National Parks & Conservation The Environmental Journal July 1975

NPCA - National Parks & Conservation Association - NPCA

Planetary Prospect: I

NOW THAT our long preoccupation with Vietnam is coming to an end, this nation can turn once again to its true calling in foreign affairs: participation in the creation of a humane world order.

No longer domination, for Vietnam has shown us that we cannot dominate, but cooperation with others in the solution of grave planetary problems must be the path we choose.

We shall have ample opportunity on this course, so old and yet so new, to apply our practical talents: mechanical ingenuity, technological capability, and managerial competence.

And in making this choice, we shall restore to their rightful place in our lives our most vital values: peace, productivity, and freedom.

There can be no turning back to isolation, for we are locked inescapably into economic and ecological bonds with all the peoples on the earth.

Within the purposes of interdependence, not an illusory independence, we shall find our true national interest and our only national security. And perhaps in this manner we shall reach as a people our genuine maturity.

Within the same perspective, the conservation movement must break free of its old parochialism. Maintaining our focus properly on our specialties, whether parks, birds, pollution, or litigation, we must nonetheless confirm our dedication to the broad purposes of environmental protection and ecological security.

And we must work within an understanding of the economic, demographic, political, and even military necessities of our times. In so doing the environmental movement will achieve its own maturity.

THE EXAMPLES of the need to seat our national policy within a structure of worldwide cooperation and interdependence are legion. We note a few of the more obvious:

Had we sought to establish a worldwide system of price and production controls over petroleum when we first realized our domestic supplies were dwindling, the OPEC ambush might never have occurred.

For the moment we have forgotten about steel, but one-third of our iron ore now comes from abroad. The rich ores of the Mesabi Range are finished, and our other good domestic ores as well; taconite is expensive and enormously destructive environmentally.

While we still have the power, we should be working for durable worldwide commodity agreements in metals. Their achievement will require a genuine concern on our part for the equitable allocation of minerals, else there will be no agreements.

Some of our American mining interests, with the eager aid of the Treasury Department, judging by published reports, have been campaigning mightily for special protection by the government in dredging up the minerals of the deep seabed regardless of the claims of other nations. This approach leads to naval engagements.

Needed are worldwide agreements on the sharing of the deep sea minerals, and on the nature of governing bodies to manage their extraction and utilization equitably in the interest of all mankind.

I N A RELATED realm, the existing conventions purporting to manage the fisheries of the oceans are for the most part instruments for the sharing of spoils by the nearest or most powerful economic interests. They have little enough to do with the conservation of the resources or the protection of the ecosystems. Their fundamental revision will be a long-drawn-out task in economic and political statecraft.

Within the controversies over the fisheries, as between coastal fishing fleets and distant-water fleets, and between old gear and new, the problem of the enforcement of regulations has arisen constantly. Assuming that in the Conference on the Law of the Sea or elsewhere agreement can be reached on conservation measures, on the equitable allocation of the catch, and on its adequate utilization, how are disputes over the regulations to be settled?

And what if there be no dispute, but all the parties at immediate interest are prepared to exhaust the resources? How can the general public interest be served, the voice of the world community be heard? Assuming the eventual establishment of a Tribunal for the Seas, can we equip it with an Officer of the Court with authority to bring proceedings for damages or injunction in the name of the public? The survival of indispensable food supplies may depend on the answer.

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COVERS Monument Valley, by David Muench The Southwest's pristine skies are threatened by planned massive development of coal-burning powerplants in the midst of this spectacular region of natural magnificence (see page 9).

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CANYON COUNTRY: PROFILE OF THE AGES

Three of our most spectacular parks record the events of three geologic eras

article by C. J. BURKHART photographs by ED COOPER

I MAGINE, if you can, standing on a towering promontory near the present Utah-Arizona border in the year 600,000,000 B.C. As your gaze sweeps the horizon, what might you see? Snowcapped mountains? Profound canyons? Verdant forests? Lush valleys? Rolling plains? No. Spread before you would be an immense sea reaching far into the distance.

During the next 530 million years the land slowly rises above and sinks below the sea many times. Each time the land is engulfed by the waters, thick deposits of limestone, shale, and sandstone accumulate. Each time the earth rises, forces of nature gnaw away at the deposits. Eventually rock at least twelve thousand feet thick is built atop the ancient Precambrian schist that forms the base.

Finally the last intruding sea vanishes, and a tremendous upheaval takes place. The entire region slowly rises, pushed by an irresistible force.

Five to ten million years ago the Colorado River begins cutting into the land. Farther north the Virgin

Grand Canyon

River rushes southward, slicing deeply into the uplifted stone. To the east the Paunsaugunt Plateau rears upward to be cut by rivulets of water into a capricious fantasy of pink and white spires. Nature begins to reveal her dim past, a complex series of events during an immense span of time that reaches so far back into antiquity that the human mind has difficulty comprehending its magnitude.

ODAY the land is a symphony in sandstone. Within a two-hundred-mile area straddling the Arizona-Utah border, nature has unveiled her past through the process of erosion. Here geologists can read the rocky pages of earth's geological history in three spectacular canyons that record the events of three geologic eras. The relentless scouring of the Colorado River has revealed ancient geologic history (Paleozoic Era) in the multicolored layers of miledeep Grand Canyon. At Zion National Park the Virgin River has chewed a half-mile down into the sandstone, revealing events of middle geologic time (Mesozoic Era). A few miles northeast, Bryce Canyon, whose high point, carved

of Wasatch limestone, rises more than eight thousand feet and displays a multitude of odd but beautiful configurations, tells the story of late geologic history (Cenozoic Era).

Although located in comparatively close proximity, each of the three canyons discloses entirely different scenery.

Grand Canyon is the most extensively eroded of the three. Sand and rocks carried by the Colorado River, pelting drops of rain, streams plunging down washes, chemical action, freezing weather, burrowing animals, plant rootsall these forces have helped create an awesome and overwhelming abyss laced with side canyons, towering buttes, and slender fins. Eons of time have been bared by the sculpturing. Numerous layers of rock expose ages of geological history beginning with the 2,000million-year-old Precambrian rock at the bottom of the Inner Gorge. Rocks from the Precambrian Era are the oldest on earth.

At one time the Precambrian rocks in the Grand Canyon were volcanic materials or horizontal layers of sediment similar to that found in the upper portion of the canvon. However, forces from within buckled the earth's crust into a great mountain range, generating such heat and pressure that the Precambrian rock recrystallized into schist and gneiss. Then, molten material from the earth's interior intruded the rock and cooled and hardened into seams of pink or white granite. Erosion wore down these ancient mountains to a plain, and a great sea covered the land. In the eons that followed seas came and went. depositing deep layers of mud and sand. Once more the sea bottom was raised and broken up into tilted mountain ranges, which again were eroded away to a level plain.

Again great seas invaded and retreated. The upper two-thirds of the canyon walls are composed of layers of various sedimentary rocks deposited by these ancient seas during the Paleozoic Era, beginning with the Tapeats sandstone. The repeated advances and retreats of the seas on the land were broken only once—by the deposition of desert sand dunes revealed in the Coconino formation.

As much as 8,000 feet of additional layers of rock once covered the Kaibab limestone, which now forms the Grand Canyon rimrock, but it was worn away before the Colorado River began cutting the canyon.

Rocks similar to those now eroded away in Grand Canyon may today be seen in Zion Canyon. These formations are mainly deposits of gravel, mud, limey ooze, and sand laid down by water. Lime, silica, and iron cemented the deposits together, and the weight of subsequent deposits compressed the layers that we see today. The Virgin River's downcutting action on this easily eroded rock created Zion Canyon and revealed the layers to our view. Volcanic rock outpourings are found in the park in addition to the sedimentary rock. They are younger than the sedimentary formations-some were born of eruptions only several hundred years ago, although some date back as much as thirty million years.

In Zion, exposed rock at the base of cliffs is weaker than overlying layers and erodes more rapidly, undermining rock above and causing huge slabs to crack and fall. Such activity forms vertical walls that now rise 2,500 feet above the green canyon floor. Many alcoves, arches, and wide amphitheaters dent these monolithic walls. Mormons stirred by the area's magnificent temples of stone appropriately named the canyon Zion, meaning "the heavenly city of God." At the canyon's north end, where red walls close to within a few feet of each other, the Virgin River falls ninety feet each mile; a rate ten times greater than that of the Colorado.

Not actually a canyon, but a horseshoe-shaped area cut into the Paunsaugunt Plateau, Bryce Canyon, with its innumerable delicately shaped spires, has been described in many ways. Some picture it as Javanese spires vaulting from a silent city, or a pink and white birthday cake with candles, or a cavern without a roof. The first white man to discover the canyon-Ebenezer Bryce, a Mormon rancher who left the canyon his name-was not impressed with its beauty but described it pragmatically as "a hell of a place to lose a cow." Probably the best characterization of Bryce comes from the Paiute Indians. They de-

Adapted by Federal Graphics from A. J. Eardley and James W. Schaack, Zion, The Story Behind the Scenery, copyright[®] 1971 by K. C. Publications. Reproduced by courtesy of K. C. Publications, Las Vegas, Nevada.







Bryce Canyon

scribed the canyon as red rocks standing like men in a bowlshaped canyon, which followed their belief that the spires were creatures set upon by evil spirits and turned into stone.

However it may be portrayed, Bryce contains some of the most colorful and exquisitely carved rock on earth. The limestonesandstone combination from which Bryce is fashioned is the youngest sedimentary rock found in the three canyons (less than sixty million years old). Like the rock formations in Grand and Zion canyons, Bryce's limestone and sandstone were laid down as sediment by inland lakes and seas. But unlike the other two canyons—which were sculpted by powerful rivers—upheavals of the earth and erosion from wind, rain, frost and thaw, running water, and chemical solutions have created Bryce's countless fantastic shapes.

Nature will inexorably continue her sculpturing process until eventually the Southwest is worn down to a level plain, possibly to be submerged again beneath the sea and maybe someday to rise and begin a new cycle.

But for the present, nature oblig-

ingly reveals her past in the walls of canyons, from the shadowy depths of Grand Canyon's dark Inner Gorge to Bryce's lofty Rainbow Point.

C. J. Burkhart has traveled extensively throughout the United States during the past twenty-five years. For the past seven years he has worked as a professional photojournalist.

Ed Cooper works as a free-lance photographer specializing in the national parks and other natural areas. His work has appeared in a number of publications.

SMOG ALERT for our southwestern national parks

Proposed industrialization of southern Utah would pollute the

Southwest to provide power for distant cities

by MARGA RASKIN

N BRYCE CANYON National Park in southern Utah a group of men holding binoculars are silhouetted against a deep pink sky streaked by a few grey clouds. Bryce Canyon's superintendent, the Bureau of Land Management's district manager, and other federal officials peer intently across a darkening plateau thirty miles away and three thousand feet below, watching for an orange and black helicopter equipped with a single strobe light. Southern California Edison, project manager for the proposed Kaiparowits powerplant, is conducting an experiment. If that group huddled on the precipice can see the helicopter land, it will mean that the huge powerplant with many strobe lights on its four pollution-belching smokestacks, proposed to be built on Fourmile Bench sixteen miles north of Glen Canyon City, will also be visible from Bryce Canyon's scenic overlooks along the canyon rim drive. As the helicopter landed, Bryce Canyon Superintendent Chuck Budge could clearly see the strobe lights, while the others in the group needed binoculars.

Earlier in the day at Inspiration Point overlook there had been many groups of visitors, some of whom knew that the world's largest coal-fired powerplant might be built on the Kaiparowits Plateau below. They, too, were concerned about the grave possibility that the vistas that had impressed them and millions of other tourists would be drastically diminished.

The more one learns about the 3,000-megawatt Kaiparowits powerplant, the more ill-conceived the project seems. Consider these facts: Southern California Edison Company, San Diego Gas & Electric Company, and Arizona Public Service Company will draw on at least 81.4 percent of the power output of the Kaiparowits plant. This means, in effect, that the integrity of one of this country's most beautiful natural areas, most of which is publicly owned, is being sacrificed for Utah's shortterm economic gain and to provide power for Southern California and Central Arizona-and at a time when use of electricity in Southern California and Arizona has decreased since 1973 to such an extent that the need for that power is questionable. The energy and natural resources required to produce this exported energy are 24,-730 tons of coal and 150 acre-feet of water per day and 1,000,000 barrels of fuel oil per year for the first five years.

The Kaiparowits plant will consume and evaporate Utah's share of critical Colorado River water supplies, and salt deposited by moisture from the plant's cooling towers will kill or stunt vegetation on 19,000 acres around the plant. In addition, the plant will produce noise, dust, smoke, haul roads, pipelines, high-voltage electrical transmission lines, coal mines, limestone and gravel quarries, ash disposal dumps, new housing developments, more than 100,000 tons of air pollutants each year, and general social disruption from an influx of thousands of employees that will more than triple the population of the country.

Yet the proposed Kaiparowits powerplant is only one aspect of a much larger threat; even more shocking is the proposed intensive development of a large and scenic region of the Southwest by the construction of a whole series of giant coal-fired powerplants.

The Four Corners powerplant in northwestern New Mexico, the first in the series and fueled by the world's largest strip mine, has become known as one of the world's worst polluters. Its stack emissions caused a fivefold decrease in visibility in the area, frequently eliminating the view of sacred Indian landmarks such as Shiprock. The haze stretched a hundred and fifty miles southwest to Los Alamos, an equal distance north into Colorado, and seventy miles southwest into Arizona. Before wet scrubbers were installed, the amount of sulfur dioxide and fly ash being dumped into the area exceeded Los Angeles' total output of pollutants.

The Four Corners and San Juan plants in northern New Mexico and the Mohave plant in southern Nevada are already generating a total of more than 4,000 mega-



Four Corners powerplant

JOHN MCC

Kaiparowits Draft Environmental Impact Statement, Bureau of Land Management

"By far the most severe impact in the study area and conceivably to the entire region is the visual pollution created by smoke and other airborne particulates emitted from the plant. In spite of the great effort put forth at the Navajo Plant to reduce these emissions, there is a definite plume or dark cloud drifting on a horizontal plane for many miles from just the one generator unit. When the two remaining units at the Navajo Plant and the four units at the proposed Kaiparowits Plant are operational, a permanent haze could be created which would significantly reduce visibility and have a devastating effect on the sky/landscape relationship as well as obscuring many of the geologic formations which are important for the total scene of this area. If this visual pollution consistently drifts into the nationally and internationally important scenic areas such as Grand Canyon, Rainbow Bridge, Lake Powell, Zion Canyon, Bryce Canyon, Arches, Canyonlands, etc., the effect on the panoramic viewing values could be catastrophic. There is inadequate scientific evidence to prove or disprove the magnitude of the smoke problem (i.e. the intensity of the emission, where and how far it will drift, etc.), but there is enough evidence from the one unit operating at the Navajo Generating Station and the units operating at the Four Corners Generating Plants to cast grave doubts on the capability of clearing up the emissions to a point where they will not have a serious adverse visual effect."

watts, and last summer the Huntington Canyon plant in Utah and the Navajo plant in northern Arizona began producing an additional 1,180 megawatts, bringing the total to almost 6,000 megawatts. A power consortium led by a Utah association of municipal utilities is planning to construct another huge powerplant near Caineville, Utah, only ten miles east of Capitol Reef National Park to supply power mainly for the Los Angeles Basin. Nevada Power Company is promoting a powerplant in the Warner Valley near St. George, Utah, twenty-three miles upwind from Zion National Park, with threefourths of the output to be consumed by Las Vegas. Additional giant plants are planned for central Utah and the Escalante River area. Under one proposal water for the Escalante plant would be provided by damming the Escalante River, thus creating an artificial reservoir in the North Escalante Canyon Outstanding Natural Area, which is de facto wilderness. Such a reservoir would drown all hope for official wilderness designation there.

Utah Power and Light Company is expanding its Huntington Canyon plant and planning to construct another near Emery, a few miles south of Huntington. The Cholla powerplant near Petrified Forest National Park in Arizona is to be increased fivefold, and the Salt River Project is proposing to construct the 1,050 megawatt Coronado powerplant southeast of Petrified Forest National Park. In addition, El Paso Natural Gas Company and Western Gasification Company (WESCO) are proposing the construction of six coal-gasification plants on Navajo Indian land in New Mexico not far from the Four Corners and San Juan powerplants. El Paso is also contemplating the construction of a coal-gasification plant on the Kaiparowits Plateau.

For the past decade, the coal and utility industries have been surveying the millions of tons of strippable coal in the Alton coal field, which forms a horseshoe around the southern border of Bryce Canyon National Park, and the billions of tons that could be mined from the Kaiparowits Plateau. Resources Company, Peabody Coal Company, Consolidation Coal Company, and El Paso have leased 107,450 acres of federal land on the Kaiparowits. An area abutting the eastern border of Capitol Reef National Park is also being considered for a strip mine.

Utilities and their subsidiaries plan to provide cheap power from mine-mouth electric generating stations for Phoenix, Tucson, Las Vegas, San Diego, and the Los Angeles area, even though it has been shown that the costs would be identical if the coal were shipped to the point of use for electrical generation in a metropolitan center. If the latter alternative were adopted, the consumer of that electricity would share the environmental costs. However, the plants could not meet Los Angeles air quality requirements, so the utilities escape regulation by California by burning the coal at mine mouth in Utah, which does not have strict regulations.

Rugged terrain and a lack of water have kept the Colorado River Plateau from being developed as quickly as other sections of the nation. After the area had been overgrazed and eroded, federal and state governments fostered tourism in an effort to aid local communities. Now the rush to national energy independence is shifting priorities from environmental quality to energy production-and Utah is eager to cash in. Because southern Utah is "economically underdeveloped," it is susceptible to promises of economic growth and schemes for quick exploitation of its resources. By 1990 utility companies hope to be exporting more than 30,000 megawatts from the region-presently one of this country's most wild, fragile, and spectacularly scenic areas.

ITHIN a 200-mile radius of Kaiparowits are eight national parks, twenty-six national monuments, three national recreation areas, two national historic sites, and one national memorial. This concentration of National Park System units comprises onefifth of the total Park System acreage. In addition, there are spectacular Monument Valley in Navajo Tribal Park and the sacred Indian landmarks Navajo Mountain and Shiprock, as well as four national forests, numerous properties included in the National Register of Historic Places, and a vast expanse of lands under Bureau of Land Management administration. There are BLM's Paria Canyon Primitive Area, and Hackberry Canyon, Cockscomb Ridge, and Canaan Mountain-the latter three proposed for BLM primitive area designation. And there are the lush canyons of the Escalante Riverwith their series of waterfalls. flowered seeps, arches, and natural bridges that provide a cool green contrast to the southern Utah desert-which are under study for wilderness designation.

Joe Kennedy, Assistant Superintendent of the Glen Canyon Na-

tional Recreation Area, is concerned about the existing Navajo powerplant's effect on regional air quality between Lake Powell's Wahweap Marina and Rainbow Bridge National Monument. Kennedy takes some comfort in the fact that temperature inversions. which cause concentrations of pollutants, occur mainly in the wintertime when the least number of visitors is present. Although meteorologists are not able to predict how severely pollutants will affect air quality in the vicinity, they do agree that the recreation area will be affected by the Navajo and Kaiparowits plants.

Bryce Canyon Superintendent Budge worries that even the slightest reduction in visibility will have a detrimental effect on visitors' experiences in the park. The Navajo powerplant, sixty miles away on the Arizona side of Lake Powell, already intrudes on the area's beauty and magnificent vistas. Pollutants from the Four Corners powerplant in northwestern New Mexico, as traced by infrared pho-



Light green Indian rice grass, Mormon tea, violet lupines, bright orange globemallow, and delicate white primroses grow in the red sand at the feet of silvery transmission towers that march across the desert from the Navajo coal-fired powerplant at Page, Arizona. The intrusion evokes a primitive, mystical feeling that makes one wonder if this is one of those ominous symbols referred to by the ancient Hopi prediction of man's demise should he destroy the land held sacred by that tribe for more than a millennium. Already smog hangs over Lake Powell in the background.



APPROXIMATE LOCATIONS OF SOUTHWEST POWERPLANTS (1975)

FEDERAL GRAPHICS

One-fifth of the National Park System is located in the region of

the proposed powerplant complex

tography, reach Bryce two hundred miles away.

Because prevailing winds at Bryce are from the southeast approximately one-fifth of the time, pollutants produced at the Kaiparowits powerplant combined with those produced at the Navajo powerplant can be expected to have an increasingly adverse effect not only on the visitor's experience but on wildlife, vegetation, and climatic conditions there as well as other downwind areas. Scientists are studying the effects of energy development on ecosystems within a 100-mile radius of the Four Corners plant in an attempt to obtain hard data.

Capitol Reef National Park Superintendent Franklin Wallace feels that "there's a good possibility that emissions from the Kaiparowits would be sucked up the Strike Valley of the Waterpocket Fold." Wallace recalls that even now, "at certain times of the year, when the clear blue sky that prevails at Capitol Reef is overcast with a heavy layer of smog, the Four Corners powerplant is suspected of being the culprit."

Park naturalist David May at Canyonlands National Park, a bit east of Capitol Reef, reports that twice during the past four years a reddish-yellow haze decreased visibility from Grand View Point, obscuring the vista of the nearby snow-capped La Sal Mountains. May suspects that the "floating garbage" originated at the Four Corners powerplant.

Keith T. Pfefferle, supervisor of the Kaibab National Forest, which adjoins Grand Canyon National Park on the north and south, hopes that prevailing winds will prevent smoke and haze from the powerplants from drifting southwest into that area. Pfefferle predicts that Kaibab's visibility, now one hundred miles or better, "will be reduced substantially when the winds blow from the northeast."

N RESPONSE to growing concern over the future of the scenic and recreational resources of the Southwest, in 1971 the Senate Interior and Insular Affairs Committee held hearings in Albuquerque, New Mexico; Las Vegas, Nevada; Salt Lake City, Utah; Durango, Colorado; and Page, Arizona. The voluminous testimony pinpointed the basic problem: too many decisions have been made "to achieve limited and relatively short-term goals and which often were made without full knowledge or adequate consideration of the full range of alternatives, the potential regional impacts, or the long-range desirability of the actions involved."

The Senate hearings brought forth a variety of objections to the proposed power developments by authoritative and vocal adversaries. Before the hearings had concluded, then Secretary of the Interior Rogers Morton hastily announced that the Department of the Interior would also undertake an extensive review of the situation and report its findings within a year. As manager of the federal coal resources and as trustee of the Indians' coal resources, Interior's goal was "to develop an information base and public dialogue to guide decisions and identify the information and alternatives required to facilitate future decisions involving long-term choices."

It soon became apparent that Interior's resulting *Southwest Energy Study* was essentially a justification for the construction of powerplants inasmuch as it minimized or ignored their damaging effects on the environment. Certain experts at Interior predict that powerrelated developments will have a profoundly devastating and irreversible impact on the environment of the Southwest. However, Indians and environmental organizations have failed in their efforts to force Interior to comply with the National Environmental Policy Act (NEPA) by preparing an environmental impact statement on the entire Southwest energy complex—instead of piecemeal, plant by plant.

The NEPA process presents an opportunity to study the seldom discussed economic and social costs of energy development—such as the need to construct roads, schools, and medical facilities and disruption of other means of livelihood such as grazing.

The Environmental Protection Agency (EPA) is afraid to move decisively to protect the air quality of the Southwest and has sidestepped its responsibility under the Clean Air Act by letting states decide for themselves the amount of significant deterioration of air quality (if any) they will allow within their borders. In the case of federal lands such as national parks, the Interior Department is empowered to place such in the most pristine classification, but so far it has not acted.

The National Park Service Organic Act, authorized by Congress in 1916 "to conserve the scenery, the national and historic objects, and the wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations," provides another tool that could be used to protect the parks of the Southwest. Thus, a number of laws exist to prevent the unique and superb environment of the Southwest from being degraded, but whether they will be implemented by the responsible agencies is another question.

The rationale for constructing



Navajo strip mine, with Four Corners plant in background

Many Indians object to leasing their land for strip mines-

"The white man, through his insensitivity to the way of Nature, has desecrated the face of Mother Earth. The white man's desire for material possessions and power has blinded him to the pain he has caused Mother Earth by his quest for what he calls natural resources. And the path of the Great Spirit has become difficult to see by almost all men, even by many Indians who have chosen instead to follow the path of the white man...

"Today the sacred lands where the Hopi live are being desecrated by men who seek coal and water from our soil that they may create more power for the white man's cities. This must not be allowed to continue for if it does, Mother Nature will react in such a way that almost all men will suffer the end of life as they now know it. The Great Spirit said not to allow this to happen even as it was prophesied to our ancestors."

-From letter to President Nixon from the Hopi Traditional Village Leaders, 1970, when the Peabody Coal Company began stripping coal from lands leased from the Hopi and Navajo tribes. Peabody Coal Company officials had promised that mining would not damage the land and would improve the lives of the Hopi and Navajo.

the Southwest powerplants is based on phenomenal growth patterns of the recent past in California and Arizona. However, an EPA consultant calculated that if the growth rate through 1990 were to fall by only one percentage point from industry projections of 7 percent annual growth, additional powerplants beyond a total of 10,-000 megawatts would prove to be unnecessary. In the past two years there was a significant reduction in consumption in that area, and in April 1975, the San Diego Regional Coastline Commission rejected an application for an addition to a plant by San Diego Gas and Electric, a member of the Kaiparowits powerplant consortium, because that utility had overestimated growth in demand.

WHEN I think of the South-west, I recall magnificent vistas of red rock and clear azure sky; lichens colored fluorescent green, metallic grey, and sulfurous yellow; agave which blooms only once in a decade to produce a tall yellow-flowered spike that continues to stand long after the plant has died; purple flowers of locoweed and the strong fragrance of sage; grasses bent by a breeze etching semicircular tracks; and delicate footprints of tiny lizards, beetles, and kangaroo rats imprinted on red sand freshly sculptured by the winds to resemble ripple marks of a receding tide. This magnificent country can heal a weary spirit. But will a visitor in twenty years be greeted by smokestacks, power lines, and a smoggy view from scenic overlooks like the ones at Bryce Canyon?

The national parks, monuments, landmarks, and recreation areas of the Southwest are financed with taxpayers' money, which means that we all have a proprietary interest in them as well as an interest in their natural beauty. The construction of powerplants in an area that includes so many national treasures is not a matter that concerns just the state of Utah and the power-consuming states of the West. It concerns all of us. When a powerplant ruins the vistas of a national park or monument, worsens the quality of pristine air, and scars public land, the investment we have made in our public natural areas is devalued-an investment intended to preserve some of the country's most beautiful and wild land for generations to come.

What will be our legacy to those who follow us?

For the past three years Marga Raskin has been lecturing, testifying, writing, and participating in panel discussions concerning various environmental problems, especially as they pertain to powerplants and air quality.



IACK E. MCLELLAN

Editor's Note

Late in 1974 EPA avoided respon-

The Clean Air Act of 1970 has the potential to safeguard our public lands in the Southwest, as well as in the entire nation, from air pollution, but the Act has not been properly enforced by the federal government. A 1973 Supreme Court decision bound EPA to implement regulations that would "prevent significant deterioration" of air quality in areas where the air is now cleaner than required by national standards established by the Act. However, "significant deterioration" was not defined by the courts or Congress. sibility for its definition by issuing regulations that allow the states to decide for themselves the amount of significant deterioration allowable within their borders. EPA proposed that the states classify areas in which existing air quality is better than national standards into three categories: Class I-areas where no change (deterioration) is allowed; Class II-areas where some change in air quality is permitted within certain set limits; Class III-areas where deterioration is permitted down to the national standard to allow industrial and other growth. Classifications do not have to conform to existing air quality in an area, so an area of pure air quality could be designated as Class III by a state. Although decisions must meet EPA approval, the only criterion required is consideration by the states of relevant environmental. social, and economic factors.

NPCA protested at the time EPA issued these regulations that they sidestep the intent of the Clean Air Act and that the federal government should set standards that promote uniform air quality controls. This Association stressed that EPA policy should include protection or improvement (when necessary) of the pristine air quality within and surrounding national parks and other nationally protected areas.

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INTERIOR PROCRASTINATES OVER CLEAN AIR FOR OUR PARKS

Under the present regulations, that would mean a Class I designation.

Although NPCA considers present regulations inadequate, there is a mechanism that could provide for Class I designation of lands within national park units and other areas. Right now these areas are designated Class II as the result of an EPA regulation issued on January 6, 1975, that designated all areas in the nation as Class II pending federal or state applications for reclassification. In order to reclassify an area as Class I or Class III, a state or federal agency must apply to EPA, which has the final authority. In the case of a national park unit, the National Park Service, acting through the park superintendents, apply to EPA for reclassification; EPA will not initiate any reclassifications.

States could leave lands adjacent to federal lands as Class II or apply to reclassify them as Class III, a designation permitting a concentration of large powerplants. (Even the present Class II designation perhaps would permit 1,000 megawatt plants at twenty-five-mile intervals.) It can only be hoped that through EPA or through the public hearing process and regulations concerning transport of air pollution, such moves would be squelched.

It is alarming that, as of press time, no action has been taken by the Department of the Interior for reclassification of national parks or other nationally protected areas as Class I.

Concerned readers should write Assistant Secretary of the Interior Nathaniel P. Reed (Department of the Interior, Washington, D.C. 20240) to urge that the federal government designate all national parks and monuments, national wildlife refuges, and national wild and scenic rivers as Class I (no deterioration).

What Used to Be

A PERSONAL EXPERIENCE

by EVERETT L. HUIZENGA

I GAZED out the rain-spattered window on a train traveling from Tokyo, Japan, bound for an outlying area where friends would meet me and drive me to Hakone National Park near Mount Fuji.

People. The first and last impression a Westerner has of Tokyo is crowds of people. Even as the train traveled farther and farther away from Tokyo, we never left people. An hour later it seemed as if we were still in the city.

Only a few months before I had visited Zion Canyon National Park where my son and I had backpacked from the floor to the rim of the canyon. We neither saw nor heard another human being on that hike. We heard only the sounds of reptiles, squirrels, chipmunks, and birds-nuthatches and roadrunners as we left the floor and great hawks near the peaks of the rocky rim. We saw no signs of people, only signs of weasels, foxes, wildcats. Flowers, ferns, and grasses gradually relinquished their dominion as we climbed to the rocks near the top. At dusk mule deer appeared on the rim, so close that they almost frightened us.

I recognized the necessity to preserve this paradise, but I argued with a park ranger when he told me that the park was already being destroyed by man. I argued against the closing of the campgrounds within the canyon, argued against his fight to close the hotel in the future, and to restrict the canyon auto traffic. I was for conservation, I said, but he was going too far. There would never be enough people to ruin this wilderness. He said I was wrong, that it could and would be destroyed if something weren't done. He talked not only of people but of policy—of the decreasing governmental concern over our natural areas and an increasing focus on energy, grazing, and mining.

The train came to a halt, and my

friends, Spring Three-Bridges and her father, met me at the station to drive me to see the national park. But Hurricane Polly, which had been raging for several days, had different plans for our trip to the mountains. As we drove along the ocean I could hardly make out the thundering waves running from her path. In the fog the sides of the road were barely visible as the car switchbacked into the mountains toward Hakone National Park. Spring Three-Bridges and her father were disappointed that I couldn't see the scenery.

Their driver suggested that we visit the Hakone Owakidani Natural Science Museum, a new building nailed to a mountainside across from Mount Fuji, where I could at least learn about the national park. The road widened into a parking lot. We entered the third floor of what had appeared to be a single-storied building, partly lost in the rain and fog. Once we had entered the first room of the building, we faced a large georama, the painted inner surface of the hollow half-globe dimly lighted to reveal sky, mountains, and forests retreating in the illusion of distance. Models of trees, plants, and animals, progressively smaller in size, stood behind the glass, perfectly positioned to provide a three-dimensional effect in front of the painting.

Spring Three-Bridges read to me from the Japanese characters on the stand in front of us: "This georama is of animals in the forest. Real-looking figures are displayed for easy viewing of animals and plants of the forest, marshes, and valleys around the lake." She turned to me. "When we press this button, we can then hear and see what used to be."

What used to be? I made her repeat the words. She couldn't understand my dismay.

We pressed the button, and the sun shone on the forest, and the sounds of birds and animals and streams echoed from within the dead sterile vacuum. We stood and looked at and listened to what used to be.

Spring Three-Bridges pointed to the map on the cover of a brochure printed in English that showed Hakone National Park and the location of the museum. Then I read:

Hakone, easily accessible from Tokyo, is rich in historical remains, scenic spots, and hot-springs. Hakone district, as applied to the vast mountainous area of about 58.43 square miles, lies within the crater of an active volcano and comprises seventeen hot-spring resorts known as "Spas of Hakone" and a mountain lake called Ashinoko, about thirteen miles in circumference.

Hakone, as one of the National Parks in Japan, is now worthy of being called "International Sightseeing Resort" for its natural beauty harmonized with hotels, driveways, golf courses, and many other man-made recreational facilities.

So then I knew. There are no more bears in Hakone National Park. No more wild boars, deer, foxes, pheasants. The old man pressed the button so we could see again what used to be. I had to listen, but I couldn't look.

By the time we left the museum, the weather was beginning to lift. As we drove along, I saw what Hurricane Polly had kept from me. Around every corner, another sprawling resort, cottages, and cars—all neat, clean, and picturesque. But it was another city. The whole national park was a city. Not exactly Tokyo, but only because there were more trees and blades of grass here.

We had late lunch at one of the resorts overlooking the lake. The weather cleared even more. Then boats and more boats began to cover the water.

I thought of Zion, of its rim, of my little boy. But mostly I thought of the ranger. I hadn't understood.

Then I wondered if anyone would ever have to press a button in Zion to see it the way it is now.

Everett L. Huizenga's vocation as an international patent and trademark lawyer affords him the opportunity to visit many countries throughout the world. He also enjoys camping and hiking in our national parks and monuments and has published fiction and personal experiences relating to his travels.

CACTI Bizarre, Beautiful, But In Danger

Cactus habitat must be preserved if many rare native species are to survive

THE CACTUS FAMILY may be the most endangered of all major groups of plants. About 72 species, or 26 percent, of the 268 taxa of native cacti in the United States are either so rare or so restricted in occurrence as to be vulnerable to extinction. For although some species, such as the prickly pear, are hardy and adaptable, most cacti are highly specialized, able to thrive only in narrowly limited habitat niches that provide the exacting living conditions they require.

Most species of cacti grow in deserts or in dry areas nearby; but some occur in the tropical jungles of the Everglades or in cool mountain forests up to eleven thousand feet in elevation, and some are to be found in open areas of spruce forests as far north as Peace River in northern British Columbia and Alberta, Canada. Native cacti are found in every state except Hawaii, Alaska, Vermont, New Hampshire, and Maine.

Some cacti are wide-ranging, adaptable, tenacious, and only here and there vulnerable to disturbance by man. For example, some species of prickly pear have survived and are abundant because they occur primarily on sandy, nonagricultural, nongrazing land where man is not interested in removing cacti. Still other species are safe becaue they grow on rocky outcrops not suitable to would-be competitors. Other prickly pears not only do not present enough of a problem on grazing lands to be removed, but they provide emergency food for cattle during drought. Some spe-



Species of Mammillaria are small and widespread, but their lovely flowers make them popular with collectors.

cies that do exclude range animals from grass are so tenacious that it is almost impossible to eradicate them.

Only a few of the smaller cacti are as wide-ranging as the prickly pear. Examples include the coryphanthas, or pincushion cacti, which do not exclude cattle from grasslands and are therefore not important in range management. Coryphanthas flowers, however, are attractive, and this attribute makes these cacti popular with collectors. Removing the plants for cultivation may therefore reduce abundance in certain localities.

by LYMAN BENSON

The hedgehog cacti are also small and adaptable. For the most part, like the coryphanthas, the hedgehog cacti are not in danger of extermination, though some rare local varieties are vulnerable.

Most species of cacti are neither so variable nor so well adapted to a wide range of environments as prickly pears, coryphanthas, and hedgehogs but are restricted to a few areas with severe climates, mostly in deserts or in nearby dry grasslands or woodlands. Within these areas each species of cactus is further restricted to a particular habitat niche related to precipitation, prevailing temperature, exposure to the sun, amount of drainage, and soil chemistry and texture.

Within its niche each cactus must compete with other plants that may shade it out or deplete water near the surface of the soil, the only level at which cacti have absorbing roots. On the other hand, some species, such as the saguaro, depend on other plants to form a seedbed and provide shade.

Many cacti, other than most chollas or prickly pears, are restricted by texture and chemical content of the soil, which are determined partly by the types of rocks from which the soil is derived. Some species grow in remote places on limited outcrops of a particular rock or in pockets of a special soil that is poor for agriculture or in dry areas that are impractical to irrigate. In some areas, the soil is so extreme in its composition that collectors don't think to look there. Even when such plants are located, they often do not become popular in cultivation because they do not live long in ordinary soils or potting mixtures.

The chief threats to cacti are from commercial exploitation, overzealous collecting, housing construction, agriculture, grazing, and fire.

COMMERCIAL EXPLOITA-TION. Rarity of a species or variety of a plant increases the commercial demand for it. Several of the new very small species of cacti I have described in scientific publications have appeared almost instantaneously in commercial catalogs in various parts of the world, and the prices have ranged from \$25 to \$50 a plant. This situation has occurred despite my considerable caution about revealing the exact location of collection. For scientific accuracy, some kind of reasonably accurate statement about soil composition and location must be made, but I have described only the general area rather than a specific locality to avoid promoting extermination of the plant at the type locality. Thus, at least collecting has been dispersed to a wider area, and in most cases—but not all—the plants first discovered are still there.

VERZEALOUS COLLECTING. Adding to private collections in greenhouses and gardens is a relatively minor cause of reduction of numbers of a species. However, it has led to decimation of some rare plants in at least the few localities in which they are known to occur. In one southwestern state a probable new variety of hedgehog cactus is reported to have been exterminated at the type locality simply because too many people knew its whereabouts. Probably each person took only a few plants for his garden; but there were not very many to begin with, and during the past several years none has been found.

In northern Arizona a low-growing cactus, Pediocactus peeblesianus var. peeblesianus, in diameter the size of a quarter to a fiftycent piece, has been known for nearly forty years to occur through an area only five or six miles long. and there it is rare and obscure. A number of scientists spent days on hands and knees looking for this plant. After many years it was found by an enthusiastic group of amateurs who were deeply concerned about the rarity of the species and its possible disappearance from nature. Therefore many people were shocked to see a woman at a national convention with a number of the plants sewn to the brim of her hat!

HOUSING CONSTRUCTION. Rare cacti occur mostly on

hills; housing developments, in valleys. However, in some areas housing projects are so extensive as to blot out everything. Near Albuquerque, New Mexico, local cactus enthusiasts removed plants of the rare and obscure Pediocactus *papyracanthus* to cultivation to save them before bulldozers arrived. In the vicinity of San Diego. California, several rare, localized species occur on relatively flat land or on low, rolling hills. The whole area from at least Del Mar to the Mexican border seems destined to become one great city, and the outlook for the native cacti there is bleak. In Florida most cacti occur in the stabilized sandy land in back of the beach along both the Gulf and Atlantic coasts, and on many of the Kevs. With the fantastic growth of Florida's urban areas, cacti and many other native plants may be eliminated. Some are of restricted occurrence, and only a little commercial development will eliminate them.

Four species of particular interest occur on one Florida key. All these species occur on the limited dry areas of some islands of the Caribbean; but, although one of them is known from two other localities in the Kevs, the only occurrence of three of them in the continental United States is on one key. Already there is housing on this key, and one housing development on one corner of that key could wipe out three of the species in this country and limit the other one to two areas in which it was

Pediocactus peeblesianus var. peeblesianus (right) is an extremely rare and localized cactus ranging in size from the diameter of a quarter to a halfdollar. Pediocactus peeblesianus var. fickeiseniae (below) is about the size of a golf ball or slightly larger. In both varieties of this species the largest part of the stem is underground. During dry weather this part contracts and pulls the rest of the plant to about ground level. Then blowing dust and sand cover the plant and hide it from view.





Clearing of land, overgrazing, and frequent fires in southern California have favored alien species of plants to the disadvantage of native species such as the rare spineless prickly pear Opuntia littoralis var. austrocalifornica at left.



GRICULTURE. For the most A part, agriculture is at peace with cacti in much the same way Sitting Bull was at peace with his enemies-because he had killed them all. All but an infinitesimal amount of the good agricultural land in the United States is farmed or has become urban. Much of the poor land was converted to agriculture at one time and then allowed to start the long road of natural succession back toward a natural area, only to have this process interrupted by several more attempts at agriculture. This cycle has tended to eliminate the smaller species of cacti. If they ever occurred in the deep soils of the valleys, they are gone now.

RAZING. Although some aggressive cacti, including prickly pears and chollas, may gain because grazing removes competitors, grazing is usually unfavorable to cacti, especially to small species or to the seedlings of large species. Some of the plants are eaten by animals for water; some are trampled; and some are no longer able to reproduce effectively because the native plants that provide their seedbed and shade are killed. For example, the saguaro, Cereus giganteus, depends on other plants to provide humus and shade during the seedling stage and for a number of years afterward, but the smaller plants that provide humus have been obliterated in many areas. On the whole, however, grazing does not eliminate smaller cacti or seedlings but tends to restrict them to favorable spots where some individuals may persist despite range animals-unless goats are included among the grazing and browsing animals. If goats are present, not much else is.

∎ IRE. Fire destroys many plants and benefits others. Hot fires kill forests and change the scene to an early stage of a secondary ecological succession, requiring many years or even centuries before the normal climax forest vegetation is

restored. On the other hand, fire maintains grasslands by killing out seedlings of shrubs and trees, thus preventing their encroachment into open land.

Many cacti are exceedingly vulnerable to fire, but fires seldom occur in cactus habitat. In deserts combustible plants commonly grow too far apart for fire to spread from one plant to another. Along the edges of deserts and in chaparrals and grasslands adjoining them. however, fire is a major factor; cacti there can persist only in areas where a fire does not become really hot as, for example, on rock outcrops, on sandy flats, or on hillsides without a dense cover of brush.

In southern California fire excludes cacti from the chaparral and restricts them to dry, gravelly washes or to grassy disturbed areas. Here the nature of the cactus populations has been altered gradually since the coming of the mission fathers in 1769. The padres brought Mediterranean plants that had come with the Spaniards to Mexico. They brought cultivated plants, such as figs and grapes, and the seeds of many weeds. The missionaries also brought Opuntia ficus-indica, the Indian fig originally native and cultivated in many forms in Mexico and now grown in warm climates throughout the world. This plant is a fruit tree, and it was cultivated about the missions and villages and on the great ranchos in southern California. Although it escaped from cultivation only rarely, its pollen was carried by native bees and beetles to the flowers of small local species of prickly pear, Opuntia littoralis (various varieties), which produced many hybrids. In addition, clearing of the chaparral, frequent fires, and overgrazing favored the Mediterranean weeds over native species of plants, and vast areas came to be dominated by these weeds, including particularly combustible annual weedy grasses like the bromes.

During the dry summers of southern California, fires swept through the area, burning the grasses and killing the cacti. Only some of the hybrids that formed dense thickets that excluded the grasses could survive. As fire would spread, such plants were singed only around the edges of the thickets, and a large center remained to regenerate and enlarge the cactus patch after the fire.

For two hundred years selection has favored the thicket-forming types of hybrids and has nearly eliminated original native cacti. Native Opuntia littoralis var. covillei and var. austro-californica have become relative rarities. These plants still exist in their extreme form in dry, gravelly washes where they have been protected somewhat from fire; but the number of plants not hybridized is becoming small, and gradually the native taxa are losing out to hybrids able to cope with fire. Obviously, no ordinary protective measures can save the native species in southern California. They are being absorbed into a new genetic system brought about by large-scale environmental changes due to a burgeoning human population living over the whole geographic range of these species.

In the perennial grasslands occurring from Arizona to Texas, fire merely burns off the dry, dead tops of the grasses; after the next rain regeneration from underground is rapid. Most of the cacti there occur in areas either disturbed by overgrazing or shielded from fire by rocky or thin, sandy soils not supporting a dense growth of grass. The recent reduction of fire, originally set annually by the Indians to make better pasture for game, has altered the character of many grasslands. Some have become forests or dry woodlands because seedlings of trees or shrubs no longer are eliminated by fire. The Desert Grassland of Arizona is being invaded by desert woody plants. This change of plant com-



Saguaros sprout only in the shade of another desert plant; they may live as long as 200 years and may attain a height of 50 feet with 40 or 50 arms. They grow their first arm at about age 75. Saguaros are vital to the ecosystem of the Sonoran Desert, providing food and shelter to many desert creatures.

munities has upset the ecosystem of the cacti by eliminating some competitors and substituting others; by removing some plants that aid in the survival of cacti or their seedlings; by changing the soil character and its moistureholding capacity; and by altering exposure of cacti to the sun.

BECAUSE the effects of housing construction, agriculture, grazing, and fire are difficult to combat except in limited areas, usually the only feasible method of preserving small rare species of cacti is to prevent or at least reduce commercial exploitation and overzealous collecting.

Many people throughout the world enjoy cacti, and reasonable propagation and marketing of plants are desirable. Probably unscrupulous commercial dealers are relatively few; most dealers are people of conscience, and they follow reasonable procedures. The crux of the problem is the *method* of obtaining plants for sale. If seeds are collected and plants are propagated from them, sale is desirable and legitimate. The capacity of plants in the field to produce seeds so far outstrips successful reproduction from them that removal of some seeds is virtually inconsequential. If all the cactus seeds produced in the desert during only one year were to grow into plants, the desert would become an impenetrable thicket. Thus, any attempts to save rare species of cacti should be concentrated primarily on preventing the removal of living plants from the field, which places a severe drain on the native population.

Overzealous collecting for home propagation is intended to come under the same laws. However, regardless of laws, an educational campaign should bring some direct results and enlist the support of garden enthusiasts and the better commercial dealers, as well. However, laws will not be enforced unless they have public support and the greatest of care must be taken to make the laws fair and equitable and neither too severe nor too mild. For some species of cacti salvation may be secured in protected areas. Many cacti occur in national parks and national monuments such as Organ Pipe Cactus National Monument and Saguaro National Monument in Arizona or Big Bend National Park in Texas. Unfortunately, under old agreements grazing is permitted in some national monuments. It is a potential tragedy to allow it to continue.

Some rare species occur on only a few outcrops of a particular rock scattered over a few to many miles. These rocky places are practically worthless to the cattle or sheep ranges around them, and their acquisition cost should be relatively small. Many of them occur on public lands.

Although the federal government is not likely to set up a separate administration for a few hills harboring one species of cactus, some areas with rare and endangered cacti can be linked with an existing facility. For example, a very rare localized species occurs in northern Arizona just outside a small national monument. Almost the entire known range of the species is on a single fantastic soil outcrop no more than a quarter mile wide and several miles long. The area is a part of Indian lands, but inasmuch as it has no value for agriculture or grazing, an arrangement for inclusion in the national monument may be feasible. Fortunately, the tribe is aware of the rarity of the cactus and is concerned about its preservation, which may be helpful.

As another example, *Pedio*cactus peeblesianus var. fickeiseniae, occupies hills not far from Grand Canyon National Park and Grand Canyon National Monument, and some of that habitat could possibly be added to the park system.

A study of individual hills occupied by unusual cacti may reveal that other plants of special interest share the peculiarities of the soil which may strengthen the case for preservation of the area.

THE CACTUS FAMILY not only includes a high percentage of rare local species, but also it is particularly vulnerable to destruction by man because of the public and commercial interest in these bizarre plants with beautiful flowers. The obvious methods of protection are by requiring propagation from seeds rather than removal of living plants for sale; by adding some areas in which rare cacti occur to existing neighboring national parks and national monuments and state and county parks; or by encouraging private organizations and individuals to set aside small areas of land for preservation. In most cases preservation of the cacti will have to be combined with saving other plants and animals and with setting aside areas that also possess geological and archeological interest.

The means exist in the provisions of the Endangered Species Act of 1973; the effort must be made to save these rare and beautiful plants.

Dr. Lyman Benson, Professor Emeritus of Botany at Pomona College, is a specialist in the plant life of California and the southwestern deserts. Among his numerous books and papers on this subject are *The Cacti of Arizona, The Cacti of California,* and the forthcoming *Cacti of the United States and Canada.* He contributed the major information on cacti to Smithsonian's Report on Endangered and Threatened Plant Species of the United States.

Editor's Note

The movement to protect cacti and other endangered species of plants has encountered a setback in the Interior Department's lack of action.

As charged by the Endangered Species Act of 1973, during 1974 the Smithsonian Institution reviewed the status of native vascular plants of the United States and in January 1975 sent to Congress a list of some 2,000 species that are endangered or threatened, along with recommendations to save them. (See January and April 1975 issues of this Magazine.)

The Interior Department is now responsible for reviewing the report and for publicly proposing the final list and protective regulations in the *Federal Register*. Some 30 percent of

MORE PROCRASTINATION AT INTERIOR

our native species of cacti are listed as endangered or threatened. Inasmuch as cacti are already listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora, protection of cacti under the Endangered Species Act as well would permit the use of Land and Water Conservation Fund monies for acquisition of protected habitat.

In late March NPCA pointed out to the Interior Department that action on this report has been delayed since January in the Office of Endangered Species of the U.S. Fish and Wildlife Service. The situation did not seem to have changed at press time.

On the positive side, the Park Service has canceled a grazing permit at Organ Pipe Cactus National Monument, but this action is under litigation by the permittee. Two grazing permits at Saguaro National Monument expire at the end of 1975, and the permittees have been informed that NPS does not intend to renew them.

NPCA members can help by supporting National Park Service efforts to phase out grazing in Organ Pipe Cactus and Saguaro national monuments, and by demanding immediate and positive action on the *Report on Endangered and Threatened Plant Species of the United States.* Write to:

Hon. Nathaniel P. Reed Assistant Secretary Department of the Interior Washington, D.C. 20240



NPCA has won a landmark court decision that requires the U.S. Fish and Wildlife Service (FWS) to submit an environmental impact statement with each annual budget request. Through public review of these environmental statements, this court victory will give a huge thrust forward to NPCA's longstanding program to reduce the secrecy surrounding budget and policy decisions made by the Office of Management and Budget (OMB) and OMB's ignorance of the environmental impacts of its decisions that affect programs of FWS, the National Park Service, and other agencies.

In response to a suit filed by NPCA, the Natural Resources Defense Council, and the Sierra Club, the U.S. District Court of Washington, D.C., agreed that each yearly budget request for the nation's 350 wildlife refuges legally falls under the National Environmental Policy Act, which requires "detailed environmental impact statements on proposals for legislation and other major federal actions significantly affecting the quality of the human environment. . . ."

The federal judge stated, "It goes without saying that budget decisions have a direct bearing on how the Refuge System will be staffed, managed and maintained . . . the unmistakable conclusion is that . . . the environmental impact of budget decisions is significant and that the federal action involved is major."

NPCA President A. W. Smith remarked, "The information provided by such an impact statement will be of utmost importance to the Congress and the general public in responding to OMB's attempts to dismantle the refuge system. Proposals to end federal control of the refuge system, to close individual refuges, or to cut back their staff are more likely to be rejected once their environmental effects are brought out in the open."

The court rejected the Interior Department's claim that the annual appropriations requests were prepared too hastily for preparation of detailed environmental analyses. Likewise, it denied the contention that agency budget proposals require secrecy and thus are exempt from the Freedom of Information Act.

The court opinion clearly is relevant to other land management agencies such as the National Park Service: "Appropriation proposals for most federal agencies would not appear to pose a threat to the environment and therefore no impact statement would be required. In any event, even as to those agencies whose appropriations do significantly affect the environment, only one impact statement is required for the appropriation proposal."

Ensuring proper land use planning for lands near national parks is crucial if we are to prevent the degradation of these and other national lands, NPCA recently testified on invitation at Senate Interior Committee hearings on S 984, the Land Resource Planning Assistance Act.

In general NPCA supported the bill, which would provide guidelines to the states and voluntary grants for establishment of comprehensive state land resource planning processes.

However, NPCA stressed that the legislation should be amended to categorically require the states to incorporate into their planning programs measures that would ensure that national parks and other NPS units-as well as national wildlife refuges, wild and scenic rivers, and wilderness areas-are not degraded by inconsistent land use patterns in the same immediate geographic region. In addition, wherever possible, such programs should enhance protection of federal lands by compatible adjacent land use practices such as properly managed policies and programs of concessions outside the parks and other areas, in coordination with states and local governments.

Under present conditions, NPCA believes that without technical and financial assistance, we cannot expect communities bordering on federally protected lands to cope with the tremendous pressures for visitor accommodations, sewage and water supply systems, second-home developments, gas stations, roads, and other facilities that indisputably mushroom in these areas.

Specific examples to illustrate the problems are numerous. A few of those NPCA examined are the crowded, uncontrolled strip development on U.S. 441 at the Cherokee and Gatlinburg entrances to Great Smoky Mountains National Park, the adverse impacts that Marriott Corporation's "Great America Theme Park" surely will have on Virginia's Manassas National Battlefield Park, the dangers of various proposals for through-park roads for non-park-related uses, and the proposed mammoth ski resort in California's Mineral King Valley adjacent to Sequoia National Park.



NPCA also testified on other aspects of land use planning, such as energy facility siting and planning.

Hearings on this Senate bill concluded in April, but no further action is expected until the House acts on HR 3510, its version of the Land Planning Assistance Act. (In late April a substantial majority of the House Interior Subcommittee on the Environment reported the bill to the full Interior Committee for markup. A similar bill failed by a narrow margin to pass the House in the 93rd Congress.)

Meetings concerning Forest Service development of long-range plans to ensure an adequate future supply of renewable resources from the nation's 1.5 billion acres of public and private forests and rangelands drew conservationists to NPCA headquarters this spring.

The series of meetings explored the complex planning process and environmental implications of the Forest and Rangeland Renewable Resources Planning Act of 1974, a far-reaching piece of forestry legislation first supported by NPCA in testimony presented to Congress on invitation in 1973. The meetings also highlighted the crucial importance of public participation in this planning process.

Public Law 93-378 directs the Forest Service to prepare and periodically update a Renewable Resource Assessment and a Renewable Resource Program. These two documents differ in scope. The assessment encompasses the nation's renewable resources, regardless of ownership; the program is oriented toward Forest Service activities only and thus is necessarily tied to the budget formulation/appropriation process. The Forest Service must transmit both the assessment and the program plans to Congress by December 31, 1975, and is required to update such during the year 1979 and each tenth year thereafter.

The Forest Service must assess and plan for resource protection, development, and management activities concerning the administration of six resource areas: wildlife and fish habitat; outdoor recreation and wilderness; rangeland grazing; timber; land and water; and human and community development. By providing specific information about forest needs and their costs and benefits, the program called for under the act should enable Congress and the Executive Branch to better establish priorities and policies for managing the national forests and rangelands.

As a result of the settlement earlier this year of a lawsuit in which NPCA was a co-plaintiff, the Forest Service's draft program will include analyses of environmental impacts of alternative policies and resource programs. Thus, decisions about the allocation of resources, as reflected in the USFS budget, must be reviewed. For instance, in recent years, by the time the budget leaves the Office of Management and Budget, the timber sale program has been given heavy preference over wildlife, recreation, and other programs. This is a situation that the new law might help to correct.

The Forest Service will be seeking public comment concerning preferences for specific alternative multiresource programs. The draft of the program/environmental statement as well as the assessment will be available to the public in August.

In addition, the Forest Service has

scheduled public hearings or "listening sessions" for September in Washington, D.C.; Missoula, Montana; Denver; Phoenix; Salt Lake City; San Francisco; Portland, Oregon; Atlanta; Memphis; Chicago; Boston; and Minneapolis/St. Paul.

To obtain copies of the above-mentioned documents, to comment in written form on the drafts, and/or for more information about the hearings, address your request to Chief John McGuire, U.S. Forest Service, USDA, South Building, Washington, D.C. 20250.

The new Park Service management policies manual, entitled "Management Policies of the National Park Service," is now in print and available to the public. This comprehensive document, which is the result of many months of revising the three administrative booklets formerly used, represents a significant improvement over the old documents and includes the thinking contributed by NPCA at conferences and through official comments.

The manual outlines the basis of National Park Service (NPS) manage-



ment decisions on many varied matters ranging from new park areas to concessions management.

NPS will update the new policies document on a continual basis, circulating any proposed changes in the policies to interested citizens' groups for a thirty-day comment period before their adoption by NPS. NPCA is particularly pleased with the concept of this procedure, and with the fact that the Park Service solicited public participation and initiated meetings with conservation groups during its examination of policy goals in composing the manual. Now the true test for the Park Service will be how it implements its management policies.

A limited number of copies of the final version of "Management Policies of the National Park Service" will be available free of charge from the Park Service. NPCA members who wish to receive this document—and thus to become a part of a widespread network of citizens with information about NPS policies—can write to the Office of Planning and Program Policy, Room 3120, National Park Service, Washington, D.C. 20240.

NPCA recently hosted a conference concerning the New River Gorge of West Virginia. The meeting enabled representatives of national conservation organizations to preview the Bureau of Outdoor Recreation (BOR) study and recommendations for this gorge area before final submission of the report to Congress.

BOR Director James Watt, Northeast Regional Director Maurice Arnold, and Deputy Regional Director John Hauptman presented the agency's study, which recommends that 66 miles of the New River in West Virginia be designated as a component of the National Wild and Scenic Rivers System.

NPCA and other environmental groups generally concurred with the BOR-recommended designation and with the finding that the gorge does not qualify as a national park because of the existence of a parallel railroad and extensive active deep mines and strip mining scars in the gorge. However, we objected to the proposal by BOR that the scenic corridor be protected by local zoning only. Too many incompatible developments would be likely to occur on the gorge rim and along the river if the protection of the gorge is limited in that way, NPCA asserted.

If, as expected, the BOR study becomes a legislative proposal, hearings are likely this summer.

The state of the U.S. nuclear export program continues to alarm NPCA, which has become involved in more litigation and other actions concerning the situation.

As the result of a suit brought by NPCA and other groups, a year ago the courts ordered the Atomic Energy Commission—now the Energy Research and Development Administration (ERDA)—to prepare an environmental impact statement (EIS) on the international nuclear power export program. The plaintiffs, concerned about various federal activities and agreements with foreign countries concerning nuclear equipment, fuels, and services, won their case that the National Environmental Policy Act applies to these activities. Nevertheless, because the court did not issue an injunction on the export activities, they continue—despite increasing evidence of the problems that can be encountered in helping to supply more countries with the nuclear capability that could be used to produce nuclear weapons.

In March 1975, NPCA and other groups, once again with Eldon Greenberg of Washington's Center for Law and Social Policy as legal counsel, went back to the courts with a "petition for supplemental relief" to force ERDA to release its interim findings and analysis of the environmental impact of the program during the period of EIS preparation.

ERDA agreed in early April and released its "Proposed Findings" pending preparation of the EIS. These findings were that the nuclear export program should continue without alteration at least until the EIS is completed—for possibly twelve months or more.

Mr. Greenberg, representing NPCA, commented extensively on the findings, concluding that they were woefully inadequate in failing to consider the impact of nuclear power export activities on other countries, in failing to consider the role of the Export-Import Bank and other agencies in committing the United States to particular projects, in failing to consider the public *benefit* of ceasing, slowing down, or altering program activities pending release of the final EIS; and in failing to consider alternatives for the interim period other than a total moratorium.

In addition, Mr. Greenberg recently represented NPCA and others upon invitation of the Senate Government Operations Committee to testify at hearings on S 1439, the Nuclear Export Reorganization Act. In its testimony, NPCA supported the centralization of authority for licensing projects within the Nuclear Regulatory Commission (rather than the Commerce Department) and offered evidence of the urgent need for strengthened safeguards in the export program as well as for increased public participation in the export licensing process.

Red River Gorge Dam, a project that the U.S. Army Corps of Engineers plans to construct in the beautiful Kentucky gorge, has once again drawn strong criticism from NPCA. Faced with imminent expenditures of funds by the Corps for land acquisition and other activities related to this worthless project, NPCA recently gathered the support of our allies at the Sierra Club, Izaak Walton League, Friends of the Earth, The Wilderness Society, American Rivers Conservation Council, and Environmental Policy Center in order once again to open the lines of communication with Governor Julian Carroll of Kentucky.

Stressing that the purchase of property and outlay of money by the Corps in the gorge area surely would make it much harder to halt the project, the groups urged Governor Carroll to take action immediately before such commitments are made. It is interesting to note that an economic consultant



hired by the Corps has stated that, on economic grounds alone, the project is not justifiable.

Although the Corps and the local congressman still support the dam, Governor Carroll more recently stated that although he has made *no* decision about the merits of the dam project, he does not want the Corps to begin construction or purchase land until he makes his decision.

NPCA members may express their own views on this project by writing:

Hon. Julian M. Carroll

Governor

Frankfort, Kentucky 40601

A proposal to renew sport hunting of the Pacific walrus was opposed by NPCA in recent testimony before an Administrative Law Judge of the Interior Department. The Fish and Game Department of Alaska has asked the U.S. Fish and Wildlife Service (FWS) for a waiver of the moratorium imposed by the Marine Mammal Protection Act of 1972 on the taking (killing) of walrus. (That Act, however, permits Alaskan natives to kill walrus for subsistence purposes including taking for producing native handicrafts.)

Alaskan officials contend that the walrus population has risen to a level that would support a regular sport hunt by any Alaskan resident or out-of-state trophy hunter—under proper regulation and management.

The proposed waiver of the moratorium would return management of any sport hunting of walrus to Alaska. However, NPCA and other environmental groups argue that Alaskan law would not ensure that walrus would be killed in a humane manner as required by the Marine Mammal Protection Act. In addition, Alaskan law actually allows the killing of pregnant and nursing females and calves; there is no requirement that a reasonable effort be made to salvage and fully utilize all walrus killed: and there is no requirement that walrus be killed on land or ice, which is important because walrus killed in the water often sink before they can be recovered. In short, the proposed Alaskan management program for walrus "manages" them in the interest of some people rather than walrus in general-Alaska puts socioeconomic "needs" of nonnatives ahead of proper wildlife management considerations; and Alaskan management policies use the "sustained yield" principle for management rather than the "optimum population" principle as required by the Act. (The former is an outmoded approach aimed at promoting maximum "harvest," whereas the latter considers esthetic values and the health of a species and associated ecosystem.)

NPCA and other environmental groups protesting the Alaskan proposal are working through Monitor, Inc., a group of representatives of conservation organizations monitoring implementation of the Marine Mammal



Protection Act. Represented by Richard Gutting of the Environmental Defense Fund as legal counsel, they have presented oral arguments, cross-examined witnesses of both Alaska and the U.S. Fish and Wildlife Service, and have filed a formal brief (statement) setting forth objections in detail.

We are awaiting the recommendation of the judge to the FWS director before taking further action.

Hells Canyon on the Middle Snake River in Idaho, Oregon, and Washington will become a national recreation area (NRA) if HR 30 is enacted during the 94th Congress. NPCA gave strong support to this legislation in recent testimony presented upon invitation.

HR 30 would designate 101.4 miles of the Middle Snake River as a component of the National Wild and Scenic Rivers System and would designate both "instant" and "study" wilderness areas within the NRA. It would also deauthorize the Asotin Dam and require the cancellation of these hydroelectric dam proposals: the High Mountain Sheep, Appaloosa–Mountain Sheep, and Pleasant Valley–Mountain Sheep dams—all proposed for various locations within Hells Canyon on the Snake.

The legislation, introduced by Representative Al Ullman (D-Ore.) and thirty co-sponsors, is supported by nearly all the national conservation organizations, as well as a broad cross section of state and local groups and individuals.

The national recreation area would encompass 661,900 acres, while designating 193,840 acres as instant wilderness and an additional 110,560 acres for study for future designation. Of the total acreage, 610,087 acres are now under national forest management.

In a more recent development, the Interior Subcommittee on Parks and Recreation approved the bill with only minor changes; conservationists now await action from the full House Interior Committee. The Senate quickly passed S 322, its version of the Hells Canyon bill, last month.

Recent oil tanker accidents off Chile, Singapore, and our own Delaware Bay make it clear that supertankers should be required to have double bottoms under their cargo compartments and other safety features to minimize oil spills.

NPCA and other environmental groups recently filed a lawsuit against the Coast Guard to force publication of overdue regulations on tanker design, construction, and operation standards.

Acting on the belief that we cannot afford any further half-measures when it comes to protecting vital marine and coastal resources from oil pollution, NPCA and other major environmental groups had previously urged Secretary of Transportation William T. Coleman to take steps to ensure promulgation of adequate standards for design and construction of oil-carrying vessels engaged in United States coastwise trade.

The Coast Guard proposed standards a year ago pursuant to the Ports and Waterways Safety Act of 1972 but at press time had not released them in final form. However, these proposed regulations fail to live up to the Act's mandate for improvement of standards in these key areas: They make no provision for features designed to improve maneuverability and stopping ability; they do not require double bottoms to reduce outflows of oil following tanker groundings; and they contain only limited standards to reduce outflows following collisions.

Working in cooperation with Eldon V. C. Greenberg of Washington's Center for Law and Social Policy on this issue for the past several years, NPCA has pointed out in numerous previous meetings and communications with the Coast Guard that there is technology available to provide the needed protection.

Secretary Coleman and the Coast Guard do not agree with our position that stronger standards for all vessels trading along our coasts are needed to prevent serious oil spills. Through the recently filed lawsuit, NPCA and the other environmental groups, with Mr. Greenberg serving as legal counsel, are seeking the release of regulations that are a year overdue.

Then, if necessary, future legal action will be taken to try to strengthen the regulations and thus assure greater protection for our coastal areas.

Strict standards become even more important in consideration of the fact that someday tankers will be feeding new refineries and pipeline terminals on both coasts with oil.

The dangers are evident in the vast damage from a February oil spill, described as history's second worst, that reportedly spoiled some forty miles of Chile's coastline, destroyed the marine life of two estuaries, killed up to 40,000 birds, and ruined fisheries.

Endangered Plant Report The Smithsonian Institution's 200-page Report on Endangered and Threatened Plant Species of the United States, presented to Congress in January, contains lists of endangered, threatened, commercially exploited, and recently extinct species of the United States (including Alaska and Hawaii), as well as recommendations for the preservation and protection of these species. Listings of endangered and threatened species arranged alphabetically by states are included. A limited number of complimentary copies of the report are available, upon written request, from: Endangered Flora Project, Department of Botany, Smithsonian Institution, Washington, D.C. 20560.



In the Southwest, scientists will study the effects on wildlife and ecosystems of energy development in the Four Corners area. The World Wildlife Fund recently announced a contractual agreement with the U.S. Fish and Wildlife Service for the study.

This research will cover an area within a 100-mile radius of the Four Corners powerplant, which includes the present San Juan powerplant and the area in which several companies are proposing construction of at least six coal-gasification plants. (See article and map beginning on page 9.)

The long-range goal of the project is to provide decisionmakers with *quantified* data concerning the effects of environmental disturbances caused by powerplant developments. For instance, in some areas there are obvious differences in vegetation, but no hard data are available on how the changes have occurred.

To obtain such data, the researchers will carry out a series of experiments designed to determine the relative effects of different components of selected ecosystems in arid environments. For example, what would be the effects of removing kangaroo rats, primary consumers of certain desert seed crops, from a selected plot?

An important aim of this project is to produce general guidelines for *rapid accumulation* of information on how a given environmental project will affect an ecosystem.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora finally entered into force in several nations as of July 1, although many leading trading nations have not yet ratified the treaty. NPCA has contributed much time and professional expertise to the development and ratification of this treaty, which is intended to protect more than 1,500 plants and animals from overexploitation through international trade.

Although the treaty, the terms of which were hammered out in final form at a 1973 conference, already had been signed by many nations, the convention specified that ten signatory nations must deposit formal instruments of ratification in Bern, Switzerland, before the agreement would be effective. On April 2, 1975, Uruguay became the tenth nation to do so and thus the convention entered into force in the ratifying nations on July 1, following a statutory waiting period.

As of press time, a total of eleven ratifying nations will now be cooperating under the treaty to ensure survival of species: Canada, Chile, Cyprus, Ecuador, Nigeria, Sweden, Switzerland, Tunisia, United Arab Emirates, United States of America, and Uruguay.



Three appendixes that list the names of protected organisms serve as the backbone of this treaty; each appendix requires a different degree of control and offers a different degree of protection. The treaty will not prohibit the killing of endangered species. However, by prohibiting primarily commercial uses of endangered species, it will remove many incentives for killing, capturing, or exploiting the species.

The need for such an international agreement has been obvious for many years. National laws against killing endangered species are insufficient. It is very difficult in most areas to provide enough wardens to adequately patrol areas inhabited by endangered species; as long as there is a buyer somewhere in the world, the poacher is in business. Endangered species and their parts and products are smuggled out of countries where they are legally protected into market countries where there are no import or sale restrictions on the species and products.

Working with the International Union for the Conservation of Nature and Natural Resources (IUCN), the U.S. government, and many other organizations, about three-and-a-half years ago NPCA began working to expand and strengthen the coverage under the treaty. In early 1973 NPCA provided technical advice to representatives of many of the eighty nations participating at the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife, which met in Washington, D.C.

The final treaty incorporated many NPCA recommendations, such as allowing a species that is not yet necessarily threatened with extinction to be protected *before* it becomes so, rather than requiring impending worldwide extinction of a species before it could be protected under the treaty. However, it also has some of the failings common to international treaties, such as no provision for penalties against nations violating its provisions.

However, despite several ambiguities in the treaty, it is a significant workable tool for protecting endangered species, provided more nations ratify it, especially those involved in commercial trade in animal products.

The 1975 edition of "Camping in the National Park System" is a pocketsized booklet describing camping facilities, services, fees, regulations, and safety concerns at ninety-six NPS areas. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, for 65 e under stock number 024-005-00573. Payment by check or money order payable to the Superintendent of Documents should accompany each order. The booklet went to press too early to report that visitors can obtain campsite reservations by mailing requests to the addresses given in the booklet for Acadia, Platt, and Grand Canyon national parks and Arbuckle National Recreation Area.

More Notes.... A new federal regulation prohibits nudity in all public areas of Cape Cod National Seashore.... The U.S. Court of Appeals for the District of Columbia recently ruled that EPA's finding that aldrin and dieldrin present an imminent hazard to human health "had an adequate evidentiary basis, including scientific data that the pesticides were carcinogenic in mice and rats...." A BOOK TO NOTE—Woodland Ecology: Environmental Forestry for the Small Owner, by Leon S. Minckler, with drawings by Francis W. Sergeant; foreword by Jennings Randolph, U.S. Senator from West Virginia. Syracuse University Press, Syracuse, N.Y., 1975. 229 pp. \$9.95.

If you are one of the some 4½ million private forest owners in this country or are thinking of becoming one, this book shares with you an environmental philosophy and humanistic wisdom that should guide the use and enjoyment of your woodland property.

Ównership objectives for timber, wildlife, recreation and esthetics, and watershed protection are discussed in separate chapters; but the emphasis throughout is on the harmonious interaction of environment and man.

Leon Minckler, author, teacher, consultant, and woodland owner himself, co-authored two of NPCA's studies on ecological forestry for the eastern United States. This book, *Woodland Ecology*, too, is largely addressed to forest types and ownership conditions of the East.

Dr. Minckler's formula for maintaining, enhancing, or protecting the wide range of uses and values inherent to the woodland environment is essentially silvicultural in nature. Owners who choose to procure some income from producing hardwood timber, while not detracting greatly from wildlife, recreation, and esthetic values, can best do so by implementing a group or single-tree selection system. Removing trees individually or in small groups provides a diverse forest environment as required by many species of wildlife and keeps soil erosion and other site damage to a minimum. Also, a continuous forest cover is retained on the landscape, but with openings just large enough to allow for the successful regeneration of preferred species of trees or other vegetation.

It is essentially this formula applicable to small private woodland holdings and hardwood forest types of the East that NPCA would like applied to the national forests. NPCA continues to battle the abuses of clearcutting and to advocate principles of ecological forestry such as those Leon Minckler presents in Woodland Ecology 45 —Tom Cobb



reader comment

Grizzlies: Beyond Debating

I was interested in reading your article "The Grizzly Debate" [April 1975]. There are aspects of the article I thought were very good, on the other hand, I think the grizzly bear situation should be far beyond debating.

Fifteen years of detailed data conclusively show that the grizzly bear has a very low reproductive rate and cannot stand heavy mortality, and the preservation of habitat alone is not sufficient. This is very evident in the Selway-Bitterroot ecosystem, where grizzlies are nearly extinct. Mapping and preserving grizzly bear habitat is of great importance, but our research shows that the susceptibility of grizzly bear populations to excessive mancaused mortalities is the most critical problem in preserving the grizzly bear.

> John J. Craighead, Leader Montana Cooperative Wildlife Research Unit

For one thing, Dr. Craighead has been concerned that abrupt closure several years ago of garbage dumps at Yellowstone National Park used by grizzlies for many years as a partial food source would result in bears invading campgrounds to forage for food, with consequent confrontations with humans. (Following such confrontations, a great cry often ensues to kill all grizzlies in the region.) In a recent legal case concerning the tragic death of Harry Eugene Walker, killed by a grizzly bear in June 1972 while camping in the park, the U.S. District Court of the Central District of California found the Park Service guilty of negligence in abruptly closing dumps, contrary to advice by Dr. Craighead and others who had recommended that bears be "weaned" slowly. NPS was also found negligent in not warning Walker and other visitors of dangers that would result from the closures, and in having stopped radio monitoring and tracking of grizzlies in 1968 and thus having inadequate data on the activities of individual problem bears. See May 1975 NPCA at Work.

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A ROBERT B. LUCE BOOK

Utah Citizens on Powerplants

... One of the problems we are especially concerned with is the projected coal-burning plants in Southern Utah. We believe there are other alternatives to the proposed plants... is it worth it to sacrifice Utah's beautiful skies and scenery for [power for] California? The areas where these plants are to be put are in an area [of the Southwest] that contains more national parks and



monuments than any other comparable area in the nation. . . .

Utah wants money. There are other ways to get it, such as promoting our natural and scenic wonders. The nation needs energy; and Utah has valuable resources of coal, geothermal, uranium, oil, etc.; use these, but use them wisely. Provide environmental impact statements that protect the land, the air, and the people. Don't let big business overwhelm with their talk of instant profits. It will cost Utah more in the long run to clean up their mess when they are through with the state....

These 15-million-dollar plants will be outdated in 10 years, the money could be spent more wisely on research which will provide more power, more efficiently, more economically, and environmentally less harmful. Utah's canyon country is blessed with sunshine much of the time; why not look into solar energy, rather than an energy that will blacken the sky; effective use of geothermal steam for power is within our present technology. . . .

If Rogers C. B. Morton, Secretary of the Interior (who ruled the first Kaiparowits plant proposal would be too close to the Navajo plant, and that the two plants would degrade air quality in the Lake Powell area and risk reducing visibility in the Grand Canyon) would look around at the other national parks that these plants are jeopardizing [in the Southwest] . . . he should shudder. . .

... One hundred years ago people in this country didn't need every room lit up, nor did they need heated swimming pools. . . . So many of these luxuries are selfish and risking the very essence of our heritage-the land-America. If California can put off planned powerplants [within Californial, then we believe they don't need Utah to sacrifice itself for their neon signs.

We believe we can still learn something from the Indian philosophy, a lesson which is the most striking difference between the Indian and the Western mind. . . . The prevailing non-Indian view is that man is superior to all forms of life and that the universe is to be used as he sees fit. The value placed on every life form and the land is determined only by its usefulness to man.

The Indian view is that man is part of a delicately balanced universe in which all components-all life forms and natural forms and elements-interrelate and interact, with no part being more or less important than another. . . . only man can upset this balance.

It is a tragedy indeed that Western man in his headlong quest for Progress could not have paused long enough to learn this basic truth-one which he is now being forced to recognize, much to his surprise and dismay. Ever anxious to teach "backward" people, we have been ever reluctant to learn from them. We hope because of America's current economic, social, and energy problems we do not regress back to the days of isolationism and selfish progress, to the decay of the world as we know it. Exploiting nature is a dreadful thing; hopefully we will realize this before it is too late. We cannot see that it is worth Utah's sculptured landscapes and vivid blue skies to install coal-burning plants, without strict environmental controls....

Ken & Marilyne Mabery Moab, Utah

Since these readers wrote to NPCA in April, Secretary Morton has resigned to become Secretary of Commerce and Stanley K. Hathaway has been confirmed to replace him as Secretary of the Interior despite NPCA opposition.



Recently introduced bills of interest to NPCA members include the following. Descriptions indicate those who introduced the bills and committees to which the bills were referred.

Shenandoah Wilderness: HR 6624-To designate 112,687 acres of Shenandoah National Park as wilderness. Rep. Whitehurst (R-Va.) and eight co-sponsors. Interior Committee.

Steel-Jaw Traps: S 1602, HR 134, HR 2327-To discourage the use of leghold or steel-jaw traps on animals in the United States. Sen. Mathias (R-Md.) and Representatives Broomfield (R-Mich.) and Long (D-Md.) Senate Commerce Committee and House Interior Committee.

Wildlife Ranges: HR 5512-To amend the National Wildlife Refuge System Administration Act of 1966 by prohibiting the transfer of administration and management of game ranges from the Fish and Wildlife Service to

the Bureau of Land Management. A similar bill, S 1293, would establish the Charles M. Russell, Charles Sheldon, and Kofa national wildlife ranges as components of the National Wildlife Refuge System for administration by the U.S. Fish and Wildlife Service. Representatives Dingell (D-Mich.), Leggett (D-Calif.), and Reuss (D-Wisc.), and Senators Metcalf (D-Mont.), Mansfield (D-Mont.), and Packwood, (R-Ore.). House Merchant Marine and Fisheries Committee and Senate Commerce Committee.

Timber on Public Lands: HR 5544 (The Public Land Timber Conservation Act)-To require that all timber harvested west of the 100th meridian be processed in the United States, and that only certain products from the processing of this timber be exported from the United States. Rep. Weaver (D-Ore.). House Interior Committee.

Madrona Marsh: HR 67-To establish the Madrona Marsh National Wildlife Refuge of 54.5 acres in Torrence, California. Rep. Anderson (D-Calif.). House Merchant Marine and Fisheries Committee.

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WITH THIS ISSUE . . . NPCA concludes our important "Get A Member" Campaign wherein we are asking our loyal members to enlist one other member. We need a larger membership to help us fight the many battles in behalf of parks, wilderness, and wildlife. For example, a powerplant complex planned for southern Utah will affect one of this country's most

spectacular regions, which contains one-fifth of the entire National Park System. In order to combat such environmentally destructive plans, NPCA needs your continued support and that of your friends and associates. Please enlist another member today!

NATIONAL PARKS & CONSERVATION ASSOCIATION 1701 Eighteenth Street, N.W., Washington, D.C. 20009

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