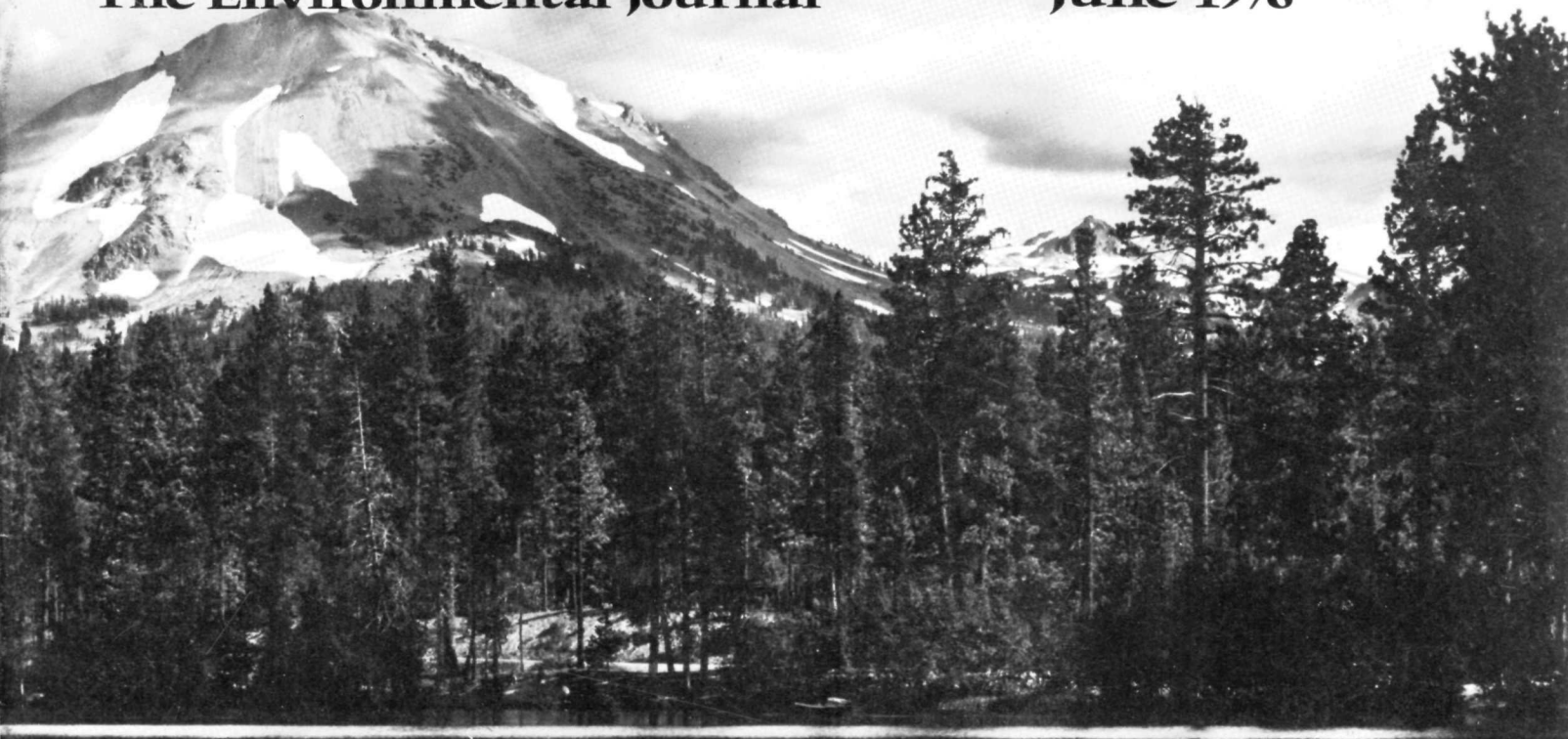
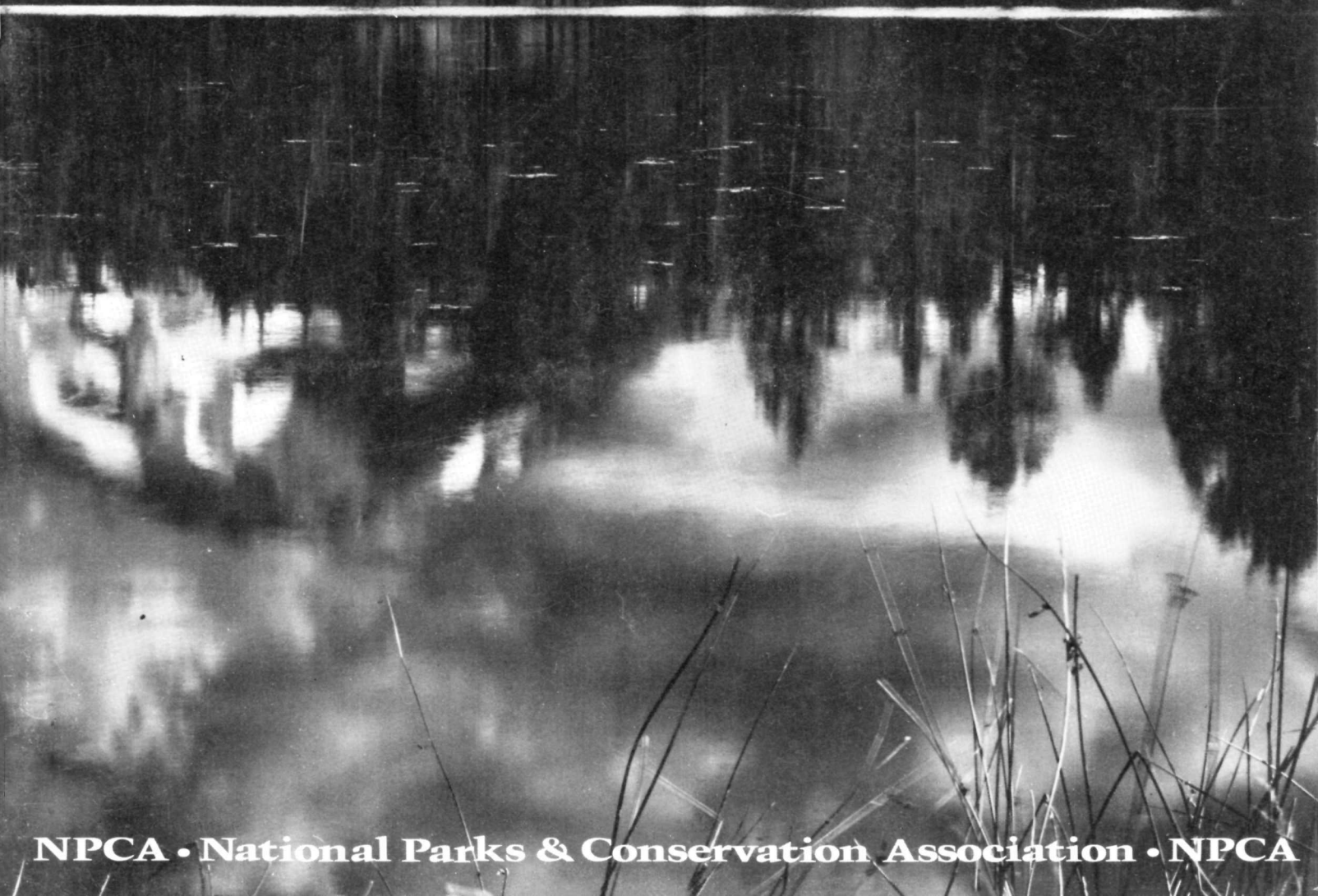
National Parks & Conservation Magazine

The Environmental Journal

June 1976





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OUTDOOR LEISURE

THE CENTURY AHEAD may turn out to be a more leisurely affair than the one just past. The reason will not be prosperity, however, because the prospect is for economic hardship following fast upon proliferation and extravagance. The reason, if the event occurs, will be a change of heart involving a growing distaste for superfluous commodities, and a growing concern for personal development and the enjoyment of nature. . . .

We must face the problem of values and goals more attentively. I suggested several years ago that we develop a discipline called telics, from the Greek word *telos,* or purpose. It would deal with what Associate Justice Oliver Wendell Holmes once called the inarticulate major premise, which hovers unacknowledged in the background of most of our thinking. It would assert that we had best know what we are about. I call that proposition the telical imperative. . . .

Another useful mandate is the ecological imperative. It says that unless men learn again to live in tune with nature, they may not live very long at all. . . .

And thirdly, to curtail dogma somewhere for the moment, we have the demographic imperative. And that one says that human proliferation must halt and our numbers must be cut back to the carrying capacity of the planet. . . .

BUT LET US take a look at parks, and specifically the National Park System. The telical presuppositions, the goals, the criteria for management, have quite fortunately been set down for us in the National Park Service Act of 1916. The purpose of the parks is the preservation of the natural environment, and the wildlife and scenic and historic objects in the parks. Provision is to be made for the enjoyment of the parks by the people, but only in ways that will not impair them for future generations.

As the pressures on the parks have mounted, what with proliferation, affluence, leisure, and mobility, it has become more and more difficult for the National Park Service to comply with the mandates of the Act. . . .

The automobile traffic has been overwhelming the people in the parks. We need a measure of control over the private automobile. The best way to get that is to substitute public transit; as a persuader, it has to be free transit. . . .

But long-line transportation into the parks is also needed; from, say, any one of six or eight sizable communities around Yellowstone to Yellowstone Lodge. New accommodations would be provided in those communities. The Service would offer a concession to a consortium of lodge operators in each community to provide paid, not free, bus transportation into the facility centers in the park.

You can add to that combination arrangements for Amtrak, the airlines, and the bus lines to take people out from the cities to the towns near the parks. . . .

We would freeze the overnight facilities in the parks, and cut down on the parking lots. We would spread the campgrounds out into the surrounding national forests; many of the parks are surrounded by forests of much greater extent. . . .

The crowds need to spill out from the parks into all the public lands around the parks—the national forests, the BLM lands, the Indian lands where the Indians want them, the reservoirs of the Bureau of Reclamation and the Army Engineers, and the state parks and forests. . . .

RECENTLY we in the NPCA have been struggling again with a long-standing ailment of the National Park System: inadequate personnel numbers and appropriations. We did a survey through our members and the superintendents of the System which showed a deplorable condition. . . . We got 400 jobs restored this year out of 1,500 which had been cut below congressional authorizations by the Office of Management and Budget. We have a long way to go yet.

The Land and Water Conservation Fund is a focal point for the enlargement of the national and state parks and forests. Big revenues will be going to the Treasury from offshore drilling. Ample money should be allocated to the Fund to meet authorizations and appropriations out of the Fund for the acquisition of greatly needed land for the System. And then the appropriations must be utilized, not bottled up as the OMB is wont to do. There are other places to save tax money: big roads, big dams, costly overruns on military procurement.

LET'S TURN TO FORESTRY. . . . Ecological forestry can be defined as harvesting which preserves the soil, water tables, water courses, vegetation, wildlife, microbiology, microclimate, ecosystems, recreational opportunities, scenic assets, and the forest itself, while permitting an even-flow harvest of wood and other forest products. The methods of ecological forestry are individual tree selection, group selection, shelterwood, or at the most small-patch clearcutting, as contrasted, with very few exceptions, to large-block clearcutting. . . .

The organic laws of the National Forest System may be going through a rather complete revision at present. The change has been forced by the Monongahela Forest case, which slowed up the expansion of clearcutting. Perhaps some ecological forestry mandate can be written into the new law as it comes out of the next few Congresses.

But beyond the national forests we have the corporation holdings. The trend here has been toward big machinery, big chemicals, plantation methods. The ecological effects could be disastrous; the effects for leisure and recreation equally so. The human love of nature, and care and concern for the outdoor environment, could be shattered by these approaches. . . .

The problems of the small woodlot owner as farmer or investor may be somewhat different. In states like Indiana and my home state of Pennsylvania, the issue is very important. A very large part of all our woods and forests is in small holdings. . . .

The methods we have developed for getting better management in these holdings have not been very effective. The cooperative state and federal programs have accorded substantial assistance, but not enough. . . .

We are talking about the world we live in, about the woods as life environment for people. The cities have turned out to be a bad environment. We never intended to get into these cities; we drifted into them from unfortunate economic circumstances.

People came to the cities looking for jobs. They were told that there were great cultural advantages, and so there could have been; but the advantages in too many cases have been destroyed by traffic, pollution, and congestion. There is a strong sentiment abroad for getting back to the open country, to the fields, forests, and wilderness.

Continued on page 31

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weathered american chestnut trunk
jack jeffers photograph

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FRONT COVER Lassen Peak above Reflection Lake by David Muench
BACK COVER Lassen Peak from Cinder Cone by Ed Cooper

Lassen Peak, which erupted from 1914 to 1921, provided the most recent volcanic activity in the conterminous United States. Lassen Volcanic National Park records a fascinating array of many other older catastrophic events as well as signs of continuing volcanism—cinder dunes, mudflows, steaming fumaroles, hot springs, sulfurous vents, and a huge rock avalanche. Because of the possibility of another avalanche, facilities in the Manzanita Lake district of the park are closed. (See page 4.)

National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and to protecting and restoring the whole environment. Life memberships are $600. Annual membership dues, which include a $6.50 subscription to National Parks & Conservation Magazine, are $120 Sustaining, $60 Supporting, $25 Contributing, $18 Cooperating, and $12 Associate. Student memberships are $8. Single copies are $1.50. Contributions and bequests are needed to carry on our work. Dues in excess of $6.50 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to National Parks & Conservation Association, 1701 Eighteenth Street, NW, Washington, D.C. 20009. When changing address, allow six weeks' advance notice and send address label from latest issue along with new address. Advertising rates are available on request from headquarters in Washington.

Lassen's Silent Threat

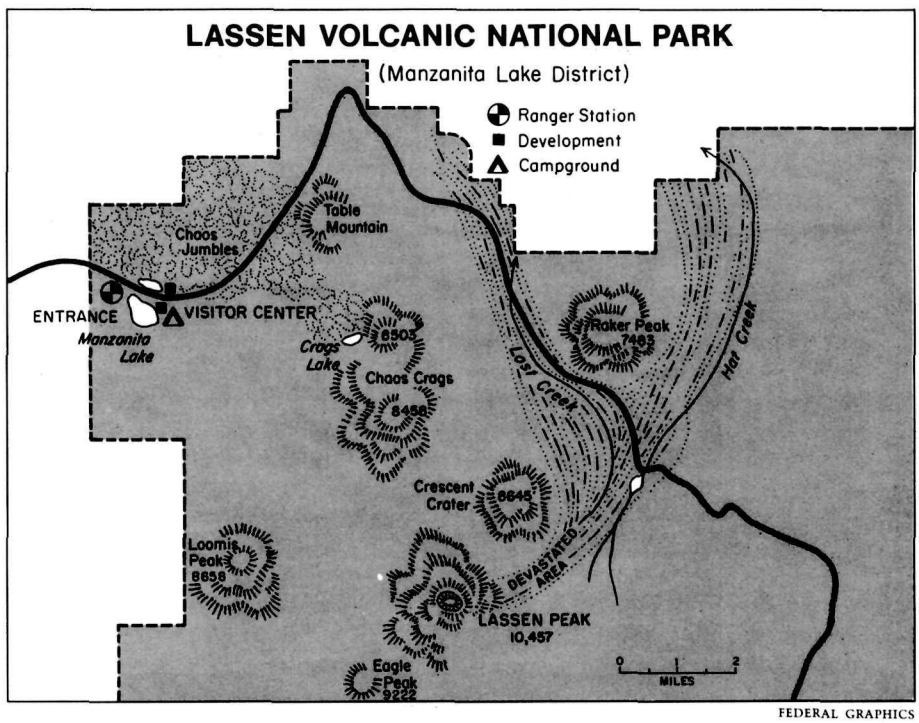
New evidence of a potential avalanche has caused the closure of facilities in the Manzanita Lake district of Lassen Volcanic National Park

by ROBERT G. HOLT

LASSEN VOLCANIC National Park lies fifty miles east of Redding, California. The park takes its name from Lassen Peak, famed as the only volcano in the conterminous United States to erupt in recent times. During the years 1914 to 1921, Lassen Peak violently exploded and inundated nearby areas in ash and mudflows.

The excitement of this recent volcanism has died away, but each year thousands of visitors converge on the park. Attendance records for 1975 show that 445,000 people came to camp, to fish in the sparkling lakes, to hike some 150 miles of trails, and to photograph the 100,000 acres of rugged yet serene beauty. When winter snows bring an end to camping and hiking, snow buffs gather for skiing.

But a geologic hazard still exists: a potential avalanche that could bury everything in its path. As the result of a four-year U.S. Geological Survey study of the Chaos Crags area, the probability for such an event has been determined to be so great that National Park Service and concession facilities in the identified avalanche area have been permanently closed, and steps have been taken to monitor geologic events more fully.



FEDERAL GRAPHICS

THE CHAOS CRAGS, situated just north of Lassen Peak, appear as four domes maintaining a lonely vigil over Manzanita Lake. The geologic history of these domes is violent and impressive.

Before actual dome formation, the site experienced eruptions of dacite pumice and nonvesicular rock fragments from vents where the domes now stand. This pumiceous material was blown by the force of the explosions and by wind over a wide area, but the primary concentration lies between Lassen Peak and the Chaos Crags.

Associated with this period of eruption were several pyroclastic flows (flows of volcanic rock supported by air trapped by the debris and propelled by the force of gravity) also originating from the vents. The flow deposits consist primarily of dacite pumice, which smothered the area around Manzanita Lake and destroyed the relatively new conifer forests growing there.

After this period of explosions and devastation, the four dacite domes now known as the Chaos Crags began to rise. Their implacement was brought about by an upwelling of lava that, due possibly to low temperatures, a lack of volatiles, and sudden chilling, was quite viscous and demonstrated relatively little flowage. The Chaos Crags presently occupy an area of approximately two square miles and reach a maximum altitude of 8,503 feet. The domes intersect each other amidst a huge pile of talus. The second dome, on the northwest side of the Crags, bears a large scar that is thought to be the source of the Chaos Jumbles deposits below it.

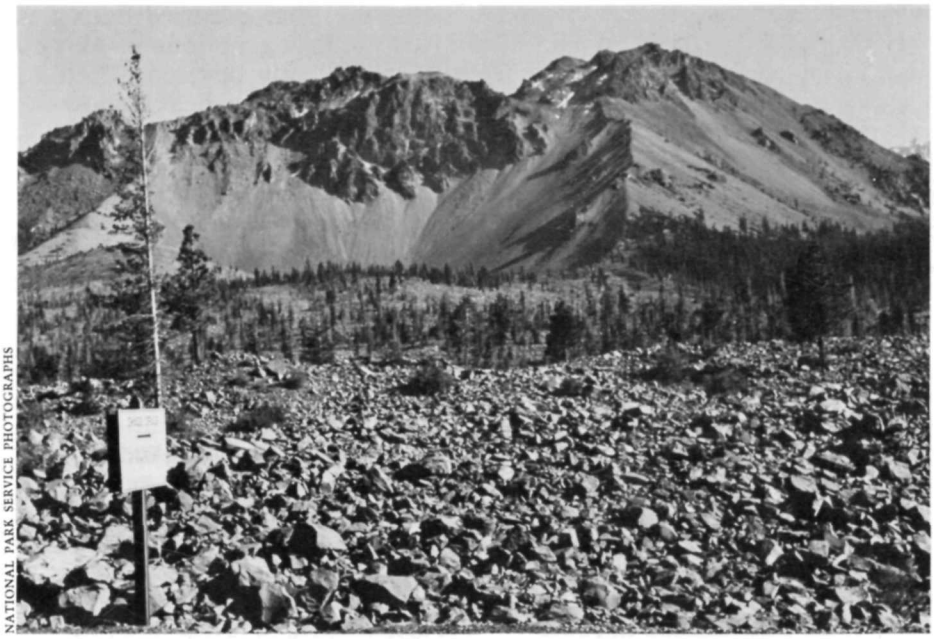
The Chaos Jumbles was aptly named, for its surface is marred by furrows, ridges, and mounds. Its boundaries are marked by steep

and abrupt marginal ridges. The angular dacite fragments comprising its contents are virtually unweathered and unsorted and range in diameter from sand to large boulders. This deposit extends down the valley from the Crags for some 2.7 miles and, although estimates vary, probably contains more than 150 million cubic yards of debris.

When one first sees the Jumbles, one wonders what devil's rage caused this chaotic, helter-skelter distribution of rocks. A first impression might be that the material was deposited there through a series of volcanic explosions. Closer inspection by geologists has shown that the Jumbles was actually transported to its present location by a huge rock avalanche.

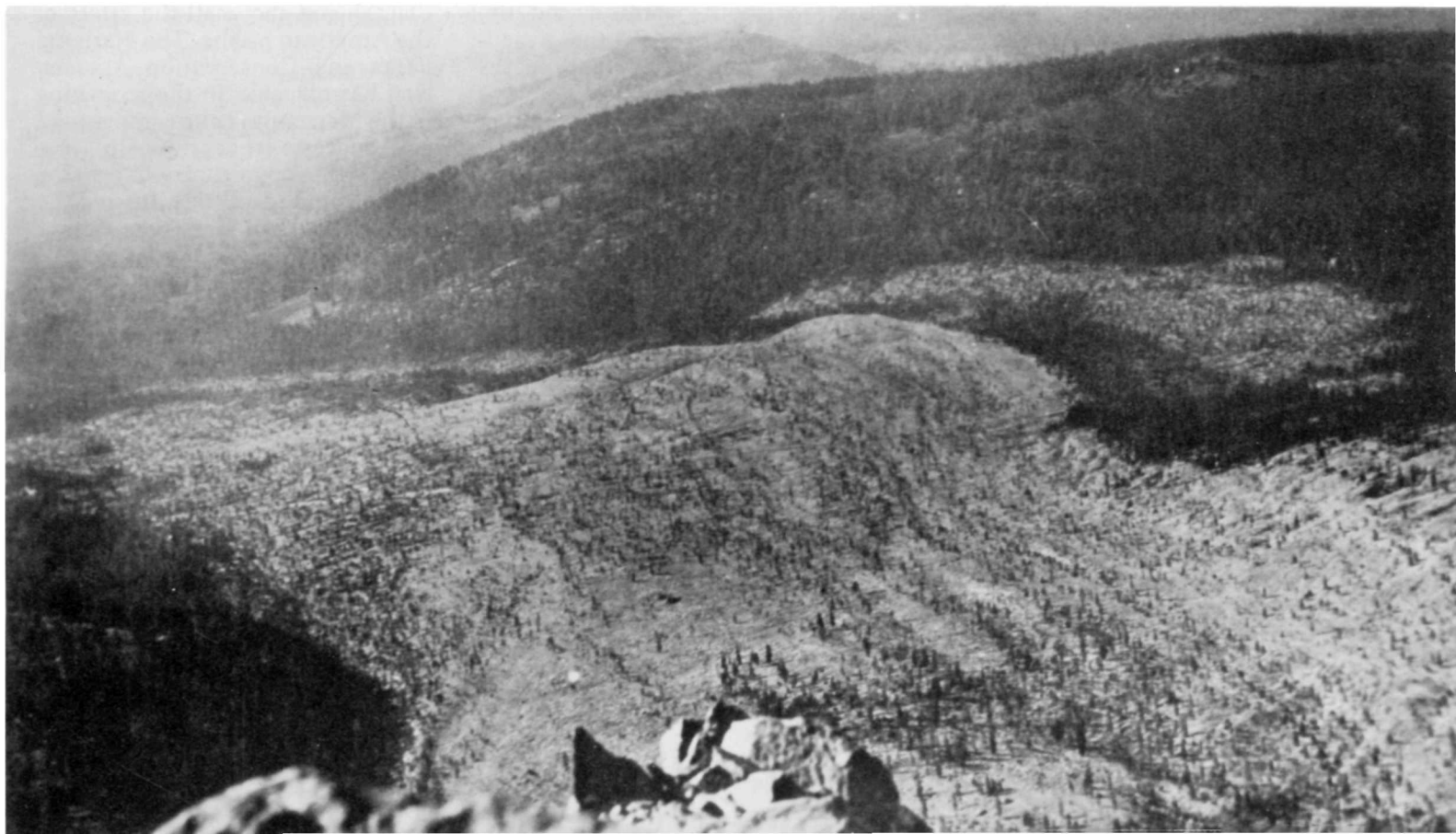
An avalanche as the method of transportation for the Jumbles' implacement is readily substantiated. The lack of a transporting medium, such as mud, or of any recognizable sorting of fragments precludes movement by mudflow or water. Yet, the fact that the debris is contained in the valley as it is and not distributed evenly all around the Crags suggests that the material had to move as a sheet rather than through explosion. Furthermore, the debris extends some 400 feet above the base of Table Mountain at Nobles Pass, which indicates that the flow was moving at a high rate of speed. The U.S. Geological Survey report estimates speeds of at least 100 miles per hour. The same report also cites tree ring counts that date the avalanche at about 300 years old.

Such a rock avalanche could have been triggered by a number of means. If the domes were intruded at different times, then the positioning of a new dome could have



NATIONAL PARK SERVICE PHOTOGRAPHS

About 300 years ago an avalanche originating from Chaos Crags (above) devastated a vast area now called Chaos Jumbles. As seen from the summit of Chaos Crags (below), the avalanche moved north, struck Table Mountain, veered west, and came to rest in the Manzanita Lake area, out of sight at left.



caused oversteepening of slopes and the eventual rockfall. A series of steam explosions at the base of the Crags could have set the process in motion. Certainly, an earthquake could have easily started the vast tons of rock toppling down the slope.

Once the avalanche had begun, gravity forced it to rush headlong down the valley. The fall from the slopes of the Chaos Crags caused air to be trapped within and beneath the body of the avalanche. This trapped air served as a cushion to support the rock mass and reduce the friction encountered in its travels.

An air cushion for such a large volume of material may seem outlandish, but the phenomenon has been observed on several occasions in the past. During the 1889 eruption of Bandai-San in Japan, rock slabs fell a thousand feet, broke into fragments as much as 30 feet across, and became a raging torrent leaping over ridges like a swollen river.

On December 14, 1963, a number of large rock masses fell onto Emmons Glacier at Mount Rainier, Washington. The masses immediately became an avalanche of material that stopped only after it had rushed 4.3 miles down the valley. Based on calculations of acceleration the avalanche should have stopped 2,000 feet beyond the end of Emmons Glacier, but it actually came to rest 9,500 feet beyond that point. Even more impressive is the fact that a thermograph shelter located some distance downslope from the origin of the avalanche was literally passed over by the rapidly moving rock mass. The shelter was 1.5 feet tall but was untouched by the avalanche. Such occurrences are difficult to explain without the presence of an air cushion beneath the descending mass of rock fragments.

THESE EXAMPLES simply serve to give life to the geologic evidence at Chaos Crags. Moreover, the potential exists for past geologic events to repeat themselves now. With volcanic activity having occurred as recently as 1921, nothing precludes the possibility of intrusion of another dome. Such activity could bring about hot pumice falls and pyroclastic flows like those of 300 years ago.

Forest fires and burial of anyone in the area could result from the hot pumice and the pyroclastic flows. If the flows were to contact snow, or if rain were to fall on the pumice and ash, another mudflow like the one that occurred during the Lassen Peak eruptions of May 1915 could easily develop. Then, hot lava caused the heavy snowpack to melt, saturating the ash. The water-saturated ash acted as a lubricant for the remaining volcanic debris on the steep slopes. Soon the entire mass plunged down the mountainside. When the mudflow reached Raker Peak, it was divided between the Hat Creek and Lost Creek valleys. This turbulent mass of mud and rock finally came to rest 18 miles downstream. Both volcanic action and mudflows could pose serious threats to human life in the area, although renewed volcanism would give sufficient warning to permit evacuation of visitors in the park.

A greater danger is another rockfall avalanche. Either the intrusion of a new dome or an earthquake of great magnitude could stimulate this action. An avalanche would come without warning and descend with such speed that evacuation in time to prevent deaths would be impossible.

Thus, after carefully evaluating the U.S. Geological Survey report, the National Park Service closed the Manzanita Lake facilities. The food service, gift shop, and gasoline station owned by the Lassen Volcanic National Park Company have been closed and purchased by the federal government. The Reflection Lake picnic area and the Loomis Museum have also been closed. The Manzanita Lake Campground was also closed; but inasmuch as it is not the Park Service's intention to prohibit individual use of possibly dangerous areas (such as Yosemite's cliffs), and inasmuch as the NPS believes that the area is relatively safe for public use, a portion of the campground will be reopened this year. But the special services facilities had to be closed to avoid an invitation to large numbers of people to remain in the area for a considerable time, and the implication of some guarantee of safety that such facilities afford. The alternative would have been to chance the deaths of an estimated 3,000 visitors who might be in the area at the time of another avalanche.

In addition to closing the Manzanita Lake facilities, Lassen Volcanic National Park has established a seismograph system connection with the University of California at Berkeley Earthquake Center. The system is closely monitored by open telephone to the university. Although the system has recorded several minor tremors, none was noticeable. A study of the park's thermal areas has been conducted, and a monitoring system for the Chaos Crags is being installed.

Alternatives to the closed facilities are now in the planning stages. The National Park Service is continuing to develop a master plan for Lassen Park. Such a plan must consider the environmental impact of new campgrounds, the possible relocation of the Loomis Museum (which is now listed in the National Registry of Historical Places), and above all the safety of the American public. The National Parks and Conservation Association has objected to the reopening of the Manzanita Lake campground and suggests that this situation offers a fine opportunity to develop new camping facilities outside the park rather than elsewhere within the park.

Although the closure of the Manzanita Lake facilities is disappointing to many people who are fond of that area, those who understand the enormity of the potential catastrophe will realize that the Park Service had no alternative. ■

Robert G. Holt's educational training is in geology. Although he did not long pursue that field as a profession, he has satisfied his interest by visiting many of the geological wonders preserved in our National Park System.

That Important P.S.—

PARK SAFETY

Observing safety precautions during your visit to national parks this summer can mean the difference between a great vacation and a grim vacation

by DUNCAN MORROW

FRED E. MANG, NATIONAL PARK SERVICE

Too many vacations to the national parks end in deep, cold waters. Fifty-six people drowned in various areas in 1975.

IN 1975 more than five thousand visitors to the National Park System suffered injuries serious enough to require professional treatment, 145 died, and countless others required first aid or simply failed to notify park authorities of injuries and sought treatment elsewhere.

The hazards in many national parks are very real, but they need not be the source of tragedy if reasonable care is taken. Dangers can be easily handled with common sense and a basic understanding about the park you are visiting. Every unit of the National Park System offers a free visitor brochure that discusses the most prominent hazards in that particular park. And anyone planning to walk or hike beyond the most heavily used portions of the parks can minimize the dangers involved by asking questions of park personnel and always traveling with a companion who can seek help if necessary.

THE OMNIPRESENT American automobile continues to plague the lives of us all—within national parks as well as elsewhere. Fifty-eight deaths and half of all park injuries in 1975 were due to automobile accidents. The national parks present special driving hazards, because visitors frequently stop without warning to watch wildlife, view the scenery, or get a better look at an historic vista. Many visitors forget that park roads are not intended for use by high-speed through traffic. These roads are designed to minimize their impact on the landscape and to maximize the visitors' leisurely enjoyment of the park.

PERHAPS MORE TRAGIC than automobile accidents are those that result from a failure to understand the natural and historic attributes of the parks. Most visitors to national parks come from urban areas and are unfamiliar with ordinary hazards of natural terrain. But visitors must realize that in the natural area parks and monuments nature must be accepted on her own terms, and they must observe certain precautions for their own safety. Most accidents in natural areas involve falls, drowning, and wildlife.

Many city-bred visitors seem unaware of the dangers inherent at the edges of great natural vistas ranging from the viewpoints along Skyline Drive in Virginia's Shenandoah National Park to overlooks by famed Yosemite Falls, the Grand Canyon of the Yellowstone, Black Canyon of the Gunnison, and the Grand Canyon. Although the more popular scenic viewpoints are equipped with safety railings, a few visitors persist in climbing over or around these protective devices, inviting disaster into their vacation.

Many high natural vistas are not equipped with protective railings. Moreover, with the increase in use of backcountry in recent years, many amateur rock-climbers seem unable to resist the temptation to climb "because it's there" and find themselves atop unstable rock formations, crumbling sandstone, loose shale, and in other dangerous locations.

Nor should experienced climbers regard themselves as immune to the hazards of falls. Many climbers familiar with the rigors of traversing granite faces in the Pacific Northwest or in Yosemite find that the softer rocks of the arid Southwest fail to hold their climbing pitons or crumble beneath their fingers, making climbs of less spectacular heights more dangerous than the rugged sheer cliffs they have braved in the past. In 1975 falls accounted for one-fourth of the serious injuries—and twenty-two deaths—in the National Park System.

An even more serious danger to life lurks in the rivers, lakes, and other waters of the nation's parks, monuments, and recreation areas. Here, perhaps more than in any

other part of the natural surroundings in parks, unsuspecting city-dwellers think themselves at home, little realizing the extent of the dangers they confront. Mountain streams and free-flowing rivers often hide dangerous currents and chill waters beneath their inviting surfaces—dangers unmatched in any suburban swimming pool.

Large bodies of water often stay cold long into the summer, leading unwary swimmers into the extreme dangers of hypothermia (loss of body heat), which requires immediate treatment to save the victim. Combined with the great depths commonly found in large lakes, such waters have claimed the lives of even expert swimmers who failed to take adequate precautions. Fifty-six people drowned in various areas of the National Park System in 1975—nearly as many as died in automobile accidents.

The dangers of wildlife are also commonly given little thought by urban residents, who seldom confront animals in their natural habitat. Television and movies have brought most of us into vicarious contact with trained bears, tamed deer, and other species that on screen are docile, loving, and cute. Yet their wild counterparts do not understand human interest and react instinctively out of fear. Annually several visitors are injured in parks in encounters with wild animals—usually by making the simple, classic mistake of coming between a mother and her offspring. Feeding bears and other animals is also extremely dangerous. A bear who becomes impatient when you run out of food can be very destructive.

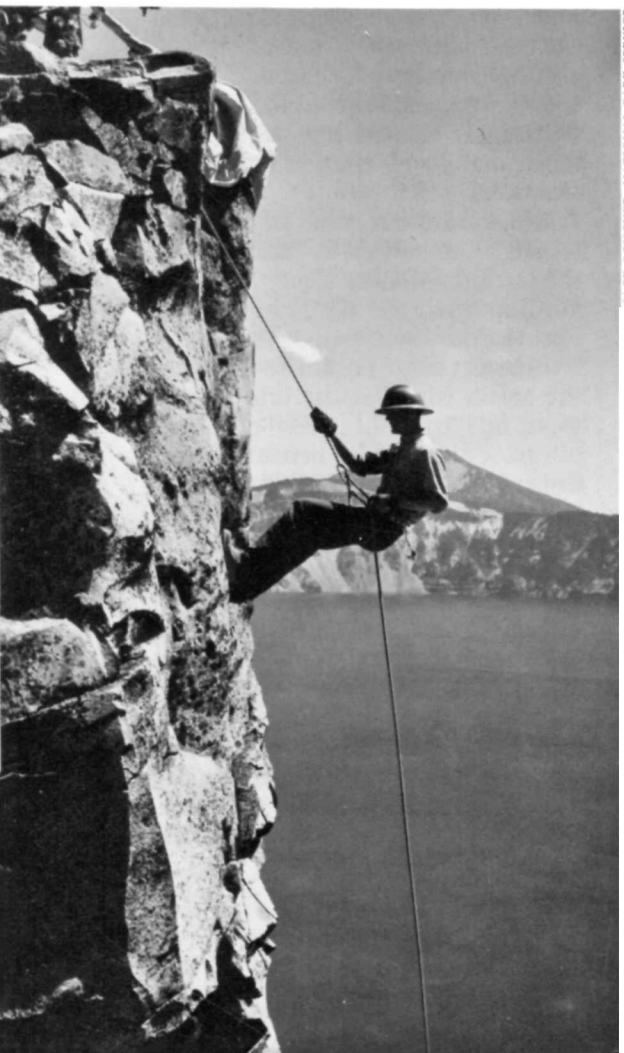
Deer are beautiful and timid, but their sharp hooves can slash. Even deer and the small animals of the parks should be regarded with care and caution, as these species often carry diseases harmful to man and are frequently equipped with sharp teeth or claws that can inflict painful, if not serious, injuries.

EVEN VISITORS whose innate fear of heights keeps them safely from the edges of great precipices, and who do not swim in cold waters, and who avoid wildlife may fail to realize that historic buildings a century or more old present special hazards to modern visitors.

The historic homes and public buildings maintained by the National Park Service and other agencies often have narrow staircases, low doorways, and other features strikingly different from modern architecture. Part of the problem lies in human growth. Thanks to great strides in nutrition and medicine, the average American of today is several inches taller than his ancestors. Facilities built for our smaller forebears often present real dangers to us.

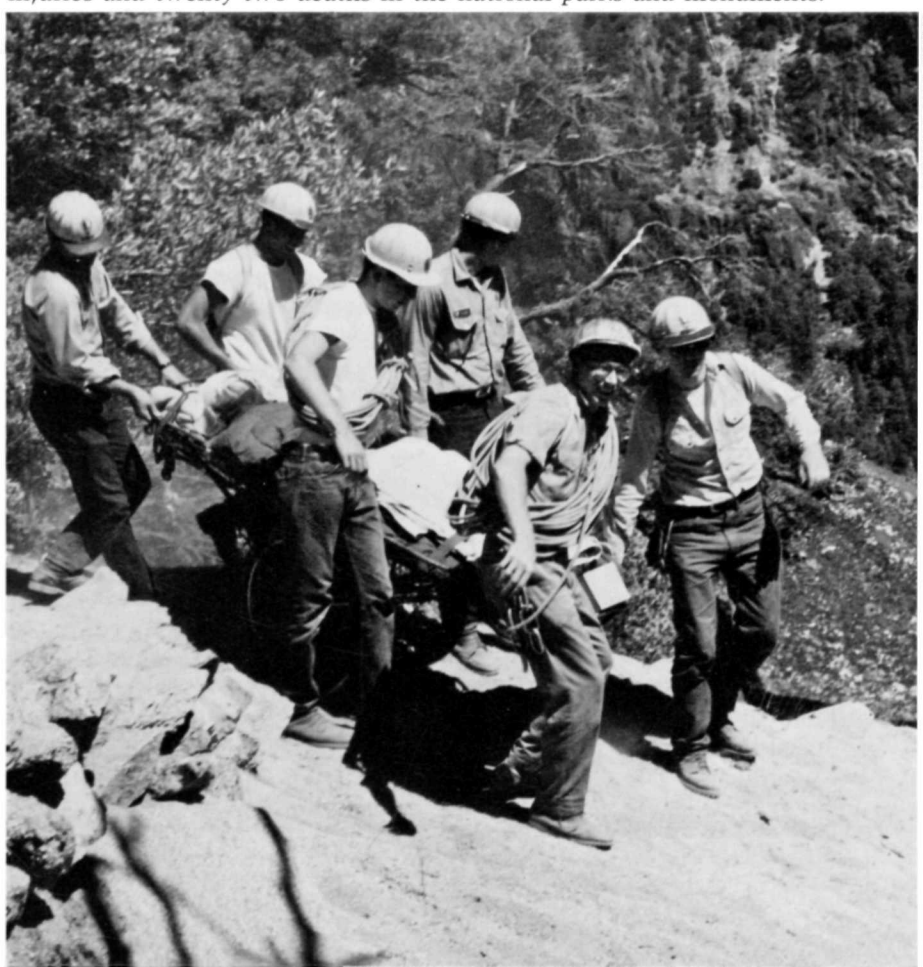
Near Hardy, Virginia, for example, the slave quarters at Booker T. Washington National Monument have low doorways, uneven floors of packed dirt, and poor lighting due to the absence of windows. Combined, these hazards can cause the careless visitor painful bruises or broken bones.

Many of the centuries-old Indian ruins of the Southwest—particularly the cliff dwellings of Mesa



JACK BOUCHER, NATIONAL PARK SERVICE

Rock climbing appeals to many visitors, whose mountaineering knowledge and experience vary widely. But in 1975 falls accounted for one-fourth of the serious injuries and twenty-two deaths in the national parks and monuments.



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Every year several visitors to national parks are injured in encounters with animals. Do not feed or approach wildlife. Bears can become belligerent when you run out of food. Do not approach or come between mother and young. The cookie-snatching cub here no doubt has a large, powerful mother nearby who may rush to defend her cub from imagined threats. Although normally quiet, elk, moose, caribou, and bison possess enormous strength and dangerous horns and hooves to fend off possible dangers—including unwary humans who approach too close while taking photographs. Apparently "abandoned" young animals such as the fawn here should be left alone. Mother is probably near, and, with razor-sharp hooves, deer can be dangerous. Even small animals may have sharp teeth and may carry harmful diseases.

Verde National Park, Colorado—have passages so small that visitors must even crawl at some points and use ladders at others.

Typically, historic cabins and rural homes present more hazards than the mansions of the wealthy. At Andrew Johnson National Historic Site in Greenville, Tennessee, for example, the doorway to the cellar stairs in Johnson's home is only five feet eight inches high.

Many staircases are also difficult to negotiate. At Salem Maritime National Historic Site, Massachusetts, visitors with heart conditions are advised not to climb the extremely steep steps to the top of the old Custom House.

The range of potential hazards throughout the National Park System is even more extensive than that discussed here, but an ever-present awareness of the simple "P.S"—park safety—can assure a pleasant and rewarding vacation for any visitor who uses reasonable caution. ■

A 1966 graduate of Iowa's Parsons College, Duncan Morrow has pursued his lifelong interest in the outdoors and camping as a National Park Service information officer for six years.

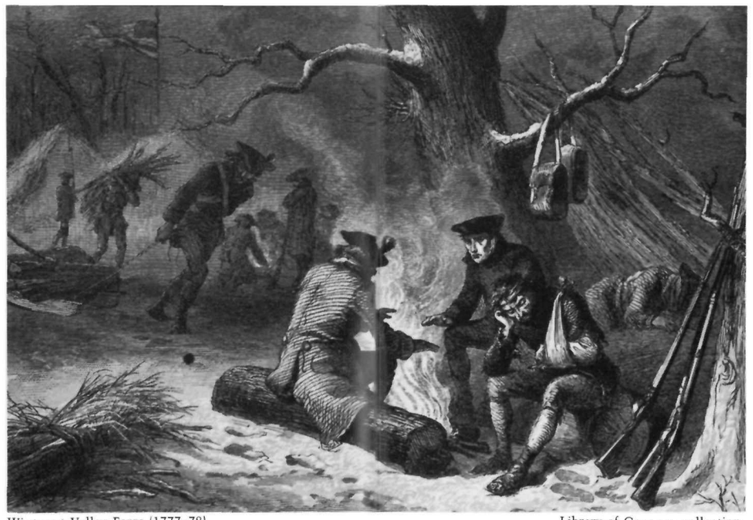
SAFETY TIPS FOR PARK TRIPS

The National Park System is intended for your enjoyment, whether you are coming to view the wonders of nature, to tread in the footsteps of history, or simply to get outdoors and have some fun. But first take a minute to read these simple but very important safety rules, and follow them for a pleasant and safe park experience.

- **Know the area.** Ask park rangers for brochures, maps, and advice about park attractions and hazards.
- **Observe park regulations.** They are for your enjoyment and protection. Snowmobiles, all-terrain vehicles, fires, fishing, swimming, and other activities are governed by regulations that take into account local conditions and problems.
- **Watch your children.** Your knowledge, experience, and wisdom can't help a child who is beyond your protective reach and warning voice.
- **Keep your distance from wild animals.** Don't feed bears or other wildlife. Remember that all wildlife can be dangerous. Remember, too, that young animals are seldom abandoned—a very protective parent is probably nearby.
- **Dress properly.** Even in the heat of summer it is often cool in the mountains or in caves. If you are hiking on rough terrain, be sure to wear sturdy shoes or boots.
- **Drive carefully.** Park roads are not expressways, so take it easy and enjoy the view from overlooks and parking areas. Be alert for less considerate drivers who may stop without warning to see wildlife or scenery. Unusual hazards—rock slides, flash floods, unseasonal snow and ice, animals and visitors crossing roads at unexpected places—are all possible at some time in some place in park areas.
- **Notify park headquarters of your plans to explore.** Mountain climbing, hiking, or horseback riding in remote areas; exploring caves or lake bottoms; and numerous other enterprises can be dangerous even for experts. If they know your plans, park rangers can alert you to hazards, watch for your return, and if necessary organize rescue efforts. Telling them your plans could save your life.
- **Don't try it alone.** Two heads are safer than one. Whether it's a short hike in the woods or a month-long backcountry backpack trip, a companion may save your life in an emergency.
- **Know your own limits.** Strenuous exertion, especially in extremes of temperature or altitude, can be dangerous if you are unaccustomed to sustained exercise.
- **Report trouble.** Whether it is your own or someone else's problem, a park ranger can help only if he knows help is needed.

THE WAR FOR INDEPENDENCE
The Continuing Revolution

The American Revolution pitted British against American, countryman against countryman, and Indian against white in a war of conflicting motives and fierce human passion.



Winter at Valley Forge (1777–78). A nineteenth century engraving. Library of Congress collection.

WITH THE War for Independence, America became the first nation in modern times to successfully sever its imperial ties. In turning its back on colonialism, feudalism, mercantilism, and monarchy, the new nation made a radical break with the European past. At the same time that American revolutionaries rejected their colonial relationship with Great Britain, they fought to maintain many of the ideals and institutions they had inherited from British law and tradition. Separated from the mother country by a vast ocean, Americans had, by necessity and by the encouragement of the British government, become well schooled long before 1776 in the art of self-government in their own colonial representative assemblies. The American Revolution asserted a people's right to enlarge that self-government and to continue the growth of economic, political, and social freedom.

Until 1774 almost all Americans hoped to settle their grievances within the framework of the British Empire. Even after the battles at Lexington and Concord, most Americans would have said they were rebelling against Parliament's violation of their rights as British citizens, not against the king. In condemning Parliament, American propagandists had established King George III as a benevolent monarch and almost mythical heroic figure who would save the Americans from the evils of parliamentary control. The publication of the pamphlet *Common Sense,* by Thomas Paine, in January 1776 marked the first strong attack upon the king. Many other diatribes against George III followed, and soon the king became the embodiment of evil as previously he had stood for all that was good. Thus, Tom Paine and his fellow propagandists put the issue of independence squarely before the American people. Some of those people chose to fight for independence while others remained loyal to Great Britain. Consequently, the American Revolution became not only a war for independence but also a civil war.

THE LEADERS of the Revolution—John and Samuel Adams, Thomas Jefferson, James Madison, George Washington, Benjamin Franklin, great heroes from that or any time—came from the educated class. Such a desperate gamble as a declaration of independence, at a time when most people felt the English would surely win any military confrontation, required men of unusual courage and vision. Their followers shared in their leaders' daring and resolve.

Although American patriotism cut across class lines, the majority of patriots came from the middle or lower classes. Farmers, mechanics, laborers, New England minutemen, artisans, and teachers usually sided with the rebel cause. Printers and editors were conspicuously on the patriot side, and the most brilliant pamphleteers of the day were patriots.

The soldier of the Continental Army, as well as the men who served in state militias and as volunteers, fought with courage and determination, often enduring savage conditions of cold, little food, and disease. Some deserted, but many stayed on. The success of the American cause was in no small way a result of the skill of the colonial soldier. That skill helped turn the tide of the war in the North, at Saratoga, New York, in September 1777. The victory—badly needed from a psychological as well as strategic standpoint—wrecked the northern British campaign and had a decisive influence on negotiations with France for an alliance. Without French aid, the American cause almost certainly would have failed.

IN CONTRAST to the patriots, the Tories—or loyalists—who accounted for 15 to 36 percent of the white population, generally came from the upper classes. They were people who, in one way or another, depended on their ties with Great Britain for their well-being or livelihoods. Royal and proprietary officials, loyal to the king, also owed their jobs to the crown. Recent immigrants from Great Britain had strong emotional and cultural ties with the mother country. Merchants, who traditionally were economically and politically conservative, depended on trade with the British and were afraid of what change might do to their businesses. Establishment lawyers, rich landlords, doctors, northern Anglicans, and Anglican clergy were also loyalists.

Loyalists served as spies, paymasters, civil servants, river boat or ship pilots, and guides to the British troops. Some thirty thousand to fifty thousand men fought on the loyalist side, not including those who served in the militia or guerilla bands, and fifteen thousand served in the regular British army. However, the American loyalists were not treated as well as the average British soldier. They were subject to prejudice and did not receive as good pay and benefits. In addition, the British plundered both loyalist and patriot homes and ships. As soldiers, they generally did not fight as well or with the resolve of the patriots, possibly because they came from the merchant and professional classes and lacked practical experience with guns, such as hunting for food and fighting off Indians.

The belief that patriots would eventually shift to the British side, underestimation of rebel determination, and overestimation of loyalist strength in the South affected British strategy in the southern campaign of 1780, which eventually led to defeat and surrender at Yorktown, Virginia, in 1781.

The British underestimation of rebel fervor in 1780 is exemplified at the Battle of Kings Mountain in South Carolina. The settlers of the Carolina Piedmont had taken little interest in the war. The demands of carving out a place for themselves across the mountains and defending themselves against Indian attack had preoccupied them. However, in 1780 Lord Cornwallis sent Major Patrick Ferguson into western South Carolina to organize Tory militia, subdue rebels, and protect the western flank of Cornwallis' advancing army.

Aroused by Ferguson's heavy-handed treatment of patriots, some one thousand frontiersmen assembled at Sycamore Shoals in Tennessee. The mountain men, dressed in hunting shirts of buckskin, breeches of home-dyed cloth, and wide-brimmed hats over long, tied-back hair, came equipped with knapsacks, blankets, and long hunting rifles. Most rode on horses, but some made the march to Kings Mountain on foot. Two weeks later, the frontier marksmen dispatched Ferguson's forces in a one-hour battle in what became the turning point of the war in the South.

If the mountain men who took part in the battle at Kings Mountain had taken a generally disinterested view of the war until it directly threatened them, bitter partisan strife was prevalent in other parts of the frontier. Tories on the frontier usually had fled

The Gathering of the Mountain Men at Sycamore Shoals (1780), by Lloyd Branson, 1915. Courtesy of Tennessee State Archives.

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

from areas where rebels prevailed. The Tory influx created hostility and suspicion among neighbors and prevented them from organizing as effectively as possible against Indian attack. Patriot settlers attempted to detect, suppress, and punish Tory neighbors throughout the war, and with increasing vigor. Massacres on both sides were frequently reported.

BUT TORIES constituted only a portion of the patriot frontiersmen's worries. Their worst enemies were Indians. Most of the twenty-six Indian nations sided with the British as their best hope for retaining enough ancestral land to maintain their way of life, which depended on hunting space to survive. The Indians received their supplies from the British, and they thought the British would control westward expansion.

The Indians could not have affected the outcome of the war, but their presence added bitterness to the conflict because of atrocities they visited upon the settlers. It must be added that atrocities were committed on both sides, but the Indians employed torture more often than the white man.

Indian and Tory attacks, led by the great Mohawk chief Joseph Brant, were particularly devastating along the New York frontier, where settlers had appropriated much Mohawk land. No massive Indian attacks occurred during the southern campaign because the Cherokee were in the midst of a smallpox epidemic, and the Creek and Choctaw failed to cooperate.

As might be expected, Indians did not conform well to the ways of an organized British army. They were impatient with discipline, refused to ration food, and refused in most cases to spare the lives of prisoners. Their ancient rules of war rendered them ferocious and unsparing in battle and conquest. The threat of losing their ancestral land must have made their ferocity that much more intense. They, like the patriots, were fighting for their freedom and the right to pursue their own way of life.

OF THE half-million African Americans who lived in the colonies during the revolutionary period, most of whom were slaves, five thousand served on the patriot side. The inducement for most blacks was the promise of freedom if they served and for some, a land bounty. They served as spies, sailors, artillerymen, guards, cooks, and orderlies. Black participation in the war began at Lexington and Concord, where black minutemen bore arms against the British. Two months later, black soldiers distinguished themselves at the Battle of Bunker Hill, as they did throughout the entire war.

Of the three all-black units that fought on the patriot side, the Black Regiment of Rhode Island is the most famous. It distinguished itself at the battles of Rhode Island, Red Bank, Points Bridge, and Yorktown.

Tens of thousands of blacks, especially those enslaved in the states south of the Potomac, fled to the English side. Some eight hundred slaves ran away from Virginia plantations to fight in Lord Dunmore's Ethiopian Regiment in return for their freedom. Ironically, the British offered liberty only to slaves of patriots, not to those of Tories. Other black regiments fought for the king throughout the war, and many other blacks also served behind British lines.

At the end of the war fourteen thousand blacks departed with the British and the loyalists, hoping to begin new lives in such far-flung places as Africa, Nova Scotia, Jamaica, Nassau, and England. Some found the freedom they desired, whereas others were enslaved again by immigrant loyalists.

Although black participation in the war effort probably did not affect the outcome of the war, the fact that blacks had borne the responsibilities of citizenship before they could enjoy its rights stirred the consciences of many patriots and increased abolitionist activities north of the Potomac.

WOMEN, TOO, played an important role in the war effort. Many wives, sweethearts, homeless women, and prostitutes became camp followers and could be found among all armies of the times. Although an occasional woman would man the battlements, most performed such duties as washing, cooking, sewing, and nursing.

THE MAJOR BATTLEFIELDS of the Revolutionary War are included in the National Park System. Among the battlefields of the northern campaign (1775 to 1780) that are represented are Minute Man Historical Park, Massachusetts; Saratoga National Historical Park, New York; and Morristown National Historic Park, New Jersey. Among the battles of the southern campaign (1780 to 1781) represented are Kings Mountain National Military Park, South Carolina; Cowpens National Battlefield Site and Guilford Courthouse National Military Park, both in North Carolina; and Yorktown Battlefield, Colonial National Historical Park, Virginia.

But the Revolutionary War involved much more than military strategy and military leaders. An understanding of the people of the era—white, black, Indian; loyalists and patriots; men and women—brings alive these battlefields as scenes of conflicting motives and fierce human passion. On these battlefields the War for Independence was won by human beings—a victory that continues to determine the course of American thought and world history. Harrison Gray Otis, in a letter to a friend of revolutionary days prophetically wrote: "You and I did not imagine when the first war with Britain was over, the revolution was just begun."

We could say the same today. ■

For a fascinating guide to 22 Park System units and some 200 other areas that provide insight into the Revolutionary War era, send for 1776: National Park Service Guide to the Historic Places of the American Revolution. *(Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. GPO Stock #2405-00517. $3.15.)*

Wildlife of Indochina: TRAGEDY or OPPORTUNITY?

How did the tragic war in Indochina affect wildlife there?

by RONALD M. NOWAK

IN APRIL 1975 the long and controversial war in Indochina came to an end. A tragedy for men and nations, this war, like none other in history, also has been viewed as a disaster to the natural environment. The concentration of military activity in forested areas, the unparalleled use of mass bombing and artillery fire, and the widespread employment of defoliating chemicals are thought to have had severe effects on flora and fauna. In some respects, however, the war may have slowed in Indochina the general decline in wildlife and habitat that now is occurring throughout the tropics.

The region discussed here is limited to four countries: Cambodia, Laos, North Viet Nam, and South Viet Nam. (Reunification of Viet Nam was under consideration at the time of this writing.) These countries, which together comprised French Indochina until 1954, lie at the extreme southeastern tip of the Asian mainland, entirely within the tropics. Geologically, this region is dominated by rugged mountains and the broad floodplains of the Mekong and Red rivers. The uplands are covered primarily by forests, although they are broken in places by savannas and the temporary cultivated fields of tribesmen. The lowland areas are now used mainly for rice production.

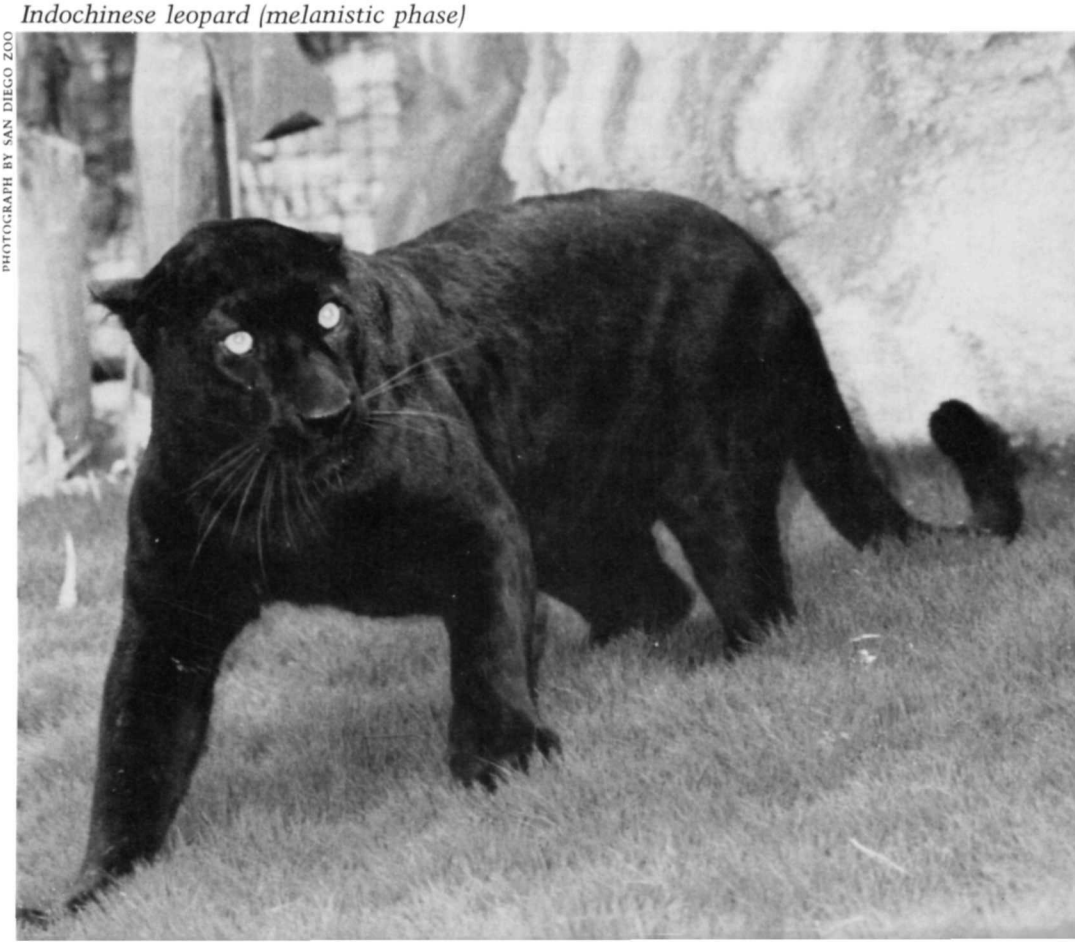
In the early twentieth century, French Indochina had the reputation of being one of the world's better big game hunting regions. Elephant, rhinoceros, tiger, and other prized trophy animals could still be found not far from Saigon in the 1930s. Many safaris were organized in the highland towns of Da Lat and Ban Me Thuot, the latter being the scene of one of the climactic battles of the recent war. Unfortunately, most of what we know about Indochinese wildlife dates from this early period, because subsequent wars have prevented formal investigation and have allowed only fragments of information to pass out.

DURING WORLD WAR II Indochina was occupied by Japanese troops, who in turn were resisted by the Viet Minh, a coalition of Vietnamese Communists and nationalists. In 1945, when the rest of the world attained peace, the French returned to Indochina and precipitated full-scale guerilla war by the Viet Minh. That war ended in 1954, leaving North Viet Nam a Communist state and the rest of Indochina divided into the countries of South Viet Nam, Cambodia, and Laos. After a brief period of relative peace, guerilla war again intensified in South Viet Nam in the late 1950s and did not end until the final Communist victory in 1975. Meanwhile, factional warfare had broken out in Laos in the early 1960s. In 1970 a U.S. and South Vietnamese invasion of Cambodia, to destroy Communist bases, brought that country into the overall conflict.

The United States had started to assist the South Vietnamese government against the Communists in the 1950s. Full-scale participation in the war by regular American military units began in 1964. The subsequent U.S. buildup saw more than 500,000 American servicemen in South Viet Nam by

Indochinese leopard (melanistic phase)

PHOTOGRAPH BY SAN DIEGO ZOO



Slow loris

PHOTOGRAPHS BY SAN DIEGO ZOO

Douc langur

1968, the introduction of vast quantities of weapons and support equipment, and the construction of numerous bases, port facilities, and fortifications. Many more American men and aircraft were stationed in Thailand and on naval vessels, in support of the intensive aerial bombing campaign against the Communists.

PROBABLY the most controversial aspect of American participation in the war, with respect to the environment, was the employment of defoliating chemicals. It is difficult, however, to assess the extent of damage that this program caused to wildlife. Indeed, a massive report by the National Academy of Sciences (1974) on the effects of herbicides in South Viet Nam included less than a page on animals, both wild and domestic.

The NAS investigation found that from 1965 to 1971 approximately 10.3 percent (2,670,000 acres) of the inland forests of South Viet Nam had been sprayed with defoliants. Considerable damage to vegetation in these areas had occurred, but there was evidence of some recovery after six months to a year, and it was thought that with proper silvicultural practices most sprayed areas could eventually be restored to a normal condition.

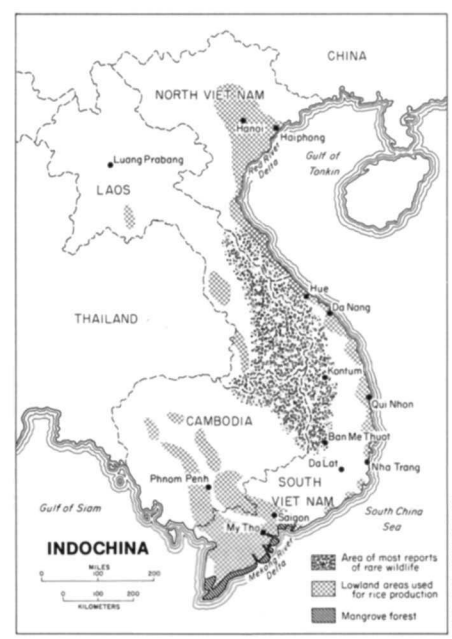
The effects of herbicides appeared much more damaging in the coastal mangrove forests. About 36 percent (260,000 acres) of the mangroves of South Viet Nam were sprayed and killed. Much of the spraying was concentrated in the Rung Sat Swamp south of Saigon, in order to restrict the use of that area by the Viet Cong as a base from which to harass the capital city. The NAS report estimated that it would take well over a hundred years for the mangroves to recover, if ever, though intensive reforestation by man might reduce the period considerably. Because of th e mangroves' vital function of preventing the soil of the shoreline from being washed away by the sea, their loss could result in problems for the ecology of a far larger region than that covered by the forests.

The fauna of the mangroves apparently was seriously affected by herbicide spraying. The fish populations, which depend on these swamps as a spawning site and food source, were reduced, along with the other forms of wildlife that prey on the fish. Observations by G. H. Orians and E. W. Pfeiffer (as reported in the 1 May 1970 issue of *Science*) suggested that the bird life in the Rung Sat area had been severely depleted.

Another controversial environmental factor was the saturation bombing of jungle areas by B-52 aircraft. The usual function of this bombing was to break up Viet Cong concentrations or to deny the Communist forces the regular use of what had been relatively secure bases in remote areas. Each raid created wide swaths of craters through the forest. Probably several hundred thousand acres of jungle vegetation were obliterated in this manner, primarily in South Viet Nam, but also in other countries of Indochina. There is no question that any wildlife in the immediate vicinity of a bomb blast would have been killed, and that many other animals suffered considerable disturbance and disruptive harassment. Nonetheless, the actual affected area, although large, formed a relatively small part of the total forested region of Indochina. Even at the height of the war it was possible to fly for lengthy periods over seemingly undisturbed forest, with no sign of military activity. It does not seem likely, as has been claimed, that B-52 bombing or defoliation in the inland forest area was responsible for the widespread extermination of animals.

Bombing by other aircraft, the use of napalm, artillery fire, and the bulldozing of large areas around bases and villages destroyed more vegetative cover than B-52 raids did. Again, however, there is no way to assess the consequences to wildlife, and most comments that have been made on the matter are pure speculation.

Also a subject of speculation has been the question of excessive hunting by military personnel in the field, either for fun or for subsistence. The presence of hundreds of thousands of men in remote areas, equipped with modern firearms, has been suggested as an overwhelming pressure on some



species of animals. Still, the Vietnamese are essentially a lowland, agricultural people who generally avoid the mountain forests. Even when stationed in suitable areas, comparatively few would have the motivation or skill to stalk and kill big game. Much the same can be said for the American troops. Probably most successful hunting was done by military units composed of highland tribesmen.

Of course, chance encounters allowed even unskilled hunters, with automatic weapons, to kill animals. The American military newspapers occasionally carried articles glorifying soldiers who happened upon and shot a tiger, bear, deer, or some other species, even though such hunting violated South Vietnamese law. In one instance, in 1968 near Hue, a tiger reportedly turned the tables and killed a U.S. serviceman.

Brow-antlered deer

Gaur

THE COMBINED LOSS of wildlife to hunting, bombing, defoliation, and other factors associated with the war may have been significant. A question that could be asked, however, is to what extent such losses were balanced by a war-caused reduction in the exploitation of Indochina's natural resources. Military activity in the jungle not only ended organized big game hunting, but led to a mass movement of people away from the countryside into urban areas. In South Viet Nam especially, large tracts of agricultural land became idle, many villages were abandoned, and the lumber industry underwent a slowdown. Money and effort that in other tropical countries might have gone to human development of wildlife habitat instead went to conducting the war.

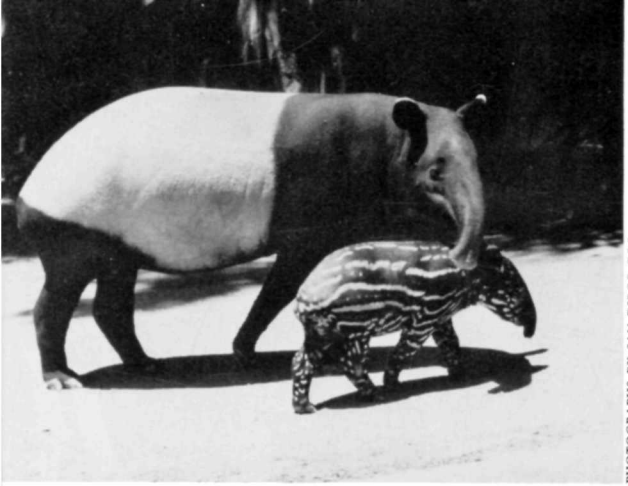
Largely because of the war, very few data are available to enable us to know how Indochina's wildlife has been affected. Only bits and pieces of information have come through, and they do little more than tempt speculation. We do know that Indochina has, or had, a substantial number of species that are listed by various agencies as being endangered with extinction or in some other category of concern.

Of the thousand or so species of birds that reside in or migrate through Indochina, probably many more than the few listed in the accompanying table should be considered in jeopardy. In most areas where wildlife has been intensively surveyed, the number of rare and endangered birds exceeds that of mammals in the same categories. In Indochina, however, almost nothing is known of the status of the myriad of tropical birds inhabiting the inland jungles, mangroves, grasslands, and watercourses of the region. The listing of the Imperial and Edward's pheasants stems in part from the importance of the pheasant group to commercial trade and the resultant greater availability of data. Both these species are endemic to a mountainous area south of the point where the borders of North Viet Nam, South Viet Nam, and Laos meet. As we shall see, these remote mountains are highly significant with regard to a number of Indochina's threatened species. Once covered in part by a vast national preserve, this area also was of great military value and was the scene of especially severe fighting in 1968, 1971, and 1972.

Probably even less is known about the reptiles and amphibians of Indochina than about the birds. The Siamese crocodile, however, is certainly one of the most endangered of crocodilians, which as a group are in jeopardy because of the skin trade and persecution by man. This relatively small species occurs mainly in rivers, swamps, and marshes some distance from the sea. In contrast, the saltwater crocodile is found in large rivers, estuaries, mangrove swamps, and even the open sea. This species is the world's largest living reptile, with a record length of over ten meters. We do not know if this animal has been hurt by indiscriminate shooting from naval vessels and destruction of coastal mangroves, or aided by a slackening of hunting in war zones, but recent reports indicate its continued presence in the lower Mekong River and the Rung Sat Swamp.

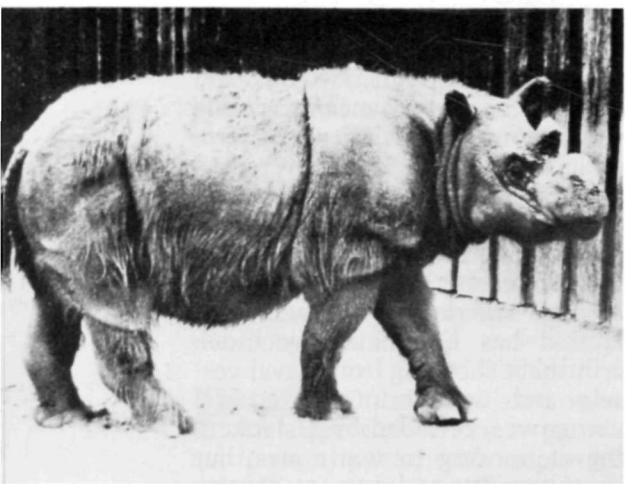
The sea turtles, massive marine animals with flippers instead of feet, compete with the crocodilians for the dubious distinction of being the most threatened of the major groups of reptiles. These turtles, of which at least four species occur in Indochina, are especially vulnerable because they must nest on relatively small stretches of suitable beaches. A new and dangerous threat is the accidental drowning of many sea turtles in the nets of shrimp fishermen. Japanese trawling fleets are said to have been especially destructive in this regard and to have contributed to a decline in sea turtles off the coast of Indochina. Sea turtles reportedly still nest along several of the excellent beaches in Viet Nam, but no population data are available.

AMONG the extensive mammalian fauna of Indochina are many species of primates. As a group the primates are of worldwide concern, mainly because of



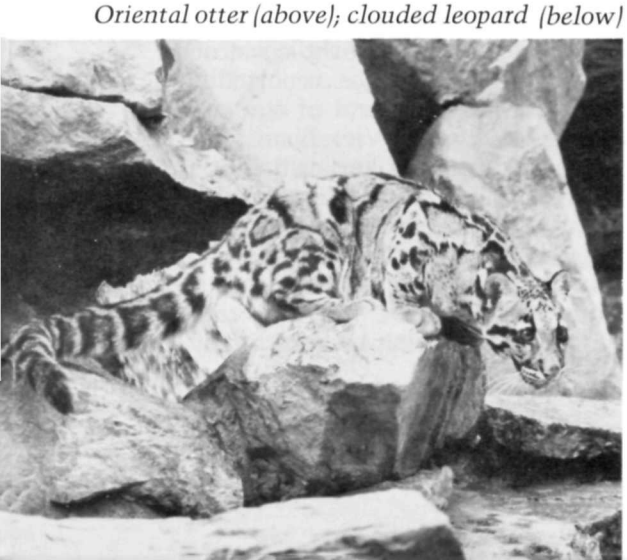
PHOTOGRAPHS BY SAN DIEGO ZOO

Asian tapir



Sumatran rhinoceros

Oriental otter (above); clouded leopard (below)



commercial traffic and loss of tropical forest habitat. Several recent reports also have expressed the fear that military activity in Indochina has been damaging to populations there, but few supporting data have been presented. The Douc langur, a large, brilliantly colored monkey, found primarily within the war zone, is listed as endangered by the International Union for Conservation of Nature and Natural Resources (IUCN), mainly on the basis of assumed losses to defoliation, bombing, and excessive hunting by soldiers.

The large herbivorous mammals of Indochina are especially vulnerable to the kind of unregulated hunting that might have been stimulated by the war, but are threatened by other factors as well. The water buffalo, which once occupied much of southern Asia, long has been declining. Its favored habitat, in grasslands and marshes along major waterways, also is desired by man for agricultural purposes. The species, however, is found in domesticated form over much of the world and is an everyday sight in the rice paddies of Indochina. These domestic animals occasionally become feral, and there is some question as to whether any truly wild water buffaloes survive in Indochina. Large herds were said to be present near Saigon early in the century, but by the 1930s the species had become rare and restricted more to inland areas.

The gaur and banteng are even larger bovids than the buffalo and usually inhabit higher, more forested country. They once were common over much of southeastern Asia but have become rare because of excessive hunting, loss of habitat, and competition and hybridization with their close relatives, domestic cattle. Almost nothing is known about the present status of these species in Indochina. They are gregarious animals, and it is possible that constant harassment by bombing and other military activity could have broken up the herds. Once the animals were scattered, they would be more vulnerable to natural predators and other misfortune, and the breeding cycle could become disrupted. The banteng reportedly still was found near Qui Nhon, South Viet Nam, in 1948; but a 1973 IUCN data sheet stated that this species had become restricted to Java. If either the banteng or gaur does survive in Indochina, the most likely area would be the remote mountainous region where the borders of Cambodia, Laos, and Viet Nam approach one another.

The kouprey, another wild bovid, is of special interest as it is the only large mammal endemic to the region under discussion. Populations are centered in northern Cambodia, although the species at least occasionally occupies adjoining parts of Thailand, Laos, and South Viet Nam. The kouprey was the last large mammal of the world to become known to science, having been discovered only in 1937 when it was already rare. There were an estimated 1,000 in 1940, 500 in 1964, and 100 in 1969. By the latter year the species was known to occur only in four separate parts of Cambodia. Its decline had been caused mainly by uncontrolled sport and subsistence hunting. The former Cambodian government nominally provided complete protection to the kouprey and established reserves in three of the areas occupied by the species. Nonetheless, enforcement of protection was difficult, considering the remoteness of the habitat and the military situation, and there were even reports that the government encouraged poaching.

In 1970 the three kouprey reserves were overrun by military forces, but there is some confusion regarding how this development affected the species. A 1974 IUCN data sheet indicated that the kouprey probably has been wiped out in two of the reserves and that the total population was down to 30 to 70 animals. A report in the November 1974 *Oryx* magazine, however, suggested that the warfare had put a stop to organized poaching and actually aided the survival of the kouprey.

Because of present political con-

ditions it may be difficult for outsiders to ascertain the status of the kouprey in Cambodia. There have been recent reports from other areas, however, including the northwestern wilds of South Viet Nam. Toward the end of the war, evidence of small herds of kouprey was obtained in the extreme southern portion of Laos. A herd also was observed in eastern Thailand near the point where the borders of that country meet those of Laos and Cambodia. Interestingly, it was suggested that this group may have been driven out of Cambodia when the war intensified there in the early 1970s. The same hypothesis has been put forth regarding the supposed movement of kouprey, as well as other wildlife, out of Viet Nam.

TWO SPECIES of rhinoceros, the Javan and Sumatran, are known to have occurred in Indochina. Apparently these huge mammals remained relatively common throughout much of the region until about the 1930s. After that period, as in the case of other wildlife, little is known about what befell the rhinos.

In 1955, during a time of relative peace, Dr. Lee Talbot, representing the IUCN, visited Indochina. He received reports that about one to three dozen animals, including both Javan and Sumatran rhinos, might be present in Cambodia, Laos, and Viet Nam. The best documented locality was a forested area near Da Lat, about 150 miles northwest of Saigon. Other reports came from mountainous areas near Hue and Nha Trang, and from the rugged region where Cambodia, Laos, and South Viet Nam meet. Only a trickle of information has come through since then, but rhinos were said to still occur west of Kontum, South Viet Nam, about 1970. More recent and positive evidence of these animals was collected at the close of the war in extreme southern Laos.

That rhinos have been able to survive for so long in such small numbers is remarkable. They are probably the rarest of all the large animals in Indochina and deserve

THREATENED AND ENDANGERED SPECIES OF INDOCHINA

This table lists all species of Indochina considered endangered (E), vulnerable (V), or rare (R) by the United States Department of the Interior (US) or the International Union for Conservation of Nature and Natural Resources (IUCN). Also listed are species on the appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed in Washington, D.C., in 1973. Appendix I (Ap.I) species are those threatened with extinction and affected by trade; Appendix II (Ap.II) species are those that may become threatened with extinction if trade is not properly regulated. Several species not now listed by any of these agencies, but considered by the author to be of concern, also are listed.

SCIENTIFIC NAME	COMMON NAME	CATEGORIES		
	Reptiles			
Batagur baska	River Terrapin	US-E	IUCN-E	Ap.I
Caretta caretta	Loggerhead Sea Turtle		IUCN-V	Ap.II
Chelonia mydas	Green Sea Turtle		IUCN-E	Ap.II
Eretmochelys imbricata	Hawksbill Sea Turtle	US-E	IUCN-E	Ap.II
Dermochelys coriacea	Leatherback Sea Turtle	US-E	IUCN-E	Ap.II
Crocodylus siamensis	Siamese Crocodile		IUCN-E	Ap.I
Crocodylus porosus	Salt Water Crocodile		IUCN-V	Ap.II
Python molurus	Burmese Python		IUCN-V	Ap.II
Python reticulatus	Reticulated Python			Ap.II
Python curtus	Blood Python			Ap.II
	Birds			
Cairina scutulata	White-winged Wood Duck	US-E	IUCN-R	Ap.I
Family Falconidae	Falcons (about six species in Indochina)			Ap.II
Lophura edwardsi	Edward's Pheasant	US-E	IUCN-R	Ap.I
Lophura imperialis	Imperial Pheasant	US-E	IUCN-R	Ap.I
	Mammals			
Nycticebus coucang	Slow Loris			Ap.II
Nycticebus pygmaeus	Lesser Slow Loris[1]			
Macaca arctoides	Stumptailed Macaque[1]			
Presbytis francoisi	Francois' Leaf Monkey[2]			
Rhinopithecus avunculus	Tonkin Snub-nosed Monkey[1]			
Pygathrix nemaeus	Douc Langur	US-E	IUCN-E	Ap.I
Hylobates lar	White-handed Gibbon			Ap.I
Hylobates concolor	Black Gibbon			Ap.I
Hylobates pileatus	Pileated Gibbon	US-E	IUCN-E	Ap.I
Manis pentadactyla	Chinese Pangolin			Ap.II
Manis javanica	Malayan Pangolin			Ap.II
Ratufa bicolor	Giant Squirrel			Ap.II
Cuon alpinus	Dhole (Asiatic Wild Dog)	US-E	IUCN-V	Ap.II
Helarctos malayanus	Malayan Sun Bear			Ap.II
Selenarctos thibetanus	Asiatic Black Bear			
Lutra lutra	Otter			
Lutra sumatrana	Hairy-nosed Otter			
Lutra perspicillata	Smooth-coated Otter			
Aonyx cinerea	Small-clawed Otter			
Prionodon pardicolor	Spotted Linsang			Ap.I
Cynogale bennetti	Otter Civet			Ap.II
Felis bengalensis	Leopard Cat			Ap.I
Panthera pardus	Leopard	US-E	IUCN-V	Ap.I
Panthera tigris	Tiger	US-E	IUCN-V	Ap.I
Neofelis nebulosa	Clouded Leopard		IUCN-V	Ap.I
Elephas maximus	Asian Elephant		IUCN-V	Ap.I
Dugong dugon	Dugong	US-E	IUCN-V	Ap.I
Tapirus indicus	Asian Tapir		IUCN-E	Ap.I
Rhinoceros sondaicus	Javan Rhinoceros	US-E	IUCN-E	Ap.I
Didermocerus sumatrensis	Sumatran Rhinoceros	US-E	IUCN-E	Ap.I
Axis porcinus	Hog Deer			Ap.I
Cervus eldi	Brow-antlered Deer	US-E	IUCN-E	Ap.I
Bubalus bubalis	Asian Water Buffalo		IUCN-V	
Bos banteng	Banteng	US-E	IUCN-V	
Bos gaurus	Gaur	US-E	IUCN-V	Ap.I
Novibos sauveli	Kouprey	US-E	IUCN-E	Ap.I
Capricornis sumatraensis	Sumatran Serow			Ap.I

[1]Proposed on 19 April 1976 by the Office of Endangered Species for listing as "threatened."
[2]Proposed on 19 April 1976 by the Office of Endangered Species for listing as "endangered."

an immediate high priority conservation effort. It would be tragic if increased accessibility to their habitat, brought on by the end of the war, were to result in their total elimination. And yet, considering the high value of rhinoceros horn in the Orient for alleged medicinal purposes, rapid extermination is a distinct possibility.

The Asian elephant, in a sense, has been more fortunate than the rhinos, because it is valuable alive as well as dead. The species still is used over much of southern Asia as a domesticated work animal. Truly wild elephant populations, however, have declined drastically in recent decades, because of overhunting and habitat loss. The species figures prominently in the history and legends of Indochina, and the kingdom of Viet Nam employed war elephants until the nineteenth century. More recently, Viet Cong forces used elephants to transport military supplies, and as a result these animals became the target of American bombing raids. Substantial wild herds are known to have survived in Viet Nam at least until the beginning of World War II. There have been recent sightings in various parts of the country although some of these reports may refer to wandering domestic animals. In the southern part of Laos wild elephants apparently survive in some numbers, and are regularly hunted.

THE VARIOUS smaller carnivores named in the accompanying table are of concern mainly because of the skin trade. The several species of otters listed may also be jeopardized by loss of habitat, pollution, and increased human manipulation of waterways. Indeed, the world's otters in general may be one of the next major wildlife groups to stimulate international conservationist concern. Among the most esthetically appealing of all animals, their status is surprisingly alarming in many areas. Possibly adding to their problems in Viet Nam has been the defoliation of mangroves and the concentration of military activity along water courses.

The leopard has been considered endangered because of its valuable skin, although it reportedly remains common in some parts of the world. It probably still occurs regularly in much of Indochina, and was observed on occasion by American servicemen. The smaller clouded leopard, a rare inhabitant of dense forests, also is thought to have declined because of the skin trade; but little detailed information is available. Defoliation may have hurt this species to some extent in Viet Nam, but potential opening of the forests to full-scale exploitation could pose greater problems.

In contrast to many of the animals discussed above, the lordly tiger is well known to all the people of Indochina. In the teeming urban centers or intensively cultivated lowlands of Viet Nam, however, it is difficult to imagine that this huge predator may be prowling not many miles away. Although declining, the tiger reportedly is doing better on the mainland of Southeast Asia than in any other part of its range. During the war, tigers were seen regularly and occasionally were killed or captured by American servicemen. Reports of tigers emanated from much of South Viet Nam, although again they were concentrated in the remote uplands near the borders of Cambodia and Laos.

Stories regarding a possible increase in tiger numbers in Indochina, because of the availability of new food supplies in the form of human battle casualties, seem fanciful. Yet there is reason to suspect that the status of the species may have improved in the course of the war. Large predatory animals traditionally increase in numbers during times of war when men are more concerned with killing each other than with hunting wildlife. Wolves, for example, are said to have multiplied in Europe during the Thirty Years and Napoleonic wars and to have made remarkable comebacks during World Wars I and II. Tigers likewise may have increased in Viet Nam in response to an end to regular hunting for both sport and predator control purposes. The decline in human and livestock populations in the countryside would have resulted in fewer conflicts between the interests of tigers and people.

THE TIGER'S SITUATION exemplifies the reason for including the word "opportunity" in the title of this article. Some of the other species discussed herein may also have been able to maintain viable populations because of, or in spite of, the war. In any case, it seems likely that there still is a chance to save most, if not all components of Indochina's native fauna. At present, however, the nations of the region are on the verge of joining other tropical countries in being able to devote their full efforts to peaceful development. Although some fighting still is going on in Indochina, there seems no likelihood of a resumption of large-scale warfare. An ever-increasing proportion of the region's energies, talent, and wealth will be utilized in obtaining maximum benefits from the land. Already foreign interests have been involved in plans for exploiting offshore oil reserves and other natural resources of Viet Nam. Already large numbers of persons have left the crowded cities and refugee centers to return to the countryside. It is good that reconstruction is taking place, but it is to be hoped that efforts to rebuild Indochina will provide for the well-being of wildlife and the environment. Indeed, surveys of rare and endangered species and plans for their protection and recovery would fit well as an integral part of an overall reconstruction program. If such work could begin now, before too many other commitments of resources are made, the peoples of Indochina may be able to take full advantage of the opportunity to preserve their treasured wildlife. ■

A wildlife biologist and veteran of the Vietnam War, Dr. Ronald M. Nowak is much concerned about the wildlife of Indochina. For ten years he has been specializing in the study of endangered species, especially predators.

NPCA at work

DETERIORATING PARKS

Anecdotes & Alibis & OMB

The President's Office of Management and Budget (OMB), shirking any responsibility for the effects of the cutbacks in money and personnel that it has imposed on the Park Service, recently tried to lay the blame for debasement of natural resources and deteriorating facilities in the parks on NPS management inefficiency.

Months after the NPCA Park Resource Survey revealed extensive damage throughout the National Park System, on April 7, 1976, OMB—finally required to justify its actions before a congressional subcommittee—labeled examples of deterioration in area after area of the National Park System as "anecdotal material."

In a two-hour session, William S. Moorhead (D-Pa.), Chairman of the Conservation, Energy, and Natural Resources Subcommittee of the House Committee on Government Operations, and Gilbert Gude (R-Md.), ranking minority member, vigorously pursued OMB Associate Director for Natural Resources James Mitchell for an answer to NPCA charges, substantiated by National Park Service personnel, that the resources of our national parks have deteriorated unnecessarily. (NPCA President A. W. Smith made the charges in testimony on invitation before the subcommittee in December 1975, when it began oversight hearings as a result of shocking facts revealed by the NPCA survey.)

Despite probing by the congressmen, Mitchell maintained as his primary argument the OMB position that the Park Service's problems could be solved through greater management efficiency. In an effort to minimize the findings of the survey, Mitchell stated, "Other than some gross measures such as number of annual visits and acreage under management, there appears to be no systematic evaluation of need. Consequently we and you are left to the anecdotal material—the bridge that needs repair, the sewer treatment facilities that are needed, the trails that are not being maintained."

The types of problems that Mr. Mitchell is referring to as "anecdotal material" include those of rangers who donate their time after hours to combat a serious problem of wildlife poaching at Great Smoky (N.C.–Tenn.), where increases in visitors and traffic take up much staff time. Other "anecdotes" include the problems of park administrators who must stretch increasingly insufficient staff and funds to deal with increases in theft and vandalism and substandard roads at Rocky Mountain (Colo.) and other national parks; unsafe bridges or trails at such parks as Yosemite (Calif.) and Assateague (Md.–Va.); toilet facilities polluting mountain streams at Shenandoah (Va.); and littering of Delaware Water Gap National Recreation Area (Pa.–Del.) with human wastes and garbage. Just how much more efficient can staff at Appomattox Court House National Historical Park (Va.) become, NPCA wonders, when they must deal with the problem of maintaining thirteen heavily visited historic structures without the benefit of *any* operational funds for major repairs or janitorial services or of an adequate fire protection system?

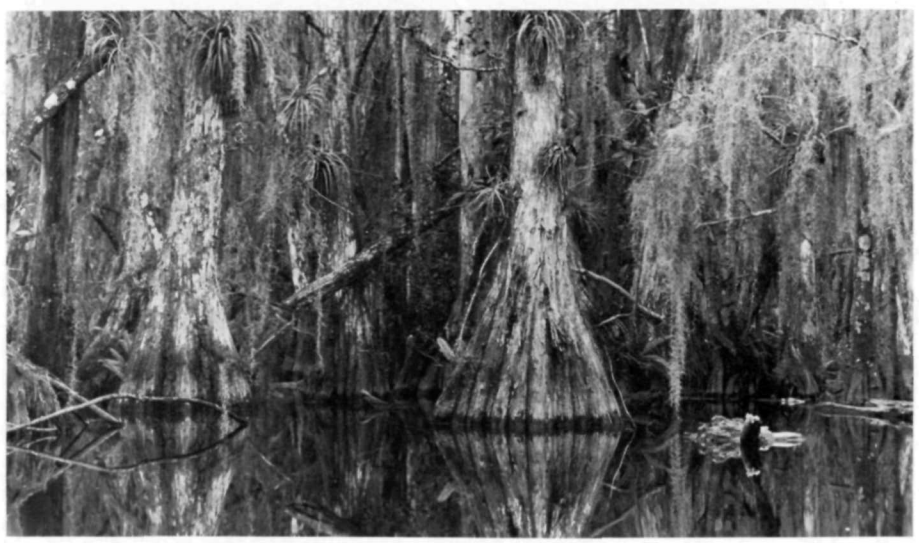
NPCA has pointed out that the recently publicized summary of numerous samples of its survey findings (see February, March, and April 1976 issues) could not possibly account for all the problems caused by the personnel and funding lag. A list of "anecdotes" could go on and on: fragile desert vegetation destroyed by off-road vehicles that the Park Service is unable to prevent from using Joshua Tree National Monument (Calif.), the imminent collapse of the home of Alexander Hamilton, a hero of the American Revolution. . . .

In fact, at the April hearing, Congressmen Moorhead and Gude were quick to point out that resources are deteriorating in virtually *every* unit of the National Park System. Thus, although there is always room in any large agency for greater management efficiency, we are talking about a pervasive problem of understaffing and underfunding, not isolated anecdotes.

Mitchell, however, pointing to what he had once termed the "Washington Monument Syndrome," claimed that "All too often, I am afraid, in a good-faith effort to secure more funds, agency personnel give short shrift to the more visible functions of an agency—and then point to them as examples of underfunding."

Mitchell went on to indicate that, as a consequence, the Park Service would begin an overall management review

CECIL W. STOUGHTON, NPS



Although Congress designated Florida's Big Cypress Swamp in 1974 for protection in the National Park System, lack of enough funds and personnel has hampered Park Service efforts to acquire lands from private owners. Actions of some owners are impairing the resources of the new national preserve.

under the guidance of the Interior Department and the OMB to determine that the most essential needs are being met in the most efficient way.

Characterizing some visitor service programs as "frills" and suggesting that Park System areas that sponsor the performing arts and some public relations and environmental programs may not be appropriate, Mitchell stated, "The management improvement project will involve a ranking of Park System objectives in priority order to be followed by a reallocation of funding and personnel to conform with these priorities."

Because the management improvement project will not be completed until September 1977, Chairman Moorhead sought to pin Mitchell down concerning OMB recommendations for current National Park Service personnel ceiling levels. In the Fiscal Year 1976 budget for the Park Service, Congress had specifically called for 533 new positions. When Congressman Moorhead asked Mitchell for the number that OMB had recommended that the President allow the Park Service to hire, Mitchell refused to answer—claiming executive privilege.

Although the Administration ultimately decided that the Park Service could hire 400, NPCA received information stating that OMB had opposed all of these positions and that permission for hiring that number of people had resulted from a personal appeal by Interior Secretary Kleppe to President Ford. Mitchell steadfastly refused to comment on this question.

Representative Moorhead then cited a recent recommendation by the House Interior Committee to the Committee on the Budget that an additional 1,000 permanent personnel be provided to the Park Service over the next five years and asked Mitchell and the two witnesses accompanying him, Assistant Secretary of Interior Nathaniel P. Reed and Park Service Director Gary Everhardt, for their opinions. Although Mitchell cited insufficient data to make a judgment, Secretary Reed stated that considering the large number of parks that will be in the process of becoming operational, the 1,000 person recommendation was "in the ballpark," and Director Everhardt agreed.

For the past three years, NPCA has pointed out the widespread effects of OMB's decisions on our natural resource agencies and how this Presidential budgeting office controls the budgeting process to such an extent that it even tells an agency how much funding it can *request* from Congress in the first place.

To summarize the latest developments, even though all evidence indicates that our parks are being degraded, and even though the House Government Operations Committee, the House Interior Committee, the National Park Service, and the Department of Interior (as well as NPCA) are in apparent agreement that the Park Service needs more funding and personnel, the OMB remains unconvinced and recommends a year-and-a-half delay for the completion of its management improvement study. OMB seemingly can't see the forest *or* the trees. . . .

FY '77 PARK APPROPRIATIONS

Will $$ crunch continue?

Even while the Park Service is struggling with serious deficiencies in funding and numbers of personnel that are having crisis ramifications throughout the National Park System, the Administration has presented a budget request to Congress that would continue and exacerbate those deficiencies, NPCA indicated in testimony presented on invitation at April hearings on Fiscal Year (FY) 1977 appropriations held in both the House and Senate.

As FY 1977 begins next month (on July 1, 1976), the country will be at the height of the national Bicentennial celebration and the fiscal year will be one in which record numbers of people will be visiting areas throughout the System. The official estimate for FY 1977 visitation is 252.6 million. In recent years, the number of visits has surpassed estimates, so the Park Service might have to accommodate 25 million or more visits over the 1976 figure (an increase of about 10 percent). At the same time the Park System has added fourteen new areas in the past three years and has been severely affected by inflation. Nevertheless, the Administration's FY 1977 appropriations requests for the two sources of Park Service funding—the agency's budget and the NPS share of the Land and Water Conservation Fund—are both scanty.

The request of $355.6 million for the Park Service budget represents a reduction of approximately 1.3 percent from the amounts actually available in FY 1976. Funds for operating programs—important in terms of protection of natural and historical resources, maintenance, and visitor services—show a net increase of $20.3 million over FY 1976. However, while lauding the Park Service's recognition of the fact that these operations should receive first priority, NPCA noted that "the additional amount is barely sufficient to cover the effects of inflation in the past year, especially when one realizes that over $6 million of this amount is going for salary increases."

To make up for the increase of $20.3 million in operating programs, the Administration proposes reductions in the grants-in-aid to the states and the National Trust for Historic Preservation, road construction, and certain planning programs.

NPCA urged additional funding in the NPS budget to alleviate the Park Service's critical personnel shortage and the NPS development backlog—principally deferred maintenance—and for an NPS public service jobs program, the historic preservation grants program, and visitor alternate transportation system pilot projects in the parks.

In relation to the only other source of Park Service funding, the Land and Water Conservation Fund, NPCA noted that the Administration request of slightly more than $77.3 million for the NPS share of the Fund must be increased substantially.

The Park Service is dependent on the Land and Water Conservation Fund (LWCF) appropriations—part of the Bureau of Outdoor Recreation budget—for monies to acquire from private owners land that has been designated by Congress for inclusion in the National Park System. The acquisition process is often a lengthy one. Considering that the Service needs acquisition funds for twenty units that are part of the Park System, and that more than $840 million worth of future acquisition opportunities have been identified for the Park System, the Administration request of $77.3 million is insufficient, NPCA testified.

NPCA particularly urged the Appropriations Committee to add $10 million earmarked for use in acquiring lands in Big Cypress National Preserve

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More than 2,000,000 whales have been killed in the past 50 years. Species after species—the blue, the humpback, the right, the bowhead, the gray whales—have been driven to commercial extinction, one step from biological extinction.

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The Japanese whaling companies are owned and controlled by the great manufacturing and trading companies that produce and market the vast array of Japanese products sold in America. The Japanese business community and the Soviet government condone the unconscionable slaughter. Japan and the Soviet Union will account for 85% of the 35,000 whales destined to die this year.

The friendly dolphins and porpoises, close cousins of the whales, are also being decimated. American tuna fishermen kill more than 100,000 dolphins and porpoises in their nets each year, and Japanese fishermen slaughter 20,000 yearly for human consumption.

THE WHALES NEED YOUR HELP

If a product says MADE IN JAPAN or MADE IN U.S.S.R. don't buy it. Support the boycott. Purchase goods made elsewhere. And tell merchants why you are boycotting Japanese and Russian products and urge them to stock goods made in other countries.

Tell your friends. The more people who act NOW, the sooner we can halt the slaughter that is driving the great whales to extinction. The fate of the great whales must be decided by all mankind, not by a greedy few. Extinction is the ultimate crime against Nature.

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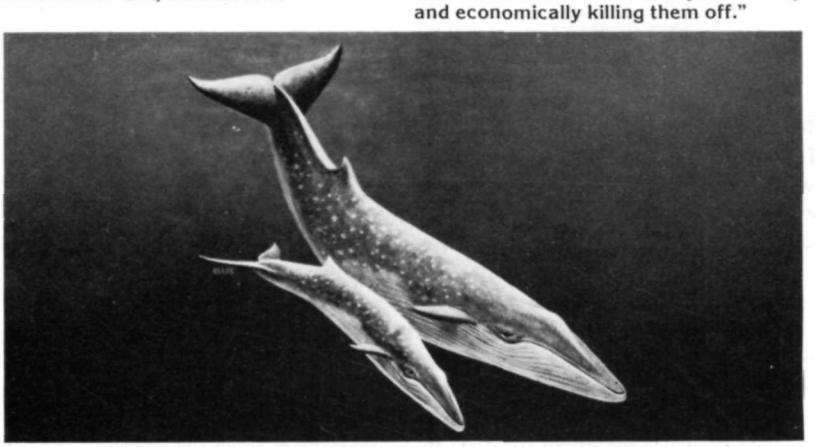
SAYONARA WHALES

The fate of the great whales was foreseen more than a century ago by Herman Melville. The author of the whaling classic "Moby Dick" wrote: **"The moot point is, whether Leviathan can long endure so wide a chase, and so remorseless a havoc; whether he must not at last be exterminated from the waters, and the last whale, like the last man, smoke his last pipe, and then himself evaporate in the final puff."**

Jacques Cousteau, the famed French oceanographer, writes: **"The only creatures on earth that have bigger—and maybe better—brains than humans are the Cetacea, the whales and dolphins. Perhaps they could one day tell us something important, but it is unlikely we will hear it. Because we are coldly, efficiently and economically killing them off."**



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in Florida, Big Thicket National Preserve in Texas, and the Cuyahoga National Recreation Area in Ohio. Although the FY 1977 request designated increased funding for these three areas ($30 million), NPCA stated that this amount "is probably below the minimum essential appropriation if some areas slated for purchase and inclusion in the National Park System are to be saved from overdevelopment or other means of exploitation." The total expenditure for FY '77 for the three areas should be raised to $40 million, and this amount should be matched over each of the next four fiscal years in order to meet the deadline set by Congress for acquisition of these areas.

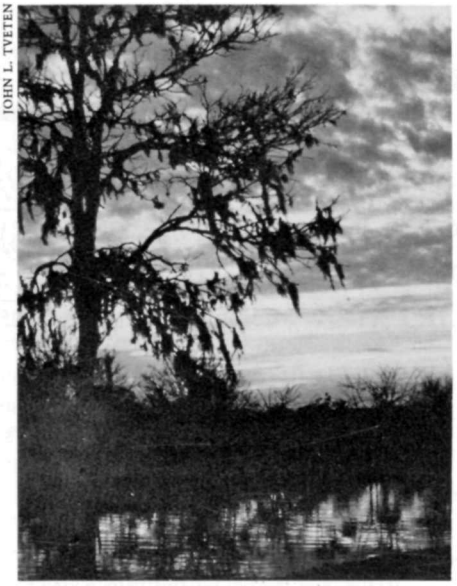
In addition to the need to acquire more recently authorized areas, NPCA noted, there is a backlog of $54.4 million of inholdings within already *established* units of the Park System.

In terms of the total LWCF appropriations for federal land acquisition, NPCA urged appropriation of an additional $120–$150 million—an amount readily available from the $250 million backlog of funds in the LWCF that were not appropriated in previous years.

In detailing areas of concern in the NPS budget, NPCA emphasized that perhaps the greatest need of the Park Service is for increased personnel levels for permanent employees to adequately manage and interpret park resources. Pointing to the recent NPCA Park Resource Survey (see page 19), NPCA threw its support squarely behind adding at least 1,000 permanent positions for the Park Service over the next five fiscal years.

Another priority for more funding is the large backlog of urgently needed maintenance in most areas of the National Park System. NPCA observed that deferring the projects will increase the necessary expenditures in the long run and supported adding $40 million to the FY 1977 Park Service budget for a public service job program that would help restore 141 parks to good condition while aiding the unemployed.

In other areas of concern, NPCA predicted that acceptance of the Administration's proposal to halve the funding for the historic preservation grants program would "clearly prove disastrous for many worthwhile projects" and, at a time when our national history is in the spotlight, would


JOHN L. TVETEN

The inability of the Park Service to readily purchase lands within the authorized boundaries of Big Thicket National Preserve in Texas means that it cannot control extensive logging currently threatening this unique "biological crossroads" of America. So far, after administrative costs, such as researching titles, NPS has acquired less than 100 of the 84,550 acres authorized in 1974. Congress may soon clear an NPS request for authority and emergency funding to immediately acquire some areas (see Conservation Docket).

"contribute to the growing lack of confidence" in government.

Likewise, proposed drastic cuts in alternate transportation systems would cut services important to the growing number of people visiting the Park System. NPCA stressed that the Park Service has clearly demonstrated in several parks that visitor transportation systems are popular and economical and contribute greatly to reducing adverse impacts on park resources resulting from the use of private autos. All ongoing visitor transportation system studies have been terminated in the FY 1977 Administration budget request. Such studies began in FY 1976 in seven NPS units. NPCA believes that visitor transportation systems should be provided in as many units of the National Park System as possible, and asked the Appropriations Committee to approve funds for pilot visitor transportation programs in selected park areas, rather than supporting the delay of actual operation of transit vehicles while costly studies are prepared.

In summary, in the midst of our Bicentennial Year, the Administration's budget request is another indication that it is giving low priority to the cream of our natural and historical heritage—the National Park System.

REDWOODS

OMB, Industry in Cahoots?

The President's Office of Management and Budget recently demonstrated that its influence and power go well beyond the purse strings and personnel rosters of government agencies (see page 19) by blocking an Interior Department move to obtain regulatory authority to protect Redwoods National Park in California from harmful logging practices on adjacent lands.

After years of recalcitrance, the Interior Department recently admitted for the first time that logging practices on private lands outside the national park are having serious effects on the park lands. It then issued a report confirming the long-standing position of NPCA and others that clearcutting in huge patches just across park boundaries is killing ancient trees in the park due to accelerated erosion and sediment deposits, resulting in loss of certain aquatic habitat, and affecting spawning areas of anadromous fishes. Some of the worst effects of recent logging, the report notes, could occur in the future.

Accordingly, the National Park Service and Interior Secretary Thomas Kleppe have agreed that action must be taken to prevent the irreparable loss of significant examples of primeval coastal redwoods and that the best approach would be to go to Congress seeking approval for establishing departmental regulatory authority and control over timber harvesting practices outside the park on watersheds tributary to streams within the park. NPCA has been urging the Interior Department to assert its authority in a similar way by gaining managerial rights on the lands outside the park. (See NPCA at Work, February and April 1976.)

In the view of the department, the regulatory control that it is currently seeking would not constitute a taking requiring compensation to the timber companies; thus, the only cost to the federal government and taxpayers would be the cost of enforcing the regulations.

In mid-February 1976 the department submitted proposed legislation along these lines to OMB. Since the early years of the Nixon Administration, OMB, under the President's chain of command, must approve any legislative report from a department before it can be sent to Capitol Hill.

Timber companies, viewing Interior's plan as a dangerous precedent and a disaster to their clearcutting interests, launched an intensive lobbying campaign to OMB. OMB recently refused to allow Interior to send its report to Congress. OMB's susceptibility to powerful industrial pressures was evident: the budget office could not excuse its action on the basis of budgetary constraint because no compensation should be required.

Although it seems likely that bills embodying the Department's strategy will be introduced in Congress, they will not have the Administration's official support due to the OMB action. The Interior Department, in the meantime, may file a lawsuit against the timber companies in an effort to protect the park.

NPCA commends the Interior Department for taking a stand on this matter and will continue to work for protection of Redwoods National Park.

GLACIER

Some Good News

By unanimous agreement, the Montana Board of Land Commissioners recently rejected bids for state oil and gas leases in the Coal Creek State Forest adjacent to Glacier National Park, thus averting—at least for the present—one of the newest threats to this land of spectacular Rocky Mountain scenery, pure streams, and luxuriant forests harboring elk, moose, grizzly, grouse, and many other animals.

NPCA had protested a plan for leasing oil and gas rights in the state forest because industrial development could lead to pollution of the North Fork of the Flathead River, which forms the western boundary of Glacier National Park, and thus have multiple adverse effects on the park environment and its wildlife and vegetation. Similarly, bids on national forest lands next to the park also are still pending.

NPCA also had pointed out that leasing could jeopardize U.S. negotiations with the Canadian government concerning the development of coal strip mines by Rio Algom Mines, Ltd., on Cabin Creek, a tributary of the North Fork only eight miles from the U.S.–Canadian border and the northwest corner of the park. The U.S. Forest Service and the Bureau of Land Management previously had agreed to defer leasing of oil and gas rights in the Flathead National Forest—also just across the North Fork of the river from Glacier—until negotiations with the Canadian government about this other pollution threat had been resolved.

Although NPCA is pleased with the recent Montana decision, the threat of leasing after the conclusion of negotiations on Cabin Creek remains, and NPCA continues to fight the many threats to this illustrious Montana park. (See November 1975 issue.)

SNOWMOBILES

Random Regulations

In the wake of the failure of the Park Service to establish a firm systemwide policy to protect our national parks from snowmobiles, policies for individual parks are inconsistent, and in several areas superintendents are opting for permitting use of the disruptive vehicles.

Current Park Service regulations on use of snowmobiles in units of the National Park System have left it up to each park superintendent to decide whether to allow snowmobiles in the park and, if allowed, to regulate where, when, and under what conditions snowmobile use is permitted.

NPCA has strongly opposed use of snowmobiles anywhere within units of the National Park System due to their harmful effects on wildlife and other natural resources and on the visitor's experience. The national parks have been recognized as special places where preservation of the resource must command first consideration and only uses compatible with that goal should be allowed. However, NPCA readily agrees that other public lands—such as some national forests, BLM national resource lands, and state and private lands—can be used for snowmobile activities with careful regulation.

NPCA recently told Park Service Director Gary Everhardt that current NPS policy does not provide the necessary protection for the parks because it obviously puts the superintendents under heavy local pressure to permit snowmobiles, even though snowmobiles may impair other visitors' enjoyment of the parks in their natural condition. NPCA urged the Park Service to establish, by regulations issued from national headquarters, a strong policy prohibiting the use of snowmobiles in the National Park System.

Under the current regulations, a number of superintendents have announced their decisions on snowmobile use in recent months. Generally superintendents have banned snowmobiles in parks where demand for their use has either been light or out-

Memo to Members

Dear Friends,

In the past, many of you have written asking how you can help NPCA and what opportunities there are for you to become involved in its work. I hope I can answer some of your questions, and perhaps some of you who had not thought about the role you play in NPCA will be encouraged to become more active. For although there are no chapters or NPCA clubs in your local area, there are many ways you can participate in our programs.

Just as you want to know what is happening in Washington and at faraway national parks, we want to know what is happening where you live. Many NPCA members have been extremely helpful by writing to tell us about national parks they have visited, experiences they have had, topics of special interest to them, and local developments that could have a national impact. This sort of communication lets us know what kinds of things interest them and how successful we are at fulfilling their expectations. I would be delighted to hear from you, and I encourage you to write and share your thoughts and ideas with us.

Other members keep us abreast of the latest news by sending us clippings of important newspaper stories that mention NPCA or deal with topics that especially concern us. If you happen to read a newspaper or magazine story that you think we should know about, please mail it to me. We will all be very grateful.

A number of NPCA members have expressed their desire to become more involved in the work we do here. We provide a number of ways for those who are interested to make a substantial contribution to our programs. Many people regularly stay in touch with us by telephone or letter about projects or issues they are working on near their homes. We try to offer assistance and advice whenever possible to members who are active in their communities. In turn, these members provide NPCA with a dynamic view of the whole country and the nationwide environmental effort. On a few occasions, NPCA members have worked with the staff to write and then present testimony on behalf of NPCA at federal government hearings in their localities. These people and others who have expressed an interest in becoming more actively involved have become our Contact People. All of them receive periodic ALERTS that announce crucial issues that demand immediate action. Contact People write letters to appropriate government agencies or individuals and enlist others to do the same. They may write about such varied issues as national park problems, historic preservation, saving a river, clean air and water, power projects, and much more. If you want to give your time and efforts to this activity, just drop me a note, and I'll be happy to put you to work!

Some members are able to spend time with us here in Washington. From time to time many of you have come to town for meetings, congressional hearings, or pleasure trips. I know that many of you will be in Washington, D.C., for the Bicentennial. I hope that you will feel free to be in touch with us any time you are here and get to know our staff personally.

At the same time, you might meet one of our volunteers or interns. People of all ages from the Washington area have volunteered to assist with the tremendous amount of work there is to be done, and their help has been invaluable. In addition, each summer and winter we offer internship opportunities to college students who are interested in environmental studies and the governmental process. These students donate their time for one to three months. During that time they do research, go to hearings, follow legislation, and help with the day-to-day work in the office. Many are enthusiastic and effective environmental activists when they return home.

Being an NPCA member can be very active and stimulating. But in order to keep our programs vital, we need to maintain a strong membership. And this is one more area where you can be a participant. Undoubtedly you know other people who share your keen interest in our national parks, natural areas, and wildlife. Why not let them know about the opportunities that await them as members of NPCA? You will be doing them a favor; and if they decide to join NPCA, both of you will receive a beautiful portfolio of nine selected *National Parks & Conservation Magazine* cover photographs. In fact, if you enlist a second new member, you will receive three more prints for your portfolio; and for the third new member you enlist we will add still another three prints (all from selected 1976 magazine covers). Finding more than three new members will entitle you to special recognition from NPCA. If you wish to give a gift membership rather than persuading someone to join, you will be given your portfolio as a special thank you. Enlisting new members may be the most important job that you, as an individual member of NPCA, can do.

As you can see, you can become involved in a great deal. So now that you know what kinds of things you can do, I hope that I'll hear from you soon and often.

Best,
Rita Molyneaux
Administrative Assistant, Information

weighed by opposition to snowmobiles. Parks in which the vehicles are now prohibited include Glacier, Lassen Volcanic, and Sequoia/Kings Canyon national parks. NPCA commends the good judgment exercised by the superintendents of these parks.

On the other hand, local snowmobiling interests are pressuring a number of superintendents to open their parks to snowmobiles, resulting in a variety of regulatory proposals for snowmobile use under varying conditions and in a variety of locations.

Snowmobiling currently is permitted in Rocky Mountain and Mount Rainier national parks. It is proposed in Crater Lake and Bryce Canyon national parks. NPS prepared an environmental assessment of snowmobiling regulations for each of these parks and NPCA recently commented on the assessments.

In Crater Lake National Park, the proposed regulations would permit snowmobiles on the unplowed North Entrance Road only. The assessment states the obvious: that mechanized over-snow travel with the attendant noise is not a natural condition, and poses the question, "Should the National Park Service allow large numbers of persons to engage in a winter motorized recreational activity in a natural area [when such activity] has nothing at all to do with the purpose for which the area was set aside?"

Citing noise; damage to vegetation; harassment of wildlife; potential pollution from oil, gas, and noxious fumes; and a disruption of other park visitors, NPCA strongly opposed the proposed regulations for Crater Lake.

At Bryce Canyon National Park proposed regulations would allow snowmobiles not only on paved, unplowed park roads, but on backcountry fire roads as well. Thus, law enforcement patrols by park rangers would be much more difficult.

In comparing the proposals for the two parks, additional policy inconsistencies are evident. Bryce Canyon regulations would require only a ten-inch minimum snow depth—even on unplowed roads—and the proposal actually laments the fact that limiting snowmobile use to the main park road would force snowmobile users to follow the same trail both to and from Rainbow Point and that this would "reduce the wilderness value of the experience." On the other hand, the regulations for Crater Lake require a two-foot minimum snow depth and require snowmobile users to use the same route in traveling to and from their destination.

Although the inconsistencies of the regulations from on e park to the next will cause problems for both park visitors and park management personnel, the fact that snowmobiles are allowed to intrude in our parks at all is highly objectionable. NPCA has protested and will continue to protest the presence of these vehicles in units of the National Park System.

ENDANGERED SPECIES

NPCA Monitors IUCN

Twenty-three nations (including the United States) had ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora at press time, and arrangements were proceeding for a first Conference of Parties scheduled for October 1976 in Bern, Switzerland.

Under the terms of the treaty, which is intended to protect more than 1,500 plants and animals from overexploitation through international trade, responsibility for its operation is vested in the United Nations Environment Programme (UNEP). UNEP has formally contracted to IUCN the function of the Secretariat to the Convention for the purpose of securing ratification. Thus, NPCA is in touch with IUCN in regard to endangered species.

For instance, NPCA President A. W. Smith recently contacted IUCN officials to inquire about the progress of efforts to help the endangered jaguar.

As detailed on our December 1975 Magazine, this beautiful American "tiger" was driven by gun and bulldozer from habitat in the United States. Its range now extends from Mexico to northern Argentina, but its numbers are declining, and commercial exploitation of the jaguar for its hide is a serious problem. Importation and sale of endangered species and their products are forbidden in nations that have ratified the treaty. So far, the signatory nations with jaguar populations are Ecuador, Peru, Costa Rica, and Brazil. Nations with jaguar populations that have not signed the treaty include all other Latin American

NATIONAL PARKS SAMPLER

Sleeping Bear Dunes

GETTING THERE: North of Frankfort, Michigan, on Rt. 22 on eastern shore of Lake Michigan.

GETTING IN: Free

WHERE TO STAY: Meals and lodging in Frankfort and Traverse City, Mich., area. Campgrounds near NPS area or camping (no hookups) within the area.

ACTIVITIES: Dune hikes, camping, canoeing, fishing, boating, birdwatching, swimming.

MORE TIPS: Superintendent, Sleeping Bear Dunes National Lakeshore, 400½ Main Street, Frankfort, Michigan 49636. Temporary visitors center, summer & fall: Rt. 109, 2 miles S of Sleeping Bear Dune.

The 71,000-acre Sleeping Bear Dunes National Lakeshore on the eastern shore of Lake Michigan is noted for its massive sand dunes, glistening beaches, verdant forests, and clear blue glacial lakes. Its most famous dune, named by Chippewa legend because it resembles a sleeping bear atop morainal bluffs, towers some 460 feet over Lake Michigan and is the highest sand dune in this nation. Hiking in dune country to enjoy the spectacular views from above Lake Michigan is a favorite activity, and at any time of the year you can find deserted beaches on your hikes. You also can rent a canoe from a local boathouse and recall the adventures of the Indians and French voyageurs who preceded you, take float trips down the Platte and Crystal rivers, or take a ferry to South Manitou Island—part of the national lakeshore—and see the largest known northern white cedar in the United States. The rugged terrain of the national lakeshore is a good place to explore the bold imprints of glaciers in the region. Colorful duneland flora and wildlife including 200 species of birds will intrigue you. Inside the NPS unit are two campgrounds; primitive camping is permitted on South Manitou.

mainland countries excepting Chile, Uruguay, and El Salvador.

In line with NPCA suggestions, officials also have been exploring the question of a separate treaty controlling trade in endangered species and their products in southern America.

The case of the jaguar is similar to that of many other endangered species of animals as well as plants: as long as there is a buyer somewhere in the world for endangered species or their products, the poacher is in business. Therefore, NPCA hopes that many more nations soon will sign the convention, a treaty that incorporated many recommendations of this organization. (See July 1975 News Notes.)

NORTHERN PLAINS & COAL

Supreme Court Weighs Future

NPCA has joined the Sierra Club, Environmental Defense Fund, Natural Resources Defense Council, and other environmental groups as a participant in a suit now pending before the Supreme Court concerning the leasing of public coal lands in the Northern Great Plains.

The suit charges the Interior Department with failing to comply with the National Environmental Policy Act (NEPA) by not filing a regional environmental impact statement (EIS) on its entire coal leasing program in the Northern Great Plains. The Interior Department claims that by writing an EIS for individual mining projects, it is complying with NEPA.

Environmentalists claim that development of western coal not only falls under NEPA as a major federal action "significantly affecting the quality of the human environment," but it also is an action requiring a study of cumulative regional impacts (the advantages and disadvantages of options such as concentrating power plants in one area rather than spreading them out or of exporting coal as opposed to converting it to electricity in the region, etc.).

In June 1975, the D.C. Court of Appeals reversed an earlier District Court decision and ruled in favor of the environmentalists. The court had enjoined further action by the Department of Interior in the Northern Great Plains until the suit was settled. The Supreme Court subsequently agreed to hear the case and at the same time lifted the injunction for four companies with pending applications. The rest of the more than 190,000 square miles of federally owned coal deposits cannot be mined until the court reaches a decision this month or in July. Most of the land involved is in Wyoming, Montana, North Dakota, Colorado, South Dakota, and Nebraska. Inadequate land-use plans and reclamation laws in those areas coupled with weak federal mining regulations almost ensure serious and widespread environmental degradation of vast portions of the area. Effects of development could include strip mines and associated power plants, coal gasification plants, railroads, and dams.

The Supreme Court's decision, therefore, will be important in determining both the future integrity of NEPA and the fate of some presently unindustrialized areas known for beautiful scenery and abundant wildlife.

SOUTHWESTERN PARKS

Utilities Drop Kaiparowits

When two major utilities announced on April 14, 1976, that they were withdrawing their backing for the proposed Kaiparowits powerplant in scenic southern Utah, it marked a reprieve for many National Park System units that would be endangered by pollution from the huge coal-burning project.

It also marked a reprieve for consumers whose bills would be raised to pay for constructing a plant that would produce power that will not be needed due to decreased power demand associated with energy conservation.

The announcement came only two weeks before Interior Secretary Thomas Kleppe was scheduled to rule on applications from the companies to build the plant on federal land and shortly after the Park Service released a study revealing the probable effects that the plant—which represents only one project in a string of giant powerplants planned in the Southwest—would have on national parks.

Backers of Kaiparowits attributed their move to environmental opposition. *The Washington Post* quoted William Gould, executive vice-president of Southern California Edison, principal backer, as saying that "As far as we're concerned, for the foreseeable future, it's dead. . . . It was beaten to death by the environmental interests."

The apparent cancellation of the

project was hailed as a victory for a number of groups (such as NPCA) that had opposed the plant. However, although environmental opposition played a significant role, seasoned observers noted that in addition to recent electricity forecasts discrediting the need for the plant, financial considerations probably played a major role in the decision. As just one example, an NPCA study has pointed out that Lake Powell probably would fail to provide the needed water as planned.

GORDON ANDERSON

Two utilities recently announced that they will drop plans for a monstrous powerplant on Utah's colorful Kaiparowits Plateau—a victory for environmentalists—but nothing would keep them from resurrecting the plans at a more politically advantageous time, and other power proposals in the Southwest threaten air quality and other resources in many Park System units.

The recent development could prove a mixed blessing for environmentalists. The same utilities that backed out of Kaiparowits may push for nuclear powerplant development in California. Some observers speculated that the timing of the announcement coincided with increased efforts by industry to gut amendments to the Clean Air Act that would prevent deterioration of the air quality of pristine areas such as national parks.

In any case, the Kaiparowits decision, although welcomed by NPCA members and many others who have opposed it, does not eliminate the need to fight threats to the southwestern parks, because the Kaiparowits plans could be resurrected at other sites or other huge plants, such as the proposed Warner Valley and Interstate plants, could be approved.

The proposed Kaiparowits plant, comprising the largest coal-fired plant in the country and four underground mines at a site on Four-Mile Bench north of Glen Canyon on the Colorado River, would have supplied electricity to Southern California.

This project became a national issue because the powerplant would emit about 300 tons a day of atmospheric pollutants into a region that includes, within a 200-hundred-mile radius of the plant, one-fifth of the acreage of the National Park System—thirty-seven parks, monuments, and historic sites—as well as other resources.

In late March the National Park Service released an analysis of the impacts that Kaiparowits would have on the national park resources. The Park Service concluded that in all of Bryce Canyon National Park and in portions of Glen Canyon National Recreation Area and Capitol Reef and Grand Canyon national parks, the powerplant would undoubtedly exceed limits established for the amount of deterioration that can occur in an atmospheric nondegradation (Class I) area under the Clean Air Act.

That is, the Clean Air Act requires prevention of "significant deterioration" of air quality in areas of the nation in which the air is now cleaner than the minimum national standards set by the act. The Environmental Protection Agency promulgated regulations that call for the establishment of "classes" of different allowable incremental increases in total suspended particulates and sulfur dioxide. The Park Service and NPCA have supported amendments to the Clean Air Act that would automatically designate national parks as Class I —the most pristine category.

The smokestacks of Kaiparowits, the report notes, would spew over the parks unacceptable levels of sulfur dioxide, particulates, and nitrogen dioxide with its objectionable odor.

In addition, Kaiparowits would substantially reduce visitor appreciation of scenic resources for miles and miles around the site and would present a significant esthetic intrusion. In some areas of Bryce Canyon, visibility would be reduced extremely at certain times—almost full reduction. A yellow-brown or reddish haze would interfere with visibility for up to 100 miles or more beyond the plant.

The plant, its 600-foot smokestacks, and its boilers, stockpile, and vertical plume would be visible from various vantage points in parks and scenic areas within 60 miles of the plant. For instance, if located at the Four-Mile Bench site, the plant would be directly visible from eleven of the twelve key observation points within Bryce.

Visitors often discover the treasures of the southwestern canyonlands, the Park Service observes, by viewing panoramas of multicolored sandstone spires, arches, and ridges that have inspired whimsical names; and of canyons, slickrock, intricately eroded formations, and distant mesas and mountain ranges. Accordingly, reduction of visibility due to pollution from a powerplant would adversely affect recreation and the tourist industry in the area, resulting in a loss of $24 million in counties that are highly dependent on tourism.

In terms of effects on wildlife and vegetation, the Park Service document

said that it is highly possible that mercury emissions from the plant would enter Lake Powell and, in combination with other mercury contamination, cause severe adverse impacts to fisheries. In addition to many important game fish, some endangered squawfish inhabit the reservoir.

The report mentions that the chief adverse impacts upon vegetation and terrestrial wildlife habitat would be localized impacts and incidents of injury to wildlife under certain conditions. It states that studies show that lichens are very sensitive to sulfur dioxide and that these plants play an important role in the ecosystem of desert parks.

It is generally accepted that an influx of people into the region, loss of habitat and water sources, and all the effects of development associated with development of the various powerplants proposed for the Southwest (roadbuilding, transmission lines, etc.) could affect many species of animals, including the desert bighorn sheep, the golden eagle, the endangered Utah prairie dog and blackfooted ferret, and a number of endangered species of plants.

Considering the threat of a number of plans for other powerplants in the Southwest, and to protect all our national parks, NPCA urges timely protection of the units of the National Park System as Class I areas.

SUPERINTENDENT TRAINING

A Little Help from Friends

By invitation of National Park Service Director Gary Everhardt, NPCA Administrative Assistant for Parks T. Destry Jarvis and two other conservationists—Chuck Clusen from the Sierra Club and Toby Cooper from Defenders of Wildlife—recently participated in a training session for new park superintendents at the Horace Albright training center in Grand Canyon National Park.

The idea was to give new superintendents, primarily those who have been superintendents for the first time for less than a year, an opportunity to meet with some leading park activists among national conservation groups for face-to-face discussion of issues concerning national park management and protection. For NPCA, it was a worthwhile opportunity to meet with thirty-five park superintendents from small areas like the Booker T. Washington National Monument and the Fort Larned National Historic Site as well as such larger and better known parks as Isle Royale National Park, Glacier Bay National Monument, and Crater Lake National Park.

The presentations by the representatives of the conservation groups generally were divided into three areas reflecting how each of the three relates to the Park Service's normal operations. Jarvis discussed NPCA's views on Park System management and preservation, Cooper discussed wildlife management in the National Park System and Clusen addressed himself to the legislative process related to the national parks. These representatives were greatly impressed by the superintendents' views and concerns—particularly their strong sensitivity toward environmental issues and a concern for preservation of the units of the National Park System that they manage. By the end of the meeting the conservation representatives were certain that they were indeed among friends. With the units of the National Park System in the hands of men and women like these, many of the types of problems that have beset the parks over the years can be avoided in the future or at least more easily resolved.

WATERFOWL HUNTING

FWS Gets Some Lead Out

Steel shot ammunition rather than toxic lead shot will be used for waterfowl hunting in selected areas in the Atlantic Flyway beginning in 1976, Interior Secretary Thomas Kleppe recently announced.

The use of steel shot will be extended to selected areas in the Mississippi Flyway in 1977 and to the Central and Pacific flyways in 1978.

NPCA has pushed for ammunition regulations for several years because waterfowl frequently ingest spent lead pellets and subsequently die from lead poisoning. (See November 1974 issue.)

However, in comments on a recent environmental impact statement on the issue, NPCA had told the Fish & Wildlife Service that, for proper protection, the ban on lead shot should be enforced throughout the flyways rather than in selected areas because the problem is an insidious and omnipresent one. NPCA said regulations should be implemented in the Atlantic Flyway in 1976 and in the others by 1977. NPCA also called for applying the regulations to the hunting of cranes and rails as well as other types of waterfowl to protect the aquatic environment.

reader comment

Testimony on NPS Personnel Crisis

A brief note to congratulate you on the considerable effort you have put into the discussion of manpower limitation impacts on the National Park Service's abilities to meet its various mandates. [See "The Degradation of the National Parks," February 1976; February, March, and April articles and p. 19.] You have performed—without the hysteria noted in overkill by some organizations—a solid, substantial, and impressive feat of public service in a reasonable and responsible manner.

My membership in NPCA is well worthwhile. Your articles are interesting, and your positions well thought out and well presented. The lack of stridency you generally maintain is, as indicated, a welcome change of pace. I do not always agree with your conclusions, but I am always interested in what you have to say and the way you say it. In the case of the manpower issue, I believe you are right, although there will certainly be instances in a large organization like the NPS where greater productivity . . . by individual employees would close the "gap" to some extent.

Terrence Cullinan
Land Use & Recreation director
Stanford Research Institute

Your efforts to get more money for the parks seem excellent. Keep up the good work. . . .

Devereux Butcher
Past Executive Secretary &
Editor of National Parks Magazine

A splendid job . . . a highly essential service at a critical time in fulfilling the established purpose for which the Association was created.

Harold J. Coolidge
Honorary President of IUCN

Send your comments and suggestions about the Magazine to Ms. Eugenia H. Connally, Editor, c/o NPCA.

GRISLY DISTORTION

"Hundreds of thousands of campers all over the world seek peace and serenity at national parks every year," begins the promotional material for a new cheap thriller movie that hopes to cash in on the "Jaws" furor. "Our film is a terrifying tale of how this serenity was shattered by one of the most dangerous animals to walk the earth." "Grizzly" is described as the story of a giant bear that "runs amok" in a national park, and—drawn by the scent of human flesh—attacks, maims, and kills people. The title role of a more than 2,000-pound grizzly (from Montana?) is played by an 11-foot trained Alaskan grizzly in Georgia.

We could be good sports about the film if it weren't for the fact that its misconceptions and distortions might stimulate more persecution of the grizzly bear. No more than 800 grizzlies remain in the lower forty-eight states—in Montana, Wyoming, and Idaho—and increasing developments in the species' habitat, as well as some unwarranted shooting, threaten the species.

Grizzlies generally avoid humans and do not attack without provocation. It is true, of course, that the grizzly is not a Teddy bear and backcountry users must take precautions such as keeping a clean camp, keeping all food sealed and inaccessible in a place removed from tents, and trying to avoid encountering or startling grizzlies. By far the most injuries occur when someone crosses between a mother and her cub, so hikers should be alert to this danger. If attacked by a grizzly, the best thing to do is to "play dead." However, your chances of getting clawed by a grizzly are minimal. Since 1900, 5 persons have been killed by grizzlies in national parks. Since 1930 there have been 7 grizzly attacks in Yellowstone and since 1939 there have been 21 grizzly-related injuries in Glacier park. These are the only parks in the lower 48 states that harbor grizzlies. By comparison, since about 1947, there have been 988 auto-related deaths in all national parks and thousands of injuries. In Glacier in 1975, 5 people were injured by grizzlies (some were only scratched) whereas 15 people required hospitalization from auto accidents. In 1975, 2 people died and 55 received injuries requiring medical attention in auto accidents in Yellowstone, whereas two people were injured by grizzlies. Perhaps the producers of "Grizzly" should consider making a horror film called "Tires."

The most disturbing aspect of the material released to promote this movie is an implication that protection of the grizzly under the Endangered Species Act may not be appropriate: ". . . the mighty grizzly bear has been declared a 'threatened' species. . . . But humans are the ones who have a right to feel threatened when faced by the most awesome creatures of North America." It is interesting that several people who were attacked by grizzlies in 1975 asked for assurance that the Park Service would not kill the bears that had attacked them because the incidents were not the fault of the bears. Many other people of good conscience who care about preservation of wildlife will want to boycott this film.

conservation docket

200-Mile Limit: PL 94-264—President Ford has signed into law a bill establishing a 200-mile offshore fishing limit. In addition, the law sets up a national fisheries management program to conserve fish resources. Any future international agreements made by the United States on fisheries will take precedence over the new law.

Big Thicket: HR 2554—Congress has acted on a request by the Department of Interior to provide the authority and funds for immediate acquisition of land threatened by logging within the Big Thicket National Preserve. The House Interior Committee approved a declaration of taking, and the House Appropriations Subcommittee approved $3.8 million in emergency funding. Action in the Senate is anticipated both in the Interior Committee and in the Appropriations Committee. Introduced by Rep. Charles Wilson (D-Tex.), Sen. Lloyd Bentsen (D-Tex.).

New River: HR 12958 and S 153—Congressional reaction to a court decision permitting building of two dams on the New River—which would flood portions of the river in North Carolina—was swift. Bills were introduced in both houses that would invalidate the Federal Power Commission license that permits the American Electric Power Company to build the dams. At the same time, the bills would make 26.5 miles of the river in North Carolina a wild and scenic river. Senate Interior Committee scheduled mark-up of the bill without hearings, on the basis that sufficient information had been obtained in the past. House members immediately began to urge their leadership to take similar action. Introduced by Sen. Jesse Helms (R-N.C.), Rep. Stephen Neal (D-N.C.).

Shenandoah Wilderness: S 885, HR 6624—The Senate Interior Committee reported out, for consideration by the full house, a bill to designate certain areas in Shenandoah National Park as wilderness. The bill would designate 79,019 acres of land within the park as wilderness areas. Its companion bill in the House is pending before the National Parks and Recreation Subcommittee of the House Interior Committee. Bills introduced by Sen. Harry F. Byrd, Jr. (I-Va.), Rep. William Whitehurst (R-Va.).

Gas Pipeline: A number of different bills have been introduced to deal with

the building of the proposed Alaska natural gas pipeline.

HR 11881, HR 12311, and S 2950 authorize construction of a gas pipeline from Prudhoe Bay on the north slope of Alaska, across the Arctic National Wildlife Range, and through Canada to the midwestern United States. The Federal Power Commission (FPC) is required to issue all necessary permits within sixty days of enactment of the legislation. The route is the one proposed by the Arctic Natural Gas Consortium. HR 12311 (the Fraser bill) specifically provides for continued regulation of natural gas prices, whereas HR 11881 (Ruppe bill) exempts Alaskan gas from regulation. Introduced by Rep. Phillip E. Ruppe (R-Mich.), Rep. Donald M. Fraser (D-Minn.), Sen. Walter F. Mondale (D-Minn.).

S 3196 is the Administration bill. It provides that the President, upon completion of FPC proceedings on January 1, 1977, will decide before August 1, 1977, on the location of the gas pipeline route. Congress would have sixty days to disapprove the decision. Introduced by Sen. Paul J. Fannin (R-Ariz.).

HR 13220 would direct the FPC to determine a route for the Alaska gas pipeline based upon environmental impact statements completed by that agency and the Interior Department. The final environmental impact statement already released by the FPC recommends a route that would follow that of the present oil pipeline as far as Fairbanks and run along the Al-Can Highway corridor to the United States. Introduced by Rep. William Broadhead (D-Mich.).

S 2778 authorizes the FPC to approve applications for construction of a gas pipeline only if the proposed route is entirely within the United States. This bill would stimulate development of a proposal such as that of El Paso Gas, which wants to build the pipeline along approximately the same route as the oil pipeline and ship the gas to California via tankers. Introduced by Sen. Ted Stevens (R-Alaska).

The Senate Interior and Commerce committees held joint hearings on the Senate bills in March. All House bills were referred to the House Commerce, Interior, and Public Works committees, with the exception of HR 13220, which was referred to the Commerce Committee only. The House Commerce Committee held hearings in May. Action is anticipated soon.

Continued from page 2

CONSIDER WILDLIFE for a moment. . . . And immediately we encounter extinctions. We find ourselves rescuing threatened and endangered species. The lights are going out for hundreds of species of animals all over the world. A big rescue operation has got to be staged, of a kind we have never yet put on. . . .

Wildlife populations, assuredly, must be kept within the carrying capacity of their diminished habitats. Management can be aided by hunting as a tool where it is properly handled. It could also be aided by the restoration of predators. I have invited sports hunters to my farm on occasion to help control the white-tail deer which were eating themselves and our cows out of house and home. . . . I feel differently about the rabbits; I would let the foxes go after them, because the foxes are attractive. . . . We all prefer to see wolves, not hunters, keep the moose under control on Isle Royale. . . .

We have a new peril now, and we call it modern agriculture. . . . Domestic prices for grain will rise as famine pinches and the profitability of export increases, and agriculture will push out into the submarginal lands. The farmers will do as they have always done, produce enough in hope of profits to keep themselves poor. And meanwhile, our American soils will be drenched in overdoses of fertilizer, insecticides, rodenticides, and fungicides, and the micro- and macrobiology of the fields will suffer as usual. . . .

The survival problem has many aspects. The NPCA has led the way in crying alarm about endangered plants. We reprinted a series of articles published on the subject in our Magazine. We need seed banks, habitat protection, listings of the endangered species.

We also have the insects to defend. The butterflies may be getting a little belated attention. It may be that the problem is less one of insecticides, although I am skeptical, and mainly habitat; certainly much of it is habitat. But we must change our basic attitudes toward insects, realizing that they are not merely a nuisance to get rid of, as most professionals in the field seem to think, but creatures of interest and beauty, entitled to share this planet with the other forms of life, including man. . . .

THE OPEN SPACES of our cities are vital to our spiritual survival. Large areas of the modern metropolis, as a result of our bad management of transportation, construction, and fiscal affairs, are presently uninhabitable. They should be rehabilitated and utilized; if that can be done, there could be plenty of space left for urban parks. In that vein, the central cities could compete again effectively for people, as contrasted with the dormitory suburbs. . . .

Meanwhile it is devoutly to be hoped that the fellows who pulled in all the cash ruining the countryside in the decade just past, the speculative land subdividers and developers, may soon be left high and dry in situations they richly deserve. . . .

What is needed is effective land-use planning to preserve agriculture, the small communities of the rural areas, and natural conditions everywhere, from the heart of the city to the highest wilderness in the mountains. . . .

There is nothing magical about planning itself; you can plan for the wrong purposes as well as the right ones. Our planning has all too often been wrongly motivated. We should make up our minds what we want. If we care to live in a rewarding relationship with nature, then our land-use planning must embody that decision. . . .

WE SHOULD LIST some additional problems. One would be ecological river basin management, meaning water pollution control at source, not by storage in reservoirs; flood plain management, not flood storage reservoirs; solar energy, not hydropower, of which there is nowhere near enough anyway; and recreation along natural stream valleys, not motorized fishing and boating on artificial reservoirs with deep drawdowns which destroy the natural valleys with all their wealth of plant and animal life.

Solutions to the energy crisis are of importance to environmentalists. The skies over our national parks are about to be darkened by fumes from the big coal-fired thermal plants in the Southwest and elsewhere. Western lands of importance for stock-raising and wildlife will be torn up for coal, their water tables broken. The fumes of the automobile choke us everywhere. Nuclear power proves disappointing and dangerous. A heavy shift to R&D to solar energy seems the best thing to do. . . .

We have been covering the waterfront, so perhaps I should mention the UN Conference on the Law of the Sea. I am a member of the United States delegation as one of a very small group of environmental consultants. . . . At stake, in addition to the mineral wealth of the ocean floor, are the oceanic fisheries, pollution from mining and drilling, from vessels, and from land-based sources, freedom of scientific research, military security items of several kinds, and the possibility of worldwide rulemaking, executive, and dispute-settlement machinery of great importance. People concerned about the planetary ecosystem have a great stake in the outcome, but few have been paying much attention to it.

ADDING IT ALL UP, from one point of view, the problem is human proliferation. America, like other highly industrialized countries, may be on its way toward birthrates giving us Zero Population Growth or Negative Population Growth. The main danger is illegal immigration, largely over the Mexican border. . . .

The essential course of action worldwide has been rather obvious for quite some time. It is not good enough to teach the dangers of the population explosion, to promote voluntary parenthood (where that can mean six children), to research contraceptive techniques, nor to disseminate supplies everywhere. It would be helpful to get some social security systems established to give people the security in old age which they have sought customarily from large families, and some tax and subsidy incentives. But ultimately a campaign of moral education must be mounted everywhere to establish an unshakable norm of not more than two children per woman. . . .

I would come back in closing to the great national parks. In the heights of wilderness in the Great Smokies, in the vastness of the High Sierra, a person can experience a cosmic peace and tranquility of an exalted kind. . . .

It is well to think ahead a hundred years as we do on this Bicentennial occasion. But a century is a short time for human planning; a millennium will be needed to restore the damage that urbanization and industrialization as we have known them have occasioned and get on to better things.

The pillars of cloud by day and of fire by night which we shall need in our wanderings through the desert may well be the snowcaps of McKinley, Whitney, and Olympus, in the brilliance of sunlight by day and the pallor of the full moon at night.

—Anthony Wayne Smith

These remarks were excerpted from the opening address, "Resources for Outdoor Leisure," presented on the theme, "Managing Recreation Resources for Century III," at the John S. Wright Forestry Conference at Purdue University on March 3, 1976.

A NEW FEATURE was introduced to the magazine in April which we hope you are finding enjoyable. Entitled "Memo to Members," its purpose is twofold: One, we want you, as members, to become better acquainted with the staff and trustees of NPCA. Each person who contributes to the page has been asked to explain personally the role he or she plays in NPCA. The second purpose is to encourage you to help us grow by enlisting a new member or giving a gift membership. We hope you enjoy meeting all of us as much as we enjoy hearing from you.

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