

# NATIONAL PARKS



# Conservation Magazine

The Environmental Journal

August 1974



# Open Budgeting

**C**LOSE to the heart of the democratic process is the requirement that public business be transacted as far as possible in broad daylight.

If we, the people, are to be the final judges of public policy, then we, the people, must have access to all the facts on the basis of which public servants make their decisions and carry out their responsibilities.

This is not to say, of course, that there are not functions within the legislative, executive, and judicial branches which must be conducted privately.

Some of the work of Congressional committees had best be carried on in executive session to protect individual reputations, or diplomatic or military security. But normal practice should favor open hearings.

By the same token, the courts must often hold consultations in chambers, but the basic principle of the public trial of civil and criminal cases must be preserved and protected with determination.

The operations of the Executive Branch should normally be public, within the limits of the privacy necessary to get the work done. Good laws can be so badly administered that their purposes can be defeated. One effective defense against the neglect or distortion of legislative intent by the Executive is full public knowledge about the processes of administration.

**C**ENTRAL to any effort at the efficient coordination of the multitudinous agencies of the federal government was the establishment of a detailed and comprehensive budget. Because the budgeting and management work of any organization, governmental or economic, public or private, are indissolubly interlinked, it could have been expected that the agency would eventually take the form of the Office of Management and Budget.

No less than the legislative, executive, and judicial branches of government, this new fourth branch of government, if we may so characterize

it for purposes of emphasis, should conduct its activities within the canon of ample publicity.

Persons concerned with a proper focus of governmental activity with a view to the immediate and long range interests of the nation as a whole have been disturbed for some time by the secrecy which has surrounded budgetary analysis within the Executive Branch.

The budgeting and appropriations processes within the Legislative Branch have been increasingly public in recent years, and we are concerned in the present discussion only with the analytic process within the Executive Branch, and the need to let the light of day into these operations.

**D**EEPLY DISTURBED by administrative restrictions placed on manpower levels affecting the management and indeed the viability of the national parks of America, for which NPCA has particular responsibilities, and convinced that one remedy may well be more publicity in the budgetary administrative process, we have conferred with the Office of Management and Budget and made the following proposals:

We address ourselves specifically to administrative procedural problems in respect to the budgeting process for the land management agencies, but also the resources management agencies generally, and indeed the entire budgeting process except where properly classified for national security reasons.

During the history of the budgeting process within the Executive Branch, the practice has grown up, although not required by statute, to conduct budget formulation within agencies, departments, and the Office of Management and Budget on a confidential basis.

We wish to lay before the Office of Management and Budget a recommendation that the budgeting process be opened up for public information and participation, in the conviction that such a change would facilitate effective budgeting, provide important information which would otherwise not be available to the government, and be more in keeping with democratic tradition.

Manpower ceilings are now in effect within the Executive Branch which might make the appropriation of funds recommended in the budget for FY75 a futile gesture. It has not been a matter of public knowledge that these manpower ceilings even exist. We believe that information of this kind should be made available to the public, and that the budgeting process is greatly hampered by such restrictions.

It is well known that the budgeting process for FY76 has been in progress since about January 1, 1974, and that this is the normal course of events. Under present restrictions imposed on agencies and departments by the OMB, it is

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COVERS Petrified Forest National Park, by J. Y. Bryan  
*Petrified Forest National Park is a treasurehouse of natural and archeological wonders, from the brilliant stratified hills of the Painted Desert badlands (front cover), to ancient Indian ruins and petroglyphs, and to trees turned to stone. Agate Bridge (back cover), one of the more curious marvels, is a petrified log more than a hundred feet long spanning a ravine. About the turn of the century a cowboy bet \$10 that he could ride his horse across this log. Although this boast was poor horse sense, he won. (See page 4.)*

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National Parks & Conservation Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and to protecting and restoring the whole environment. Life memberships are \$750. Annual membership dues, including subscription to National Parks & Conservation Magazine, are \$150 sustaining, \$75 supporting, \$25 contributing, and \$12 associate. Student memberships are \$8. Single copies are \$1.50. Contributions and bequests are needed to carry on our work. Dues in excess of \$12 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to Association headquarters in Washington. When changing address, allow six weeks' advance notice and send address label from latest issue along with new address. Advertising rates are available on request from headquarters in Washington.



# *Speaking Rocks of Petrified Forest*

*A system to prevent  
the daily looting of a national treasure  
should be given high priority*

*article & photographs by J. Y. BRYAN*

**O**NE OF OUR great national treasures, Petrified Forest National Park in Arizona, is being looted daily, and few citizens are aware of this disturbing fact. If visitors to the Smithsonian Institution walked out with priceless antiquities, or if someone stole gold ingots from Fort Knox, the press would certainly give the robberies headline treatment. Thefts from Petrified Forest, however, are rarely given publicity.

One reason for this lack of interest is that petrified wood is too commonly regarded as just pretty rock. Actually the Petrified Forest is the earth's most wonderful concentration of once-living forms converted into richly colored crystalline stone—agate, chalcedony, and jasper. If we look and listen, these stones will speak to us of a marvelous and complex process of burial, transfiguration, and upheaval that occurred over a period of millions of years. These speaking stones are in the deepest sense a treasury meriting intensely concerned protection.

The petrified wood is difficult to protect because of the magnitude and open character of the park's display, which covers 94,161 acres. Approximately twenty-nine miles of paved road wind through hills, buttes, and mesas, preventing easy surveillance over wide areas. Indeed 50,260 acres are congressionally established wilderness, accessible only by trail.

Furthermore, unsupervised hiking in the park must not only be tolerated but encouraged. Walking about on foot is the best but, alas, least utilized method of absorbing the mind-stretching instruction the park's many features offer. According to park superintendent C. A. Veitl, a majority of the park's visitors stop off only briefly at Petrified Forest en route to another destination. He estimates that the average visit lasts less than two hours.

The number of persons passing through would tax the vigilance of a much larger staff than the park budget presently allows. By 1973 the annual total of visitors had reached over a million. All these people come in cars, campers, or pickups in which the clever can conceal stolen rock. Not all visitors recognize

that the park can remain worth visiting only if its treasures are left where they are.

There is, of course, no law against examining scraps of rock. Unfortunately, too many people in doing so succumb to a temptation to take the choicest specimens home. Searches of cars reveal chips or chunks hidden in luggage, ice chests, picnic baskets, diaper bags, or odd nooks of vehicles.

All visitors entering the park are courteously asked if they have any petrified wood with them, for it can readily be purchased nearby from samples gathered on private lands. If they have any, it is examined and identified so that it will not later subject them to a charge of theft. All visitors in any case are informed verbally that no park rock is to be removed. In addition they are given a cleverly illustrated card containing such counsel as, "Help protect *your* national park. Do not remove petrified wood or other natural objects such as flowers, rocks, and Indian relics. VIOLATORS WILL BE PROSECUTED. . . . You may purchase petrified wood from park concessioners or at adjacent curio shops. Such supplies come from lands outside the Park. . . ." Many signs within the park plead or warn, "Leave the fragments where nature left them."

Persons caught with anything stolen from the park are subject to a fine ranging from \$25 to \$500 and up to six months in jail or both. Why so many, in the face of all the warnings and despite access to reasonably priced souvenir rock, should risk facing the trouble, expense, and embarrassment of court action is a puzzle.

Superintendent Veitl says a high percentage of culprits are neatly dressed, apparently decent middle-class adults. They tend to be citizens who abominate shoplifting, deplore street robbery, and regard statistics about burglary with horror. Not a few experience pangs of conscience as they approach exits preceded by signs saying "Vehicle Inspection Ahead" and toss out their take. During the first eight months of 1973, 933 pounds of petrified wood were recovered from piles jettisoned near those signs. A few other pilferers, sickened over discovery that stolen rocks at home soon lose their charm, have sent them back.

*The diversity of hues in the giant logs of Rainbow Forest behind the Visitor Center inspired this forest's name.*

Nevertheless, the amount of stolen loot is large—an estimated twelve tons annually. All the stolen rock is, naturally, selected for beauty or unusual form. All of it is part of an irreplaceable exhibit. None of it is ever as valuable in scattered private collections as it is in the park, a splendid outdoor museum enormously stimulating to imaginative visitors.

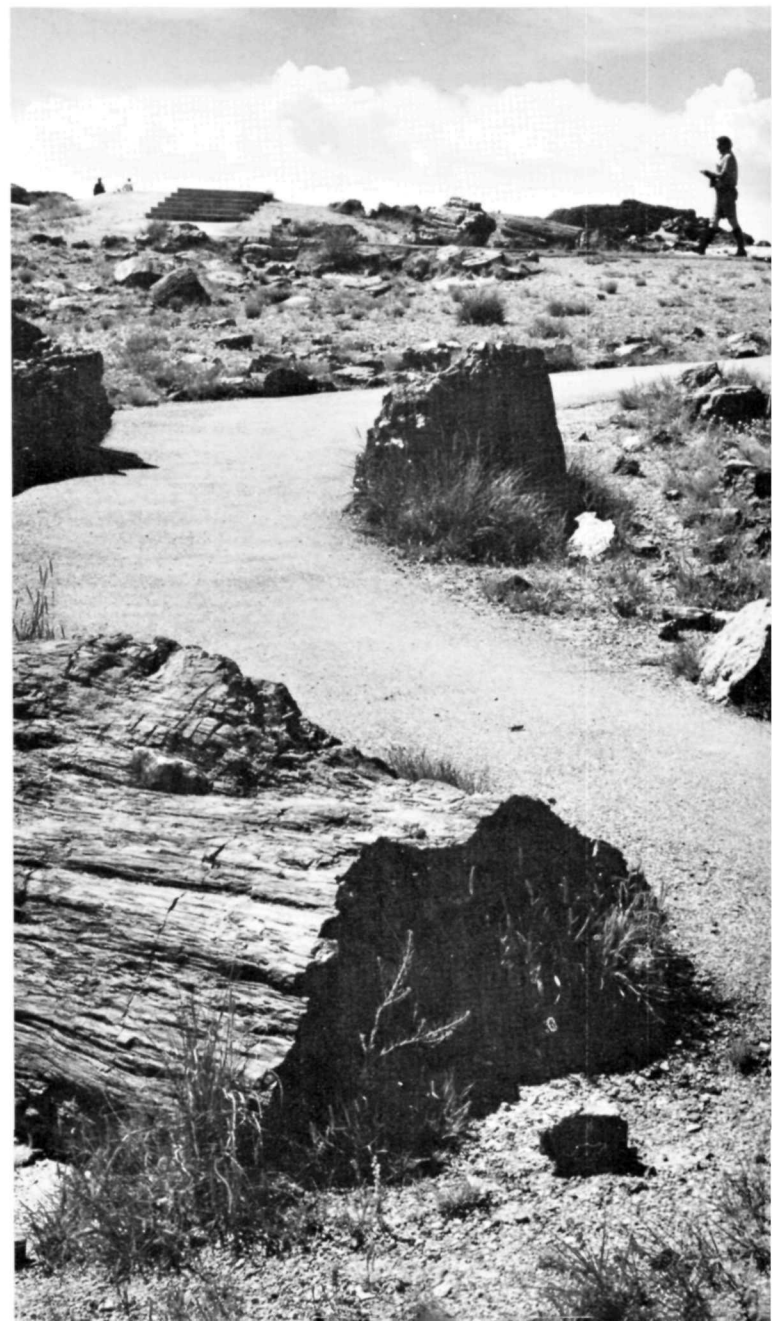
**P**ETRIFIED WOOD is not by any means that museum's sole attraction. The park includes some of the most variegated stretches of the Painted Desert. The Painted Desert is composed of a claylike substance called bentonite, which was formed from water-deposited layers of volcanic ash interbedded with thin layers of shale, sandstone, and river gravel. During the dry season bentonite is hard and dry. However, the torrential summer rains typical of this semiarid region rapidly cut the bentonitic beds into turreted ridges, conical hills, and small steep-walled canyons and ravines, resulting in the usual forms of badlands erosion. Mesas and buttes are formed when a hard covering of sandstone or lava protects the bentonitic layers beneath from the erosion of rain.

The changing colors of the Painted Desert result from small quantities of manganese oxide in the volcanic ash that have stained the bentonite—which is nearly white in its pure state—to many shades of red, blue, brown, and yellow. Indeed, throughout its twenty-seven-mile length the park's terrain is multi-colored and in many places fantastically molded. All of it changes under varying light from dawn to dark but is most enchanting early and late.

The park becomes most captivating when slanty, shadow-forming light gives the landscape its highest expressiveness, its richest colors, and its sweetest air. Observing the transformations that result is in itself worth special effort. The gates open shortly after sunrise all year long and are not closed again until about sundown. Thus anyone wishing to do so can see the area graced by the sun's most decorative palette at both ends of the day. By far the largest proportion of visitors, unfortunately, see the park only when the light is flattest—in the hours just before and after noon. They may conclude erroneously that the park is barren, bleak, and overrated.

Close observers will find that, as day wanes and the tide of cars recedes, native inhabitants of the park emerge more boldly. Most are of a kind at home in high desert grasslands, for the park is between 5,300

*The badlands of the Painted Desert in Petrified Forest National Park consist of bentonite, a claylike substance. Although hard when dry, bentonite erodes readily under torrential summer rains, which expose buried logs that protrude for a while like guns on a battleship (opposite page). Finally, with further erosion, they break off and join other fragments like the two big chunks in the foreground. Visitors to the park (top right) naturally like to examine bits of petrified rock, but too many are tempted to carry specimens home, in spite of repeated pleas and warnings. Many visitors enjoy the self-guiding trail in Rainbow Forest (bottom right), the most visited portion of the park.*





and 6,200 feet above sea level and receives only nine inches of precipitation per year. Among creatures most at home there are pronghorn antelopes, bobcats, coyotes, jackrabbits, cottontails, skunks, porcupines, whitetail antelope squirrels, and several kinds of lizards and snakes. Resident birds include horned larks, rock wrens, phoebes, house finches, and several species of sparrows.

**U**NTIL ABOUT 600 years ago the portion of the Southwest that includes Petrified Forest had a fairly large Indian population. The park contains more than three hundred Indian ruins that date before 1350 A.D., some of which consist of only one room. Others, like the Puerco Indian Ruins—the remains of an ancient pueblo near the Puerco River—are much larger. They indicate a rectangular village of about 150 rooms completely enclosing a large courtyard.

Many artifacts have been found near the ruins. The ancient Indian presence is graphically represented at Newspaper Rock. The “news” is published in Indian petroglyphs, or picture-writings, which call to mind contemporary graffiti. No one as yet has satisfactorily deciphered them or done better than guess at their purpose.

Fossil bones, teeth, shells, footprints, and leaf imprints found in the park indicate that between 180 and 200 million years ago, in the Triassic period, when the trees we now see petrified were living, the climate and character of the area were utterly different from today's. Scientists piecing together the jigsaw of evidence envision the region as an antique version of the rankly growing portions of the Florida Everglades.

Although the exact process of tree deposit and petrification has yet to be proved, natural processes such as fire or insects are believed to have killed the trees of the Triassic period. Most, it is theorized, rotted; but some were carried by flooding streams and deposited in bays or on sandbars in mud and sand so dense that their decay was arrested because of lack of oxygen. The sediments of mud and sand in which the logs were buried contained much silica-rich volcanic ash. Ground water, which percolated more easily through the porous cells of the trees than through the sediment, carried the silica into the wood and deposited it in the cell tissues. Oxides of iron and manganese stained the crystal in a wide range of hues. Eventually the waterborne silica converted entire logs, some of them more than 150 feet long, into crystalline stone with pronounced grain, knots, and twists.

Slow and marvelous as was the burial and transfiguration of these ancestral relics, their disinterment was at least as impressive. Even though waterborne deposits had buried the trees deeply—possibly to a depth of more than 3,000 feet—restless heavings of the earth eventually lifted the mass far above sea level. Thereafter water conducted gradual excavation which, in geologically recent times, laid bare the bones of that long-buried era which give the park its colorful terrain today.

When this treasury was first described by Lt.

Lorenzo Sitgreaves, an army officer who explored parts of northern Arizona in 1851, it was much richer than it is now. As it became more widely known, looters moved in, some of them blasting logs apart in search of stones of gem value. The callousness of this despoiling is indicated by the fact that a stamp mill was shipped to Adamana, less than one mile from the present-day park, to be constructed for the purpose of crushing petrified wood for conversion into abrasives. The mill was never erected, for the looting and the threat of the mill spread alarm through Arizona, inducing the territorial legislature in 1895 to petition Congress to put the area under protection as a national park. Nevertheless, another decade of neglect and despoliation followed before Theodore Roosevelt set Petrified Forest aside as the nation's second national monument. It was redesignated as a national park in 1962.

**A**LTHOUGH the problem is far from solved, Superintendent Veitl has seen evidence during the past five years of greater public concern about looting. More visitors to the park, reflecting greater attention to the quality of our environment, are willing to report persons walking off with choice bits, pieces, or chunks. More visitors, too, seem uneasy about their own impulse to steal. Certainly some whom I tried to photograph quickly threw their take aside when one of my cameras turned their way. To get clear photos of the impulse at work I had to use a telephoto lens.

But there is a simple, though costly, solution to these thefts—a transportation system that would bar automobile traffic and would bus visitors through the park. Visitors could park their automobiles at the park entrance and take buses on conducted tours that would stop at places of interest throughout the park. Such a system would provide greater interpretation/appreciation opportunities for park visitors as well as shrink thefts to a fraction of their present rate. Petrified Forest has a master plan that refers to such a transportation system, although only in passing. However, a limited Park Service budget prevents adopting this system until other parks with higher priorities (Grand Canyon, for one) have been so equipped.

The persisting losses in Petrified Forest National Park suggest that a good transportation system should be given high priority in the Park Service budget. Petrified wood is found in many parts of the world, but nowhere else can such an astonishing quantity and variety of it be seen as in Petrified Forest National Park. The trees of Petrified Forest have existed for 200 million years; all speak persuasively to us of nature's marvels. Unless we afford them better protection than we do now, those speaking rocks will in time address us only in whispers. ■

**J. Y. Bryan taught creative writing and journalism at the University of Maryland before embarking on a twenty-year career with the Foreign Service. Since retiring, he has been teaching photography at the University of California at Riverside.**



# RED WOLF

## our most endangered mammal



The rare red wolf is endangered  
by hybridization with coyotes

by RON NOWAK

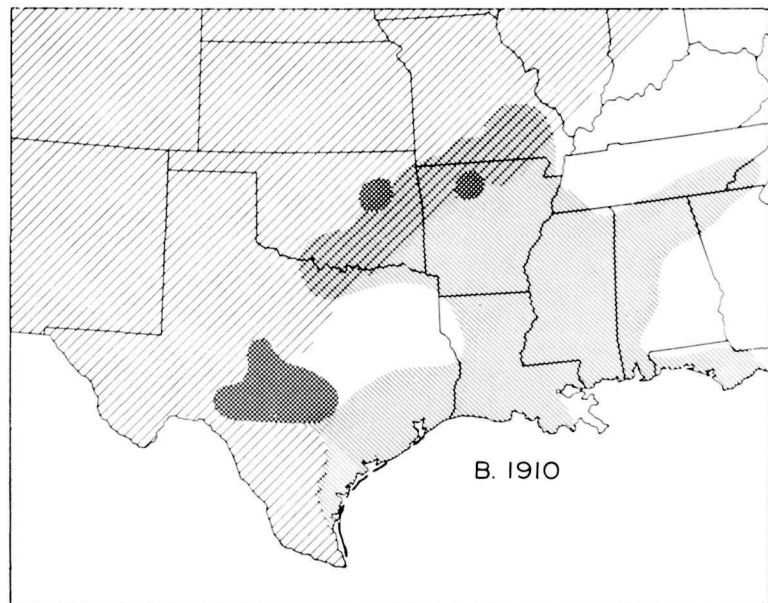
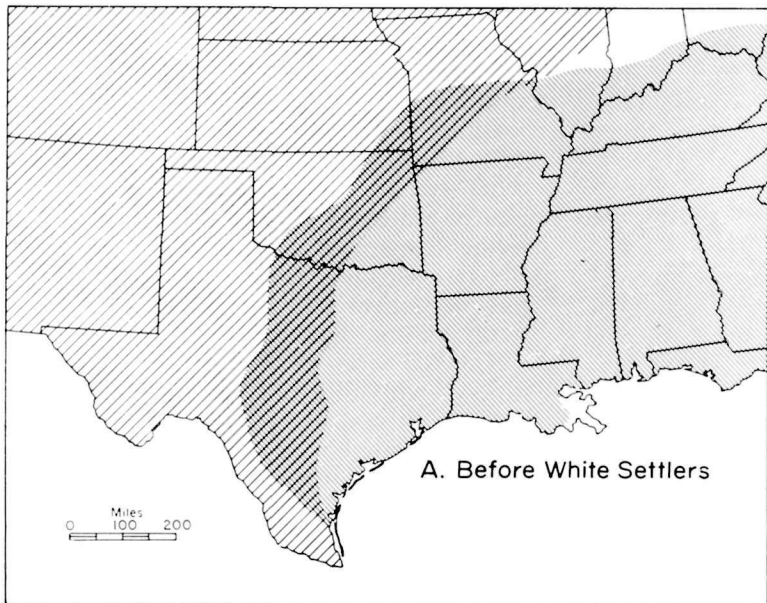
**I**N THE TALL GRASS prairies and marshes that line the coast of extreme southeastern Texas and southwestern Louisiana, the world's last red wolves (*Canis rufus*) are fighting for existence. No other species of mammal in the United States—not the blackfooted ferret, the sea otter, the manatee, the Tule elk, nor the grizzly bear—has become so restricted in numbers and distribution.

The red wolf is the only living kind of wolf that presently is recognized as a species distinct from the circumpolar gray or timber wolf (*Canis lupus*). It seems likely that the red wolf represents a surviving line of a primitive group of wolves that was distributed over much of Eurasia and North America in the early to middle Pleistocene (Ice Age) but was subsequently displaced by the more specialized *Canis lupus*.

Compared to the gray wolf of the North and West, the red wolf is

PHOTOGRAPH COURTESY OF CHICAGO ACADEMY OF SCIENCES





characterized usually by much smaller size, narrower proportions of skull and body, shorter fur, and relatively longer legs and ears. The color that gives the red wolf its name actually is not of common occurrence, and most specimens have a typical gray-brown or tawny coat with black hairs interspersed. There also was a locally common dark or fully black color phase in the forested region of the Southeast. In many aspects of its natural history, the red wolf varies little from the gray wolf. Differences that are apparent may be attributable in part to the smaller size and peculiar habitat of the southern species.

In the area in which they still survive, red wolves usually establish their dens in sand knolls. There the young are born in March or April. Both parents actively guard and feed the pups. Litters reportedly average six or seven, but most die before the age of six months. Hookworms seem to be an important factor in limiting the successful reproductive rate in southeastern Texas.

Red wolves are more sociable than coyotes but probably less so than gray wolves.

Clearly the red wolf is not so much a predator of big game as is the larger gray wolf. There are stories of red wolves pursuing deer, but recent studies indicate that rabbits and rodents are by far the most important prey species. In the

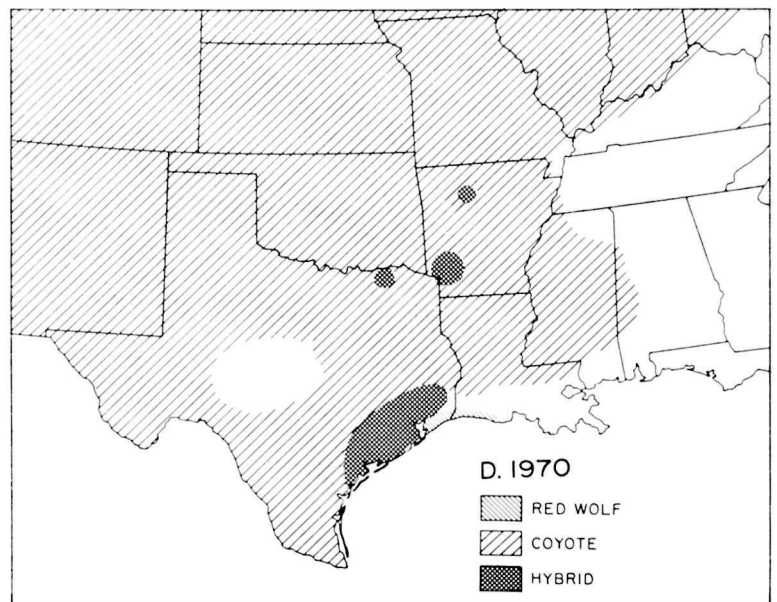
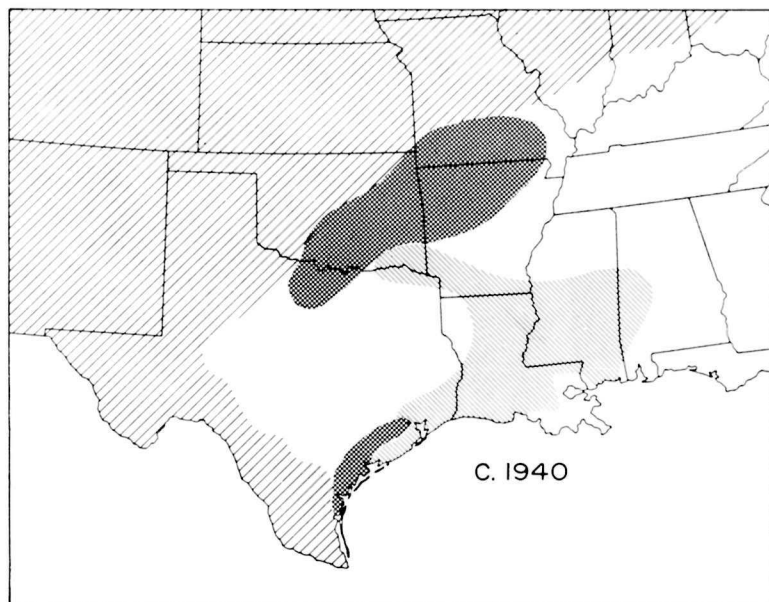
coastal area still inhabited by red wolves, the introduced nutria is a favorite food item. In its present food habits the red wolf does not differ greatly from the coyote. Possibly this factor has led to increased contact and competition between the two species.

Available specimens and reports suggest that at the time the white man entered North America, the red wolf was distributed from central Texas to the Atlantic Coast, and from the Gulf Coast north to the Ohio Valley and southern Pennsylvania. Subjected to the same persecution as other large carnivores, however, the species rapidly declined in numbers and distribution. By 1900 it was gone from most of the Atlantic seaboard and Ohio Valley. After 1920 there are no reliable records from Florida and most other areas east of the Mississippi River. The species also apparently had disappeared from much of central and northeastern Texas, central Oklahoma, and southeastern Kansas. Continued hunting pressure and habitat destruction had by 1940 wiped out the once large red wolf population of the Ozark-Ouachita uplands. At that time the species, in any numbers, could be found only in Louisiana and in the Big Thicket and coastal area of southeastern Texas. A few animals also survived in extreme southeastern Oklahoma, southern Arkansas, southern Mississippi, and extreme west-

ern Alabama. At present there is firm evidence for the survival of *Canis rufus* only on a narrow strip of Texas coast between Galveston Bay and Sabine Lake. The population, however, may also extend into southwestern Louisiana, possibly as far as the great Atchafalaya Swamp.

The decline of the red wolf was caused by the same factors that brought about the extirpation of other large carnivores from most of the eastern United States. The species was looked upon as a threat to livestock, and possibly to man himself, and thus was hunted and trapped at every opportunity. In addition, modification of wolf habitat and elimination of its natural prey were of major consequence. From the 1920s to 1940s, when the red wolf still was common in parts of the south-central United States, there seems to have been an accelerated movement by man to exterminate the species in its strongholds. This effort was supported effectively by an increasing amount of federal and state government trapping.

**T**HERE WAS, however, another critical factor in the decline of the red wolf, apparently unique to the species. This matter has been the source of constant confusion regarding the correct status of *Canis rufus* and is a subject that I have investigated in some detail. While the red wolf was being ex-



terminated over its former range in the south-central United States, a kind of wild *Canis* continued to inhabit, and even increase, in much of the region. For many years these wild animals were called "wolves" by most rural residents and trappers. As late as 1963, after some authorities had recognized that the red wolf was on the verge of extinction, reports by the federal and state governments claimed that the red wolf existed by the thousands in eastern Texas, Oklahoma, Arkansas, and Louisiana. Only in the past decade have most of us come to realize that nearly all of the so-called "wolves" actually were coyotes (*Canis latrans*) or hybrids between coyotes and red wolves.

In order to trace the process of hybridization and replacement of the red wolf by other canids, I measured every available skull that had been collected in the south-central United States and tested the data by a computer program of multivariate analysis. The series of maps accompanying this article show how the situation changed over the years.

Before the arrival of white settlers the red wolf and coyote had largely separate ranges, the former in the eastern forests and coastal prairies, the latter in the more open and drier country to the west and north. By the early twentieth century man had altered much of the natural habitat and had reduced the

red wolf population in many areas. The clearing of forests and development of agriculture created conditions favorable to the coyote and enabled that species to extend its range eastward.

**N**ONETHELESS, at this time a large population of unmodified red wolves continued to hold out from southern Missouri to the Gulf Coast. Available specimens indicate that localized cases of hybridization between *Canis rufus* and *Canis latrans* occurred in northwestern Oklahoma but that the only large-scale development of interbreeding was in the Edwards Plateau area of central Texas. The situation in this area apparently resulted from man's disruption of an already transitory ecological zone and the subsequent breakdown of reproductive isolation separating the red wolf and coyote.

By the 1940s all kinds of wild *Canis* nearly had been wiped out by man in most of central and northeastern Texas. Farther north the hybridization process spread rapidly as coyotes moved in and sometimes mated with those few red wolves that had survived man's onslaught.

Over the years, red wolf influence weakened until by the 1960s a predominantly coyotelike population occupied most inland parts of the south-central United States. Because this population had received an infusion of red wolf

### Red wolf distribution to 1970

*These four maps of the south-central United States show how the coyote extended its range and how hybridization developed over the years, at the expense of the red wolf.*

*A. The original situation before the arrival of white settlers; the red wolf and coyote have largely separate ranges, though there is some overlap.*

*B. 1910; the range of the red wolf has been reduced by man, and this factor along with habitat disruption has enabled the coyote to extend its range eastward; hybridization has developed in some areas and is widespread in central Texas.*

*C. 1940; the range of the red wolf has been greatly reduced; all kinds of wild *Canis* have been nearly wiped out in central and northeastern Texas; hybridization has become widespread to the north and also is occurring on the central coast of Texas.*

*D. 1970; the red wolf survives only in extreme southeastern Texas and perhaps in southwestern Louisiana; a coyotelike population occupies most inland parts of the south-central states; genetic influence of the red wolf remains strong in some areas, especially along the Texas coast.*

genes, a few individuals still morphologically approach *Canis rufus*, at least in certain localities.

Along much of the Texas coast, red wolf influence still is strong, and an apparent hybrid population exists in a strip of land from Aransas Bay north through the Houston area and above Galveston Bay into Liberty and Tyler counties.

In the eastern part of Brazoria

County, to the south of Houston and west of Galveston Bay, red wolf genes actually seem to predominate, but the population here has lost its "purity" within the last few years through continued expansion of hybridization.

To the east of Galveston Bay, in Chambers and Jefferson counties, all available specimens collected after 1960 are referable to *Canis rufus*. Coyote or hybrid influence

is not yet established in this area, and hope for the survival of the true red wolf is centered here.

The threat of hybridization to the red wolf was initially pointed out in 1962 by Professor Howard McCarley of Austin College, Texas. Eventually the critical status of the species was recognized by all concerned, but efforts at protection have seemed painfully slow to some conservationists. Major developments regarding the red wolf in the past ten years are summarized in the accompanying chronology.

### Recent Chronology of Red Wolf (*Canis rufus*)

**1964.** Following the collection of new series of specimens from the south-central United States, John Paradiso of the Bird and Mammal Laboratories, Smithsonian Institution, confirms McCarley's belief that the red wolf has largely been replaced by the coyote or hybrids.

**1965.** Professor Douglas H. Pimlott and Paul Joslin of the University of Toronto report that an investigation of the former range of the red wolf has shown that the species survives only in a few localities. The red wolf is declared an endangered species by the U.S. Bureau of Sport Fisheries and Wildlife.

**1966.** Federal predator control efforts in southeastern Texas are curtailed in an effort to assist the red wolf.

**1967.** Live-trapping of red wolves begins in order to obtain animals for captive breeding and study. Subsequently records of this activity become confused, and the genetic constitution of certain captive stocks seems questionable.

**1968.** A full-time investigation of the red wolf problem is started by John Steele of the U.S. Bureau of Sport Fisheries and Wildlife. The study area includes Brazoria, Chambers, Galveston, Harris, Jefferson, Liberty, and Orange counties, Texas.

**1969.** Glynn Riley takes over the federal red wolf program, though not always on a full-time basis. Riley attempts to convince cattle ranchers and other persons in the area that red wolves are not a serious threat to human interests and that the species deserves protection. He works out agreements by which major landowners do not kill wolves indiscriminately, and he traps particular wolves thought to be attacking stock. He also makes

field studies that add substantially to the knowledge of the species. Riley's efforts contribute to a reduction in human persecution of the red wolf and apparently to a stabilization of the wolf population in Chambers and Jefferson counties.

**1970.** The Texas Parks and Wildlife Department makes its own survey of the red wolf and reports dense populations in southern Chambers and Jefferson counties. Louisiana establishes a law protecting the species.

**1971.** James H. Shaw of Yale University begins a field study of the red wolf in Chambers County. He obtains extensive information on the ecology and behavior of the species.

**1972.** The Office of Endangered Species, U.S. Bureau of Sport Fisheries and Wildlife, begins development of a recovery plan for the red wolf (the first species to be so covered). The plan calls for public education, habitat improvement, and the control of disease in the area occupied by the species. An effort to restrict the hybridization threat is to be made by trapping all coyotes and hybrid animals in a buffer zone to the north of the red wolf range. Maintenance of captive breeding stocks and reintroduction into areas formerly occupied also are proposed.

**1973.** Curtis J. Carley is sent to southeastern Texas to supervise implementation of the recovery plan; Glynn Riley remains active in the project and receives an American Motors Conservation Award for his efforts. Texas establishes a law protecting the red wolf. Congress passes new Endangered Species Act that will provide stronger protection for all native endangered species.

**A**LTHOUGH the red wolf now has received full legal protection and a top-priority recovery program, the species remains endangered. Attempts to establish a buffer zone to prevent the spread of hybridization have been considerably more difficult than originally thought. The last red wolves also still are threatened by illegal hunting, habitat disruptions, and by such natural factors as disease, parasites, and flooding. Current population estimates vary, but probably there are fewer than two hundred red wolves in southeastern Texas. The small area occupied and the multiplicity of problems faced by these animals should be cause for serious concern to conservationists. ■

**Dr. Ronald M. Nowak, biologist and author of many publications and reports on large carnivorous mammals, has recently completed a status survey of the gray wolf and cougar in the Western Hemisphere, under a contract administered by the New York Zoological Society.**

#### ***To Help the Red Wolf***

*Interested readers in Texas and Louisiana could encourage their governments to enforce not only the letter, but the spirit of laws protecting the red wolf. They might watch for and attempt to limit disruption of habitat and excessive human activity in wolf range. The Office of Endangered Species, U.S. Department of the Interior, needs the cooperation and support of conservationists so that its recovery program may attain maximum effectiveness.*

# THE WORLD OF PRAIRIE CREEK



DAVID SWANLUND, COURTESY OF SAVE-THE-REDWOODS LEAGUE

Many promises  
are waiting  
to be kept  
on California's  
redwood coast

by FRANCES GREIFF

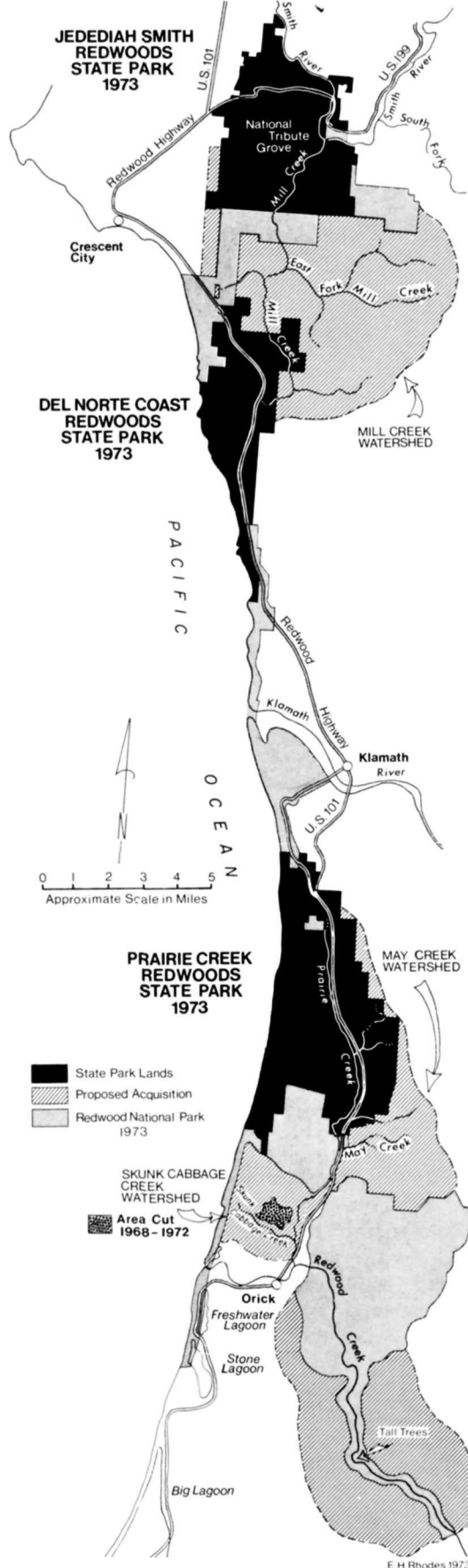
**O**NE MISTY MORNING early in August, I sat on a fallen redwood log in a secluded creekside forest about a hundred yards from U.S. 101, where it runs through Prairie Creek Redwoods State Park in Humboldt County, California. The sun was beginning to filter through the redwood canopy overhead, creating soft lights and shadows on licorice fern and redwood sorrel growing from a pocket of humus a foot or two up the log from where I sat.

Black huckleberry nudged the curving fronds, and from my side-long view I could see that the three cloverlike leaves of the sorrel, not yet fully open to the day, were peaked in a green triangle, revealing a soft purple lining underneath. An appealing combination of fragility and strength surrounded me. The minute perfection of small growing things was emphasized by the immense height of the coast redwood—the *Sequoia sempervirens*. Stalwart reddish-brown columns, in turn, were enhanced by the aerial tracery of the vine maple, its slim branches dripping here and there with a lichen much like spanish moss in appearance.

Despite the profusion of plant life, a delicate order was evident. Layer upon layer of small flowering plants, ferns, berries, vines, and broadleaved trees such as laurel, maple, and red alder were sheltered by the giants—Sitka spruce, Douglas fir, and the redwood. Each species reached for its own share of air and light and moisture—tangling, dropping, piling up, growing, dying, and regenerating.

The incomparable beauty of the Prairie Creek forest, now faintly lighted in luminous greens, brought resurgent awareness and appreciation for the hours, months, and decades of energy and emotion that have been spent by conservationists to protect enough coast redwoods to guarantee their presence for future generations.

**W**HEN THE FIRST Europeans arrived in California, an estimated two million acres of *Sequoia sempervirens* grew along the twenty- to thirty-mile-wide fogbelt from Monterey to the southwest tip of Oregon. The oldest known fossils indicate that the tree's ancestors lived more than 100 million years ago. Today, 190,000



Map of north coast state redwood parks and Redwood National Park indicates watersheds needed to complete ecological units. (Map by E. H. Rhodes, courtesy of Save-the-Redwoods League.)



A familiar combination in redwood groves is the sword fern (*Polystichum munitum*) and redwood sorrel (*Oxalis oregana*).



Wild Roosevelt elk can be seen in California only at Prairie Creek park at Gold Bluffs Beach and upper Elk Prairie.

acres of primeval forests remain, of which one-third are preserved in state and national parks. Although the range of the species has not changed, the number of acres of virgin redwood forest has decreased greatly.

Forests of old-growth *Sequoia sempervirens* are supposed to be protected at the national level in Redwood National Park. Prairie Creek, as well as Jedediah Smith and Del Norte state parks, abut the national park and were authorized for inclusion as part of Redwood National Park in the 1968 law establishing the national park.

Prairie Creek's principal campground is near the entrance and close to one of the park's most popular attractions, the Madison Grant Elk Refuge, where herds of Roosevelt elk live. The elk once extended from the San Francisco Bay region into British Columbia. They cannot now be observed elsewhere on the Pacific Coast as easily as at Prairie Creek.

Coming off U.S. 101 on our arrival at the park, we had immediately spotted the animals—some feeding and some moving about the broad Madison Grant Elk Refuge. The summer coat of the Roosevelt elk is fawn-colored, the head and neck a darker brown, and the rump patch a distinctly lighter color. Larger than the Rocky Mountain

elk, the mature bull ranges from 600 to 1,000 pounds in weight; the antlers often extend thirty inches in height, and they spread three and a half feet or more.

For some time, Prairie Creek has had an average elk population of two hundred. In the spring of 1973, a sudden upsurge in numbers created staff concern about the food supply. A two-year elk management study was begun to provide a sound basis for management of increased numbers. By early summer, the herds unaccountably dwindled to their usual size, which is considered in balance with the available natural food.

The elk's notion of what to eat can be a problem to park staff members with housing at the edge of the prairie. Terry Adams, supervising ranger, recounts his experiences at being cornered on his front porch or garage while the elk stand on their hind legs a few feet away to eat apples from his trees.

Rutting season can produce other disconcerting incidents. Late last summer, one bull chased two campers into a restroom and a park ranger into the glass-windowed kiosk. In its rampage, the elk broke a number of windows, leading observers to speculate that elk reflections in the glass may have provoked the attack. Although the elk are free to graze in meadows and



FRANCES GREIFF

*Antlers of mature Roosevelt elk bulls at rest rise dramatically above the dune grasses and driftwood at Gold Bluffs Beach in Prairie Creek Park.*

open woods, such close contacts with humans are rare. Park visitors are cautioned to treat them as they would any wild animal.

**A**LTHOUGH Prairie Creek's 100 campsites are always full in July, August, and September, no plans are underway to create more sites. "Our philosophy is oriented more toward preservation than recreation," explained Ranger Adams. "We don't plan to cut down redwoods or reduce the size of the elk prairie to create more camping facilities."

The relocation of thirty-five campsites several years ago left a prime redwood area that has been converted into the imaginative and lovely Revelation Trail. With a rope guide and a Braille handbook, blind visitors are able to explore a typical streamside forest. Relocation of the sites was necessary, according to Adams, to prevent further damage to the shallow root systems of the redwoods and to preclude danger from falling branches. At all times, mature trees are carefully watched to prevent accidents from falling trees or limbs. Most falls occur in severe winter storms, especially in wind. Trees are not cut down, although heavy branches are removed occasionally in areas of public use.

Although redwoods grow along

the Revelation Trail, the path skirts the roots or provides wooden risers over them to allow visitors contact with the trees' bark and overhanging branches. A few trees reveal scars left by elk in rubbing the velvet from their antlers.

The Revelation Trail is easily accessible and physically undemanding for sighted persons who might pass up more arduous trails. Fifty-five miles of park trails, some following ancient Indian pathways, thread their way through dense stands of old-growth redwoods, climb ridges, and follow meandering streams into the park interior. The supremely beautiful James Irvine Trail, four and one-half miles long, extends from park headquarters to the sea.

When compatible with safety and fire protection, trails are made to accommodate natural features that happen to lie in the way, such as fallen giants two to three hundred feet long and massive up-ended root systems. Occasionally, on a stroll, we saw dramatic examples of the western hemlock "octopus tree." The tree germinates on a nursery log; when the log's nutrients become insufficient, the hemlock roots begin to straddle the log to reach the soil. When the log rots away, the tree is left standing on its roots; it is a startling sight to encounter.

Although sightseeing roads for vehicles are limited, the Cal Barrel road led us through an area of exceptionally impressive redwoods and lush unspoiled undergrowth. The winding, narrow road brings little feeling of intrusion into the forest community and offers a way to see some of the tallest trees in the world.

Prairie Creek does not encompass a true rain forest; however, similar conditions result from an average rainfall of 70 inches a year and as much as 100 inches in several recent years. The blanket of mosses, lichens, and small shade-loving plants on down wood, stumps, and tree trunks deep in the shadowy recesses creates a semi-tropical ambiance.

**A**S IF superb redwood forests were not enough for any park, Prairie Creek is one of only two places on the earth where the redwoods extend from the ridgetops almost down into the ocean tides. On one clear day, we took Humboldt County's unpaved Davison Road down seven steep and winding miles to the park seashore below rugged Gold Bluffs. Four miles south of the park, it is the only route open for vehicles. On the seven-mile stretch of wild beach, Roosevelt elk roam freely on the dunes. Ticks are a problem for all the elk but are considered less so for the beach animals who soak frequently in the ocean. There on the beach, it is a rare privilege to see the great antlers of a reclining bull rising above the driftwood and dune grasses.

Gold Bluffs derives its name from the days of 1851 when widely advertised tales of easy pickings from the sand and bluffs brought 5,000 fortune hunters to the California beach to seek what they had failed to find elsewhere in '49 or '50. But the fine, light gold floated on the water; and wealth came only to the promoters who had claimed, "Any man who can't earn 40 million in a summer is not worth his salt!" A few remnants of the old miners' settlements can be seen in the area.

*Delicate five-finger ferns (Adiantum pedatum) hang profusely from the steep walls of beautiful Fern Canyon in Prairie Creek Redwoods State Park.*

*A clearcut area along the road to Gold Bluffs Beach near the southern boundaries of Prairie Creek Redwoods State Park is a scene of utter devastation. Ironically, right across the road from the entrance to Lady Bird Johnson Grove in Redwood National Park cold-decked redwood logs are tagged and numbered in a lumber yard. They remind the visitor of the devastation being wrought in the parks' watershed and the consequent threat to the parks themselves.*



FRANCES GREIFF

If one had no other reason to go to Prairie Creek, the park's sea-coast boundary offers Fern Canyon—a rare botanical inducement. The fragile grotto, created by erosion of Home Creek, is a narrow cut in Gold Bluffs that opens onto the beach at the mouth of the creek. Exquisitely patterned five-finger ferns completely cover steep fifty-foot-high walls, brilliant green in sunshine and muted in shadow. The Yurok Indians, once indigenous to the region, are said to have woven the black veins of the ferns into their baskets. A serene and lovely world unto itself, the canyon contrasts strikingly with the adjacent driftwood-strewn beach.

State park acquisition of the bluffs, beach, and canyon in 1965 brought problems along with exceptional natural beauty. Commercial fishermen, many of them off-duty lumber workers, have long

used the Gold Bluffs shore to net smelt. Off-road vehicles, now popular with the fishermen and other visitors, are being raced up and down the beach and dunes, destroying the natural protective covering, creating unstable dune conditions, and upsetting the environment for all forms of beach life. Other serious vehicle problems include herding of the elk and hunting of them just outside park boundaries. The park has insufficient staff, especially off-season, to adequately control the beach.

**D**URING OUR VISIT to Prairie Creek my family and I observed evidence of two contrasting philosophies toward California's coast redwoods. Along the forested Avenue of the Giants (old U.S. 101 in southern Humboldt County) we saw magnificent examples of some three hundred or more memorial groves of trees one thousand to two

thousand years old, with many exceeding three hundred feet in height.

But near Prairie Creek's entrance on U.S. 101, we observed a clearcut area—a panorama of chopped up, logged-over slopes extending in places to park boundaries. We walked onto a vast asphalt lot where thousands of prone redwood logs were stacked by size, like so many giant Tinkertoys. Eternally bringing in and taking out their ponderous loads, the trucks added to the depressing effect with the anguished noise of their grinding gears.

Failure to incorporate complete watersheds when Redwood National Park was established is one of the greatest mistakes of conservation history. As a result, the visual and auditory blight of clearcutting has persisted alongside the national and state redwood parks. More serious, erosion of clearcut





areas is causing siltation within the national park, downstream from the logged areas, thus endangering prime redwood forest with future floods that will undermine stately virgin trees.

I had already been told that those hillsides were urgently needed to complete protective watershed basins for redwoods now presumed "saved." As I looked at denuded slopes above the cold-decked lot, I recalled the morning freshness of the memorial groves and thought of Robert Frost's familiar words in a new context:

*The woods are lovely, dark, and deep.*

*But I have promises to keep  
And miles to go before I sleep.  
And miles to go before I sleep.\**

**A**S MY days passed at Prairie Creek, I discovered there are many miles to go and many promises waiting to be kept on the red-

wood coast: promises to people who believe their labors and gifts to save exceptional redwoods for all mankind will be forever honored; promises of perpetual protection by the state of California and the federal government; promises to the Indian youth on a prison work furlough who carved the benches along Prairie Creek's Revelation Trail.

It is a year since I left Prairie Creek. Almost daily, I think about returning, especially about going back into the delicately balanced and beautiful world of the creek-side redwood forest. Threats and promises, words and pictures do not adequately convey the essence of Prairie Creek. The eye and the spirit must be able to explore there at leisure.

But crucial slopes are already denuded, and more trees are being cut. How many windy winters and how many swollen springs will

pass and bring further death to the redwoods before the promises are finally kept and the parks of the redwood coast are truly protected?

**Frances Greiff has traveled more than 50,000 camping miles throughout the United States and Canada. She has published several dozen articles on scenic, historic, and recreational features of state and national parks in various national publications.**

\* From "Stopping by Woods on a Snowy Evening" from *The Poetry of Robert Frost* edited by Edward Connery Lathem. Copyright 1923, © 1969 by Holt, Rinehart and Winston, Inc. Copyright 1951 by Robert Frost. Reprinted by permission of Holt, Rinehart and Winston, Inc.

# LAST STAND AT RED RIVER GORGE

Final skirmishes in a battle over a 20-year-old dam proposal have divided local residents and Kentucky politicians while conservationists gather strength

article & photographs by ALTON MARSH

**S**OME 400 million years ago a seabed was lifted out of the ocean—or perhaps the ocean drained away—and the area that is now central Kentucky was born.

In perhaps another sixty million years erosion had done a demolition job on the plateau, making it seem to be a mountain range with a 600-foot-deep valley twisting among its peaks. Rich vegetation and superb trees grew thickly along its precipitous slopes.

Then in 1786 Virginia's Governor Patrick Henry signed the first deed for 5,000 acres of land including the lush gorge, and the destruction by man began.

When Daniel Boone led hunting parties through the gorge, down the Red River, it still featured 200-foot-tall trees and every type of eastern oak imaginable.

But the pioneers whom Boone brought and those that followed cut most of the timber to clear land for farms. The logging marked the first time man had altered the character of this precious natural showcase. The timber grew back but was cut again and again.

By the Depression years of the 1930s the area had been cut over three times, according to University of Kentucky professor Carl M. Clark. Clark studied Red River Gorge southeast of Lexington for thirty years, learning where it

came from, what it is now, and what it could be if left alone.

The U.S. Forest Service in 1937 made the then-worthless valley part of the Daniel Boone National Forest and restored many of its trees and woody plants. Scars from old logging trails are, unfortunately, still visible from the air.

Despite the misuse, there are still spots in the gorge where man has never walked, such as the exposed rock outcroppings at the tops of the jagged hills. And although the area has suffered clearcutting, all of the thirty natural stone bridges of the gorge area are still intact. The stone bridges, left as sky bridges when erosion removed the softer stone beneath their arches, are the major attraction for some 960,000 visitors a year.

**T**HE RED RIVER, the sculptor that transformed the flat plateau into what Clark calls a geological "art gallery," has the misfortune to be a tributary of the Kentucky River Basin in which the Army Corps of Engineers has planned a dam system.

In the early 1950s the Corps was well into a plan that would control the Kentucky River Basin with a series of dams that could act like a giant spigot. The river system could be turned on in drought, off in flood, the engineers promised.

The state of Kentucky asked if the system could also be designed to store drinking water for twelve towns nearby, and the Corps was happy to oblige.

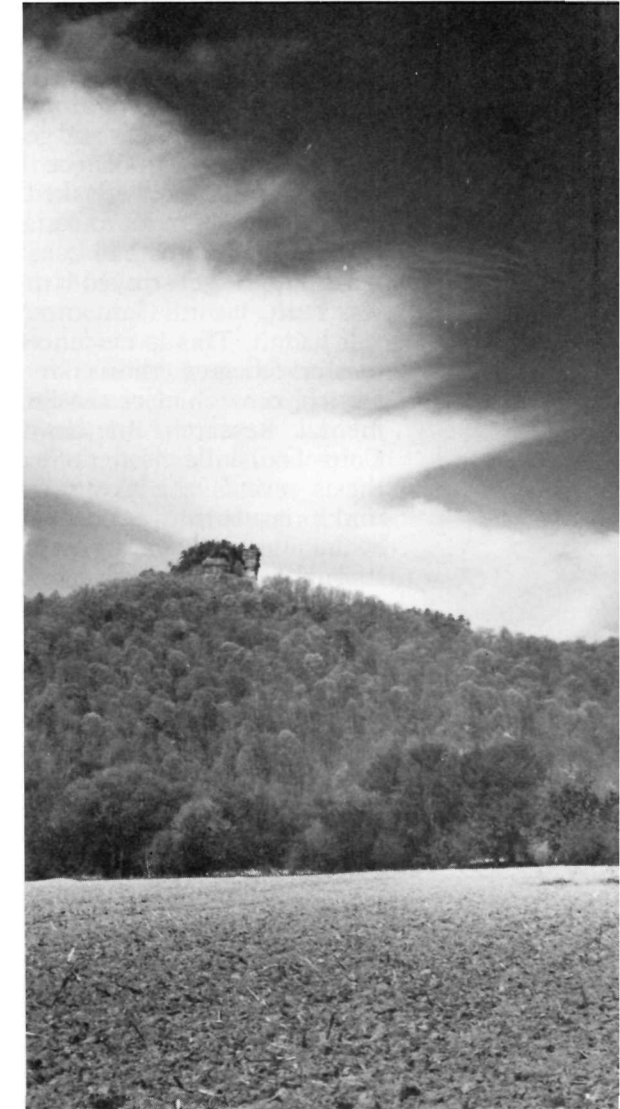
The Red River Gorge was too small an area to stand in the way of this grand design. Another promised benefit was pollution control for the Kentucky River. Whenever the river became polluted, a little twist of the spigot would send fresh spring waters from tributaries in the belief that dilution solves pollution.

The "pollution control" aspect has been deleted from the project as a result of federal law against such so-called benefits. The major benefit that is still included in the grand design for the dam is recreation. The lucky citizens living near the project will be able to frolic on the newly created reservoir. Not included in the grand plan by the Corps is the fact that 17,500 of those citizens have signed petitions against the dam and sent them to Governor Wendell H. Ford. The Corps gives the appearance of not being able to believe that persons in Kentucky, Tennessee, and Ohio—all within driving distance of the gorge—are not grateful for the gifts inherent in the project.

The dam was authorized by Congress in 1962. It was to be built in the most scenic portion of the

## A geological art gallery

*The Red River of the Kentucky River Basin transformed the plateau area of central Kentucky into a geological art gallery nearly 400 million years ago. A proposed dam that would be built at the site of the house (at bottom left) in the photograph on the right would cover the river valley with sixty feet of water. Tranquil scenes (below) along the Red River where the dam would be built would be destroyed. The geologic outcropping (below, right) on the north side of the valley would be seen by boat after the building of the dam because the surrounding area would be under water.*





gorge. The site would have created a fifteen-mile-long reservoir beneath the stone arches and geologic outcroppings. In 1965 the *Louisville Courier-Journal* asked in a brief paragraph on its editorial page whether the Corps had considered what might be destroyed if the dam was built.

It hadn't. This is evidenced in a master's degree thesis by Dave French, now chief of the Environmental Research Branch of the Corps Louisville district office. The thesis reveals the Corps tried to make itself more ecologically aware, as the awareness grew throughout the nation, through a special in-house education project. The thesis further states that the Corps is making a survey of natural resources in Ohio in order to avoid another Red River Gorge controversy when planning projects for Ohio. The thesis was written in 1971, when French held his present position.

What the Corps and the governor refer to as "formal opposition" came at a hearing in Stanton, Kentucky, for landowners affected by the dam. Stanton is near the gorge. The Corps followed up on the hearing by buying land that they hold today, in hopes the dam can still be built.

U.S. Supreme Court Justice William O. Douglas was invited to hike through the gorge in November 1967. Douglas emerged from the craggy slopes into the lights of national television news cameras and advised the public to either make it what they wanted it to be or let the Corps of Engineers and Bureau of Public Roads "grind it up."

That statement brought massive pressure on the Corps. General William F. Cassidy, then head of the Corps, announced in November 1967 a "restudy" of the Red River project. Funds for the project were temporarily frozen.

The "restudy" seems to have been little more than a free vacation trip to the gorge for certain officials, and its findings were that the Corps could put the dam exactly where it wanted it—in the center of the gorge. The completed report with review statements by Interior Secretary Stewart Udall and Agriculture Assistant Secretary John A. Baker was issued in March 1968.

Udall agreed the dam should be built in the gorge but tempered his approval this way: "If we were starting with a clean slate in our consideration of the Red River under today's criteria, which gives

heavier emphasis to protection of a natural value than was true a decade ago, we might well decide: (1) that no dam should be built on this river and attempt to meet the needs in some other fashion; or (2) propose a dam at the lower site." [The lower site is the one now targeted to receive the dam.]

Baker, however, strongly supported the gorge, or original site, saying the area had been logged, roads had been built, and structures existed. Therefore, it was not a primitive wilderness area, Baker argued.

The Corps was elated with the report. It became clear to conservationists that the dam could not be stopped. The best outcome that could be hoped for was to move the dam five miles downstream and out of the most beautiful portion of the gorge. So the conservationists reluctantly wrote to the Corps stating the lower site would cause less damage to the gorge. (Governor Ford has since interpreted the letter as an "endorsement" of the lower site, which it is not.)

But the Corps was not interested in a compromise. It announced a few days after the report was issued that it would proceed to build the dam at the gorge site, ecology or not.



## Man and nature displaced

*Not only would the proposed dam spoil scenic views and destroy countless trees, plants, and animal habitat but elderly farmers would have to leave their homes. The reservoir proposed by the Corps would climb nineteen feet up the hill in back of the H. B. Farmer property along Spaws Creek (left), which feeds into the Red River. The pure, spring-fed waters of the creek would be used in creating Red River Reservoir.*

Hours later, on March 15, 1968, Kentucky Senator John Sherman Cooper succeeded in getting the Senate appropriations subcommittee on public works to vote to hold hearings on the Red River project. He was sure that there were additional arguments to be heard. Had it not been for that action by Cooper, the gorge today would be "Red River Reservoir." The subcommittee hearings were successful in turning the full Senate appropriations committee against the Corps decision to build in the middle of the gorge.

At the early May subcommittee hearings scientist Dr. Mary Wharton, an ecologist and head of the geology department at Georgetown College, condemned procedures used in preparation of the reconnaissance restudy issued in March. She said the report contained "serious biological and ecological errors" and demonstrated a "lack of understanding of the floristics of the region."

The vote against the Corps preferred site by the full Senate appropriations committee came on July 15, 1968. The Corps, in this instance, took little action and for the most part ignored the Senate committee.

In the coming months Marlow

Cook campaigned for the U.S. Senate, arguing in favor of the Corps original site as preferable from an engineering point of view.

(Senator Cook has since had a change of heart as a result of a personal tour of the gorge, and recently announced his firm opposition to any dam, anywhere in the gorge or its valleys.)

President Lyndon Johnson then included full funding for a dam in the gorge at the site preferred by the Corps, despite the fact that senators—representatives of the people—had ordered the Corps to study the alternate site.

Again, it was Senator Cooper to the rescue. The budget was issued in January 1970, but Cooper noted in a newspaper article that the Nixon Administration would be in power in a week. New administrations change budgets, Cooper added. His appeal to President Richard Nixon was mailed in February. On March 26, 1969, Nixon replied to Cooper, supporting the alternate dam site as Cooper had requested. The letter was made public.

Two days later, then-Governor of Kentucky Louis B. Nunn formally requested the Corps to select the alternate site in the farm valley five miles from the gorge site.

General Cassidy replied that the Corps would comply with Nunn's wishes, and planning for a dam at the alternate site began in February 1970. In the meantime the National Environmental Policy Act was passed on January 1, 1970, forcing the Corps to prepare its first environmental impact statement on the project.

A public hearing on the environmental statement was held in July 1973, and the statement was forwarded to the federal Council on Environmental Quality.

In a speech prepared for a Louisville civic group, Corps official Bob Woodyard predicted construction would begin in 1974. That may or may not happen.

But whoever wins this last defense of Red River Gorge wins the entire war. The river, its valley and gorge area, will either be preserved in its present state or its character will again be changed—but this time drastically and permanently.

It is impossible to predict the future, but there are several reasons to believe that the Corps will proceed with a mistake. Two of those reasons come from the thesis by Corps official French, mentioned earlier. These additional quotations speak for themselves and suggest French is more sensi-

tive to the environmental issues of Red River than most Corps officials.

"Of course," French writes in a discussion of alternatives to the Red River dam, "another alternative, and perhaps the most popular of all, has also been advanced by opponents of the dam, that no dam at all be built on the Red River. *If time could somehow be moved back, I believe that this alternative would be the one chosen, given the facts we have today.*" (Italics mine.)

But a second quotation reveals French's feeling that not even the facts are enough to prevent a mistake: "It seems that once the wheels of bureaucracy are set in motion, it is almost impossible to apply the brakes, and reversal of an earlier Congressional decision is nearly impossible," French wrote in 1971.

In the fall of 1973 ten of the twelve cities that were supposed to benefit from the water supply stored behind the new Red River dam indicated they did not need it, forcing the state Water Resources Authority to withdraw its support for the project.

The Water Resources Authority had pledged to pay the additional cost of the dam incurred by adding water supply capability for the nearest twelve towns. The ten indicating no interest in such a water supply included Lexington, which was to have been the largest customer. The two stating they remained interested in such a water supply were Stanton (population 2,034) and Clay City (population 1,000), which are located a few miles from the proposed dam. Opponents of the dam suggest the two tiny cities are actually more interested in the boost to local economies that could result from having a new recreational "lake" nearby.

As the Water Resources Authority withdrew its support, the state Environmental Quality Commission in the fall of 1973 voted unanimously to ask Governor Ford to oppose the dam. Ford gave no response.

On April 20, 1974, marchers protesting the Red River dam gave an aide to the governor some 17,500 petitions against the project.

Four days later Governor Ford announced his support of the dam. In contrast, Senator Cook has been convinced that the gorge should be left in a natural state while alternate flood prevention methods exist.

Flooding does in fact occur, especially in and around Clay City, nearly every year, because founding fathers located the town on a floodplain. Floodwalls could easily handle the problem, but the Corps considers them impractical.

In the numerous newspaper accounts and Corps documents that have been generated in the years since the controversy, no mention is made of the fact that the Corps has actually investigated or studied the feasibility of floodwalls.

An alternative to providing drinking water seems a moot point, because few of the cities feel they need such a supply.

The Corps is correct in asserting that the dam would improve recreational benefits of the area—if one likes boating. Any time rich farmland and a natural wilderness area (above the farmland) is flooded under water sixty feet deep, flat-water recreation is about all there is left.

Recreational use of the land at present is almost nonexistent, because it consists of privately owned farmland. Sixty people live in the affected valley that is the hard-won alternate site for the dam. Most of them are elderly operators of small farms. Several are distraught at having to disinter deceased relatives and move family cemeteries, such as the Reed family cemetery located exactly at the dam site.

Some of the 960,000 visitors who come to the gorge area each year have not been kind. Beer cans litter some of the hundreds of bunches of wildflowers along the roads. The main attraction for all of the visitors now is not a reservoir, but a wild gorge with natural bridges, babbling brooks of ice-cold, spring-fed water that is pure and clear. But the Corps insists that, if allowed to build the reservoir, its project will attract perhaps another half-million visitors per year. A safe guess is that another half-million visitors would mean at least another 100,000 beer cans on the

slopes of the terrain and along the banks of the Red River.

"This is Eden," cried 73-year-old H. B. Farmer during an interview at his home in the valley. He said nineteen feet of water will cover the dogwood-lined Spaws Creek, behind his home, which flows to Red River.

"We know what we've got here. That's why we don't want to leave," Farmer said. Scores of tiny fish can be seen wavering in Spaws Creek at any point, as is true with Red River. During several trips through the affected valley last spring I was serenaded by the sweet songs of some of the 150 species of birds that have been spotted by naturalists there.

If conservationists win the battle of the dam, other threats wait in the wings to keep them busy. During an aerial photo session my pilot told me that he was recently employed to survey the area for an oil company. He refused to name the company after sensing my keen interest. About 1971 two mining firms announced that they think there is coal and uranium in the rock ledges of the jagged peaks in the gorge. A little strip mining in such a delicate area could go a long way, as the acid mine wastes wash down into those crystal-clear streams with the tiny fish.

It seems that some factions simply won't be happy until the gorge is entirely wasted. Only then will they get the dollar signs out of their eyes and move on to the next natural treasure.

It is obvious to many thousands of us that the Red River Gorge area and its connecting valleys must be left in its natural state. No dam must be built.

The federal government stands ready to buy the area to build a dam. Let it instead give up this ill-advised project and buy the area with our tax dollars to save it as a recreation spot, in its natural state, for present and future generations. ■

**Alton Marsh is a Louisville-based freelance writer and photographer who specializes in nature topics. He formerly worked as a medical-science writer for *The Louisville Times*.**

# HELP RESTORE THE AMERICAN CHESTNUT

*Under the spreading chestnut-tree  
The village smithy stands;  
The smith a mighty man is he  
With large and sinewy hands.*

—from "The Village Smithy"

Henry Wadsworth Longfellow (1842)

**W**HEN Longfellow wrote these famous lines in 1842, perhaps as many as three in every four trees in the forests of the Appalachian range of the eastern United States was an American chestnut. Just over half a century later, in the greatest botanical disaster to strike this country, the trees were attacked *en masse* by disease. Today the American chestnut is virtually gone from our forests, but hopefully it will not become part of our past in a fate similar to that of the village smithy.

In an effort to find strains of American chestnut (*Castanea dentata*) resistant to the so-called "chestnut blight," the National Parks and Conservation Association is asking its members and other interested persons to participate in its chestnut revival program. Seeds are needed from trees that are thought to have some immunity to the blight. In the initial phase of this NPCA pilot program, the seeds will be planted in a nursery this fall and after two years replanted in a protected area. With time, persistence, and more than a little luck, we hope to identify and propagate disease-resistant strains through a natural selection process.

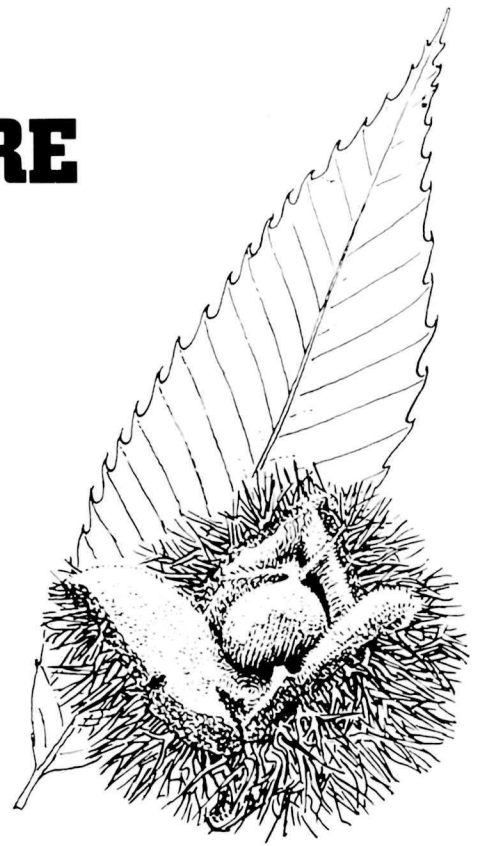
Before the blight, trees matured to 100 feet tall and 4 feet in diameter. Their characteristically broad, rounded crowns were the inspiration for Longfellow's "spreading" tree.

In times past the American chestnut was one of the most commer-

cially valuable of American hardwoods. Its wood was variously used for zig-zag rail fences, telegraph poles, railroad ties, and fine furniture. Sawed into sixteen-foot lengths by water-power or steam-driven up-and-down sawmills, the chestnut provided lumber commonly used in barn construction and as flooring in stables, where its resistance to decay was especially important. The tree also provided plentiful supplies of bark for the tannin industry and nuts for human consumption. Mountain folk in the Appalachians depended heavily on the tree for their livelihood.

The American chestnut's function in the forest ecosystem also included provision of nuts as food for both wildlife and livestock.

At around the turn of the century, the "chestnut blight," a fungus disease of the bark, was introduced from Asia; and the American chestnut was almost completely lost. Within twenty-five years, the American chestnut was eliminated as a dominant forest tree. However, sprouts still come up from old stumps and may live long enough to bear fruit before succumbing to the blight. Although these seeds may produce seedlings, it is rare for a tree to survive for more than twenty years. But a few old, nut-producing trees are thought to have survived the blight, and it is the fruit from these trees that NPCA is anxious to receive and propagate.



U.S. FOREST SERVICE

**B**efore collecting the seed, be careful to correctly identify the parent tree. There are several species of chestnut, including hybrids. The American chestnut is most easily identified by its leaf and fruit. Leaves are large, narrow, hairless, and coarse-toothed; 5 to 8 inches long and 2 inches wide; dark green above paler below; and smooth on both surfaces. Two or three somewhat flattened nuts about 1 inch in diameter are contained in a characteristic spiny husk about 2½ inches in diameter. They ripen from September through October. The natural range of American chestnut is the Appalachian region of the eastern United States, but many seedlings were once planted beyond this natural range.

If you are aware of possible blight-resistant trees, please send some seed samples (in the husk) to NPCA as well as an indication of where the parent tree is located. Also please tell us the diameter of the parent tree at 4½ feet above ground level, the approximate age of the tree, and whether any indication of the blight is apparent. Pressed leaf samples sent along with the nuts would assist us in positive identification. Thank you for your interest and cooperation. ■

# NPCA at work

**Meeting with OMB officials, NPCA has asserted the public's right** to participate in the budgeting process in relation to natural resources matters. This recent meeting was a followup to a staff report, "Our Natural Resource Agencies in Trouble," in the May 1974 issue of the Magazine.

NPCA staff met with Frank G. Zarb, Associate Director for Natural Resources, Energy, and Science of the President's Office of Management and Budget (OMB). Mr. Zarb was accompanied by Don Crabbill, Deputy Associate Director for Natural Resources.

As an opener, Mr. Zarb attempted to refute selected portions of the staff report, claiming certain figures were either incorrect or misleading. Although NPCA maintained that it was more important to spend time discussing the policy issues in the staff report, rather than arguing about details, the OMB's criticisms were well taken. Despite the disagreements over certain statements in the May issue, NPCA continues to stand behind the integrity of the reporting in the staff report. Any mistakes are traceable to the extreme difficulty in obtaining details from the highly secretive portions of the budget-planning process.

A. W. Smith, President and General Counsel of NPCA, then presented a memorandum to Mr. Zarb which described a full program for public participation in the formation of the President's annual budget. (See editorial.)

NPCA argued that a public review process was essential to the application of public interest concepts to the formulation of a budget that can and does have profound impacts on many public natural resources. Frank Zarb responded to this proposal with the contention that existing public access to the OMB was sufficient to meet the needs described by Mr. Smith.

After much discussion, Mr. Zarb agreed to develop an alternative proposal of his own, to which NPCA could respond. NPCA, in turn, will continue to work to clarify the goals of public reviews in budget planning.

NPCA members are urged to continue writing letters in support of these

concepts. Response thus far has been excellent, and we now need to demonstrate our desire to see the budget planning process opened to public examination and comment. The result would be natural resource administration more responsive to the public interest in high quality programs to protect and preserve our remaining natural resources. Write

Frank G. Zarb

Associate Director for Natural Resources, Energy & Science  
Office of Management & Budget  
Executive Office Building  
Washington, D.C. 20503



**In opposition to the killing of thousands of fur seal pups**, NPCA has expressed its objections to a draft environmental impact statement (DEIS) that considers a waiver of the moratorium on importation of South African sealskins. NPCA, along with eleven other organizations participating in Project Monitor, has urged National Marine Fisheries (NMFS) Director Robert Schoning to deny the application of the Fouke Fur Company.

The fur company is applying for an exemption to the Marine Mammal Act to import some 70,000 sealskins for processing and sale. Project Monitor is a group of representatives of environmental organizations who meet regularly to monitor the administration of the act.

During the congressional debate on the Marine Mammal Act, it was clear that a large and vocal sector of the

American public wanted the law to prevent the killing and clubbing to death of baby seals. Although the United States Pribilof seal "harvest" was partially excluded from some provisions of the act as being under international agreement, the act's legislative history and its prohibition against importation of fur seals less than eight months old, or those still nursing at the time of killing (whichever occurs later), demonstrate that the importation from Africa requested by the fur company would be illegal.

NPCA considers the DEIS an "uneven-handed rationalization" designed to support the waiving of the moratorium despite the fact that the seal pups in question admittedly range from six to ten months of age. Unjustifiable amendments to the act, or arbitrary redefinitions, should not be tolerated to change the illegality of the proposed waiver.

Another reason for its illegality is that the South African government fur seal management policy conflicts with U.S. policy. The U.S. Marine Mammal Act calls for maintaining the health and stability of the marine ecosystem. Our national policy emphasizes protection of marine mammals at optimum sustainable population levels. In contrast, South African policy is to exploit the seal population "at around its maximum sustainable yield level." Ample evidence exists to document the fact that South Africa has overfished stocks of pilchard and anchovy off its coasts, and it seems the South African government intends to compensate by exploiting the fur seals (fish predators) to ensure continuing large fish harvests.

The DEIS states that NMFS intends to make a "more comprehensive investigation of the harvesting methods used in the South and South West African sealing operations during the winter of 1974 (in the Southern Hemisphere, June to September)." NPCA finds such a trip at taxpayers' expense unjustifiable in view of the illegality of the situation. In addition, U.S. certification of the South West African program might be construed as a tacit approval of that nation's illegal, according to the United Nations, control of South West Africa. Indeed, it is unlikely that first hand information could be obtained because the State Department has declared South West Africa,

where the majority of sealing occurs, off limits to U.S. government officials. The DEIS does not adequately identify and examine all environmental factors. It is interlarded with the language of maximum sustained yield management, but the fact is no one knows what effects this fur seal harvest has on the marine environment.

**The Yosemite Park and Curry Company**, presently under the ownership of Hollywood's MCA-Universal (producer of the recent film, "The Sting") has issued plans to replace 150 of the old tent-cabins in Curry Village, Yosemite Valley, with new all-weather units designed to accommodate winter ski trade in Yosemite National Park.

The Curry plan is not accompanied by a formal environmental impact statement because the Park Service ruled that replacement of the cabins was not a "major federal action," a consideration allowed by the National Environmental Policy Act before any impact statement is written. However, the Park Service, in conjunction with the Curry Company, held an informal public meeting on the subject in May, and the Park Service issued an environmental assessment. Public comments were received during and for a short time after the meeting.

NPCA protested the proposed action based on two important factors: First of all, the master plan is not yet complete for Yosemite, and to prejudge the planning process on a fragmented basis is neither productive nor in the best public interest. Secondly, increased investments in overnight facilities in heavily used Yosemite Valley will result in an endless spiral of more visitation and more new accommodations and facilities, which, in turn, generate more visitation.

NPCA pointed to the mandate of the National Park Service "to preserve the

parcs unimpaired for all generations" and stated that luxury accommodations would be more properly placed outside the park.

NPCA concluded with a general comment on the role of concessioners in the national parks: "We are not pleased with the Curry Company's approach to promotion of tourism for Yosemite National Park. Any corporation has the ability to sell recreation as a product and generate public campaign to popularize an area with plentiful recreational resources. However, Yosemite is a national natural resource, to be preserved in an unimpaired state, and not exploited for private profit. It is completely inappropriate for a national park concessioner to promote a natural area as a ski resort, a convention site, or a novelty tourist attraction. This not only violates the public interest in a wilderness park, but it leads the Park Service into dereliction of its mandate."

No decision had been reached on the proposed action at press time, but readers will be informed in the future.

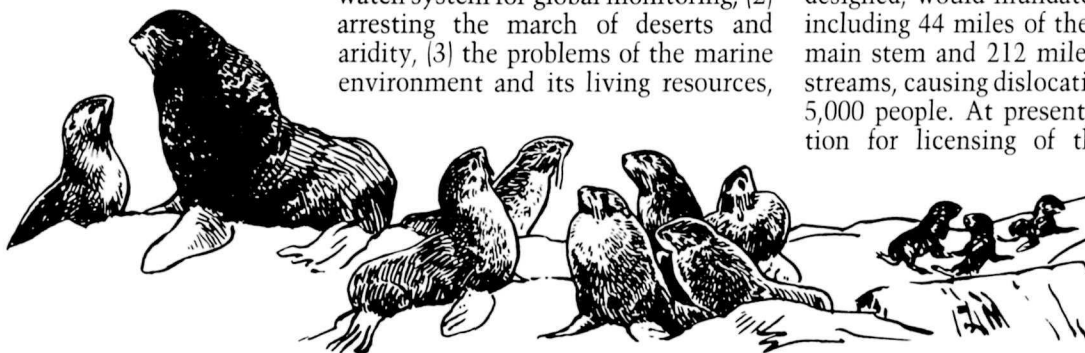
**The United Nations Environment Programme (UNEP)** Governing Council met recently in Nairobi, Kenya. NPCA was represented by Mr. William Zimmerman, designated as an official observer. The council agreed to several significant objectives for its Conservation Programme, identifying three major program subareas: (1) plants, animals, and endangered species; (2) systems, sites, and samples (parks and reserves); and (3) genetic resources. UNEP's Executive Director will undertake a major effort to encourage an expedited ratification of the "Convention on International Trade in Endangered Species of Wild Fauna and Flora" of 1973. Other aspects of the environment program discussed and acted upon were (1) establishing an Earthwatch system for global monitoring, (2) arresting the march of deserts and aridity, (3) the problems of the marine environment and its living resources,

and (4) agreement to partially finance the U.N. Conference-Exposition on Human Settlements and to recommend that the U.N. General Assembly establish a Voluntary Habitat and Human Settlement Foundation.

Before the convening of the Governing Council, the worldwide non-governmental organization (NGO) movement, which emerged from the 1972 Stockholm Conference on the Human Environment, met in Nairobi and agreed to constitute itself as the International Assembly of NGOs Concerned with the Environment. There will be a permanent, independent, international NGO Environmental Centre in Nairobi to facilitate communication and action between NGOs and the UNEP headquarters.

Also at this meeting the North American Committee of NGOs elected Dr. Margaret Mead, internationally noted anthropologist and author, as president and Mr. Glen Leet, president of Community Development Foundation, as vice president. The North American Committee serves a function for North American NGOs similar to that of the new International Assembly. Early in June, the North American Committee met in New York City to establish its program for the coming year under the guidance of Dr. Mead. NPCA was represented by our president, A. W. Smith.

**Will the New River be dammed** or remain wild? NPCA has been concerned for a number of years with the threat of inundation hanging over this ancient river that runs through North Carolina, Virginia, and West Virginia (see August 1971 and March 1974 issues). Since 1965 Appalachian Power Company, a subsidiary of American Electric Power, has proposed the Blue Ridge Project, a pumped storage electric power facility, which, as presently designed, would inundate 40,000 acres including 44 miles of the New River's main stem and 212 miles of tributary streams, causing dislocation of 3,000 to 5,000 people. At present, the application for licensing of the project is





awaiting final approval by the Federal Power Commission (FPC).

In an effort to ensure the New River its proper place in America's natural history as the nation's oldest river and one of the few unpolluted, free-flowing streams in the East, legislation has been proposed in both the House (HR 11120) and the Senate (S 2439) to authorize a study of the New River for potential inclusion in the National Wild and Scenic Rivers system. NPCA testified on invitation at Senate hearings



ings on the proposal in February 1974 and more recently at the House hearings in June 1974. At both hearings, NPCA urged immediate action to provide the New River the protective status it rightly deserves. On May 28, 1974, following intense efforts by two of the bill's major Senate sponsors, Senators Sam Ervin (D-NC) and Jesse Helms (R-NC), S 2439 passed by a vote of forty-nine yeas to nineteen nays. During the hotly debated Senate floor action on the measure, the bill's chief opponent, Virginia Senator William L. Scott, contended that this was a Virginia project and that the FPC should make the sole decision on the project without congressional action. To counter this position, Senator Ervin quoted from the Interior Committee's report on S 2439, that "the Commission (FPC) lacks competence to judge the potential of a river for wild and scenic river status." Furthermore, Senator Helms said, "The studies which the FPC has made are based on old concepts of resource management. This country has done a lot of rethinking about how to handle the power crisis and to balance out our economic and social needs. The pumped-storage concept of supplying peaking power has been shown to be an *uneconomic* concept when considered in the overall context. It will take three (3) units of power to generate every two units produced by the pumped storage facility."

Significantly contributing to the passage of S 2439 was the reversal of the Interior Department's previously announced recommendation for deferral of the bill pending FPC action. Interior Secretary Morton wrote to Senators Helms and Ervin on April 4 re-

commending enactment of S 2439 and stating that Interior was prepared to conduct the study within two years.

At the more recent House Interior Committee hearings, NPCA testified on invitation in support of HR 11120 introduced by Rep. Wilmer Mizell (R-NC) and HR 12836 introduced by Rep. Ken Hechler (D-WVa). Congressman Hechler's bill would also include the section of the New River in West Virginia that flows through the New River Canyon, well known among white-water enthusiasts.

**The camping public, including holders of Golden Age and Golden Eagle passports,** will be interested in a new law that amends the Land and Water Conservation Fund Act. Public Law 93-303 contains provisions that will clarify the details for which user fees may be charged on federal recreation lands. NPCA had supported these and other provisions in testimony concerning proposed House and Senate bills presented on invitation before the National Parks and Recreation subcommittee in the House.

As reported in the June "Conservation Docket," Public Law 93-91 of 1973 was interpreted more broadly than originally planned so that the law precluded the charging of fees at campsites in many of the national parks and forests. This action resulted in an estimated loss of \$8 million that would ordinarily go into the Land and Water Conservation Fund. These funds are earmarked for costs of campsite operation and maintenance as well as for the acquisition of new campsite areas. NPCA concurred with the principle that those persons who use the sites, facilities, equipment or services provided at significant public expense should also share in the costs of such use. Charging nominal fees, as they existed before 1973, should also help to correct the inconsiderate practice of some individuals who would monopolize, or "squat" on, a camping site for an extended period.

NPCA supported other provisions in the bills, including a clarification that the Golden Eagle and Golden Age passports would allow entry into areas by means other than private, noncommercial vehicles. For example, parties could enter the national parks on foot or horseback or by commercial bus. This assurance of an individual's

transportation preference has added importance because of the need to reduce automobile congestion in our national parks. NPCA supported an assurance that the Golden Age passport, which is for citizens over sixty-two years of age, would be a lifetime passport rather than one to be issued on an annual basis.

The bills authorize the head of any federal agency to contract with any public or private entity to provide visitor reservation services. *Campers can now reserve campsites in twenty-one national parks through a computer system. Call 800-553-8425 toll free or 319-365-4348 toll charge, or write Park Reservation System, P.O. Box 1976, Cedar Rapids, Iowa 52406.*

**The proposed Delmarva Waterway** was considered at a recent Maryland State Department of Natural Resources hearing. NPCA testified against approval of this \$17 million Corps of Engineers project to dredge a channel for the 145 miles from the Roosevelt Inlet near Lewes, Delaware, to Cape Charles of Virginia.



The channel, proposed to be at least 100 feet wide and 6 feet deep, would cut through a number of very shallow bays—Rehobeth, Indian River, Assawoman, Sinepuxent, and Chincoteague—as well as large sections of marsh. These bays and estuaries are highly productive spawning grounds for a major portion of the fish and shellfish of the East Coast and are extremely sensitive to the disturbances of dredging, spoil deposition, and turbidity. (These disturbances would occur during both initial construction and annual maintenance dredging.)

The sole expressed purpose for the channel is to provide an alternative to the present Chesapeake Bay route for intercoastal pleasure boat travel. NPCA stated that this is a totally unjustifiable reason for the destruction of such a valuable marine resource, and urged Maryland to withhold approval of its section of the project.

The Corps has stated that the approval of all three affected states (Delaware, Maryland, and Virginia) is required before it will undertake any part

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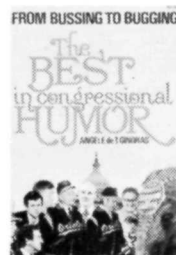
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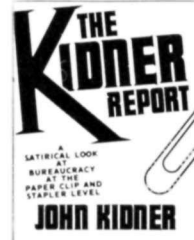
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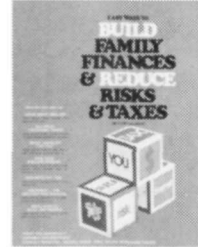
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of the project. NPCA members wishing to express their own views on this matter may write to:

1. Honorable Sherman W. Tribbitt  
Office of the Governor  
Dover, Del. 19901
2. Honorable Marvin Mandel  
Office of the Governor  
Annapolis, Md. 21404
3. Honorable Miles E. Godwin, Jr.  
Office of the Governor  
Commonwealth of Virginia  
Richmond, Va. 23219
4. District Engineer  
U.S. Army Corps of Engineers  
2nd and Chestnut Streets  
Philadelphia, Pa. 19106

**Construction of controversial Bailly Nuclear** Power Plant on the very border of Indiana Dunes National Lakeshore has been approved by the Atomic Safety and Licensing Board of the Atomic Energy Commission (AEC). The board released the decision approving construction of the proposed 685 megawatt plant on April 5, 1974. The Department of the Interior and a strong coalition of local environmental groups opposed the decision.

NPCA carried the fight directly to the Atomic Energy Commission, pointing out that the AEC licensing board was disregarding the public interest in the National Park System. The Association identified serious environmental impacts on the national lakeshore, including the visual impact of a 450-foot cooling tower immediately adjacent to the park, influences on the water table of the park, interruptions to park visitation during emergency shutdowns, and the possibility of radioactive pollution.

NPCA urged the AEC to consider alternative sites, including the 4,200-acre Kankakee River site where a fossil plant is already under construction. The only deterrent to this alternate site, according to the AEC, was the "delay that would be associated with moving to a new site."

The Bailly Nuclear Power Plant decision carries severe implications for the entire National Park System. The Department of the Interior does not have the power to stop construction, and the AEC is moving forward despite this interagency conflict.

NPCA members are urged to write letters to the Atomic Energy Commission, urging that the Bailly Nuclear

Power Plant not be built, and that alternative sites be located that will not harm the environment of a unit of the National Park System:

Hon. Dixie Lee Ray, Chairperson  
Atomic Energy Commission  
Washington, D.C. 20545

**"Forest Policy for the Future: Conflict, Compromise, Consensus"** was the theme challenging more than 200 outstanding leaders from Congress and the



Executive Branch of the federal government, the forest industry, labor unions, universities, and environmental organizations at a recent forum convened in Washington, D.C. Resources for the Future, Inc., a private conservation research group, organized the meeting.

NPCA President and General Counsel A. W. Smith was called upon to present the Association's views concerning forestry "investments" for multiple uses among multiple ownership types. The thrust of President Smith's commentary was the need to reorient the nation's forest policy in the direction of *ecological forestry*. In NPCA's program ecological forestry means methods of management that preserve the soil, water, watercourses, water tables, vegetation, wildlife, soil micro-organisms, microclimate, and recreational, scenic, and esthetic resources of the forest, and certainly the forest itself, while permitting an abundant harvest of tangible wood products. Silviculture in the sense of ecological forestry means the maintenance of an

ecological diversity, hence excluding artificial monocultures. Furthermore, it means a method of harvesting that excludes large block clearcutting of our forests and means, instead, a partial cutting system employing single-tree or group selection, shelterwood, or, at the most, small-patch clearcutting where the silvics (characteristics, ecology, etc.) of the species demand.

But ecological forestry does not overlook the institutional and economic aspects of forest policy, but rather is inherent in these. In this perspective, ecological forestry means an *even flow* of products and results in the long-range protection of the capital investment in land and forest, regardless of ownership type. It means also retaining capital already invested in standing forests and drawing on the annual growth as income.

In terms of regulation, President Smith said, the broad objective "should be to require the employment of ecological forestry practices on all forest lands. Such regulation would mean the conservation and preservation of the forest capital, and thus should be regarded as exacting savings, not investment. It should be regarded as requiring timber owners to protect, not squander, their capital. In that light, regulation would not require public compensation, because it would improve the property."

In practical reality, however, the implementation of a forced national policy for ecological forestry should derive from the will of the people; those who perceive the forest for the multiple uses and needs it provides and satisfies, and those who manage the woods with "an artist's eye and a craftsman's hand." It is to these ends that NPCA is committed in its program of ecological forestry.

**NPCA is grateful** for the recent receipt of a generous bequest to this Association from the will of Dorothy Vandergrift Lee. Readers will recall that Mrs. Lee died on November 16, 1972. She is missed by us at NPCA and by many others. Mrs. Lee was an NPCA trustee from 1962 to 1969.

A native of Wilmington, Delaware, she eventually settled in Washington, D.C., where she was deeply involved in environmental, historical, and civic affairs. Beyond her trusteeship in NPCA, she was active in several other

environmental organizations. She also was one of the original directors of the Robert E. Lee Memorial Foundation.

This request will be of great help to NPCA in terms of moral support as well as in material terms.

**Piscataway Park** is a unit of the National Capital Parks located directly across the Potomac River from historic Mount Vernon. The park was created to preserve the view from Mount Vernon in much the same state as it was in the days of George Washington.

A bill is now active in Congress that would enlarge Piscataway by 625 acres. The bill is part of a controversy that has been kept alive for nearly twelve years. Now, with a House-passed bill in hand, the Senate is currently considering the legislation.

NPCA testified in June, on invitation, in favor of the additions to Piscataway. The land in question is important, NPCA stated, because it includes undeveloped riverfront property now zoned for commercial development, and several unsightly structures including an amusement park and a marina.

Although several of the proposed new tracts are covered by scenic easements, NPCA called this form of protection inadequate because the existing easements allow housing construction and continuation of the amusement park operation.

Piscataway Park, one of the priority projects of the late U.S. Congressman John P. Saylor, is at last nearing completion. With enough citizen support for the Senate bill, which probably will be out of committee by the time this issue is published, the expansion of this park could be finished in time for celebrations in conjunction with this nation's Bicentennial.

**Threats to the Land and Water Conservation Fund's** (LWCF) orientation toward purely outdoor recreation include a move in Congress to amend the LWCF act of 1965 to include funding of "indoor recreation" facilities. A bill now on the Senate floor, S 2661 introduced by Senator Burdick of North Dakota, proposes to add a general provision for using up to 25 percent of the state allocations from LWCF for building shelters over facilities that are normally used for outdoor recreation (such as swimming pools or tennis courts)

but that are rendered useless by winter weather.

NPCA testified on invitation before the Senate Subcommittee on Parks and Recreation in opposition to S 2661. The existing provisions for management of the fund are based on the principle of providing outdoor recreation opportunities mainly through grants to state and federal agencies for land acquisition. To intrude on this

mandate with amendments is to weaken an important program for recreation in America. The subcommittee was urged to reject the amendment and continue to adhere fully to the existing guidelines.

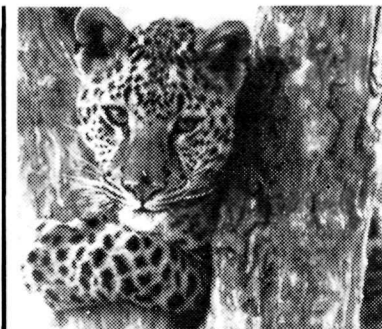
NPCA defended the use of the LWCF for open space acquisition not only for recreational benefits, but also for the ecological benefits of wild habitat preservation. This concept was sup-

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ported as an essential environmental safeguard in an industrialized nation.

At this writing, the Senate has not taken any action on S 2661.

**The rights of the Havasupai Indian Nation** recently prompted NPCA to supplement earlier testimony presented on invitation concerning the Grand Canyon Park Enlargement Act.

The Administration now supports the granting of a deed in trust for the Havasupai Indians for 251,000 acres of land in Grand Canyon National Park and Kaibab National Forest.

NPCA President A. W. Smith stated that NPCA wants to help work out a complete solution for the serious problems of the Havasupai. However, the Grand Canyon is a natural resource of national interest and must also be protected.

NPCA strongly recommended the approval in conference of S 1296 as passed by the Senate, including guarantees for the present use of certain park lands by the Havasupai, and calling for an immediate study to determine what steps should be taken to assist the tribe. NPCA recommended that the legislation provide for the following in the final settlement:

(1) The existing privileges of the Havasupai within the national park and forest should be confirmed by law irrevocably and in perpetuity. These include grazing privileges on the plateau, access to the river for limited purposes, and access to and use of areas of religious significance.

(2) A deed in trust should be granted to the Havasupai for land adequate for the presently foreseeable needs of the tribe for housing, schools, and facilities related to the exercise of grazing privileges. The total area might be 1,000 acres. The land would be excised from the national park and/or forest, and would be looked upon as part of a boundary adjustment that would include the enlargement of the park.

(3) The legislation should make it clear that the privileges thus confirmed would be nontransferable and exercised solely by the Havasupai Nation; otherwise we may find that commercial interests, including utilities, will be pressing for development programs of a nature incompatible with the desire of the Havasupai themselves for a natural environment.

NPCA is opposed to the granting of

a deed in trust for the proposed 251,000 acres. Such a grant would be a serious blow to the entire National Park System. Our compromise solution makes provision for both the smaller area needed for facilities and the larger area needed for the exercise of grazing, historic, and religious purposes, but recognizes that the latter can be confirmed irrevocably as rights in perpetuity without conveyance of land by deed in trust.

**The Bureau of Land Management (BLM)** has existed for many years without a specific congressional man-



date. This has resulted in haphazard administration of our public land resources, and many natural values have been improperly protected.

NPCA was invited by the House Subcommittee on Public Lands to testify on HR 5441, the proposed BLM Organic Act. The act seeks to clarify the role of the BLM in public lands administration. It defines general management authorities, sale authorities, management implementation, and pipeline rights-of-way regulations; and it repeals hundreds of obsolete public land laws.

NPCA endorsed most of the bill but called for stronger language to protect whole ecosystems on the public lands, especially those areas designated as "areas of critical environmental concern." NPCA contended that predator populations, including coyotes, should not be indiscriminately poisoned on public lands, nor should the broadcast application of pesticides be allowed.

The Association supported provisions to require the BLM to study its lands for potential wilderness classification, including instant wilderness designation of certain "primitive areas" wilderness tracts upon passage

of the act. This would involve a total of 187,094 acres.

NPCA pressed for stronger enforcement provisions, especially in critical areas such as the California desert. Because the Senate had not acted on the California Desert National Conservation Area bill, NPCA asked that the BLM Organic Act include the same protective measures, including a proposal for uniformed rangers such as those the Park Service and Forest Service employ.

The Senate Interior Committee has reported out its version of this act (S 424) incorporating the same concepts into a stronger form. NPCA hopes that the House version in its final form will match that strength.

**A proposed timber sale threatens the Yellowstone ecosystem.** NPCA has urged the U.S. Forest Service to defer a 5.69-million-board-foot timber sale in the Tepee Creek drainage in Montana's Gallatin National Forest. In addition to this area's proximity to Yellowstone National Park, NPCA is concerned about the prescription of clearcutting to three of the eleven proposed

harvest units, and adverse effects of the proposed action on the grizzly bear population native to the region.

It is apparent that two of the sale units about the park's western boundary. Although the National Park Service has failed to voice any objection, NPCA holds that there exists an inherent danger to the park as a result of logging, skidding, and road-building operations. These intolerable risks include siltation of streams draining into the park and loss of trees to windthrow.

The second area of concern to NPCA involves the prescription of clearcutting to two of the remaining nine sale units. If any harvesting is to be allowed in the area of the proposed sale, then reconsideration must be given as to the proper size of these clearcuts.

The final point that demands more adequate attention before the sale should be authorized is the effect of the sale on the grizzly bear population of the greater Yellowstone ecosystem. The only consideration that a draft statement addresses to this point is that an occasional grizzly has been observed to frequent the sale area. In this

regard, Section 7 of the new Endangered Species Act indicates that no federal agency shall take any action that would harm an endangered or threatened species or its habitat. Along this same line, the U.S. Department of the Interior is currently reviewing the endangered or threatened status of the grizzly bear in the Yellowstone ecosystem. Furthermore, the U.S. Forest Service has long recognized the grizzly to be a threatened species. The proposed Big Tepee Creek timber sale would undoubtedly give rise to increased hunting pressure, off-road vehicle use, and probable loss of habitat.

The final environmental impact statement must give these factors full and proper consideration.

**As the result of an NPCA lawsuit, the Atomic Energy Commission (AEC)** announced in mid-June that it will prepare an environmental impact statement on its International Nuclear Power Program.

Last October NPCA, along with several other environmental organizations, brought suit under the National Environmental Policy Act

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(NEPA) against the AEC, the Department of State, and the Export-Import Bank. The plaintiffs contended that NEPA applies to federal actions facilitating nuclear exports, including bilateral cooperation agreements for export of nuclear equipment and fuels, the sale by the AEC of fuel-enriching services to foreign users, and licensing of equipment and fuels by the AEC.

The AEC program in question includes these actions, which should be covered in the environmental impact statement. However, several central issues are still left open in this case, such as the obligations of Eximbank under NEPA, particularly in regard to financing nuclear power export transactions.

NPCA and the other plaintiffs are concerned about the scope and content of the impact statement that the AEC has committed itself to prepare, as well as what the situation with the international nuclear export program will be while the statement is being prepared.



The AEC has solicited suggestions from the public concerning this impact statement, and we are submitting our comments.

NPCA questions the rationality and justification for consuming scarce fuel resources to enrich nuclear fuels for export, considering the dangers to health and the environment posed by nuclear power production. The matter is particularly critical now because in June President Nixon signed provisional uranium fuel contracts with Egypt and Israel to assist their nuclear power plant programs. A recent nuclear test explosion by India, using a reactor supplied by Canada for peaceful purposes, highlights the problems that could be encountered in helping to supply more countries with nuclear capability.

The plaintiffs in the case are NPCA, the Sierra Club, the Environmental Defense Fund, and the Natural Resources Defense Council. They are represented in this lawsuit by Eldon V. C. Greenberg of the Center for Law and Social Policy in Washington, D.C.

## reader comment

**Kentucky history was made in the Red River Gorge**—and that's not just water over the dam. When Daniel Boone first crossed the Cumberland Mountains, he found spread before him a land of rich beauty, lush forests, rushing streams, and Eden-like valleys. The Indians called this place Kentucky, "Fair Land of Tomorrow."

This has all changed now—excepting one small area in the Daniel Boone National Forest, the Red River Gorge. There, the wild turkey still forages in the early light of dawn, and the deer, ruffed grouse, beaver, trout, and countless other more common varieties of wildlife thrive.

For nearly ten years the U.S. Army Corps of Engineers has been trying to build a dam in the Red River Gorge. Like a bad penny that keeps showing up, the Army Corps of Engineers is back on the subject of building a dam in the Red River Gorge on Kentucky's lovely free-flowing Red River. Trees will be cut away with abandon.

The boulder-choked river will be sacrificed for a silt-choked, man-made lake. More noticeable than the soaring cliffs will be the ugly expanse of bare banks and mud flats left exposed by the summer draw-down. Gone will be the cover and solitude of what has been called "the finest wildlife habitat in Kentucky—if not the entire Eastern United States."

The Red River Gorge should be made a national park or national monument for future generations of Americans. The Red River Gorge in Kentucky is like the Grand Canyon in Arizona—it does not belong to any one state, or town, or group of people. It must be saved for its own sake, a heritage for the future.

As times change so do the nation's needs and priorities. But the Army Corps of Engineers just keeps rolling along as it has for decades, working one of the most powerful lobbies in Washington, winning more than \$1 billion a year from the Congress to straighten rivers, build dams, and dig canals that frequently serve only narrow interests

and too often inflict the wrong kinds of change on the environment.

*W. G. Duncan (NPCA member)  
Louisville, Kentucky*

*Despite NPCA's request that the proposed dam project be terminated, and despite more than 17,000 petition signatures against the Red River Dam [see page 18], Kentucky Governor Wendell Ford has announced strong support for the dam. Senator Marlow Cook of the state has announced his total opposition to the project.*

**The paddlefish is not in danger of extinction from overfishing** in Montana. While the worldwide distribution of these fish is quite limited, they are present in good numbers in our lower Missouri and Yellowstone drainages . . . .

Increased coal development is imminent and this poses many environmental problems for our state . . . . If the coal is used to generate electricity near where it is mined, then large volumes of water must be used for cooling in this generation process. If instead our coal is transformed into gasoline, then even more water will be consumed. The source of water for either of these operations will be Montana's Yellowstone and Missouri rivers, the home of the paddlefish and other popular game and food fish such as sauger, catfish, burbot, and the very rare pallid sturgeon. Thus, the real threat to the continued survival of the paddlefish is the possibility of drying up its habitat . . . .

We have been investigating our paddlefish runs since 1963 and have no indication that angler harvest is a significant factor in their continued survival. We know from tag returns that some paddlers from our Yellowstone and Missouri (below Fort Peck) runs spend part of their lives in Garrison Reservoir in North Dakota. There is also some interchange between these



runs as fish tagged in the Yellowstone have appeared in later years in the Missouri and vice versa. We also have another run of paddlers in the Missouri River above Fort Peck Reservoir.

Whether all paddlers in any of our runs return to the reservoirs after spawning or whether some remain in the rivers the year around is not known. We hope to find out more about their movements this year by installing radio transmitters on a number of individuals this spring and following their movements by use of receivers in boats and airplanes. We need to know just where in our rivers they spawn, what water flows are necessary for them to spawn successfully, and how long young paddlers stay in these spawning and nursery areas. . . . We can then make intelligent recommendations for the minimum flows necessary to sustain the paddlefish. However, even without this detailed information we are confident that severe, year-around flow reductions or total dewatering of our rivers will eliminate the paddlefish . . . .

Therefore, if you are really concerned for this fish, I suggest that you can best help assure its survival by letting your own congressman and senators know that you support strict environmental protection during eastern Montana's coal development, particularly with regard to provision of adequate minimum flows in the streams. . . .

Arthur N. Whitney  
Fisheries Division Administrator  
Montana Department of  
Fish and Game

*This letter was sent by the Montana Department of Fish and Game to answer correspondence from NPCA members concerning an article in our January Magazine. The letter was brought to our attention by NPCA member Mrs. John Turnage of Murrysville, Pennsylvania, who also forwarded responses she received from the South Dakota Department of Game, Fish, and Parks and the Army Corps of Engineers. South Dakota officials said that "Overfishing is not the cause of the paddlefish's plight, but the construction of the massive Missouri River Dam by the Corps of Engineers for the Pick-Solan Plan." South Dakota and the Corps both reported that they're conducting studies.*

## conservation docket

**Big Thicket:** Soon to go to a joint House-Senate conference to resolve differences, the Big Thicket National Preserve legislation seems well on its way to passage during the 93rd Congress. In early May HR 11546, which had passed the House in December of 1973, underwent several days of Senate Interior Committee markup and passed the Senate on May 30, 1974, with several amendments.

NPCA members will recall many efforts over the years to assure preservation of at least a portion of this "Biological Crossroads" in East Texas. Once composed of over one million acres of the most diverse combination of plant and animal communities in North America, the Big Thicket has been reduced to less than one-third of its former size, primarily by logging practices. The House Interior Committee report (H. Rept. 93-676) states that "While to some the area does not contain the spectacular natural grandeur of places like Yellowstone, Grand Canyon or the Redwoods, from an ecological point of view it is considered by many to be even more deserving of preservation than most of the areas already designated as units of the national park system, for nowhere else in North America does such a diversity of plant and animal species exist. It is this speciation, perhaps more than anything else, that makes this area an unexcelled natural laboratory for the study of ecology, plant taxonomy, and systematic biology."

National Preserve designation for the Big Thicket would be a new category for land protection and management by the National Park Service, and would be used to classify areas primarily because of unique flora and fauna. However, both House and Senate versions permit hunting and fishing to continue in the areas subject to valid federal and state laws.

Two major differences have emerged between the House- and Senate-passed versions of HR 11546. The House version would provide protection for 84,550 acres and would use the legislative taking mechanism to convey title to the lands concerned to the United States within six months of passage, or

upon publication of the proposed boundary designations (except for mineral lands and qualified residential property). Agreed negotiated value of property would then be paid to the landowner.

Contrarily, the Senate-passed bill, which would protect 100,000 acres, does not contain the legislative taking provision; the reasoning given is that acquisition of Big Thicket lands is *not* urgent, because the timber companies have verbally agreed not to cut in areas proposed for protection.

Compromises and trade-offs may delay final action on this measure.

**Chatooga River:** Readers of James Dickey's novel *Deliverance* who were

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thrilled and fascinated by the descriptions of the raging white water churning between towering cliffs should be pleased to learn that the Chatooga River, on which the movie *Deliverance* was filmed, has recently been added to the National Wild and Scenic Rivers System. PL 93-279 was signed into law by the President on May 10, 1974, designating the Chatooga River in North Carolina, South Carolina, and Georgia for inclusion. The Chatooga Scenic River unit flows from near the headwaters in the Nantahala National Forest in North Carolina, southward to form the Georgia-South Carolina border separating the Chattahoochee and Sumter national forests and ending above the Tugaloo Reservoir also on the same border.

**Solar Heating and Cooling Demonstration Act of 1974:** On May 21, 1974, the Senate passed HR 11864, which had already been passed by the House on February 13. In order to expedite mass production and general use of solar energy, the bill provides for development and commercial demonstration of the practical use of solar heating (within three years) and solar heating and cooling systems (within five years) in both residential dwellings and commercial buildings.

The Department of Housing and Urban Development (HUD), the National Aeronautics and Space Administration (NASA), the National Science Foundation, and the National Bureau of Standards are the agencies designated to jointly administer the act. Their functions would be to initiate programs for the development and demonstration of prototype solar heating and cooling systems, to establish performance criteria (to be published within nine months of enactment) for equipment and dwellings, to monitor the performance and operation of the systems, to collect and evaluate data, to carry out studies, and to assure the program's success by maintaining contact with the related industries and technical and scientific groups beyond the end of the program. A principal goal will be dissemination of all information gathered under the act to various interest groups involved, including the general public, in order to promote widespread use of solar heating and cooling.

Federal assistance in the purchase and installation of components and

systems is provided as one incentive to encourage widespread utilization. Monies to be appropriated include \$5 million to both NASA and HUD for 1975 and \$10 million to HUD each year thereafter until 1978.

**Land Use:** After much early optimism about the chances of Congress successfully passing a land use planning bill during the 93rd Congress, the House of Representatives recently voted to kill the bill with little substantive debate. In a close 211-204 vote, the ultraconservative elements of the House, led by Representative Sam Steiger (R-Ariz), rallied 136 Republicans and 75 Democrats to defeat the Interior Committee bill, HR 10294, on what is normally merely a procedural vote, to accept the rule outlining the

procedure under which the bill would be debated.

The bill's principal sponsor, Representative Morris K. Udall (D-Ariz), immediately charged that "impeachment politics" had spelled the defeat of the bill, pointing out the recent administration switch from over two years of solid support for land use planning and its strong support for the committee bill up until May 1974. (After Representative Steiger introduced a substitute bill, the administration decided to throw support behind this version even though it was generally regarded as inadequate, even by some officials in high positions within the Nixon administration.)

The land use planning bill seems to be dead for this Congress.

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Continued from page 2

not possible for the public to learn the nature of the proposals being made by the agencies and departments to the OMB, let alone make helpful recommendations.

The National Environmental Policy Act requires the development of environmental impact statements in connection with major federal actions significantly affecting the quality of the human environment, and directs that such statements accompany the proposal through the existing agency review processes.

In our opinion, these provisions of NEPA require the development of an environmental impact statement to accompany all tentative agency budgetary proposals. The Act requires that such statements be made public. It follows that the tentative budgetary proposal must necessarily also be made public.

We recommend that the OMB give serious consideration to the establishment of the following procedures by appropriate regulation:

(1) By approximately April 1 of each year preceding the beginning of the fiscal year, each agency would complete a tentative budget for submission to the department, which would be accompanied by a draft environmental impact statement. The tentative budget and draft statement would be published and a date set for an open meeting in which all interested persons would be invited to participate and submit comments and recommendations. This would be an informal gathering, and not a formal hearing, but would be completely open to the public. The agency would then prepare a revised tentative budget and revised draft impact statement on the basis of recommendations received at the open meeting and transmit both to the department.

(2) On or about July 1 of the year prior to the beginning of the fiscal year, each department would complete a tentative departmental budget and a departmental draft impact statement which would be made public and with respect to which an open meeting would be held similar to that described above for the agencies. The open meeting would include a series of sessions on the component parts of the tentative departmental budget, including the revised tentative agency budgets; likewise on the component portions of the departmental draft impact statement including the revised draft impact statements developed by the agencies.

(3) Thereafter, on or about September 1 of the year preceding the beginning of the fiscal year, the OMB itself would hold open meetings on the various departmental tentative budgets and draft impact statements. These would be open meetings as described above, but thereafter the OMB would enter into executive sessions for the purpose of preparing recommendations to the President of the United States for embodiment by him or on his behalf for the customary budget message to the Congress.

(4) The OMB would encourage the agencies and departments to seek the informal advice and consultation of qualified persons in the development of budgetary estimates and environmental impact statements and would itself seek such assistance during the entire process and in the concluding stages thereof where the final responsibilities devolve upon the OMB itself.

**I**N THE COURSE of subsequent exchanges, we have emphasized that while we recommend informal consultations with qualified per-

sons, and would be happy to cooperate with the agencies, the departments, and the OMB in this respect, we would not regard such conferences as meeting the need approached in the proposed open meetings.

In raising these issues, first in *The Environmental Journal* for May 1974, and in discussions during May, we emphasized that the manpower ceilings which we believe have been imposed on many agencies can be lifted by administrative action for purposes of the protection of the National Park System during the present summer.

Without commenting on the adequacy or inadequacy of National Park Service budget items for fiscal 1975, taking effect July 1, 1974, the imposition of manpower ceilings may result in severe injury to the national parks this summer. It may well increase accidental injuries and deaths and raise the crime rate in the parks, because personnel will not be available to protect the people.

We are concerned in this article, and in all related discussions, with the responsibility of the OMB as an instrumentality of the Executive Branch. We are concerned, moreover, with the question of *process*, not with the substantive budgetary issues, nor with the merits or demerits of any particular budget item.

Manpower ceilings, imposed in addition to the normal restraints represented by general or line items in the budgets, are strictly administrative in character, originating with the OMB. The same is true of impoundments, which are imposed by administrative order, despite authorization and appropriation by Congress, and signature by the President. Apparently certain other administrative practices, of a more subtle nature, have also been in use: informal warnings to departments and agencies to minimize their estimates.

It might be worth noting that the advocates of open budgeting are not all necessarily advocates of increased spending, nor opponents of impoundment in proper cases; they will often be opposed, for example, to what they consider to be inordinate outlays for big roads and big dams.

We suggest that the budgeting process, the prestige of the OMB, and general public interest would be greatly served by turning the bright light of public information on administrative budgetary analysis at the open meetings we recommend.

—Anthony Wayne Smith



## HELP PROTECT YOUR PARKS

For many years, NPCA's main interest has been in protecting national parks from destruction of natural values by excessive roads, off-road vehicles, mining, airport construction, overt commercialism, and traffic abuse. Now we are advocating wilderness and other natural preserva-

tion in the national parks, methods of preventing destructive impacts of mass recreation, and additional funding for Park Service interpretive programs. The support of you and your friends through membership and contributions will go far in helping us accomplish these goals.

**NATIONAL PARKS AND CONSERVATION ASSOCIATION**  
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