this earth." ■

Russ Butcher's book, *The Desert* (The Viking Press, 1976), portrays in color photos and text the magnificent parks and other scenic reserves in the western deserts of the United States. His latest book, *Field Guide to Acadia National Park, Maine* (Reader's Digest Press), was published in 1977. Russ has long been a contributor to this magazine.

Message to Members

Help Protect Cave Creek Canyon

Concerned NPCA members should write to the Forest Service to urge designation of Cave Creek watershed as a Wildlife Habitat Management Area and the South Fork as a National Zoological Area. Ask to be informed when the development of the land management plan for Coronado National Forest is scheduled so you can participate in the planning. Write:

Ken Weissenborn, Supervisor
Coronado National Forest
301 West Congress Street
Tucson, AZ 85701



CLOUD DECK, MALIBU CANYON, BY BRUCE BARNBAUM



DEVELOPMENT IN THE SANTA MONICA MOUNTAINS, BY NATIONAL PARK SERVICE

Thisor This?

What Future for the Santa Monicas?

The Santa Monica Mountains must be protected within the next few years if this unusual natural retreat is to be saved from developers

by ANTHONY C. BEILENSON

DESPITE the popular image of Los Angeles as a smoggy, sprawling urban center, it is the only major city in the country containing a rugged mountain range. The Santa Monica Mountains rise in the heart of the nation's second largest city and stretch for fifty miles to the sea. Deep canyons with flowing creeks, ancient oak groves, sand dunes, and mountain-top vistas entice city dwellers to retreat from the urban bustle to the serenity of a natural setting. Numerous varieties of sage and sumac and hillsides of wildflowers perfume the air over the mountains.

Estuarine lagoons attract innumerable shorebirds, and tidepools teem with aquatic life. Most of the two hundred thousand acres of the Santa Monicas, extending across Los Angeles and Ventura counties, are still untouched by the many suburban developments that have been spreading over the entire surrounding flatland.

The northernmost four of the eight Channel Islands are the westernmost peaks of the mountain chain and are separated from the mainland by only ten miles of Pacific Ocean. Two of the Channel Islands are already designated as a

national monument. All of the islands provide habitat for a large population of sea elephants, seals, and sea lions along the Pacific Coast and for numerous rare and endangered plants, animals, and sea birds. Thousands of years of separation from the mainland have produced many species that took different evolutionary courses from mainland forms. As a result, many of the islands' plant species, such as certain varieties of oak, poppy, morning glory, and paintbrush, and animals such as the island kitfox and the island night lizard are found nowhere else in the world.

The future use of this rugged coastal mountain range will be decided in the next few years. Without government action, the human population in the mountains will double in less than twenty years. The Santa Monica Mountains Comprehensive Planning Commission has estimated that without extensive parkland acquisition and restraints on land use the population in the mountain region will grow from the present 192,000 people to between 319,000 and 356,000 by 1990.

Developers have already submitted plans to local governments

to erect several thousand new single-family homes and townhouses. Three large proposed developments alone would add 12,000 inhabitants to the mountains. The tops of ridges would be cut off to create flat lots for modern housing tracts. Even now, natural stream beds are being converted into concrete drainage channels, and the canyons are being used as landfills for Los Angeles wastes. The opportunity to preserve this vast scenic wild area is slipping away all too quickly.

Threats to the Channel Islands and mainland seashore come

mostly from plans for energy development. The Department of the Interior proposes to lease large tracts of the outer continental shelf near the islands and in Santa Monica Bay for offshore oil development in 1979. In addition to oil drilling, the waters over the submerged part of the Santa Monica mountain chain will be used for shipping crude oil and probably liquid gas as well, creating a potential hazard of unpredictable dimensions. Of greater significance than the esthetically undesirable effects of offshore oil rigs, the shores and waters will be threatened with an increased risk of oil spills, blowouts,

seepage, and routine losses from the expanded oil exploration and tanker traffic. A report entitled *Offshore Oil and Gas Development: Southern California*, released by the California State Office of Planning and Research in August 1977, predicts that oil spilled anywhere in the Santa Barbara Channel will be washed ashore on either the islands or the mainland or both.

PRESERVING the Santa Monica Mountains will bestow a number of benefits on the surrounding communities and the nation. The mountains and seashore provide a magnificent recrea-

tional opportunity for the area's ten million residents as well as the eight million visitors who come annually to Southern California. The mountains provide relief from the noisy, stressful, polluted world below them. The ridges and peaks offer majestic ocean vistas. The mountains and islands contain more than a thousand archeological sites, some dating back as far as ten thousand years, which reveal the history and culture of California's earliest inhabitants, the ancient Chumash peoples, as well as of other Indian groups. The hillsides and canyons contain a diversity of native plants and animals, and a



COASTLINE AT LEO CARILLO STATE BEACH, BY BRUCE BARNBAUM

variety of sea birds make their home in the coastal bluffs and lagoons. The giant kelp beds, bays, and inlets are known for their biological diversity, complexity, and productivity. Thus, substantial recreational, scenic, ecological, historical, and cultural returns could be realized from investing in preservation of the Santa Monica Mountains and seashore, as well as benefits to the physical and psychological health of the surrounding populace.

Perhaps the greatest return on this investment would be realized in increased recreational opportunities for a city with only 2 percent of its area presently dedicated to park use. (Los Angeles has less park area than any other large American city. By contrast 14 percent of New York City and San Francisco, 22 percent of the District of Columbia, and more than 8 percent of Chicago are in parkland.) Year-round, the Santa Monicas are used for picnicking, hiking, hang gliding, horseback riding, birding, rock climbing, scuba diving, surfing, swimming, beach walking, sunbathing, meditating, and stream wading. Wide meadows and gently sloping hills in portions of the eastern and northern mountains lend themselves to fairly intensive recreational use, as do the wide sandy beaches. The steeper slopes and rocky canyons of the western portion of the mainland mountains and the islands can be preserved as undisturbed systems and used by people seeking a natural outdoor experience. For whatever reason the city dweller is attracted to the mountains, the Santa Monicas are close at hand. The farthest part of the range is less than a ninety-minute drive from downtown Los Angeles. Griffith and Elysean parks, the easternmost tip of the range, are in the center of downtown Los Angeles. The mountains are also easily accessible to residents of Santa Barbara and Ventura counties.

In addition to the recreational benefits the mountains offer, they contribute in other ways to the mental and physical health of the



MEADOWLANDS AND PEAKS, MALIBU CREEK STATE PARK, BY BRUCE BARNHAUM

residents of the surrounding cities. As the only large area of open space not overrun with automobiles, the mountain air is remarkably free of pollutants. The southwesterly winds blow clean air into the heart of the city through this last corridor of unurbanized land, thus lessening the load of hydrocarbons in the lungs of urban dwellers. If development spreads in the mountains, all the narrow mountain roads would be widened, and the resulting traffic would destroy this valuable airshed.

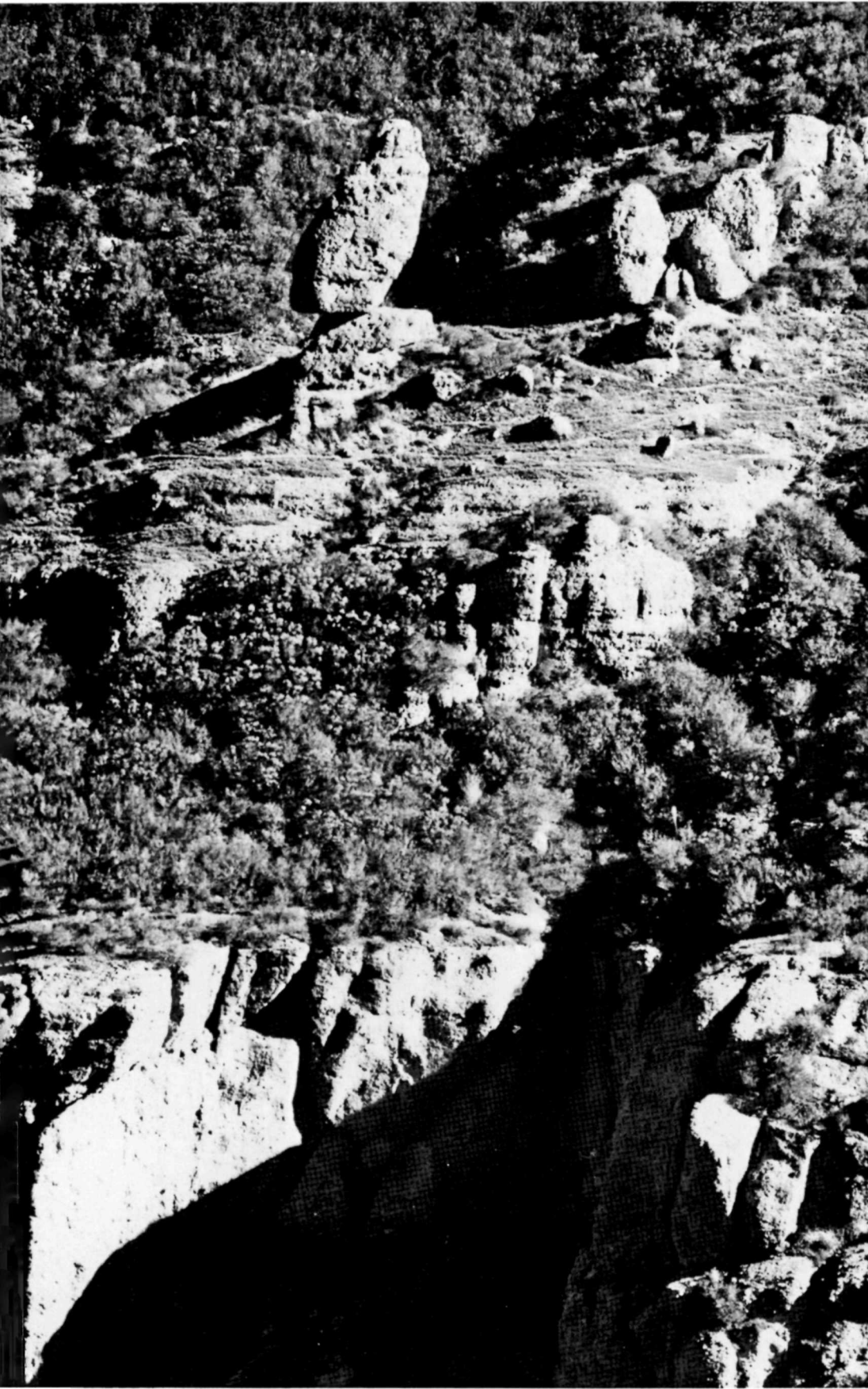
The mountains and seashore are also a large outdoor laboratory for schools throughout Los Angeles and Ventura counties that rely on the Santa Monicas for field trips to study geology, archeology, and the interrelationships of terrestrial and aquatic plants and animals. The shrinking of this natural landscape would destroy the delicate balance of nature and close this open-air classroom to the next generation of students.

The mountains provide a large natural habitat area for mule deer, bobcat, coyote, gray fox, mountain lion, badger, red-tailed hawk, os-

prey, a pair of golden eagles, and other birds of prey. They are also a favored foraging area for the few remaining California condors. Only about forty-five of these majestic birds have survived man's assault on their environment.

The Santa Monicas contain an irreplaceable human record and a wealth of information on the earliest inhabitants of California including the Feranino, Gabrielino, Tongva, and Chumash peoples. One archeological discovery on Santa Cruz island is thought by some archeologists to be evidence of the oldest known habitation of man in North America, dating back some thirty thousand years. By the sixteenth century, the Chumash, traveling in their swift pine-plank canoes, had established an elaborate trading network between the Channel Islands and the mainland.

In 1542, Spanish explorer Juan Cabrillo first landed in California on one of the Channel Islands. The first white colonists from Mexico settled in the Santa Monicas in the late eighteenth century, and the original Spanish land grants were issued creating large estates called



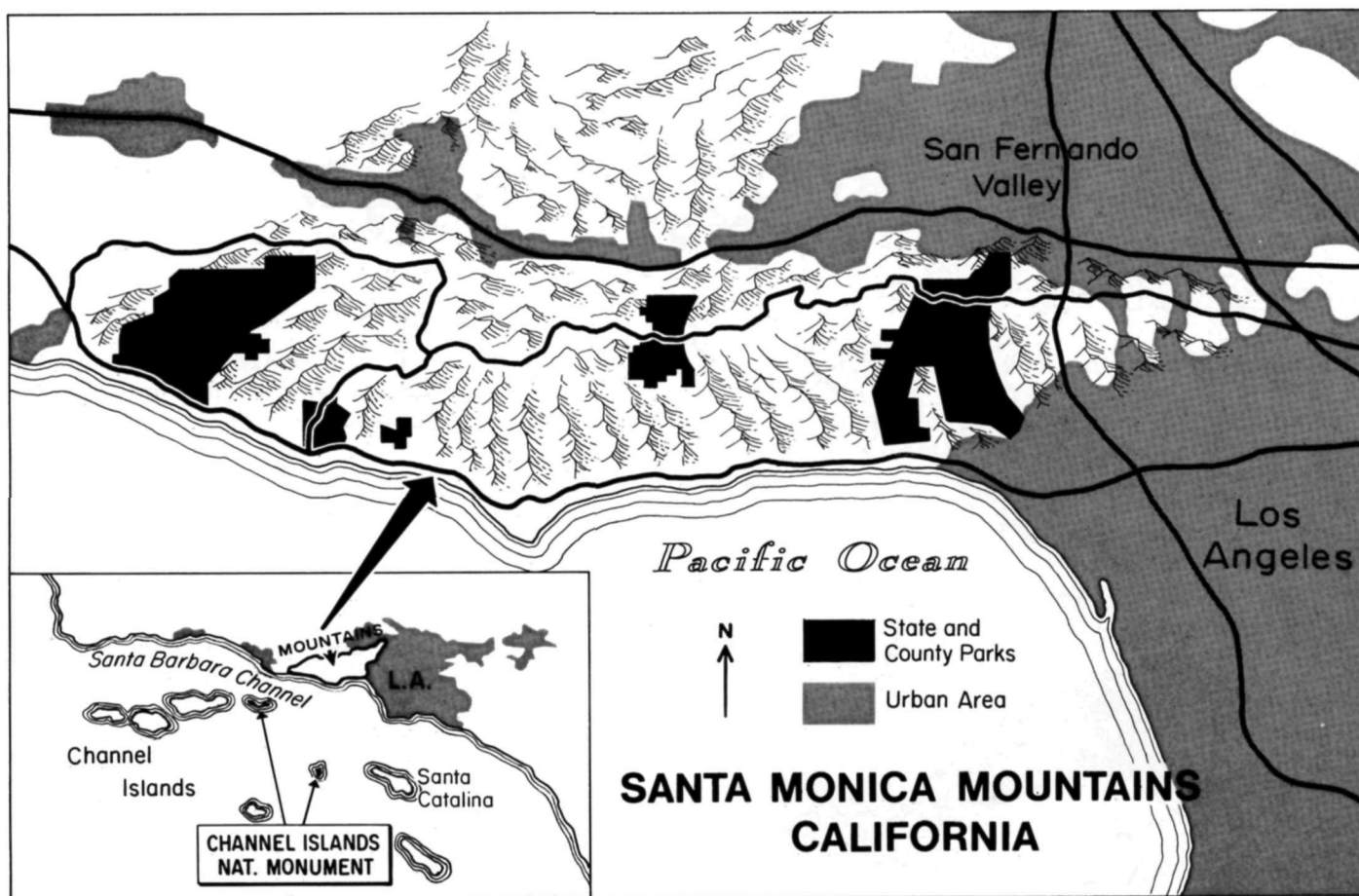
CLIFFS AND BALANCED ROCK NEAR BONEY MOUNTAIN, BY BRUCE BARBRAUM

ranchos. By the 1900s, homesteaders had moved into the mountains around the *ranchos*, and pressures mounted for subdivision and development. A few of the original landholders and their descendants fought for years to preserve the huge ranches and to prevent highways, railways, and water projects. However, land that could be purchased for ten cents an acre in the 1850s was worth ten dollars an acre by the turn of the century. Fortunes were made and lost in the Santa Monicas as large landholdings were subdivided and became exclusive residential communities. By the 1940s, urbanization was sweeping Los Angeles, consuming all the available open space. Miraculously, nearly 200,000 acres of land in the mountains remain unspoiled.

DURING the past decade California embarked on an aggressive parkland acquisition program and created three large state parks in the Santa Monicas totaling more than 31,000 acres. If we are to reap the benefits of the mountains, however—if we are to protect the airshed, take advantage of the diverse recreational opportunities, preserve archeological sites and natural habitat—we will need to more than double the amount of land in public ownership.

When we consider all the benefits, I think the cost of achieving these benefits is not so large. For \$100 million to \$150 million, at current market values of \$500 to \$4,000 an acre, 30,000 to 50,000 additional acres of parkland and beaches could be purchased. Such a purchase would preserve the heart of the mountain range and its contiguous seashore. By connecting the three existing state parks and public beaches with additional parkland and seashore, we could create a continuous equestrian and hiking trail from the heart of Los Angeles to the sea.

Of course, after initial purchase, rules and regulations must be established not only for the park's management but also for the use of lands bordering the public lands.



Buffer areas should be zoned by local governments for fewer dwellings per acre and lower population density and for uses compatible with recreational land and wildlife habitat, such as agricultural use.

In 1976 the California state legislature created the Santa Monica Mountains Comprehensive Planning Commission and charged it with developing a plan for protecting the mountains. That protection will require, according to the commission, a national parkland acquisition program and some restrictions on land use in the rest of the mountain area. Unfortunately, the state legislature did not give the commission power to regulate land use in order to implement its plan. The plan must be submitted to the legislature, and further legislation will be necessary to implement it.

The Channel Islands and the mainland coastline also must be protected from threats beyond the land's edge. Multiple-use conflicts

among wildlife and sea life habitat, recreational use, military activities (the area is a missile target range for Air Force and Navy tests from Point Mugu and San Nicolas), tanker traffic, and offshore oil and gas development must be resolved. Oil spill containment methods must be tested and improved. The Department of the Interior should reconsider its proposed lease sale near the islands and should require strict safety precautions to prevent oil spillage. Tanker safety regulations need to be tightened to reduce risks to the fragile island ecosystems. The Department of Commerce could also protect against the hazard of oil spills in this active seismic area by designating the waters for twelve miles around the islands for special protection under the Marine Sanctuaries Act.

EACH LEVEL of government —local, state, and federal— must share in the cost of protecting

the Santa Monicas. If we don't act quickly, this mountain range in the midst of the nation's second largest metropolis with so many present and potential benefits to offer the public will be used to benefit land speculators, developers, and the fortunate few wealthy enough to live in the subdivisions the developers build there. The millions of Los Angeles residents and visitors to the metropolitan area will lose a priceless opportunity as houses creep up the ridges, dry up the streams, and drive out the wildlife. We can always build subdivisions, tennis courts, and shopping malls; but we cannot recreate wilderness and other natural areas. ■

Congressman Anthony C. Beilenson represents the Twenty-third District of California, which includes western Los Angeles County. He has proposed legislation that would preserve the Santa Monica Mountains and the Channel Islands from destructive forces.

by WILLIAM O. TUCKER, JR.

The popularity of ginseng in the Orient as a panacea and aphrodisiac contributed to the rarity of the North American species

Ginseng: The Magical, Mystical Root

FOR MANY YEARS hunters from Maine to Georgia have taken to the woods to search out the most valuable quarry in the East—the world's most fascinating herb, ginseng.

For nearly four thousand years the Chinese have been using ginseng for its medicinal and magical properties. Legends persist about the rare "man-shaped" roots of China that have saved the lives of people on their death beds. One of the most repeated themes in the legends is the belief that ginseng could come out of the ground and become a person or some other form, such as a ginseng bird. The plant most frequently appeared in these tales, however, as a child who would mingle and play with other children. The stories often told how the ginseng child would work miracles to help right the wrongs caused by ruthless and greedy people and would reward those who were persevering, kind, and unselfish. A ginseng child could be spotted by a red ribbon it wore around its body. When someone removed the red ribbon, the ginseng child lost its powers and enabled the one removing it to find where the child lived. That person could then dig the root of the ginseng child, which was the most perfectly formed and therefore the most potent and valuable of roots.

An old Chinese medical text states that ginseng is "a tonic for the five viscera, quieting animal spirits, establishing the soul, allaying fear, expelling evil effluvia, brightening the eye, opening the heart, benefiting the understanding, and, if taken for some time, it will invigorate the body and prolong life." One early Chinese emperor

reputedly paid the equivalent of \$10,000 for a single root, and another emperor sent a ginseng root as a highly valued gift to Peter the Great.

Modern Chinese, Koreans, and other Oriental people still prize ginseng and are willing to pay exorbitant prices for it. They use it as a tonic and to cure disorders of the nerves, lungs, and stomach. They use it in the treatment of such ailments as diabetes, gastritis, insomnia, anemia, arthritis, malaria, headache, and sexual impotence. They also use it as an aphrodisiac, to reduce fever, to alleviate both high and low blood pressure, to treat coughs and colds, to increase perspiration, to prevent wrinkles, and to cure rheumatism.

It is difficult for most Westerners to believe that any one drug or herb could possess such miraculous and sometimes contradictory qualities, but in China ginseng is displayed in drugstores right beside the latest scientific compounds, and it is often used in combination with other drugs.

How many of ginseng's alleged benefits are factual, and how much is superstition? Some folk remedies have been proven by science to be effective, and many modern medical compounds are derived from herbs. For example, digitalis, a heart stimulant, comes from foxglove; podophyllin resin, an ingredient in many liver pills, comes from mayapple; and quinine is derived from cinchona bark. A synthetic formulation of an active ingredient similar to that found in white willow bark, which Indians and later country folk used for years to treat fever, has given us aspirin. In fact, according to the Natural

Resources Defense Council, "an extremely important group of drugs, the alkaloids, which are largely derived from tropical plants, are used for cardiac problems, hypertension, and leukemia, and they show promise in treating several other forms of cancer. . . . As many as one-half of all prescriptions written in the United States each year contain a drug of natural origin as sole active ingredient or as one of two or more main ingredients."

Researchers in Europe and Asia have been exploring ginseng's healing potential for some time. A British experiment has established that small doses of ginseng extract, after about a month's treatment, enabled mice to swim one and a half times as far before exhaustion as untreated mice. Another study done on mice at Toyama University, Japan, established that the extract of *Panax ginseng* stimulates every aspect of protein and nucleic acid metabolism. In another experiment large doses of poison were administered to rats after they were fed ginseng; they did not die. In still other studies topical application of ginseng inhibited inflammation of gums in humans and in fact increased generally the protective capacities of periodontal tissues.

It has also been scientifically reported that ginseng will prevent change of body temperature in animals and has prevented the development of fever induced by typhoid or paratyphoid vaccine. In an experiment in Russia, scientists found that proofreaders and telephone operators worked significantly faster and more accurately when they had ginseng in their diet. The antistress action of ginseng may

prove its most generalized and important use. Eastern faith in ginseng's powers may yet be vindicated by medical research.

GINSENG MEANS "human-essence" in Chinese. The most highly prized species of ginseng, *Panax ginseng*, grows in the Soviet Far East, China, and Korea. *Panax quinquefolius*, the less valuable species of the herb that grows in North America, has been recorded in the wild in at least thirty-two states as well as in the provinces of Quebec, Ontario, and Manitoba, Canada. In the Far East the supply of wild *Panax ginseng* is almost exhausted.

Soviet hunters still search the area north of Vladivostok for the rare wild roots in that area. The mountains on the China-North Korea border are also still scoured for the elusive one-hundred- to two-hundred-year-old plants. Although tales still abound of one-thousand-year-old roots, scientists believe that such claims are more myth than reality.

The most valuable ginseng roots are old and big and resemble a man, with a body, arms, legs, and head. Such a root is believed in South Korea to give ten years more life. In South Korea, only two or three such ideal manlike roots are found each year, and they can bring from \$1,000 to \$2,000 each. The Russian wild root displayed in the agricultural pavilion of Moscow's Achievement Exhibition is reputedly insured for about \$35,000.

The seeds of ginseng may take as long as eighteen months to germinate, and the sprout takes another three to six years to mature. The



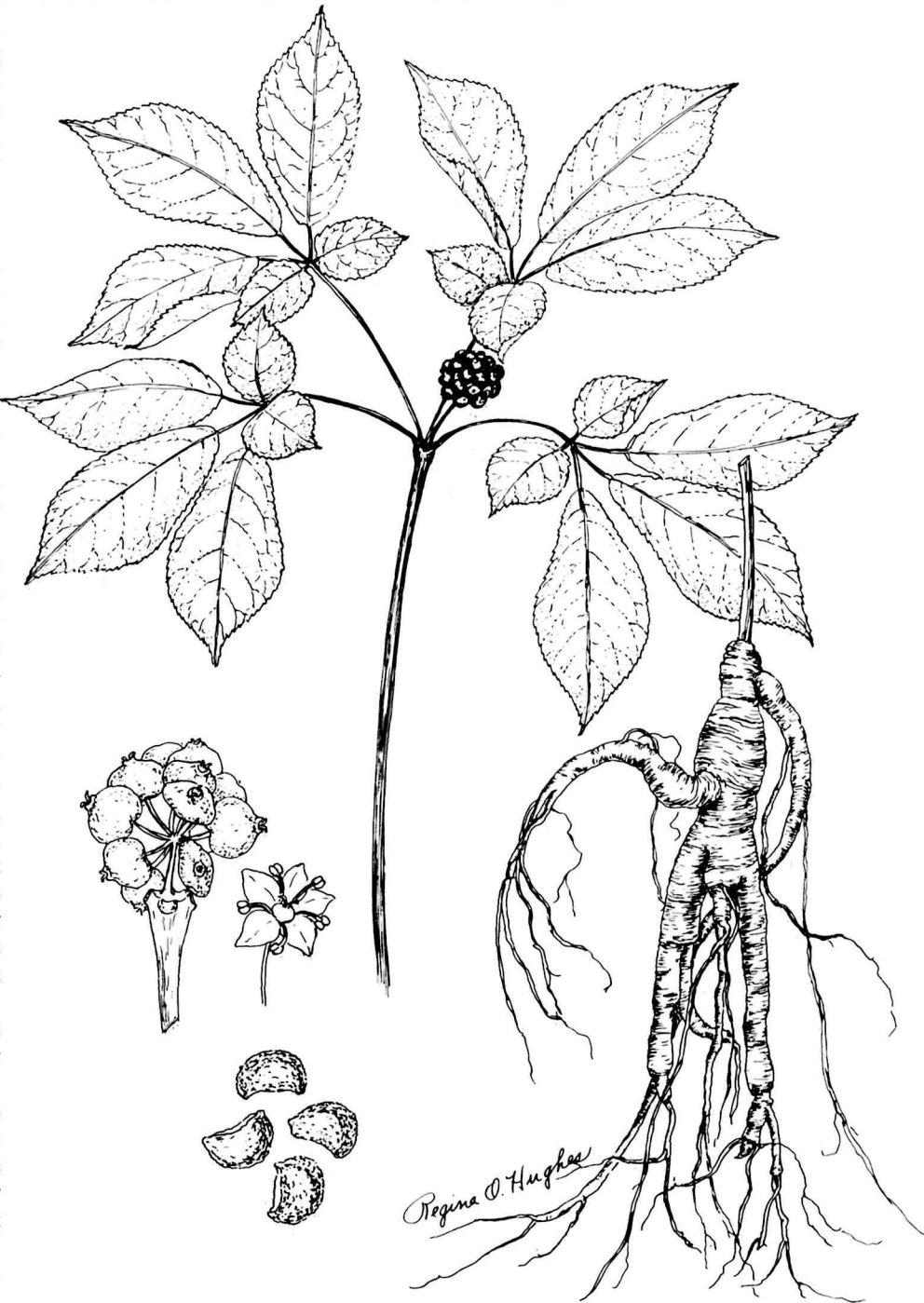
plant comes up as a single stalk with a compound leaf of three leaflets. In a year or two it becomes a branched two-prong plant, with each prong having a compound leaf of usually five leaflets. It develops a stem in the fork of the prongs with a few small, greenish-yellow flowers, which produce a cluster of red berries. Older mature plants eventually grow five prongs and become as much as two feet high. The root grows slowly, adding a growth ring each year. The dried root of a mature plant can be from two to eight inches long and half an inch to an inch thick. Some older roots grow both longer and thicker.

THE HISTORY of ginseng collection in the United States dates from the early part of the eighteenth century when the plant was first found growing wild. Fur trappers, Indians, and, later, settlers all hunted for the valuable plant as a quick cash source. A growing Oriental market and habitat destruction from intensive cutting of forests that caused scarcity of the wild plant resulted in a ginseng boom in the late 1800s. Hundreds of ginseng plantations were established to profit from this demand, but leaf disease wiped out ginseng farmers in 1904. In 1954—the last year that the plant appeared in a Census of Agriculture—only five farms with a total of twenty-one acres were planted with ginseng. Ginseng is cultivated on a large scale in the Far East, South Korea being the leader in the export field, followed by Japan. The roots of cultivated ginseng are heavier and more uniform than wild roots and are less valued because they are supposedly less potent.

In North America wild ginseng is hunted by people in rural areas for sport or hobby as well as for profit. Hunters of "sang," as ginseng is known in Virginia and West Virginia, can tell as exciting stories about finding the "big root" or "patch" as any angler can tell about the fish that got away.

A good sang hunter knows not to dig the plant before the berries ripen unless he is transplanting it

Branch, root, flower, berries, and seeds of American ginseng



U.S. DEPARTMENT OF AGRICULTURE

to another location. When he finds it with the berries ripe (usually August through mid-October), he scatters the berries nearby on the ground just under the leaves. A good sang hunter knows not to dig a plant unless it has at least three prongs. Even some of the young three-prongers have very small roots, however. After the root is dug, its age can be determined by the knobby extension, or rhizome, above the root. When the hunter finds a five-pronger, he knows he has an older plant; but when he finds a root with twenty or twenty-five annual notches in its main rhizome, he has a sang tale that will stand up against almost any hunter's or angler's story.

In fact, however, the amount of cultivated and wild ginseng roots exported from the United States has been climbing steadily every year. For example, according to the Department of Commerce 329,754 pounds of the root were exported in 1976 in contrast to 162,689 pounds in 1970. Most of the roots went to Hong Kong, where they are redistributed throughout the Orient. In 1973 American ginseng was the fourth most important agricultural product exported to Hong Kong from the United States. With such heavy exploitation some hunters and state and federal officials have reported that ginseng has become increasingly rare. This rarity may account, in part, for the increase in prices. Buyers in this country paid diggers as much as \$90 a pound in 1976 and \$130 a pound in 1977 for high-quality dried roots. These prices caused the search for the plant to intensify; and instead of waiting until August and September when the berries are ripe and can reseed the plants, many newer hunters began looking for ginseng from the time it comes up in the spring until the leaves and stems fall in October and November. Obviously, a species that is removed from the environment before it can reproduce itself is in trouble.

Experienced and conscientious sang hunters claim, however, that their gathering helps to increase ginseng populations, because they

plant the seeds. Without such planting, they say, many seeds would be eaten by animals. Many oldtimers also claim that ginseng is more plentiful than ever in many areas because of the regrowth of many Eastern forests since the turn of the century.

THE ENDANGERED Species Scientific Authority (ESSA), a federal agency composed of representatives of six federal agencies, including the Department of the Interior and the Smithsonian Institution, recently banned the exportation of wild ginseng roots, although roots that were harvested before December 1977—and are documented as such with the U.S. Fish and Wildlife Service—are still approved for export. Ginseng is protected on Appendix II of the forty-nation treaty, the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Appendix II species are those that, although not directly threatened with extinction, may become so. No trade in Appendix II species is allowed if such trade would be detrimental to the survival of the species. In addition, trade in Appendix II species must be carefully monitored by the scientific authority in the nation of origin to make certain that the species are maintained well above the level that would make them eligible for Appendix I—species threatened with extinction—and at a level consistent with their role in the ecosystems in which they occur.

The ESSA is soliciting information concerning the biological and commercial status of the species, as well as recommendations for management programs and regulatory mechanisms that will ensure that future harvests of ginseng will not be detrimental. On several occasions the ESSA has met with ginseng dealers to obtain their views on the problem. The ESSA, dealers, and many hunters agree that a season on hunting ginseng should be established, much as seasons exist on hunting deer, bear, and other animals. This season would occur after the berries have ripened.

Many dealers believe that hunters should be required to scatter the berries after harvesting the plant. Some hunters believe that only the three-prong or older plants should be harvested.

The ESSA and dealers also agree that no systematic way has ever been established to assess the appropriateness of harvesting ginseng in any given area. As a result, the ESSA is asking states where ginseng is found for their recommendations on how the harvest can be most effectively regulated and monitored to ensure that this resource will be properly conserved. The ESSA believes that before it can approve future exports the biological status of the species in various areas must be better established and appropriate management and monitoring systems must be implemented in the various states to ensure that future harvests are not detrimental to the species.

Restrictions on exports of wild roots will probably cause an upsurge in cultivation of the plant. In fact, only 115 acres per year of well-tended ginseng could produce as many pounds of roots as was exported in 1976. The Department of Agriculture advises would-be ginseng farmers, however, to approach the cultivation of the plant warily because of the high initial cost of planting stock, the plant's susceptibility to diseases, and its long maturing period. Moreover, cultivated roots attract only about half the price of wild roots. A good ginseng dealer can easily tell the difference between a wild and a cultivated root, and even between a spring-harvested and a fall-harvested root.

For now American ginseng—the mysterious, magical root of a thousand myths—will finally receive a measure of protection and the attention it has long deserved. ■

William O. Tucker is an officer of a bank in Lynchburg, Virginia. He grew up on a farm in Virginia, where his father still runs a country store. For as long as Bill can remember, country people have been bringing ginseng to the store to sell or trade for groceries.

The widespread use of clearcutting on Forest Service land in the East violates not only environmental and esthetic values but the spirit and intent of the National Forest Management Act of 1976

by LEON S. MINCKLER

Eastern Forests: A Better Way

AT A TIME when the environmental movement has captured the imagination of millions of Americans, an unfortunate adversary relationship has developed between foresters and environmentalists over the widespread practice in mixed hardwood forests of the East of even-aged management or clearcutting (the removal of an entire stand of trees in one cutting with reproduction being achieved artificially or from seeds of trees in nearby stands or from the seeds of the felled trees or from sprouts).

Why does the Forest Service and much of the forestry profession continue to favor clearcutting hardwoods and even-aged forest management as the dominant harvesting method even though this practice is often environmentally and esthetically damaging? First of all, clearcutting often gives the maximum short-term financial profits from timber and is therefore highly favored by timber operators. Clearcutting also makes possible the efficient use of heavy logging equipment. It is a capital-intensive and energy-intensive mode of operation. Labor inputs are greatly reduced in contrast to selection harvesting. In addition, even-aged management makes regulation of the forest easier for the Forest Service, or so they believe. Certainly it requires less professional skill in the forest and probably less record keeping than do other man-

agement techniques. Other reasons have commonly been given for selecting even-aged management, but none of them are valid. It is said over and over again that only tolerant, or shade-enduring, species will be regenerated by selection cutting. But moderately intolerant species such as yellow poplar, oaks, and white ash can be regenerated by group selection (the selective cutting of one-eighth-acre to one-half-acre areas; in northern hardwoods the openings can be even smaller).

Another justification given for clearcutting is that tree quality and volume growth of the resulting forest is superior to selection forests. This claim is not true. The quality and growth of forests depend on the site quality and the silvicultural care given. High-quality, productive forests can be attained by either even-aged or uneven-aged management. And in past cuttings covering millions of acres, clearcutting all hardwood trees—even those only five or six inches in diameter—for acid wood or charcoal has often resulted in regrowth of low-quality forests of stump sprouts and multi-stems, with a higher incidence of butt rot than single stems from seedlings. Anyone who doubts this statement should look carefully at the forests in the Catskills. These low-quality forests are the consequence of acid wood clearcutting during and just after World War I.



This mixed hardwoods forest in the Midwest was partially cut about fifty to sixty years earlier and contains many species and a wide range of tree sizes and qualities. The cove and lower north slope in the middle and background is a good site and contains yellow poplar, northern red oak, and white oak. The right foreground shows a medium-dry south slope with black and scarlet oaks. This forest was later treated by a combination improvement and group selection cutting to harvest the mature and low-quality trees and to kill the cull trees. This cutting improved the quality of the stand, provided spaces for regeneration, and increased diversity. (Photo reproduced from Leon Minckler, Woodland Ecology; Environmental Forestry for the Small Owner, Syracuse University Press, 1975.)

SUSTAINED YIELD of a forest requires a range of tree age and size classes. Diversity of this kind is also necessary for integrated uses including wildlife, recreation, and esthetics as well as timber. When former President Ford signed the National Forest Management Act of 1976, he described it as a "balanced consideration of all resources in the land management process." Section 6 of the act states that harvest systems will not be selected primarily because they will give the greatest dollar return or the greatest unit output of timber. It further states that clearcutting is justified only when "it is determined to be the optimum method." The act does not specify optimum for what purpose, but the whole act makes it clear that environmental and other nontimber values are equally important as timber. In fact, the guidelines in Section 6 make it completely clear that such values as maintaining productivity; insuring plant and animal community diversity; watershed and stream protection, site protection, outdoor recreation, and preservation of wilderness, range, wildlife, and fish would be given equal consideration with timber. (See CI-16, the National Forest Management Act of 1976, U.S. Forest Service, U.S.D.A., for a copy of the act and a summary and analysis.)

Why, then, do the first four Forest Service draft management plans and environmental impact statements that were submitted after the signing of the act that I have seen—for Monongahela National Forest, West Virginia; Green Mountain National Forest, Vermont; Nantahala National Forest, North Carolina; and Francis Marion National Forest, South Carolina—clearly violate the spirit and intent of the act? True, these draft statements are subject to revision, but a revision implementing integrated forestry with a strong ecological base would be a complete turn-about from the present draft management plans.

The plans call overwhelmingly for the use of clearcutting and

even-aged management on the hardwood forests. Selection cutting is recommended only in special cases, and the correct definition and use of group selection is not even recognized. This is true in spite of the fact that, except in northern hardwoods, single tree selection as a regeneration cut is not even silviculturally viable; group selection is required. The environmental impacts of clearcutting are consistently minimized, and little advantage is given to selection silviculture regarding land and water impacts. For example, conventional heavy machinery logging is allowed on slopes up to 60 percent with no regard for soil types, depths, or character. The plans

disregard the ecological characteristics and nature of eastern hardwoods, which would allow sound alternative cutting methods instead of clearcutting, methods that would far better satisfy the objectives in the 1976 act. The act makes some provisions to help small private woodland owners, who own most of the commercial forestland; but the example furnished in the national forests strongly suggests clearcutting to woodland owners. The management of the national forests—the people's forests—of the East is an horrendous example for millions of small woodland owners.

The management plan for the Monongahela National Forest con-

fuses patch clearcutting of up to five acres with group selection. This plan is not group selection; it is even-aged management. The Monongahela plan proposes to manage the forest by what I will call area diversity and area control in forest regulation. That is, the unit of diversity, or age class, will be an area of land, perhaps twenty acres or more. Another method could be called stand diversity, where several age classes exist in each stand, even on each acre. This is attained by selection harvest cutting—group selection where the desired species require 50 percent or more of full sunlight. In area diversity a patchlike forest results; this technique can be used effec-

tively only on large forests. With group selection the forest is like a tight mosaic, the diversified elements are in close proximity, and the method can be applied on small forests or on compartments of large forests.

Because of widespread and heavy cutting for sawlogs in and around the twenties, the Monongahela is an immature but generally high-quality forest on mostly very productive sites. The bulk of the forest is in presawlog sizes with ages ranging from forty to seventy years but with a scattering of older trees developed from those not cut or destroyed by the logging. Age class diversity can be attained in this forest by either area diversity or

group selection. If even-aged management is used, the cuts during the next thirty years or so will necessarily be made in mostly immature timber. But in order to establish balanced age classes, the later cuts, say in an eighty-year sawtimber rotation, will have to be deferred sixty to eighty years. By that time the present stands will be overmature. Only in the mid-term, about thirty to sixty years, will cutting be properly timed in relation to tree maturity.

THIS WASTE of timber can be avoided by a combination heavy improvement cutting—or harvesting high-risk and low-quality trees—and group selection silvicultural operation. The resulting forest will have greater combined long-term environmental and timber values. But it will require more forestry skill and more foresters and technicians in the woods.

The method of implementing the techniques for better forest management are briefly stated as follows. (See my book *Woodland Ecology*, Syracuse University Press, Syracuse, New York, 1975, for details and illustrations.)

1. Divide the whole forest into compartments (management units) based on topographic features and the nature of the stands so that similar stands are contained in one unit. The size of each compartment will vary with conditions but should perhaps be one hundred to two hundred acres so that timber sales on each unit will involve 200,000 board feet or more. Such units should be designated on maps and on the ground.

2. Inventory or examine compartments and set up a cutting schedule priority based on stand conditions, accessibility, use suitability, site conditions, and any other pertinent economic and ecological conditions.

3. Mark trees for a combined improvement and regeneration cutting. The improvement cutting would harvest high-risk and sound low-quality trees and would fell or kill cull trees. Any of these trees might be left, however, when they

This mixed-oak stand in the Midwest was photographed after an improvement cut that removed low-quality and cull trees and left all good growing trees. This stand produced three hundred board feet per acre annually during the following

*twenty years. (Photograph reproduced from Leon J. Minckler, *Woodland Ecology; Environmental Forestry for the Small Owner*, Syracuse University Press, Syracuse, N.Y., 1975.)*



Yellow poplar reproduction in a small forest opening four years after cutting. If the diameter of the openings is at least equal to the height of the surrounding trees, light will be sufficient for regeneration of yellow poplar, oaks, ash, and species of similar tolerance. This is an example of group selection.



qualify for wildlife or esthetic purposes. A popular expression for such cutting is "thinning." The operation does improve and thin the stand. The regeneration cut, made at the same time, harvests the mature crop trees and, along with the improvement cut, provides space for regeneration. Usually the cuts should be arranged to leave small, clean openings one-eighth to one-half acre in size. In northern hardwoods openings may be considerably smaller. The immature good growing stock trees of all sizes should be left to grow.

Some stands require only improvement cuts and thinning to reduce density, and in these cases the creation of openings should be avoided. In some cases small-patch clearcutting in spots of mature or decadent timber is desirable for timber and wildlife and can be used along with selection silviculture on a compartment.

4. Make the cuttings with the required care to avoid damage to the soil and site, waters, and the remaining trees. This is the key to true ecological forestry.

5. The forest manager should know the approximate condition of

compartments at all times; but each compartment should be inventoried before each cut, in most cases ten to fifteen years apart. This inventory tells the forester the species and size classes of the trees and guides the marking so a balanced size distribution can be developed to attain sustained yield of timber and to enhance diversity and other desired forest characteristics. By this selection method there is no need to cut immature trees of good quality as with clearcutting, and size class distribution is attained on each compartment and gradually spread over the whole forest long before large numbers of trees become overmature.

Obviously, the details of managing a forest are very complex and require professional knowledge and skills. My insistent point is that this can be done by selection silviculture and uneven-aged management as well as by clearcutting and even-aged management. Practice is more intensive, and required skills are greater; but the long-term total rewards to the people and to future generations make it all worthwhile.

I HAVE one last thought. I question whether the present top-heavy bureaucratic structure of the Forest Service is best suited to attain good ecological and environmental forestry *on the ground*. Too much is going on behind desks and not enough in the woods. We have a lot of good office men but not enough competent field foresters. I have thought for many years that forest managers or rangers should have almost complete control of logical forest areas somewhat smaller than the present Ranger Districts and that they and their staffs, within congressional and administrative guidelines, should run the show on those particular areas. The bureaucracy above that level could be greatly streamlined; there would be a greater sense of professional responsibility, and we would get better integrated forestry in the woods. ■

Leon Minckler is a trustee of National Parks and Conservation Association. He worked for the U.S. Forest Service for thirty-three years and has also taught silviculture at several major universities.

NPCA at work

ADJACENT LANDS STUDY

NPCA Surveys Superintendents about Threats to Parks

Gaudy commercial establishments crowded along the roadway leading into Great Smoky Mountain National Park, clearcutting to the boundary line of Redwood National Park, and coal-fired power plants in the vicinity of our southwestern parks are only the more blatant examples of a variety of incompatible uses of lands adjacent to NPS units.

Many National Park System areas are plagued by activities on nearby lands that harm the parks. These activities range from air and water pollution from industries and municipal treatment plants in the vicinity of the parks to runoff from neighboring agricultural and residential areas.

A threat to Indiana Dunes National Lakeshore from a proposed nuclear power plant is particularly serious be-

cause the case could establish a precedent for siting such dangerous projects in proximity to parks on the justification that the areas around the parks have a low population density. (See October 1977 issue, p. 4.)

This past fall NPCA held a conference to build support for dealing with adjacent lands problems throughout the National Park System. Representatives of congressional committees, federal agencies, and public interest organizations generally agreed that serious problems exist and that insufficient action has been taken to solve them.

Those attending explored several possible solutions. These solutions included allowing the Park Service to acquire adjacent lands by donation, putting conditions on federal grants and loans to communities to prevent

incompatible uses, cooperative planning by the Park Service and communities, and planning grants to adjacent communities.

The Park Service has the authority to undertake many of these actions, but the agency may require additional staff and funds to do so. In some cases the proposed solutions may require congressional authorization.

As more development occurs near parks and as more parks are established in or near already developed urban areas, the number and severity of adjacent lands problems undoubtedly will continue to grow. Such problems and solutions to them currently are the focus of an NPCA survey of the superintendents of all National Park System units. The survey findings will be published in an upcoming issue. ■

GLEN CANYON

Park Service Promotes Oil & Mineral Development of "Less Scenic" Wilderness

The National Park Service is inviting extensive oil, gas, and mineral development in the Utah wilderness of Glen Canyon National Recreation Area.

A management document and wilderness proposal released by the agency late in 1977 upset conservationists by calling for protection of only 42 percent of the recreation area as wilderness. The plan thus threatens critical wildlands within the 1.25-million acre NPS unit, which includes magnificent canyon and mesa country and important habitat for bighorn sheep and mountain lions.

The Park Service proposal is a compromise between two other alternatives that are presented in the management document. NPCA and other conservation organizations have supported "Alternative A"—protection of 1.03 million acres of wilderness, whereas the state of Utah proposes "Alternative B"—only 163,915 acres of wilderness. The Park Service's preferred plan is to protect 519,090 acres. The NPS obviously has given the occurrence of mineral reserves much weight in determining the wilderness boundaries within Glen Canyon.

In comments on the plan and the related draft environmental impact statement, NPCA recently took issue with the management classification system by which the Park Service justifies its push for development of some areas.

The agency would divide the recreation area into four parts: a Natural Zone including the recreation area's "outstanding scenic resources," "areas remote from the activities of man"; a Cultural Zone protecting archeological and historical resources; a Development Zone including marinas and visitor services; and a Recreation and Resource Utilization Zone for areas "possessing somewhat less scenic values, greater susceptibility to the activities of man, potential or actual mineral resources, or value for utility rights-of-way or development."

One hitch is that in determining which parts of Glen Canyon should be managed as natural wilderness, the Park Service gave the areas of this NPS unit scenic value ratings. This Association criticized the Glen Canyon beauty contest as "subjective at best." NPCA Southwest Representa-

tive Robert Coshland pointed out that if the existing condition of an area is natural, "for conservation and survival the entire ecosystem needs to be preserved regardless of scenic values; in fact, it would be a rare ecosystem indeed if it did not encompass a range of conditions which embrace a variety of scenic qualities."

In the lowest scenic category the Park Service placed the Purple Hills, a colorful rolling pinyon-juniper forest between the center gorge of the Escalante

Stevens Arch at the mouth of Coyote Gulch along the Escalante River



PHILIP HYDE

and the Waterpocket Fold. NPCA maintained that this area really was excluded because of the possibility for uranium mining. Yet uranium deposits in the area are hypothetical and—by admission of the Park Service—constitute a small fraction of projected needs. NPS proposes to transfer 11,410 acres of the Purple Hills to the Bureau of Land Management despite the fact that mining in that area could have serious side effects on other NPS lands.

Likewise, agency officials apparently adjusted wilderness boundaries in other parts of the national recreation area in consideration of the occurrence of known or possible mineral reserves. An area of the Kaiparowits Plateau that falls within the boundaries of Glen Canyon probably was excluded in order to provide access to coal deposits in the region.

NPCA noted that the Park Service plan also threatens the Orange Cliffs area—a part of the NPS unit named for its beautiful pink and orange sandstone. The Orange Cliffs overlie a large petroleum deposit. Most of the deposit—called the Tar Sands Triangle—lies outside the recreation area's boundary. But the wilderness boundary lines

in Glen Canyon have been drawn with the deposit in mind.

NPCA opposed any upgrading of jeep roads to accommodate interests seeking to exploit the oil and gas potential of the Tar Sands Triangle. Coshland noted that the technical aspects of recovering petroleum from tar sand have been studied in other parts of the world without significant success. "In the absence of a proven, economically feasible process," he reasoned, "we see no excuse for invading the natural sanctuary of a recreation area for such experiments."

Moreover, activities destroying the natural character of the land would violate the intent of the 1972 law that established Glen Canyon National Recreation Area.

The Park Service points to that same law as justification for its recent management plan. Unlike laws establishing most other NPS units, the enabling legislation for Glen Canyon directed the Park Service to "permit" removal of minerals. But the law also gave the agency a mandate to "preserve scenic, scientific, and historic features contributing to public enjoyment of the area."

NPCA said that the Park Service

plan to exclude many areas from wilderness designation and from protection as natural areas is based on an erroneous assumption that such designation would prevent development of mineral resources and thus would conflict with the 1972 law.

NPCA explained that the door remains open to mineral development to the extent permitted by the enabling legislation regardless of whether the Park Service implements its plan or the conservationist-supported Alternative A. The current NPS plan would stimulate mineral development rather than merely permit it, whereas the conservationists' proposal would facilitate regulation of access to the minerals and methods of removal.

In fact, at the same time that the Park Service is promoting great increases in development and activity within the national recreation area, NPS confesses right in its proposal that the carrying capacity of the environment in the area has not been determined!

Despite the overall development thrust of the Park Service's proposal, conservationists were pleased by the agency's decision not to push for any of the proposed routes for a paved road between Wahweap and Bullfrog Basin. This parkway would run right through the center of the Escalante wilderness.

The 1972 enabling law authorizes construction of a \$100 million federally funded parkway, but the fact that the Park Service has declined to propose the road in its plan could be the project's undoing. NPCA urged the Park Service to ask for congressional deauthorization of the road.

Conservationists hope the final environmental impact statement will improve on the draft. The final statement is due out by this summer.

You Can Help: If you agree that Glen Canyon wilderness is worth protecting, let the Park Service know that you support Wilderness Alternative A by writing

Mr. John Cook, Regional Director
National Park Service
P.O. Box 728
Santa Fe, NM 87501



PHILIP HYDE

Away from Glen Canyon Dam and the crowds of motorboats on Lake Powell Reservoir, Glen Canyon National Recreation Area includes a remnant of the once-great Escalante wilderness. The wild Escalante River still flows freely under orange arches and through intimate canyons full of cottonwoods, silent except for echoes of canyon wrens. Along a tributary of the Escalante is Jacob Hamblin Arch (left) in the Coyote Gulch Area. NPS included Escalante drainage areas in its wilderness proposal for the recreation area but omitted many other important areas to permit mineral exploitation. NPCA has opposed paving the existing access route into the Escalante because this action would threaten Coyote Gulch and other areas with excessive visitation. This Association supported a Park Service decision not to promote a new road that would cut across the Escalante.

NPCA BENEFACTORS

Lena Artz

Some of the most unselfish gifts are those for which we cannot possibly receive any thanks. Described by a friend as "an ardent conservationist as well as an outstanding taxonomic botanist," the late Miss Lena C. Artz was one of those persons who made such a gift to NPCA in the form of a generous bequest.

In fact, Lena Artz's bequest to NPCA seems in keeping with a lifetime characterized by a spirit of generosity and concern for the environment.

A native of Shenandoah County, Virginia, Miss Artz held degrees from the College of William and Mary and

George Washington University and did postgraduate work at George Washington University and the University of Virginia.

She taught in the public schools of Virginia for thirty-one years and according to a friend "was consulted on plant identification by people from almost every section of the United States. She was one of the forerunners in the field of ecology and her contribution to the preservation of our environment cannot be measured."

Miss Artz's collections of many species of native U.S. wild plants are found in the herbaria of numerous colleges

and universities in the East. In addition, she was a respected author and lecturer on American flora. She was listed in *Who's Who in American Education* and in *Leaders of American Science*, and was one of the founders of the Virginia Junior Academy of Science. Just before her death Miss Artz was made a life member of the Virginia Academy of Science in recognition of her scientific contributions.

We trust that her gift to NPCA will help to preserve our heritage for future generations and thus, like her life's work, will extend beyond her time to enrich the lives of others. ■

NPS MANAGEMENT CATEGORIES

NPCA Pinpoints Trouble Spots in Management of Seashores & Lakeshores

NPCA has long asserted that our national seashores and lakeshores are threatened by an antiquated management categorization system.

Accordingly, this Association recently expressed support for a decision by National Park Service Director William Whalen to discontinue use of the management categories under which units of the National Park System have been classified since 1964. Starting in that year the Park Service separated all units of the Park System into three major categories—national, historical, and recreational. The system proved to be problematic because the diverse resources of the Park System do not always lend themselves to such neat categorization. For instance, units classified as recreation areas include designated wilderness areas within their boundaries.

NPCA has been particularly concerned with the classification of all national lakeshores and seashores as recreation areas. In many cases preservation—not recreation—was the principal mandate in the enabling laws that established each of these units. NPCA's position has been that the National Park Service Organic Act and the enabling legislation entitle the areas to a higher degree of protection than is afforded them while categorized as recreation areas.

The new plan involves a land classification system that enables land managers and planners to recognize various zones with differing levels and types of uses, all within one unit of the system. Until the recent decision, the management categories had remained in force. In some cases they had conflicted with the land classification system determined during the planning process. For example, Fire Island National Seashore contains both development zones and environmental protection zones.

During the past year this Association investigated all national seashores and lakeshores to identify trouble spots around the country that have developed as a result of management views inconsistent with those laws.

The plan to rescind management categories should eliminate some of these problems and give the Park Service increased leverage in dealing with others. In light of the new classification proposal, NPS managers should be particularly sensitive to the areas of concern indicated in the following list. Detailed information is available for each area.

- *Apostle Island National Lakeshore*, Wis.: The most recent statement of management is harmonious with enabling legislation.

- *Assateague Island National Seashore*, Md.-Va.: Hunting, trapping, and over-sand beach travel are allowed in most areas.

- *Canaveral National Seashore*, Fla.: Some 41,000 acres that surround the seashore are in NASA's control, and NASA opposes wilderness classification or management of any lands as a primitive zone. A new agreement between NPS and NASA is needed, or NPS could attempt to have land transferred to its jurisdiction.

- *Cape Cod National Seashore*, Mass.: Beach buggy routes impair some areas.

- *Cape Hatteras National Seashore*, N.C.: Construction of a waterline over NPS land has been authorized. It poses a danger of increased growth and damaging manipulation of the island's ecosystem. Over-sand vehicles use the entire length of beach.

- *Cape Lookout National Seashore*, N.C.: A proposed mainland deepwater oil terminal with storage and refinery facilities would require connecting pipelines across Core Banks and Core Sound in the NPS unit.

- *Cumberland Island National Seashore*, Ga.: The final environmental impact statement and wilderness study does not concede preference for wilderness designation within Cumberland. It considers managing a 1,800-acre unit for park development and intensive use.

- *Fire Island National Seashore*, N.Y.: Sunken Forest Preserve, intended

Continued on page 28

reader comment

Eyewash & Nonpark Articles

In the November issue of the NPCA journal one person wrote that your recent articles on orangutans, plutonium, and smoking were eyewash and had nothing to do in context with the preservation of our national parks. I feel this, in my view, to be incorrect. These articles on our environment, as a whole, seem to be a great asset in making the readers of this magazine aware of problems that face not only our national parks, but more important, the world in which we live.

*Chris Crockett
Campbell, California*

Reducing NPS Seasonals to a Number

Since you raised the issue of working in a National Park [November 1977 issue, page 27], I would like to bring to your attention the fact that all is not rosy with Park Service seasonal hiring. First of all, for the 1978 summer season, the period for receipt of applications is December 1—January 15, not January 1—February 15. . . .

Secondly, NPCA should take a hard look at the drift toward greater centralization of seasonal hiring. This year, for the first time, all applications will funnel through the Denver Regional Office where they will be rated by "trained" computer key punch

operators. Gone are the days when park managers sifted through the applications looking for the qualities they needed the most. Gone, too, are the days when seasonal employees could make a "career" of working seasonally. During the early 1970s, a cadre developed composed of well-trained, highly motivated seasonals who worked the summers at various parks and some of whom wintered at Death Valley or Everglades or a few other parks. These people moved to new parks from time to time, thereby retaining a fresh outlook yet bringing with them years of valuable experience and expertise.

This past summer a Seasonal Hiring Task Force—which lacked any seasonals as members—decided that the National Park Service was more interested in efficiency than quality or morale. The Task Force said, in a letter in the August edition of the NPS Newsletter, that it was not the intention of the National Park Service to encourage a group of "professional seasonals." In effect the Task Force told all of us who have worked many winter and summer seasons to jump into the nearest lake.

The seasonal road has never been a secure or well-paid one. Seasonals are vital to the Park Service, serving at

the front line of visitor services. [See January 1978 issue, pages 10–12.] Those who continue in this service over the years receive no federal benefits other than sick leave and annual leave. The costs of moving twice a year are borne by the seasonal. And usually when a seasonal "transfers" himself to a new park, he does so by taking a cut in pay. . . . Now the seasonal road is fraught with computerization and rating by people far removed from park management. The effect will be to discourage a seasonal from risking moving to a new park since the new hiring system allows applying to only two parks. . . . It seems the Washington Office of the Park Service has yielded to the Civil Service Commission and its desire to objectify every applicant by reducing him to a number. . . . Apparently, equal employment opportunity means rewarding inexperience, encouraging turnover, and strapping park managers with red tape.

It seems to me the Park Service is costing itself more than it will gain. Long-time seasonal employees with experience in many parks and many fields of park operations constitute a rich manpower pool for NPS. . . .

*Jack De Golia
Seasonal Park Technician
Everglades National Park*

Continued from page 27

in the enabling legislation to be "preserved from bay to ocean in as nearly its present state as possible," is the proposed site of a major interpretive and visitor center, auxiliary facilities, maintenance structures, and housing for personnel. Over-sand vehicles still use the entire natural zone.

- *Gulf Islands National Seashore, Fla.-Miss.:* Extensive development is proposed on Santa Rosa Island. A proposed wilderness classification that does not include beaches of Petit Bois and Horn Island would not afford complete or permanent protection to these two small islands.

- *Indiana Dunes National Lakeshore, Ind.:* Construction of a nuclear power plant next to the lakeshore is proposed.

- *Padre Island National Seashore, Tex.:* Oil and gas extraction operations that are visually unappealing and could cause considerable damage to bird and fish populations are underway in the seashore area.

- *Pictured Rocks National Lake-*



shore, Mich.: As detailed in a 1976 environmental assessment, the Park Service contemplates permitting expanded snowmobile use in the lakeshore area.

- *Point Reyes National Seashore, Calif.:* The Park Service has fenced off native species of elk in deference to cattle grazers, maintains exotic species of deer that compete with native deer, and stocks streams with fish for sport fishing.

- *Sleeping Bear Dunes National Lakeshore, Mich.:* The final wilderness recommendation (1975) improved on the existing general management plan (1970), which calls for construction of extensive recreation facilities and access by air. Major revisions to the management plan are necessary regardless of whether the wilderness recommendation is approved. ■

conservation docket

Urban Recreation Study

At press time the Bureau of Outdoor Recreation and the National Park Service were scheduled to submit to Congress in January the Urban Recreation Study mandated by 1976 amendments to the Land and Water Conservation Fund Act. The study includes various options for both administrative and legislative changes to improve urban recreation and, in particular, to provide federal assistance for urban recreation. In its own studies on urban recreation, NPCA has found substantial recreational needs in urban areas. The findings of the NPCA studies as well as the major options in the Urban Recreation Study will be presented in an upcoming issue of the magazine. ■

National Reserves System

Senators Harrison Williams (D-N.J.) and Clifford Case (R-N.J.) have introduced a bill to create a new National Reserves System along the lines of the Greenline Park System NPCA advocated in previous congressional testimony in the House.

Their bill, S 2306, would create a whole new federal system of areas of outstanding ecological, scenic, cultural, historical, and recreational significance that do not fit into the traditional national park mold or cannot be protected in the Park System for a variety of reasons.

The key to the Act would be creation of a framework for a new local-state-federal partnership. Under this partnership, the governments and the private sector each contribute according to their inherent capabilities to the identification, planning, financing, and management of landscapes "for which large-scale direct public acquisition is inappropriate, unnecessary, and not cost effective."

Williams and Case explain that the bill resulted from a search for effective ways to protect the Pine Barrens in New Jersey. The pinelands is a vast and largely untouched wilderness in need of preservation. Nevertheless, it is too big, complex, valuable, and intermixed with existing communities to protect within the National Park System.

The Barrens is interlaced with federal

and state parks and recreation areas, low-intensity private development, and blueberry and cranberry farms. It overlies an aquifer that stores water the equivalent of a lake 2,000 square miles in area and 37 feet deep. All these values must be protected, but the cost of acquisition would be prohibitive.


The senators note that similar situations exist in other areas of the nation. Implementation of the many proposals to protect valuable open space within the National Park System—particularly in metropolitan regions—would pose astronomical problems for the Park Service. As it is, the agency is operating with insufficient funding and staff levels for managing existing parks. The Land and Water Conservation Fund (LWCF), which supplies NPS with acquisition money, has a \$3 billion backlog in authorized and soon-to-be authorized federal parkland acquisition.

The new National Reserves System would hold land acquisition to a minimum by relying heavily on state and local regulatory powers. The federal government would provide oversight, funding, and technical assistance.

The bill proposes the following procedures for establishing and managing national reserves.

- A National Reserves Council composed of the Secretary of the Interior and other federal department heads would evaluate congressional and governmental proposals for reserves, would direct feasibility studies, and would recommend to Congress that certain areas be designated as National Reserve Planning Areas. S 2306 gives the Pine Barrens a head start by designating it as the first planning area.

- The state in question would establish a state or local agency authorized to regulate land acquisition, land use, and management.

- For each area designated by Congress as a planning area, the Secretary of the Interior would provide financial and technical assistance to the state agency to develop a management program. The Secretary also would provide guidelines for resource assessment, boundary determinations, local participation, and other matters. 

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conservation docket

- Within two years after an area is designated as a planning area, the state agency must submit its management plan to the Secretary. (Meanwhile, federal agencies are prohibited from involvement in projects that would harm the area.)

- Upon granting his approval to a plan that meets all the requirements of the Act, the Secretary would recommend to Congress that the area be designated as a national reserve.

- Once a reserve has been established, the Secretary would be authorized to acquire lands or provide funds for acquisition of critical areas within the reserve. Grants also would be

authorized to compensate private landowners for the right of public access, to make payments in lieu of taxes to local governments, and to develop special public recreation and historical interpretation projects. The federal government could purchase land that then would be resold or leased to owners with restrictions on its future use.

- The council would conduct a continuing review of the management of national reserves. If a state agency ever defaulted on protection of an area, the Secretary would be empowered to withhold funds or make deductions from LWCF payments to the state.

In order to carry out the National

Reserves System program, the bill authorizes appropriation of an amount from the Land and Water Conservation Fund not to exceed 15 percent of the amount not earmarked by Congress for other purposes.

S 2306 will be considered by the Subcommittee on Parks and Recreation of the Senate Committee on Energy and Natural Resources. The House Interior Subcommittee on National Parks and Insular Affairs is considering a bill (HR 6625) that would establish a Pine Barrens National Ecological Reserve. This bill could be reformulated into an organic act for a new system. (See December 1977, p. 18.) ■

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Continued from page 2

much to return to Washington by car, even though it was a Jaguar, as it meant to go to Harper's Ferry by train.

Go some Monday to the farmers' auction at Charles Town. This is no gimmick, this is the real thing. In the early morning, the lots of old junk are sold; by early afternoon, the poultry and rabbits are being knocked down; by late afternoon, the cattle and pigs are going. There is nothing like it, no such faces to be seen elsewhere. There used to be such a market where I lived 50 miles from London, and here was one still 50 miles from Washington.

As one watches, one learns from the country people, relearns what one has forgotten. A few scraps of junk—battered kitchenware, rusty tools, old tires, odd lengths of chain—are put up for bidding. They are things which in the city we would throw away. We would not even bother to take them to the thrift store. A box of them fetches only a dollar and a half, yet they have been carried to market, been bought, and will be carried away to a new home. They will still be used. There is no built-in obsolescence in the country. Nothing seems to wear out, because a use is always found for it.

THEN THERE WAS the pool hall at Shepherds-town. I say that there was, because we went there on the last night when it was open under its present owners, presumably to reopen again later. The singer was Hillbilly Sue, and she lived up to her name. She is from "the Mountain," as the Blue Ridge is called there, and of course the music was from "the Mountain." The very old and the very young were there together, and seven beers cost under \$3.

Above the bar was a notice: "Due to our having to leave these premises on October 30, we ask that all tabs be paid by October 22." One thought of Bert Lance's description of a small town, where everyone is known to the bank, and here everyone was known to the owner of the pool hall, and credit was given on the basis of no more than an informal understanding, to be paid only because the owners were leaving. Where such arrangements exist, one knows that rural life is still genuinely existing.

One picks up the local newspapers—a surprising number of them, of often surprising quality, in both Connecticut and West Virginia—and reads the announcements of the week's activities. The calendar of the activities of a large city is hardly so full. They are closing libraries in the cities. In

the small town of Norfolk, Connecticut, they are increasing the hours when the public library will be open, for a population of 1,760 people. The library is also opened on the days when snow causes the schools to close. This is rural life, with its thrifty use of limited resources.

And of course as the background to this life is the country. One does not notice only the change of the seasons, one notices also the change of weather a score of times a day. One forgets in the city how often the weather changes, but in the country a breeze stirs, or the birds go silent, and one looks up, and the clouds, the sky, the light, have changed in a moment. One can see a cold front passing through in the bending of a blade of grass, or in the shadow suddenly cast on a field.

If I say that 10,000 birds wheeled through the air, alighted in the trees and on the fields, took off again in wave upon wave, to wheel once more overhead, you may think that I am exaggerating their number. If anything, I am underestimating. Alternately the sky and the fields were black with them, as they pillaged the fields for what corn or seed was still there, and prepared for their migration south. In Connecticut, forty geese in a meadow were called to silence by two of their number, who then marched around them, until at a signal which as humans we could not observe, in a single movement they swept into the air in the same direction.

And there it all is, at hand, in the reach of our largest cities. Perhaps there is something to be said for the wilderness, the desert, the mountains, the prairie, but I prefer gardens to the wilderness, and where man has made a garden of the landscape, as in these small farms in their human-sized setting, we of the cities may enrich ourselves, more than by any other activity out of doors, simply by looking on man and nature in as perfect a harmony as we are entitled to ask.

Here in the industrial Northeast, it is more or less at our doorsteps, and if we realize that it is there, that it has not all been erased, we may then make the small measure to preserve it. For it needs so little to keep this precious heritage of a rural life on a scale that can be measured almost by our hands, so simple a decision as to stop the developers from moving in. There are some things more important than profits for realtors. Just pass a law—a Town and Country Planning Act, as it is called in Britain—and you will not have to go to England to find the stone walls and the hedges, the cows and the ducks, the hay and the corn, that bring the country to the very gates of the great cities.

—Henry Fairlie

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