

THE GREATEST MERCY

CONFIRMING THE WARNINGS of a growing number of demographers, economists, ecologists, and psychiatrists during the last two decades, the problematical computers now spread an alarm of worldwide ecological disaster.

The curves they trace, showing resources, food supplies, industrialization, pollution, proliferation, rising slowly at first, then almost vertically, leveling rapidly, plunging precipitously, are unpleasant. We have not listened to our prophets; perhaps we may listen to the machines.

Omitted of necessity from all the mechanical diagrams are the social factors of complexity and pressure. The velocity of life in the industrialized countries, resulting in heavy personal stress, has undoubtedly been rising rapidly. The complexity of the modern institutions with which the average man must deal begins to surpass his understanding. The economic and political managers of society struggle with gargantuan problems, which are solved, if at all, by narrowing margins, and more and more escape control.

MITTED ALSO from the charts, perhaps, are too many factors of salvation. The machines can be no better than the data and presuppositions with which they are provided. For the subtler tasks of prediction, the human mind will still do better than contraptions. But in any event, the analyst, of whatever persuasion, should plot the results of available remedial measures. We shall then be in a better position to decide what to do. And the question before us recurs, not whether disaster impends, as it rather obviously does, but what to do about it.

Most of the factors of chaos can be mitigated in some measure by direct remedial attention. The polluting effects of industrialization can be abated to some extent by industrial development for the production of abatement equipment. The destructive effects of a polluter, like the internal combustion engine, can be mitigated by modification or abolition, or by getting the automobile under control. Even the explosion of electric power consumption might be contained in a minor measure by an inversion of rate schedules, or, for example, by going back to windows and sunlight in buildings.

But none of these measures will be adequate, alone or together, unless the population explosion can be contained. The per capita factor compounds every danger. All the signs indicate that for mere survival, let alone civilized living, this Nation and the world are already overcrowded. Population levels must be stabilized and reduced by a rapid lowering of birthrates, and in some countries, like the United States, by the curtailment of immigration.

We suggest that reliance be placed on two essentially human characteristics: reason and morality. A rational standard of personal conduct must be created to which every individual can repair. The essence of this personal and social standard is a normal family size of not more than two children. The need for the standard must be explained in simple terms to as many human beings as possible and as quickly as possible around the planet, and their help must be obtained in adopting it in their personal lives and recommending it to others.

Stabilization and reduction would be a planetary educational effort, coupled with technical and clinical assistance, not merely with respect to the facts and dangers of overpopulation, nor the gains for society in population stabilization and reduction, nor the advantages and methods of family planning, but with respect also to the moral obligation which people owe to themselves, their children, their parents, and the community, to stop at two. The need is for both telical and technical education, and the materials and services for implementation, providing not merely facts, but orientation and motivation.

An educational and operating program of this Continued on page 39

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COVER Big Cypress Swamp, by Patricia Caulfield

The feltlike mat so commonly seen on swamp waters of the Florida Everglades is composed of myriad plants and animals that, after death and decay, contribute to the creation of new land in the "sea of grass." (See page 4.)

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BIG CYPRESS



or many years now the Everglades of central and southern Florida have been the focal point for a classic and complex conservation operation aimed at saving a great national park—one whose name today has become a household word to much of America. The park is Everglades, a great natural treasure covering nearly a million and a half acres of watery, subtropical south Florida. The lands of this park are unique in the real sense of the word—a corner of the nation in which a strange and fantastically beautiful association of plants, birds, reptiles, and mammals has flourished from time out of mind, and to the preservation of which the nation dedicated Everglades National Park many years ago.

When the park was established in 1947, President Truman was on hand for its dedication. He recognized the special nature of the region when he said, "Here are no lofty peaks . . . no mighty glaciers or rushing streams. . . . Here is land, tranquil in its quiet beauty, serving not as a source of water but as the last receiver of it."

Doubtless the President had not intended those last words as prophetic, but in the years that followed they turned out so. Ongoing construction of a vast network of canals and drainage projects north of the park, diverting historic natural patterns of water flow for various human

Left, a bald eagle comes in for a landing. Below left, waterlilies float among spikerush. Below, a grove of young cypress trees reflects in the marsh waters of Big Cypress Swamp.

purposes, was slowly but inexorably squeezing dry the lifeblood of a park whose plants, animals, and very nature depended on seasonal supplies of the precious mineral from the north. The slow process leading toward biological death for the southern Everglades had been in operation for many decades, but it was only in the past ten or fifteen years that the sickness had been diagnosed and publicly acknowledged and a start made toward treatment.

Among the most recent of actions looking toward a solution of the problem which has been suggested by conservationists has been the public acquisition of a major portion of the Big Cypress Swamp, a vast section of Everglades adjacent to the national park on the northwest that receives and passes along to the northwestern part of the park the slow southward flow of fresh water vital to all plant and animal life there. Indeed, it has been determined that the Big Cypress basin contributes between 55 and 60 percent of the surface water received by the park.

This great region, still largely undeveloped and "unimproved" by extensive canalization and drainage, would be worth national purchase for its own sake, were there no particular practical reasons for its acquisition. The southeastern corner of the Big Cypress was recently a showdown battleground against a huge international jetport—a project defeated by united efforts of conservationists.

The overall ecosystem of the Big Cypress Swamp does not differ in important respects from that of the national park. The same great assemblage of subtropical plants and

article and photographs by Patricia Caulfield



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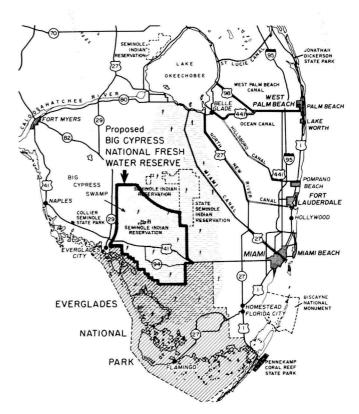
animals for the most part are found in both park and swamp, even though in appearance the two areas are considerably different. Birds that roost and nest in the park may feed in the Big Cypress, and it has been estimated that they obtain as much as 40 percent of their food there. They could not survive if their habitat were limited strictly to the park. Other animals also move back and forth between the park and the Big Cypress, which, incidentally, is home for some thirteen species of native animals currently listed as endangered—the Everglades mink, the otter, the Florida panther, and the bald eagle, to name several. Botanists specializing in the bromeliads—those mainly tree-dwelling members of the pineapple family whose blooms embellish the Everglades during spring—will find not less than twenty-five species in the Big Cypress, including several unique to the swamp.

Beyond its immense capacity as a fresh water reservoir for the national park, there is another practical consideration for protecting the Big Cypress that is not so commonly known outside Florida.

The porous limestone basement of the Everglades, including that of the Big Cypress, geologically is an enormous natural sponge for fresh water. During long drought periods the limestone of the Big Cypress, charged with fresh water from the north, is one of the great pressurized vessels that helps prevent intrusion of salt water from the Gulf of Mexico and the Atlantic into the soft rocks of south Florida—a fact that Floridians along the southeast coast of the state have learned painfully on several occasions in the recent past, after having overdrawn their account with nature. Canalization and drainage of the Big Cypress, as visualized by land speculators, would be a further invitation to this kind of trouble.

There is a current misconception about the nature of the Big Cypress Swamp that is quite understandable in view of the region's name. The Big Cypress really is a region of considerable diversity in its physical nature. I have waded, stumbled, walked, and swum in the lakes and alligator holes of its famous and mysterious cypress "domes." I also have walked and slogged and stumbled across its comparatively high ground. Some of the region is covered with muck; some, with marl. Limestone soils or rocks invariably are created in the first instance by living aquatic organisms—some animal, some plant. The marl that underlies the heavy peat and muck deposits of the Everglades and which also is at the base of the Big Cypress is almost without question the creation of the algal mat that commonly forms in Everglades swamp waters and which is composed of more than a hundred species of minute plants and animals. When this fascinating ecosystem, part of the larger ecosystems of the Big Cypress and the Everglades generally, dies and decays by bacterial action, great quantities of calcium carbonate (the basic stuff of limestone and marl) are deposited. Thus is land in the Everglades created.

Now there are proposals for acquisition of the Big Cypress Swamp. The boundaries of the federal reserve under consideration—to be known, perhaps, as the Big Cypress National Fresh Water Reserve—are considered by many conservationists as adequate to the job of continuing a freshwater flow to the western half of the national park. The entire reserve might consist of something like 547,000 acres plus whatever state lands Florida might wish to



Creation of a Big Cypress national fresh water reserve or a national recreation area northwest of Everglades National Park has been proposed to protect one of the water supplies of the park. Arrows in the map above indicate the direction of the slow southward flow of water in the region. The swamp, one of the prime sources of ground and surface water vital to the park's existence, has been threatened with drainage and real estate development. At right, cypress knees create a decorative pattern on the forest floor of Big Cypress Swamp during the seasonal dry period.

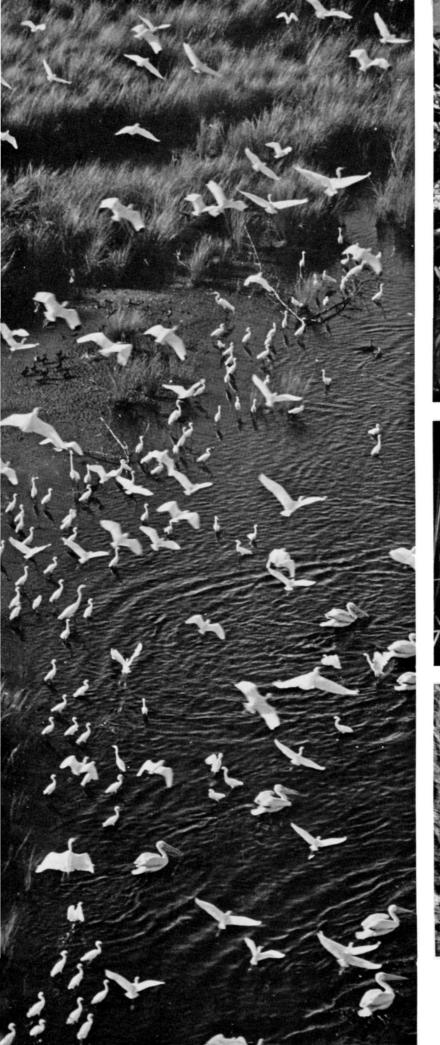
donate. As is usually the case in such proposals, the ideal may somewhat outrun the practical. Some lands to the north and west of the proposed boundaries would be desirable, but extremely high acquisition costs would seem to rule them out

When a decision must be made as to how much an area like the Big Cypress is worth, dollars in themselves should not be the sole criterion, although many people will see it that way. Some local landowners in the region have believed for years that their initial investment in the Big Cypress would prove to be the goose—perhaps in this case, better the alligator—that lays the golden egg. Businessmen look to development as a means to more and bigger business—and Big Cypress real estate after drainage would offer just that.

On the other hand, there are local people who are friendly to the purposes of the national reserve, whatever it eventually may be called. Many of them are outdoorsmen to whom "development" is anathema, destructive to the way of life they love the most. They have traversed the Big Cypress without ever having owned any of it; they have enjoyed it without taking from it; and in general they seem to be on the side of national protection.

Whatever is done here must be done fairly soon. Drainage projects are closing in around the region, followed







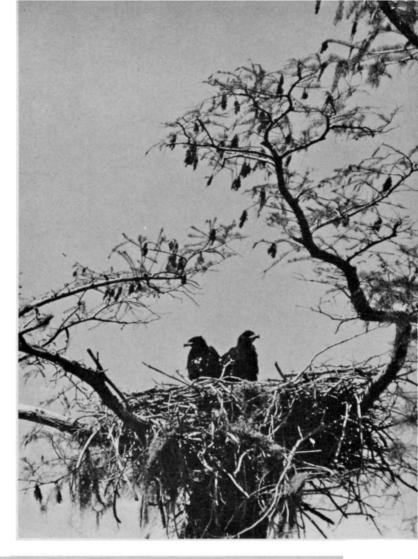




inevitably by the "lots for sale" sign. Today Americans are in danger of losing their third largest national park without a single change in its land or water boundaries. They are in danger of losing it because it is not receiving its vital natural supplies of fresh water from the north. Recent steps to insure shipment of water to the park by canal will help, though the measure is artificial and its results remain to be seen. The Big Cypress Swamp is a natural conveyor of fresh water to much of the park, and, in a general sense, the last remaining one. National protection will come not a minute too soon.

Since 1967, when she resigned as executive editor at *Modern Photography*, Patricia Caulfield has devoted full time to conservation and nature photography. She spent more than five years' intermittent work in the Everglades, stalking with her lens the elusive wildlife and evocative landscapes of America's only subtropical wilderness—resulting in the hauntingly beautiful color photographs in her book, *Everglades*, published by the Sierra Club in 1970.

Big Cypress Swamp is home or feeding ground to many different creatures. At left, flocks of egrets and white pelicans, among others, intermingle to feed in the shallow Everglades waters; and raccoon, bittern, and deer as well as other animals pass freely back and forth between Big Cypress Swamp and Everglades National Park. At right, chicks of the bald eagle, one of thirteen endangered species that find refuge in Big Cypress, peer at the world from their lofty nest of sticks high in a cypress. National protection of Big Cypress Swamp would prevent drainage and development projects such as that below and would help protect the habitat of the many wild creatures that depend on the swamp and the park for their existence.





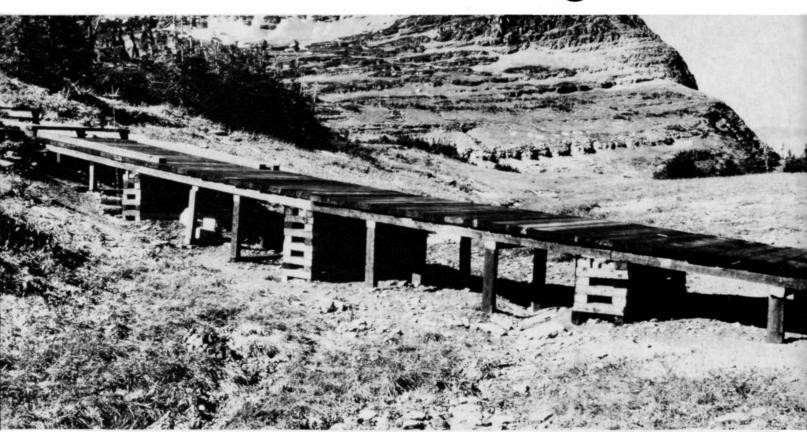
Conflict currently exists between those people deeply concerned with preserving natural values in our national parks and those whose main objectives seem to be to accommodate unlimited numbers of park visitors in these natural areas. As with many types of conflicts, there are casualties involved. It is with regret that I must report that the fragile alpine ecosystem at Logan Pass, in Glacier National Park in Montana, has become a devastated victim of this struggle.

In the past few years the Logan Pass meadows and timberline krummholz vegetation have been subject to the worst assortment of management actions imaginable. The basic cause of the severe environmental degradation is what seems to be an administrative goal to accommodate many kinds and many levels of public use that are incompatible with one of Glacier's most scenic spots—in spite of the fact that both law and national park policy make clear that unlimited visitor use in natural area parks is neither necessary, required, nor ecologically desirable.

When it was established in 1910, Glacier Park was dedicated by Congress as a 'public park or pleasure ground for the benefit and enjoyment of the people" to be regulated by the Department of Interior to "provide for the preservation of the park in a state of nature. . . . " In 1964 the Park Service adopted a set of rules to govern management of what it determined to be three distinct types of parks within the national park system: historical areas, recreation areas, and natural areas. Glacier Park fits into the last category. According to the guidelines, natural area parks are to be preserved in an unimpaired, natural condition. Physical developments are to be limited to those absolutely necessary and appropriate, and they are to be carefully controlled to prevent unregulated and indiscriminate visitor use. These guidelines were reinforced by an act of Congress in 1965, which stated that visitor use should be limited to that which can be accommodated without altering or disturbing natural values and characteristics and without introducing undue artificiality. In recent years Glacier Park's administrators have ignored both congressional directives and the Park Service's own policy guidelines. Their failure to comply is illustrated nowhere better than at Logan Pass.

James R. Habeck

GLACIER'S LOGAN PASS a case of mismanagement



Partially completed boardwalk at Logan Pass in Glacier National Park.

PHOTOGRAPHS BY JAMES R. HABECK

Logan Pass is Glacier's number one scenic attraction. The natural values encompassed in the scenery surrounding this continental divide setting are certainly worthy of a visitor's awe and wonder. The pass lies at 6,700 feet and occurs at the apogee of the trip that most visitors make across Glacier Park. Since the 1930s the Going-to-the-Sun highway, which traverses the park from east to west, has provided access to the fragile high country in Glacier Park. For many years a small parking lot and limited restroom facilities at the pass were able to accommodate those visitors who elected to make a short stop on the pass.

During the 1950s visitor numbers increased tremendously, and visitor use at Logan Pass increased proportionately. If resource management alternatives existed before 1960 that might have led to successful preservation of the Logan Pass area, they were not implemented. Instead, a decision was made as a part of Mission 66 programming to construct a major visitor center atop Logan Pass. The decision was a serious error. Completed in the mid-1960s, the visitor center was accompanied by a water storage unit, a water pipeline, and a sewage disposal system. The parking area was expanded manyfold.

None of the construction activity reflected any degree of sensitivity for the delicate alpine setting. Alpine meadows and timberline vegetation were rudely bulldozed; the perimeter of the construction site remains an eyesore today. The denuded alpine areas are yet unvegetated. Plant reestablishment on bare soil is extremely slow in such alpine eocsystems. Every scar remains for many decades, as in the arctic tundra. The water line was brought in from a distant point on the pass; its location can be seen as a wide, barren soil strip.

Glacier's managers perpetrated another ecological atrocity on Logan Pass in 1967. The new visitor center was then surrounded by denuded soil and landfill. Someone must have suggested that the center ought to have a natural setting. The solution to this "esthetic" problem involved transplanting more than an acre of nearby alpine meadow to the center. The success of the transplanting operation remains to be evaluated, but it is obvious that a high price was paid for this "beautification" project. The area from which the transplants were made is still bare and is likely to remain so for many years.

The center itself became a major visitor attraction, and the proportion of visitors stopping at Logan Pass increased; it is likely that few visitors fail to stop now. Restrooms in particular were an attraction, because visitor stays on the pass were prolonged. In short time the sewage disposal facilities became overtaxed, and the unfortunate decision was made to dispose of the liquid fraction of the sewage directly on the pass. This was accomplished by yet another pipe system that terminated in a series of spray nozzles

James R. Habeck is a professor of plant ecology in the Department of Botany at the University of Montana in Missoula. He has been engaged in plant ecology research in western Montana since 1960, concentrating much of his effort in Glacier National Park. During the past ten years he has closely watched the developments at Logan Pass, and on many occasions he made studies of the plant communities there.







Top, an aerial photograph shows barren sections of alpine meadow near Logan Pass two years after sod was transplanted to sites around the visitor center that were bared during its construction. Above left, "recovery" after several years at one of the stripped sites; only a few glacier lilies reappeared. Above right, alpine flowers in transplanted sod bloom near the visitor center. Visitors have beat a short path into the transplanted meadow for picture-taking, a feat made easy because railing is absent at the base of the slope.

that ejected the sewage directly on nearby vegetation. This nutrient-charged waste drained to the east into St. Mary Lake, causing contamination and eutrophication of that body of water.

The sewage disposal technique was employed with full approval of park administrators, and an attempt was made in 1970 to continue this type of operation on a larger scale when plans were approved to construct an even larger spray-bar system at yet another point on the pass. The new pipes were to be hidden from the public view in a grove of krummholz subalpine fir trees. Public outcry at the time brought a halt to the scheme. The solution arrived at for handling sewage during 1971 involved the simple expediency of using tank trucks to carry the sewage to a site near park administration headquarters in West Glacier. An unsealed pit, dug in the rather porous morainal soils near McDonald Creek, is currently the recipient of

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the Logan Pass sewage. The sewage problem is not solved at all; the problem has simply been removed from public view.

With increased activity around the visitor center the trails in the area became more heavily used. Trail maintenance slipped woefully during these critical years of increased use. In the summer of 1970 an ugly, dangerous three-foot length of abandoned telephone cable projected itself above the major trail to Hidden Lake and remained exposed for some time. Erosion increased on the trails; nature trail markers just off the trail lured people off the trails, causing needless damage to nearby alpine plants.

Perhaps even as late as the summer of 1971 a management decision could have been made to dissuade more visitors from stopping in on Logan Pass—by backing off from further development. However, in their unrealistic determination to accommodate the ever-larger crowds, Glacier's administrative officers elected an alternate but ecologically tenuous direction.

The National Park Service at Glacier Park decided to cover a major portion of the main trail crossing the alpine meadows at Logan Pass with a wooden boardwalk. The boardwalk's construction was inspired by the use of boardwalks over swamplands in Everglades National Park (Anhinga Trail) and over thermal springs in Yellowstone, both entirely different types of terrain. The Glacier Park boardwalk will be a semipermanent, 3,700-foot-long, 8-foot-wide structure composed of chemically treated Douglas fir timbers.

In spite of the fact that ecologists who understand the sensitivity of alpine ecosystems advised against the boardwalk, the project was started in September of 1971. Although they are legally required, no environmental impact studies preceded the work.

The first public criticism of this new Logan Pass blunder came, surprisingly enough, from a group of fourteen trail crewmen who were assigned the construction task. Finding it impossible even to voice their objections to park administrators, these men submitted a joint letter of protest against the boardwalk to the news media. They based their objections on the claim that the boardwalk was a serious intrusion into the natural alpine ecosystem. All the men were promptly dismissed for their protest. Public outcry at the dismissals led to a reversal of the firings, and park officials promised that the men would be considered for rehiring during the 1972 season.

Boardwalks of this type and permanency are unknown in other alpine areas of western North America. The Glacier Park administration is engaged in an insidious type of management "research." They are using the Logan Pass area to test the effects of a massive boardwalk on the maintenance and perpetuation of an alpine ecosystem, which happens also to be the major scenic attraction in Glacier Park.

Most plant ecologists with experience in alpine and timberline ecosystems can offer an educated estimate of the potential environmental degradation that will accompany the boardwalk. Construction activity has already required some soil excavation to permit leveling the stringers supporting the boardwalk planks. The stringers are likely to function as little dams that will alter the direction of snow-melt waters originating from points upslope from the

boardwalk. The flow change will lead to unnatural water and soil movements and accumulations on a portion of the pass; similarly, alpine communities below the boardwalk will receive less water than normal.

From my past studies I know that both the amounts of moisture received and the seasonality of the moisture play major roles in community maintenance at Logan Pass. The boardwalk is likely to influence the seasonal moisture regime sufficiently to alter significantly the composition and distribution of the alpine plants, and those subjected to the greatest alteration will be those closest to the park visitor observing them from the boardwalk.

The boardwalk will be elevated from one to three feet although the design does not allow either light or air to circulate beneath the boardwalk. The planking is slippery when wet and presents a safety hazard to visitors. The construction design also will interrupt normal freezing and thawing cycles around the boardwalk, and it is quite possible that frost heaving will thrust the boardwalk out of line, creating further hazards for the foot traveler. Many alpine ecologists (including myself) believe that building the boardwalk is a terrible mistake, both esthetically and ecologically. It is worth anyone's effort to urge the Park





Service to abandon further construction. If large-scale visitor use at Logan Pass is to be continued, traditional trail maintenance methods and materials should be employed, with expanded visitor education programs to protect the alpine ecosystem. Better yet, visitors should be discouraged from stopping at Logan Pass—by downgrading the facilities that attract them.

The possibility that Glacier's administrative officers have managed the park as a recreation area rather than as a natural area is supported by other evidence, too. Noting the rather sparse winter use of Glacier Park, the administrators have publicly sought, through news media releases, greater numbers of visitors. A special appeal has gone out to snowmobilers to make greater winter use of Glacier Park, with the added enticement that snowmobilers are encouraged to motor close to wildlife wintering areas.

Furthermore, waterskiing is permitted in Glacier Park, although the spirit of the natural area management policy indicates that waterskiing also is an inappropriate use. In the mid-1960s park administrators did make an attempt to curtail waterskiing on Lake McDonald, but inholders occupying tracts along the shore of the lake successfully protested the ban, and consequently it never took effect.

As an arena for waterskiing Lake McDonald is unnecessary, because many lakes exist near Glacier Park where water sports are encouraged.

More than enough evidence is available to conclude that the National Park Service is converting Glacier Park into a recreation area. Very likely other natural area parks are also going this route. One reads with dismay the list of new program thrusts outlined by a group of national park superintendents following a conference in Everglades National Park in the fall of 1971. The programs embody a bizarre scheme to get park visitors even more heavily engaged, literally, in a wide assortment of fun and games. Although the conference was held in a natural area park, few of the new ideas relate to preservation of natural park values.

Natural area parks seem to be gradually losing their special and separate identities within the national park system. The United States needs its historical areas preserved, just as it needs to have recreation areas that are located and designed for a wide assortment of public uses. But the nation also needs to have its natural areas properly protected from overuse. Without specific directives from

With the new visitor center on Logan Pass came an excess of sewage. Until 1971 sewage disposal was accomplished by spraying it on the pass. After ejection from the spray bar the sewage collected in small streams, killing vegetation and causing formation of a dark, slick layer of blue-green algae (opposite page). In 1971 tank trucks were used to carry sewage outside the park, where it was dumped in an open pit (below right). Below left, the visitor center is visible behind a pile of construction debris created when holding tanks for sewage were installed in 1970.





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Congress the National Park Service is making a national playground out of at least one of the areas under its control.

If this interpretation is anywhere near correct, then other facets of the problem can also be understood. Personnel transfer policy within the Park Service forces a rapid staff turnover in all the parks. Those persons who occupy the most important decisionmaking positions are rarely allowed to become well acquainted with the specific resources and problems in a given park. Typical park administrative organization leads to the development of deskbound resource managers. Park personnel are transferred freely back and forth between natural areas and recreation areas; this policy has been of major importance in the loss of differentiation between natural areas and recreation areas. The current Glacier Park superintendent arrived in the park after nearly a decade of training and experience in recreation area management that could not have successfully equipped him

to properly interpret natural area administrative policies.

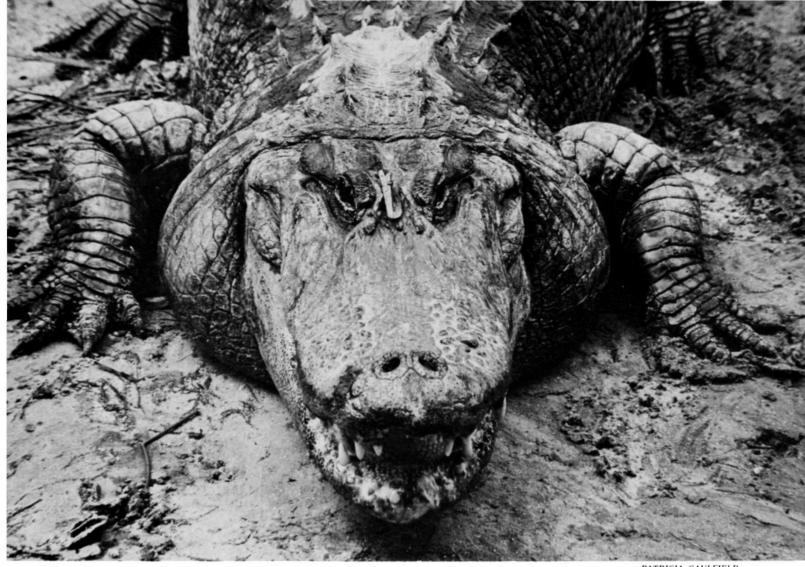
The first parks set aside in the national park system, beginning with Yellowstone National Park a century ago, were "states of nature" that seemed worthy of preservation to benefit both present and future generations of Americans. Natural areas form the backbone of the national park system; and if the National Park Service continues to move in the direction it has taken at Glacier Park, that backbone inevitably will be broken. This year marks the centennial of the national park system, an appropriate time for the National Park Service to reevaluate its mandates and its practices and rededicate itself to preserving natural area parks in a state of nature—unimpaired by human impact. Changes must be made in the Park Service—quickly. As examples of complex, life-supporting environments, the natural area parks may too soon be the only ones we have left.

Replacing a paved path through the Logan Pass meadow, the Glacier Park boardwalk (bottom left) is supposed to encourage visitors to stay off the delicate meadow. A self-guided-trail marker beside the old trail (bottom left) is located so as to lure people off the trail in order to read it. The old trail could have served well to protect the meadow, had it been adequately maintained. Right, another example of poor trail maintenance at Logan Pass: a section of exposed telephone cable laid decades ago remained exposed for some time on the Logan Pass—Hidden Lake trail.









PATRICIA CAULFIELD

THE AMERICAN **ALLIGATOR**

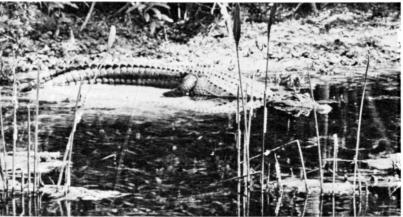
F. Wayne King



s the American alligator an endangered species? Most people think so, but some do not. If you ask the average American, even a biologist, to name an animal that is in imminent danger of extinction, chances are that the first species mentioned will be the American alligator. But today some game biologists contend that the alligator is no longer endangered and that we should again permit them to be hunted. However, this idea is a mental trap that biologists should not fall into.

There is little doubt that the alligator is less abundant now than it was twenty-five or fifty years ago. This decline resulted from the overkill inflicted first by legal commercial hide-hunters and later by poachers. The steady flow of hides to northern markets decimated the alligators in one southeastern state after another. One by one the gator-producing states imposed hunting prohibitions in an effort to control the killing of the big reptiles. But the profits were too great. Poachers could pay off fines when caught and return to the hunt immediately, and jail sentences seemed never to be imposed by local judges. The money to be made induced many people to become involved in gator poaching. As a consequence, the hunting laws were nearly useless, and illegal hides could be sold openly to northern and foreign tanners and manufacturers once they were smuggled out of state of origin. Florida spent a quarter of a million dollars annually trying to curb the poachers but could not do so. Other states also expended enormous amounts of money with little success.

In the late 1960s concern over the alligator's seemingly irreversible slide to extinction grew nationwide. Then a significant change was made in efforts to protect the species. Legislators began to direct their attention toward controlling the hide market rather than the hunters. In 1969



REX GARY SCHMIDT, BUREAU OF SPORT FISHERIES & WILDLIFE

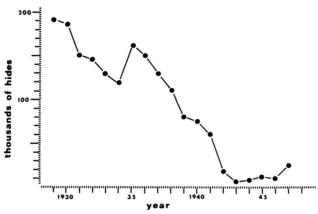


LUTHER GOLDMAN, BUREAU OF SPORT FISHERIES & WILDLIFE Poachers with airboats like these Park Service patrol vehicles could hunt alligators over wide areas of swamp and marsh.

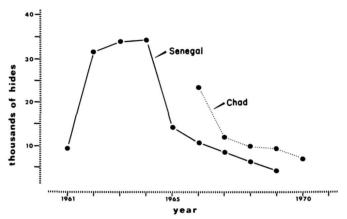


New York state joined the battle by passing the now famous Mason-Smith Act, which banned sale of a number of endangered species and their products within the state. The ban included all species of crocodilians, including the American alligator. This was the first truly effective law protecting the alligator, because it controlled the few and conspicuous tanners and manufacturers rather than the numerous and elusive poachers. Inasmuch as New York City is the fashion center of the United States, if hides cannot be sold there, they will not be featured in fashion shows and will slowly fade away as a fashion item in the rest of the country.

Almost simultaneously with the passage of the New York legislation the federal government amended the Lacey Act so as to ban interstate traffic in illegal reptile hides. This law also hits at the market rather than at the poacher. It had been tied up in Congress for more than a year, but concern for the alligator finally led to amendment of the law. By this time the last of the alligator-producing states had outlawed hunting of the big reptile, so the federal law



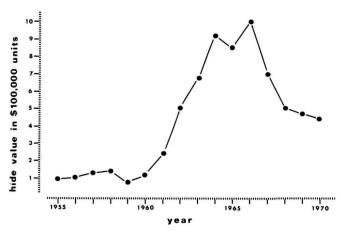
Tax records from the sale of American alligator hides in Florida, when the species could still be hunted legally, clearly reflect the early decline in the wild populations. As alligators became scarce, the price of raw hides went up from \$.21 per foot of length in 1929 to \$3.25 a foot in 1945. In 1970 the price was \$6.00.



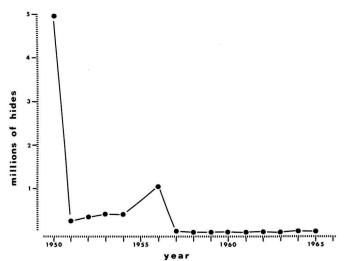
These export data for Senegal and Chad are typical of what has occurred throughout Africa. The number of hides exported each year increased as hide-hunting intensified. When the hunters began to run out of crocodiles, the numbers declined. Three species are included in these data.

had the effect of stopping interstate movement of skins to domestic and foreign markets. Not all poaching was ended, by any means; but most of it was.

In 1970 Louisiana game biologists conducted the first accurate census of wild alligators in that state. It was based on counts of gator nests made from aerial transects flown over the entire stretch of coastal marsh in the state, combined with on-site correlations of the number of alligators in the vicinity of nests. The survey yielded a surprising estimate of at least 200,000 alligators in the delta state. A much less accurate census, based on tabulated estimates of district game officers, was completed in Florida. That count projected a possible 300,000 gators for our southernmost state. These two states clearly have the majority of wild alligators within their borders, because they have by far the greatest expanse of suitable gator habitat. The other gator-producing states-North Carolina, South Carolina, Georgia, Alabama, Mississippi, Arkansas, and Texas -may have another half-million alligators among them. Taken all together there may be as many as one million



Hide exports from Papua—New Guinea reached a high peak in 1966. The decline that followed indicates that the two species involved are becoming increasingly rare.

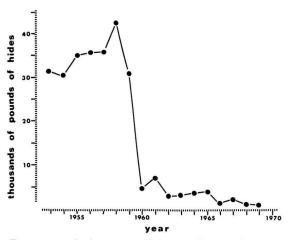


Records for the state of Amazonas, Brazil, indicate an almost unbelievable drop in the numbers of caiman hides exported following the 1950 high of 4,926,908 hides. At least four species are included in these data from Manaus, the capital of Amazonas.

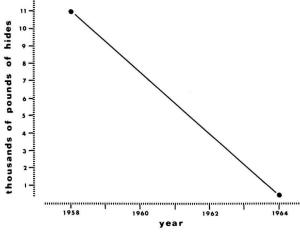
wild alligators in the southeastern states today. This estimate has led some game biologists to the conclusion that the American alligator is not an endangered species. They reason that no species with an extant population of a million individuals can be in danger of extinction.

However, an estimate of the number of alligators existing at any one moment does not indicate whether wild populations are increasing, decreasing, or remaining stable. If the death rate is consistently higher than the hatching rate (the birth rate), the population will decline and eventually disappear altogether. If the hatching rate is greater than the death rate, the population will increase. If the two rates are equal, the population will remain stable.

In the late 1800s near Frankfort, Kentucky, Alexander Wilson observed a flight of passenger pigeons that was a mile in width and took four hours to pass. By his estimate there were probably 2,230,272,000 pigeons in that one flock. The species was abundant everywhere, and no one thought it would ever become scarce, much less extinct. Birds were shot and netted and rookeries violated to supply



Export records from west Malaysia show a slow increase in the volume of hides shipped each year, followed by a dramatic decrease when the giant reptiles could no longer be found in numbers. Since Malaysia is largely a transshipping point for crocodiles, these data include up to five species.



The few records available for India show a decline in the total volume of crocodile hides exported. Three species of crocodilian occur in India.

the commercial meat market with the squabs it demanded. During one forty-day period in 1869, 11,880,000 passenger pigeons were shipped to market from Hartford, Michigan, and similar numbers were shipped by other commercial hunters from other nesting sites. In 1908 the last wild passenger pigeon was killed near Detroit, Michigan. In thirty-eight years one of the most abundant vertebrate species in the world had been exterminated by commercial hunters. The same thing could happen to the American alligator, notwithstanding its estimated million wild specimens. If relatively few hides were taken today, the species might not disappear. However, if they were taken at the rate of two million hides a year, the million alligators obviously would constitute only a six-months' supply.

Before the New York and federal laws came into being. the alligator clearly was being killed faster than it could reproduce. It was in danger of extinction. From the meager records available we know that before the early 1900s alligators must have been astonishingly numerous. In the mid-1700s William Bartram reported that in the St. John's River of Florida alligators were "in such incredible numbers, and so close together from shore to shore, that it would have been easy to have walked across on their heads, had the animals been harmless." From the early 1800s until 1940 at least ten million were killed to supply a growing market for hides both in this country and in Europe. At first the large adults were killed; but when they became scarce, smaller and smaller specimens were taken. As one population was decimated, the hunters moved on to the next. And as the animals became scarce, the price of hides went up. The increased price brought out more hunters, and pressure increased on the wild gators. Ross Allen and Wilfred Neill documented the decline in Florida from 190,000 hides marketed in 1929 to 25,000 hides in 1947. Hunting increased as airboats and swamp buggies became increasingly available and poachers were able to cover ever larger areas of swamp and marsh. Research by Florida Game and Fresh Water Fish Commission biologists shows that the numbers of alligators in south Florida water conservation areas decreased 30 percent from 1954 to 1968. Similarly, Robert Chabreck of the Louisiana Cooperative Wildlife Research Unit believes that the numbers of alligators in Louisiana declined about 90 percent from the late 1940s to the late 1950s.

As alligators became scarcer and their hides more expensive, something else also happened. Tanners turned to other species of crocodilians for the hides they needed to satisfy their markets. Skins from tropical America, Africa, and Asia were used. These species could not stand intense hunting any better than the alligator, and eventually they also became scarce. Like the American alligator, by 1970 they also were facing extinction. Today, because of the international traffic in crocodilian hides—with all its aspects of smuggling and transshipment—it is impossible to consider the plight of one species, like the American alligator, without considering what is happening to all the crocodilians.

In the late 1960s the world market was consuming over two million crocodilian hides a year (American tanners alone were importing 750,000 hides a year), and every crocodilian species was sliding toward extinction. Some foreign hide-producing countries made no effort to protect their crocodilians, but those that did found that prohibitions against hunting these reptiles were as useless as they had been in our own southern states. In countries where the animals were protected, they were poached and their hides smuggled into countries that did not prohibit hunting. There the hides could be sold legally, and dealers from the hide-consuming countries were willing to buy all the skins they could get regardless of where they had originated.

Then things changed. The amended federal Lacey Act prohibited importation of hides poached or illegally exported from countries where the animals had been removed from the wild. This law denied the United States market to illegal hide dealers. And, of course, New York's Mason-Smith Act and similar laws in California, Connecticut, Massachusetts, and Pennsylvania went a step farther and closed the market entirely by banning sale of all crocodilian hides, including those of the American alligator, rather than participate in further destruction of the world's crocodile populations.

ITH THIS BLANKET of protective legislation the American alligator is on the road to recovery. Without the excessive mortality caused by hide-hunters, the wild populations are sure to increase in size. That increase will argue persuasively that the alligator is not endangered. However, it will not mean that the species should again be hunted. Whether a species is endangered is a biological matter, but the decision of whether a species should be hunted is not biological—it is political. Many animals that are not threatened with extinction are not hunted, songbirds being a good example. Also, it must be remembered that the alligator is no longer in danger of extinction only as long as the number of animals killed or dying from disease, old age, or natural predators does not exceed the number of young hatched. If hunting ever were to be permitted again, it must be managed in such a way that no illegal hides can ever be sold. If this restriction is not accomplished, poaching will again become uncontrolled and the alligator again will decline in numbers. It must remain virtually impossible for hides poached in one state to be marketed in another state or country. Without such market control the world hide industry could consume every living alligator in less than one year. And if past performance is any indication, they would be perfectly willing to do just that.

Is the American alligator endangered? The answer is simple—not so long as it is protected by present laws. ■

F. Wayne King is curator of herpetology with the New York Zoological Society and chairman of the Society's educational programs. He is also chairman of the Conservation Committee of the American Association of Zoological Parks and Aquariums. Dr. King's particular research interests lie in the fields of the ecology and behavior of reptile populations, zoogeography, and vertebrate paleontology.

Report of the President and General Counsel, Anthony Wayne Smith, to the General Membership of the

NATIONAL PARKS AND CONSERVATION ASSOCIATION

on the Occasion of the Annual Meeting of the Corporation and Trustees, May 19, 1972

The work of the NPCA continues to center on the protection and enlargement of the National Park System. Our efforts reach out, however, into the broad conservation and environmental field. They are conducted in close contact with the Resources Management Agencies of the Government. They rely heavily on National Parks and Conservation Magazine, The Environmental Journal.

This year there will be events throughout the National Park System commemorating the establishment of the first great National Park, Yellowstone, in 1872. The National Park Centennial Commission, established by Congress, will have held a comprehensive Symposium at Yosemite Park in April by the time these words are in print. Conservationists from all over the country will have come together on invitation of the Conservation Foundation to participate in the preparation of policy statements looking toward the next century in the life of the parks. The NPCA will have played a significant role in the development of these proposals.

WE RECRET HAVING TO REPORT again that all is not well in the National Park System. In too many instances the National Park Service has been yielding before local and special pressures demanding more facilities for more crowds and more traffic in the parks. The NPCA finds itself constantly resisting these intrusions; we think that the Service should be carrying the brunt of the fight. Recent examples of retreat under pressure include the extension of the Jackson Hole Airport; approval of a new Parkway between Grand Teton and Yellowstone; construction of a large boardwalk through high mountain tundra in Glacier Park, leading to a visitor center which should never have been built in that location; the maintenance of goats in the Hawaiian National Parks for hunting; delay in picking up scenic easements and taking other steps to protect Piscataway Park; construction work along the C & O Canal in violation of the purposes of the Park; issuance of a permit to the Army Engineers for a mammoth pier and road link on Assateague National Seashore; and failure to terminate incompatible leases on Padre Island Seashore.

In many cases the particular failure to protect natural conditions in the parks has been quite serious in itself; in others, where comparatively minor, it has contributed to a gradual erosion of park protection policies. We find it necessary to investigate and criticize these delinquencies too frequently, and on occasion to appeal them to higher authorities.

The problem of goats in the Hawaiian Parks is a very good example; after months of polite representations, an editorial protest against the mismanagement of the Hawaiian Parks had to be made

in the Magazine; eventually an official study showed that our contentions were right, that the continued presence of goats in Hawaii Volcanoes National Park imperiled many native species of plants and animals and should be terminated.

THE NPCA HAS ALWAYS PROPOSED a more fundamental solution to park protection problems; namely, a dispersion of traffic into the other lands and beyond them onto private land. This is the regional planning approach which we have advocated since the time of the first World Conference on National Parks in 1962 and earlier. It has received broad nominal approval, although reluctantly from the National Park Service, but nothing much has been done. Nothing will be done, in our judgment, until the Service gives it wholehearted support.

The NPCA approach to park protection includes the following elements: maximum protection of all natural country in the parks in wilderness-type reservations; a freeze on lodges, roads, and other facilities; restrictions on crowding within existing facilities, including a system of reservations; reduction or elimination of private automobile traffic in the parks; substitution of common carrier transportation, operated by external concessioners (based outside the public lands), long-lines to enter the parks, short-lines within the parks; dispersion of camping facilities into the national forests and other federal public lands; full utilization of state park and forest systems; opportunities for the Indians to develop recreation facilities on their lands; and encouragement to private enterprise to construct commodious recreation facilities on private lands beyond the public lands.

In recent months a measure of acceptance of the regional planning approach has appeared in Service decisions. Mass transportation facilities have been provided on a limited basis in three or four cases. Restrictions have been placed on visitor use of remote areas, although in our judgment the primary problem is the private automobile, not people.

We see little indication of any shift to external, as contrasted with internal, concessions; that is concessions for mass transportation into the parks and local transportation around the parks, granted to resort operators on private lands beyond the public lands; this is the key to protection of the National Park System. We shall continue to press for its utilization.

The protection and enlargement of the Wilderness System has always been a matter of great importance to the NPCA. Our regional plans for the National Park System have been based on large areas of protected wilderness within the parks. Now that

forestry and wildlife departments have been added to its structure, the NPCA is in a better position to work for the protection of wilderness in the national forests and wildlife refuges also, and it has proceeded to do so.

The NPCA has always stressed the importance of open space and parks in the cities for the benefit of people who do not wish to travel long distances to the big national parks. We have urged that space required by heavy private automobile traffic and parking in the cities be reduced by shifting to comfortable and efficient mass transportation, making more parks and housing available for central city people. Now official NPS plans are beginning to incorporate urban parks such as Golden Gate National Recreation Area in San Francisco and Gateway National Recreation Area in New York and New Jersey. Provision of adequate funds for such additions to the System, together with additions like Big Cypress, north of Everglades Park, and adjacent lands near Redwood National Park will be essential if the shift of focus to urban parks is not to impair the expansion of the natural area park system.

Part of the responsibility of the NPCA runs to the historic parks in the System and the established protective arrangements for national historic sites. In general the environmental movement has paid far too little attention to the historical heritage. The National Park Centennial and the forthcoming Bicentennial celebrations add significance to this aspect of our work.

The Members are familiar with the role of the NPCA in alerting the conservation movement to the threat of construction of a giant jetport in the Everglades country by editorial in January 1969, and in the development of the Everglades Coalition, which was decisive in stopping the jetport. The members are also familiar with the role played by the NPCA on invitation in obtaining a legislative guarantee of the delivery of water from Lake Okeechobee to the Park; also with the work of the Environmental Coalition for North America, of which the President of the NPCA is Chairman, in supporting efforts to protect Big Cypress Swamp, source of water to the western side of Everglades National Park against drainage and development.

It begins to look as if the combined efforts of the environmental movement, including the United Auto Workers and United Steelworkers, may soon succeed in getting guarantees of permanent protection of Everglades National Park for the benefit of the people of Florida and America. We regard this as a signal achievement, in which the NPCA made a major contribution to the protection of a vital unit of the National Park System.

The success by conservationists in getting a Redwood National Park established has not guaranteed protection of the Park, nor of park-quality areas of the Coast Redwood Forest. The new areas protected by the legislation establishing the Park were much too small; the NPCA had recommended, on invitation, that much larger areas be included; our proposals were more comprehensive than those of any other organization. Fortunately, the law authorized National Park Service to acquire protective interests in lands near the Park and on watersheds affecting the Park. This power, however, has not been exercised effectively, and heavy and destructive cutting has been occurring at a number of places, including the Redwoods Creek watershed.

Conservationists, including the NPCA, have been demanding of the National Park Service and the Department of Interior that they exercise this authority conferred by the law to protect the new Park. As we write, studies are being expedited by Interior to determine the extent of damage; the acquisition of temporary leaseholds or suits for injunctions to stop destructive cutting may be the remedies.

The truth is that the entire northern portion of the Coast Redwood Forest drains through and affects the Park; public measures to get ecological methods of timber cutting in the non-park areas appear to be imperative. If the destructive logging operators insist on pursuing their avaricious policies in violation of the public interest, they may find all their operations in the northern portion of the Forest coming under severe regulation. The NPCA will support Executive Branch measures looking toward that result.

THE NPCA HAS TAKEN A LONG STEP forward since the last report to the general membership in establishing a socioecological forestry program and the appointment of a professional forester to its staff to manage the program.

In an era of rampant clearcutting, accompanied by great ecological damage to timberlands, and requiring in many cases the use of aerial reseeding and widespread employment of herbicides and rodenticides, with consequent serious wildlife damage, it is important to show that forests can be managed by less destructive methods, indeed by silvicultural techniques which may improve stands which have been cut destructively in the past.

By socioecological forestry we mean the use of silvicultural methods which preserve the forest, micro-climate, water courses, water tables, vegetation, wildlife, recreation and scenic resources, and the timber stand itself, while permitting the production of wood and wood products commercially.

A basic presupposition of the socioecological approach to forestry is that methods are available, such as individual tree selection, group selection, small-patch clearcutting, and shelterwood, as contrasted with large-block clearcutting, which can accomplish all these purposes simultaneously. We hope to provide examples of specific situations showing that prevailing practices could be changed.

Basic to the case of clearcutting is the perennial argument that good silviculture is uneconomic; by which is meant unprofitable. But by placing a floor under good silviculture by regulation or other methods, putting good forestry on a fair competitive basis with cut-out and get-out operators, good silviculture, where it is not already so, could be made economic.

Against this background, as this report is written, the NPCA is completing a study of a successful group-selection operation in the Central Hardwoods region of southern Illinois, and another study of an individual tree selection operation in the Northern Hardwoods region in Michigan. These studies will show mainly that harvesting can in fact be done by these methods. The basic studies will be published in reports and summarized in articles in our Magazine.

Collateral studies of the economics of these or comparable operations will be developed in due course. Particular attention will be given to the problem of the ecological harvesting of *Sequoia sempervirens*; group selection will be explored in Douglas-fir; Ponderosa pine and Southern softwoods will also be examined.

The forestry program of the NPCA, hopefully, will also encompass support for seed banks, involving all types of plants, to forestall extinctions on a worldwide basis; also efforts to get plantations of American chestnuts going for the long-term natural upbreeding of these species as an invaluable forest tree.

The ecological forestry program is an essential component of the regional planning approach for the protection of the national parks. If good natural-type automobile and trailer campgrounds are to be provided for the public outside of the national parks, the forests must be managed in such a way as to preserve their recreational and scenic assets while being managed.

A LSO, AS A NEW DEVELOPMENT since the last report to the general membership, the NPCA has established a wildlife department and has employed a professional wildlife specialist for that purpose.

The national parks are among the finest of our wildlife refuges. Any monitoring of the work of the National Park Service by private nonprofit public-interest organizations like the NPCA must include attention to NPS policies with respect to wildlife in the parks.

But the wildlife problems of the national forests are also closely

interlinked with the socioecological harvesting of the forests. And the integrity of the national wildlife refuge system has always been a matter of profound concern to all conservationists.

One of the greatest dangers to wildlife in the United States and around the world has been the irresponsible use of pesticides. The NPCA has been grappling with this problem with increasing success over a long period of years. Widespread concern with the issue among environmentalists has at last resulted in restrictions being placed on the abuse of these chemicals; these restraints must be tightened further. Our work in this field is the operating responsibility of our wildlife specialist.

Efforts by environmentalists to stop the poisoning of wildlife on federal public lands, and by federal public agencies, in which the NPCA has played a major role, have at long last been crowned with success by decision of the President of the United States. Further efforts to follow up on these victories and get other methods of control into effect where justified will continue.

Among recent international conventions, originally proposed for signature at the forthcoming United Nations Conference on the Human Environment in June 1972, has been one regulating commerce in endangered species and their products. The President of the Association serves on an Advisory Committee to the Secretary of State on Wildlife. The NPCA has taken the position, on invitation, that the proposed convention should be greatly strengthened; and other conservation organizations concur. Closely related are three additional proposed conventions, on the world heritage, on wetlands, and on islands for science; all of them have wildlife implications, although not necessarily limited to this question; in all cases we proposed that they be strengthened.

Worldwide agreements of this kind are of great importance if many invaluable species of animals are to be saved from extinction during the next few decades. Strong world institutions must be established to rescue them. The ecological underpinnings of the planet, including those of human life, are at stake. The time for action is short.

We make use of The Environmental Journal, National Parks and Conservation Magazine, on a systematic basis for these purposes. Each issue carries an article, with special insignia, on one or another of the endangered species, and we try to indicate to our readers what they can do about it individually.

Our contribution turns in considerable part around our expertise in relations with the Executive Branch of Government. We hope that practical solutions can be found to the survival problems on a case by case basis. We plan to concentrate on survival problems with the thought that there is more time for the solution of other issues.

The Long-drawn-out conflict over the management of our great river basins, or what remains of their natural streams and rivers, continues. The balance is shifting, albeit slowly, nonetheless surely, toward ecological management. This means it is shifting away from the big dam as the central concept of management and toward the protection of life in the stream valleys as fundamental.

Briefly, all the old imputed purposes for big reservoirs are now out-of-date: flood control, hydro-power, irrigation, navigation, recreation, pollution abatement. The damage that these structures often do to ecological systems and human communities, as the Aswan Dam in Egypt shows, is now better understood. Attention will be focused in the future on flood-plain protection against settlement, water purification, and local storage for water supply, alternative energy sources, and the protection of natural stream valleys for recreation. The NPCA has argued for this kind of shift of basic values for many years; a widespread consensus now appears to be emerging along these lines.

Many shifts of agency structure and functions can be visualized, most of which can be accomplished by executive order. The Army Engineers may be civilianized; their functions may be shifted from dam building to pollution prevention; or all of their functions may be transferred to the Environmental Protection Agency. Many people think that the Bureau of Reclamation may be terminated; it should be integrated with river basin management operations which have the valley ecosystems and human communities more clearly in mind.

One decisive shift is from big reservoir storage for the dilution of pollution and for water supply to spray irrigation and other tertiary treatment measures for municipal pollution, and toward prohibition of industrial pollution at source. The Environmental Protection Agency has developed important programs; stronger measures have been incorporated in legislation presented in Congress. The NPCA supports the strongest possible Executive Branch decisions in these matters, and where invited, testifies in favor of strong and effective legislation.

Closely related are the grave problems of atmospheric pollution with which the Nation is confronted. Air pollution by the internal combustion engine is helping to make our large cities uninhabitable rapidly. We have serious doubts about any of the methods which have been proposed thus far to emeliorate this situation. The complete transformation or abolition of the internal combustion engine would seem to be necessary, and rapidly. The reduction of private car traffic in the big cities by good mass transportation systems will also be necessary.

That the world is passing through an environmental crisis, which is indeed a crisis of life as a whole, can hardly be doubted any longer.

For at least a quarter of a century, leading historians, economists, ecologists, demographers, psychiatrists, have been warning that the present course of civilization is leading toward major disaster. Computer confirmation of these predictions has now been provided by studies at the Massachusetts Institute of Technology. One may quarrel with details of the models employed, but the general result is clear enough, and farsighted observers have been saying the same thing for a long time.

The various components of the crisis can theoretically be dealt with severally to a certain extent. More food can be produced by the methods of the Green Revolution, but at heavy costs in pollution by excess fertilization and hard pesticides. A shift can theoretically be managed from hard to soft pesticides and to biological or integrated controls, but whether it can be accomplished in time in practice is another matter. Industrialization is offered as a means of raising living standards around the world, but the necessary capital flows into heavy current consumption, and the rate of population increase parallels or exceeds capital investment. Industrialization is accompanied by dangerous pollution; industrialization for the mitigation of pollution can be attempted, but the result may be only partially successful. The energy demands of the industrialized countries are enormous, and rapidly increasing, and most of the solutions will be accompanied by dangerous pollution of one kind or another. The population problem underlies all of the economic problems; the per capita factor compounds every

Small wonder that the studies and reports which are accumulating, most of which point in the same direction, emphasize the fundamental nature of the population explosion and the imperative need to bring it under control.

The report of the Commission on Population Growth and the American Future, appointed two years ago by President Nixon, has urged that this Nation stabilize its population. If families average two children, there will be 350 million Americans within another 100 years; a three-child average will produce nearly a billion people, and the quality of life for everyone will be gravely impaired.

The NPCA has recommended an ethical standard of not more than two children. The adoption of such a standard would have to be voluntary and free from any class, ethnic, or national overtones. A declaration of governmental policy along these lines would be in order, and fiscal encouragement, such as tax credits, can easily be imagined. It is clear that government policy now moves in the direction of substantial public assistance in terms of services, materials, education, clinics, and the like. There is a very strong tide moving in this direction, because large numbers of people have come to realize that the population explosion has been threatening both the quantity of material goods available and the quality of life for everyone.

The general adoption of a standard of not more than two would result in a gradual reduction of population over a long period of time. The result would be a general reduction in social tensions, in economic pressures, in bureaucratic controls, in crowding, traffic, and pollution, and in pressures on resources, natural areas, cultural and historic treasures, and living space. Available resources could be devoted to educational and cultural activities which must be neglected if emphasis must be placed constantly on expansion of economic production to keep up with the explosive growth in population.

The problems and programs with which environmentalists must deal increasingly in the future have broad international aspects.

The significance of the National Park System has always been international. No sooner had a number of national parks been established in the United States than the idea began to spread abroad. With the firm establishment of the National Park System in America this international movement took on a very significant character.

The national park idea spread rapidly in Africa where it was essential to get a measure of protection for the big ungulate herds and dependent species of great cats.

All over Latin America beautiful national parks and equivalent reserves have been flowering; in Europe the problem has in some ways been more difficult because of the established settlements; throughout Asia and Australasia the idea has also spread.

The International Union for the Conservation of Nature, of which the NPCA has been a charter member from the beginning, has been one of the principal organizations working for the establishment of many national parks in other countries. Its General Assembly will meet at Banff National Park, Alberta, Canada, in September of this year, and the NPCA, as always, will be represented in its deliberations.

The Second World Conference on National Parks, which will be held at Yellowstone National Park in September will also be an event of worldwide significance. The NPCA participated prominently in the deliberations of the First World Conference on National Parks in 1962, and hopes to play a comparable role in the current Conference.

The UN Conference on the Human Environment will take place in Stockholm, Sweden, during the first two weeks in June of this year. The NPCA has been accorded official status as an observer at the Conference. It has submitted to UN Under Secretary-General Strong, who is directing the work of the Conference, recommendations with respect to permanent institutions in the United Nations structure which might be hoped for as a result of the Conference. It maintains close consultative relationships with the Assistant to the Secretary of State, Christian A. Herter, Jr., who is in charge of preparations on behalf of the United States.

The next year there will be the UN Conference on the Law of the Sea. Two years ago President Nixon proposed the establishment of a world Authority to license and regulate the extraction of minerals from the seabeds; the U.S. submitted a draft treaty to the United Nations Seabeds Committee a few months later. The President of NPCA serves on the Advisory Committee to the Secretary of State on the Law of the Sea. He has recommended that the President's original proposals be adhered to and strengthened.

During the second following year, the United Nations Conference on Population will take place. By that time the U.S. will

have had an opportunity to consider the proposals of the President's Commission on Population Growth. It seems possible that realistic proposals can be advanced at the Conference for world action to get the explosive growth in human numbers under control.

As our members know, the NPCA is almost entirely dependent financially on the dues, contributions, and bequests of its individual members for its operations. These resources are supplemented to a limited extent by relatively small grants from foundations. Our members are generous with their assistance in the form of increases in dues levels and responses to our semi-annual drives for additional contributions; everyone should understand how greatly this assistance is appreciated, for without it we could not keep on growing.

We hope, however, to increase the number of small grants received from foundations, with a view to financing existing programs and establishing others. It would also be desirable to enlarge our capital reserves with a view to more financial income and greater stability.

The membership of the NPCA has grown five-fold in a little more than a dozen years; its income and capital have grown ten-fold. We think these developments reflect not only a greater awareness of environmental problems on the part of the public, but the success of the NPCA in meeting the needs of its members for information and participation in constructive activity.

The NPCA maintains a network of correspondents throughout the United States and abroad, consisting of members who are interested in local or special problems, or have special expertise, and are willing to correspond with NPCA and represent it occasionally at hearings or other events in their own areas.

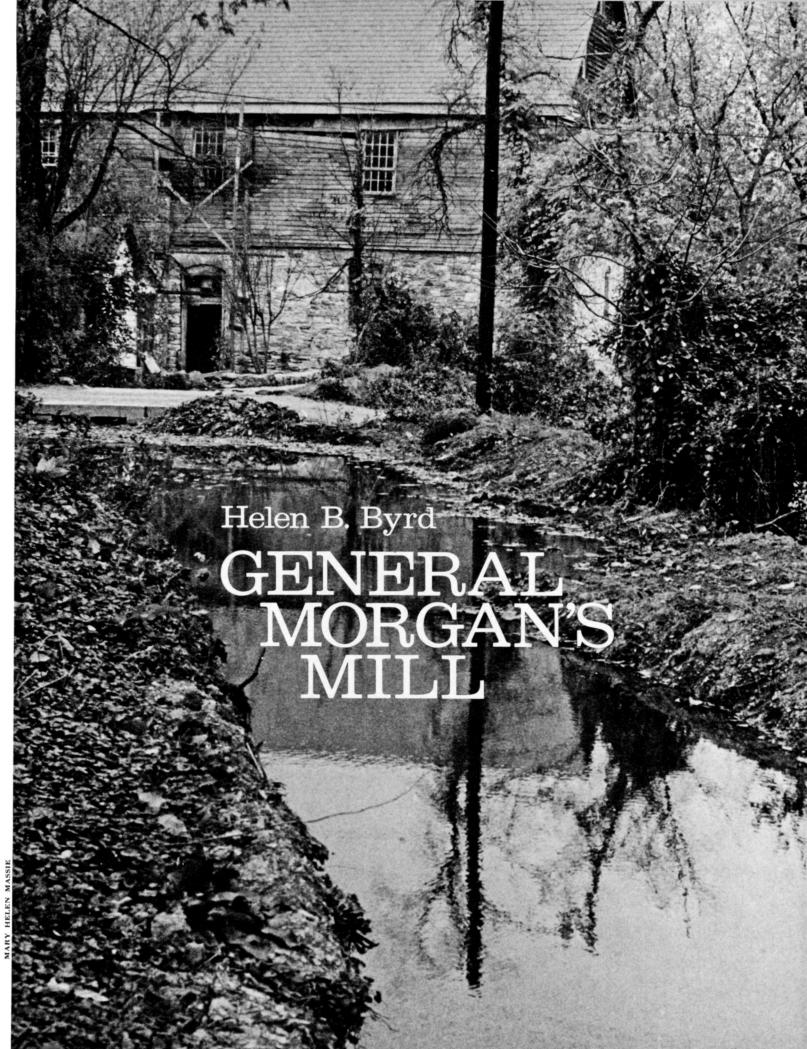
Direct working relationships with agencies of the Executive Branch of the Government are the main focus of our attention. We engage also in legal proceedings in court with respect to issues of vital importance in our sphere. On occasion, when invited officially by Congressional committees, we testify with respect to pending legislative matters, and report thereafter to our membership.

Environmental litigation and administrative proceedings in which the NPCA has engaged recently included injunction proceedings against the atomic explosion at Amchitka, Alaska; proceedings to halt the drainage of Gum Slough north of Everglades Park; a petition before the Interstate Commerce Commission to eliminate discriminatory railroad rates against recycled material; a petition before the Environmental Protection Agency to suspend the registration of certain poisons used in predator and pest control; proceedings against the Park Service to secure financial statements of concessioners in national parks; and proceedings before the Federal Power Commission concerning the environmental impacts of the Storm King Power Plant.

We participate in the organization of combinations of environmental organizations such as the successful Everglades Coalition. The President of the Association serves in his individual capacity as Chairman of the Environmental Coalition for North America and General Counsel to the Citizens Permanent Conference on the Potomac River Basin.

The strong right arm of the NPCA is the National Parks and Conservation Magazine, The Environmental Journal. The Magazine carries at least one major article on the national parks every month. It carries at least one major article on endangered wildlife. It reports on the work of the NPCA, significant conservation news, and forthcoming events in which readers may be interested and in which they may wish to take part. Members can help the NPCA by calling the Magazine to the attention of friends and getting additional memberships.

If only by maintaining membership in the NPCA, and certainly by additional contributions of time and money, each individual member can feel that he is playing an important part in the vitally significant environmental movement.



Camp on Cain Creek on Pedee January 19, 1781

Dear Sir,

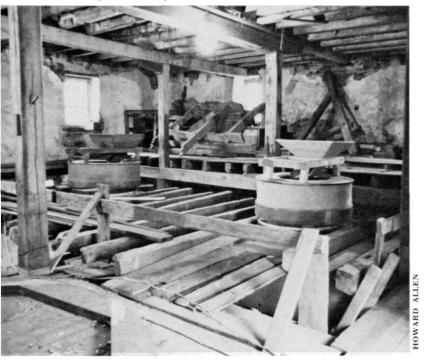
The troops I have the honor to command have gained a complete victory over a detachment from the British Army commanded by Lieut. Col. Tarleton. It happened on the 17th. inst. about sunrise, at a place called Cowpens, near Pacolet river. . . .

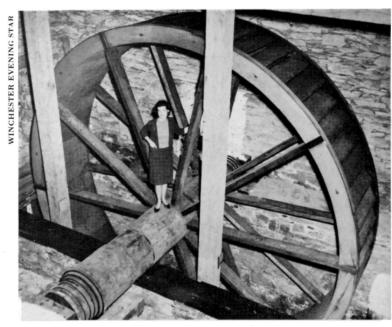
So wrote General Dan Morgan in an official report to General Greene after his great victory at Cowpens that was a turning point in this country's fight for independence. It changed the southern campaign from defeat to victory and elevated the morale of the colonial cause. Lord Cornwallis led his superior force in his second North Carolina invasion, which ended in surrender and the termination of the Revolutionary War at Yorktown in October 1781.

Dan Morgan returned to his home in Clarke County, Virginia, and in 1782 started to build the great mill in Millwood with the financial assistance of his friend and partner, Colonel Nathaniel Burwell of "Carter's Grove." For his labor force Morgan used Hessian prisoners quartered outside of Winchester who had been captured during the battle of Saratoga. Among these men whom he employed to build the mill were skilled stone masons.

The mill itself is an outstanding example of eighteenth century architecture and technology. It is located on Spout Run, a stream fed by six great limestone springs (or spouts, as they were then called). A site was chosen for the log

Mill equipment in 1967 during restoration. The wheat stone and the corn stone, each with their hoop, cradle, shoe, and hopper in place on their bed sills atop the husk-frame rebuilt from the Jackson mill husk-frame timbers. The original crane is upside-down against the south wall.





The author stands beside the great waterwheel, twenty feet across.

dam two thousand feet from the mill above a twelve-foot waterfall. The water was diverted down the millrace, which wound its way through the little town of Millwood. The mill was unusual in that the waterwheel was inside the building. The wheel measured twenty feet in diameter, and its buckets were filled at the top from a flume that ran into the mill on the southwest side.

Although the mill ground corn and wheat for the local people, the bulk of the wheat flour was hauled by wagon to Alexandria, Virginia, or floated down the Shenandoah River by raft and boat to Harpers Ferry, West Virginia, for shipment down the C&O canal to Georgetown. Then it was loaded into sailing ships bound for the West Indies.

The original millstones were of solid stone. After the War Between the States they were replaced by composite millstones imported from France (now reinstalled in the mill). The mill was in continuous operation from 1784 until 1943, when the collapse of the southwest corner of the building upon the sluice and waterwheel forced abandonment of operations.

The fate of most old grist mills in the Shenandoah Valley was neglect and abandonment. This once-thriving industry, which provided the staff of life for rich and poor, disappeared from the American scene when modern technology came along.

In 1964 The Clarke County Historical Association rescued the Burwell-Morgan Mill from such a fate. Realizing its historic significance as an industry as well as a landmark, they decided to take it on as a project. To restore the mill to an operating museum it was necessary to purchase the surrounding land, which included the miller's house. Funds were raised locally, and restoration was begun.

The building was in deplorable condition: the whole structure needed shoring up; new footings were needed for the upright pillars; the foundation walls were weakened by dampness; the roof was bowed; half the slate shingles were gone, letting the weather take its toll of the interior floors and beams; the east wall had been torn out to allow a tractor to be stored in the ground floor; the windows were rotted and most of the glass broken; the clapboards were loose and broken.

As for the milling equipment, the milldam had washed out; the head race was no longer used and had been filled in with dirt, broken bottles, beer cans, and other trash. The water no longer flowed to the great wheel, the spillway was gone, the flume was gone, the wheel pit was full of trash and debris, the tailrace culvert was packed with bluestone washed off the highway. The iron propulsion gears installed in 1876 had been sold for scrap in 1945. The mill machinery was out of line and partly broken. It was a discouraging outlook.

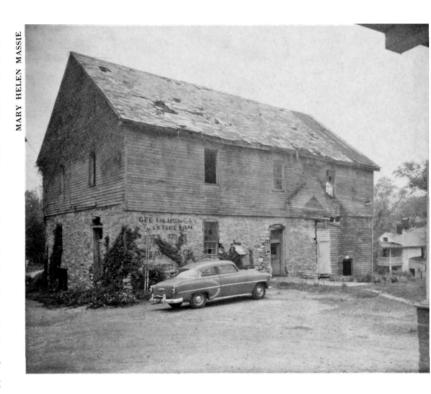
It was the farsighted few in the beginning that gave direction and purpose to the mill restoration. A committee was formed that had the following objectives:

- A. To establish a memorial to General Dan Morgan and to Colonel Nathaniel Burwell.
- B. To preserve a fine building, the craftsmanship of our forefathers, and an industry that had existed since shortly after the American Revolution.
- C. To restore an atmosphere, a cachet, a center of activities, and a place of beauty, as well as a flowing millrace for the village of Millwood.
- D. To promote tourism and visitors for Clarke County.
- E. To add a prosperous enterprise to the neighborhood economy.

To enumerate the steps taken to restore the mill and its machinery, to open the millrace, and to raise the needed funds is too detailed for this article. Suffice to say we reached our goal by taking it step by step over a period of seven years. There were moments of great excitement when we were given original wooden gears from another mill of the same period that, reassembled, fit our mill perfectly; and when original mill account books and Colonel Burwell's personal account book were found in a niche in a fireplace at General Morgan's home, "Saratoga," while renovating the old kitchen house.

The Burwell-Morgan Mill was dedicated on July 11, 1971, by the National Park Service director, George Hartzog. It is a registered Virginia landmark and is on the National Register of Historic Places. The Garden Club of Virginia voted to landscape the mill as its project for Historic Garden Week this spring.

There is much to be done, but with the bicentennial of the American Revolution only four years away, the importance and significance of the mill will increase. In many ways Dan Morgan was truly an American hero. Without the advantages of aristocratic birth and a formal education he elevated himself from a lowly waggoner to one of Washington's most valued generals. He perfectly exemplified the American frontiersman and patriot. His strong body and flexible mind, coupled with an indomitable spirit and strength of purpose, gained him first recognition and eventually greatness. The fact that such a man as Dan Morgan built the mill in Millwood gives the structure a value far beyond its four walls. It stands as silent testimony to the ability and resourcefulness of the frontiersmen who, through great personal courage, forged a new way of life on this primitive continent.



The Burwell-Morgan Mill before and after restoration.



Mrs. Richard E. Byrd has been president of The Clarke County Historical Association for the past twelve years. She is chairman of the Restoration Committee of the Burwell-Morgan Mill, and it was through her leadership that the project was started. Mrs. Byrd is special assistant to the president of The National Trust for Historic Preservation and a member of the Board of Trustees of NPCA.

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Hugo Correa Luna EL PALMAR A NEW ARGENTINE PARK

photographs by Maria Buchinger

A few miles north of Buenos Aires, capital city of Argentina, two of the nation's great rivers converge to become the broad Rio de la Plata, which carries their waters to the open South Atlantic. The two rivers are the Rio Uruguay and the Rio Paraná; and between them, in their courses south, lies the Province of Entre Ríos—in English, the Province between the Rivers.

On the eastern side of the province the Rio Uruguay forms the boundary between Argentina and Uruguay. On the western bank of the river, some 240 miles north of Buenos Aires, Argentina recently has created a national park whose primary purpose is to protect a native species of palm that, until about the turn of the twentieth century, was a common tree of the region. Originally, the natural habitat of the palm, Syagrus yatay, extended north to Paraguay and east into some areas of Brazil and Uruguay. But in spite of the abundance of seed produced by the palm and its ease of germination, agriculture and grazing have taken such a toll that the palms of new El Palmar National Park may well represent the last major nucleus of a once great plant community.

The first studies and recommendations for creation of El Palmar were made more than twenty-five years ago. Its establishment actually was authorized by national law in 1965; but only by May of 1971 could an initial 12,350 acres be acquired and a functioning park be assured. The ultimate goal at El Palmar is a reserve of about 21,000 acres. It is the first Argentine national park to be located relatively close to some of the great cities of the nation. Paraná is 223 miles to the west, and Buenos Aires is about the same distance south. Conceptión and Colón are 56 and 34 miles south, and Concordia 37 miles to the north.

Predominant in the rolling landscape of the new park, which is crossed by a number of creeks running from the west into the Rio Uruguay, is *Syagrus*, an attractive palm that in maturity may be some forty feet tall with a trunk diameter of fifteen or sixteen inches, topped by beautiful

Ingeniero Agronomo Hugo Correa Luna is chief of the Department of Conservation of Nature in the Argentine National Park Service. The department is principally responsible for ecological studies, research, and interpretation within existing and proposed Argentine parks. Ing. Correa Luna began his career with the Argentine Park Service in 1947 as assistant superintendent of Iguazu National Park.





Prior to the halting of grazing in this palm forest a century ago there was no regeneration of trees, so the mature trees in this photograph are all over 100 years of age. The young palms in the foreground have begun growth since the park was established.

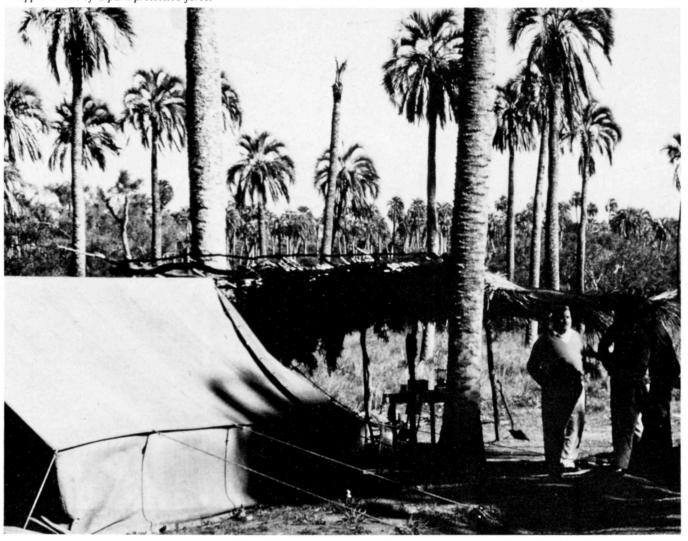
six-foot fronds. It is interesting that a lower limit to the age of the mature palms of the park can easily be set. At the time the park was established in 1971 it had been precisely 100 years since cattle grazing had commenced in the area. Until a halt to grazing was called, young palms were rare; and the scene was dominated almost entirely by an even-aged stand. However, even over the short span since protection began many seedlings have made their appearance, and reestablishment of a climax vegetation in the park has begun.

In restoring the palm forest in this park the Argentine Park Service may need to deal in places with the *espinillo*, a small tree of the acacia family bearing clusters of aromatic yellow flowers. The tree is a lover of sunny, open habitat and has tended to invade areas of the palm forest destroyed in the past by man and his animals. Because of former heavy grazing the tree was not able to make much headway, but with this activity eliminated it will be

free to flourish at the expense of natural regeneration of *Syagrus*. The Park Service is considering intervening to assist in recuperation of the palms where necessary.

The soil of the lowlands in El Palmar seems unsuitable to palm growth. There, along with the espinillo, grow other trees of the andino-patagonic forest—the coronillo, barba de tigre, and various lesser species. Creek banks support a dense growth of forest trees. In addition to those just mentioned are several representatives of the myrtle family of trees and shrubs so widely distributed in the southern hemisphere and the increisa, mata ajos, and blanquillo. A thorny vine of the genus Smilax—relative of the well-known greenbriar of eastern North America—is abundant in the moister places. Protection of these moisture-loving trees and plants will be given special attention, because the areas in which they grow frequently have been used in the past as campsites and picnic spots, and a certain amount of physical damage has been done.

The superintendent of El Palmar Park greets visitors in front of his primitive administration office. The only roads in the park are gravel surfaced, and the park administration intends to keep it that way. There are no visitor facilities within the park, but picnicking is allowed. Under such protection animal life is beginning to return to the area. Argentinians in the immediate vicinity of the park are proud of the preservation. No fee is charged for admission. Protection is afforded by the provincial police at present pending appointment of a park protective force.

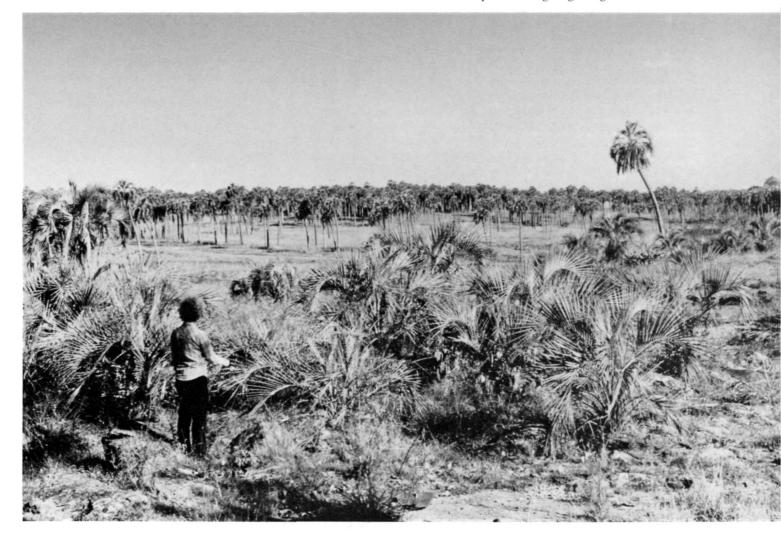


Great predators like the jaguar and puma disappeared from this region many years ago, but there are numerous other mammals of interest to be seen in the park. In the drier parts of the preserve are foxes and the plains vizcadia—large representative of the chinchilla family—whereas along the waterways one may see the capybara, that largest of the rodents which, in full growth, may be four feet long and weigh one hundred pounds. There is the nutria, with its bright orange incisor teeth, and the freshwater otter. Parrots are most abundant among the many birds of the park, of which the largest by far is the rhea, now a rather uncommon ostrichlike bird of the Argentine plains.

There are no visitor facilities in El Palmar, although camping and picnicking are allowed; and there is no admission charge to the park. Park roads are gravel surfaced and will be kept that way. Until a ranger force can be appointed, protective work is the responsibility of the provincial police. The park is carefully and sympathetically managed by a superintendent who has, perhaps, more than an ordinary interest in his work. The new park, El Palmar, was the locale of his boyhood home!



A view of the palm forest shows the nature of the terrain and regeneration of palm trees. Gravel mining operations were carried on in the area before it became a park, and the scars are still evident. These spoil banks will be allowed to revert to natural cover with no attempt at leveling or grading.



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NPCA at work

Assateague pier plan Plans of the Army Engineers for a 1,760-foot concrete pier in the central portion of Assateague Island National Seashore on the Maryland coast, known to environmentalists and the general public only during the recent past, now have been dropped. The pier, with a six-mile access road from the northern end of the seashore, was to have been used by the Engineers for research into the erosional effects of ocean waves on sandy coastlines. Location of the proposed pier and access road

is shown on the accompanying map. Length of pier is not in scale with map features.



Surfacing of the pier plan, for which the Engineers apparently have held an Interior Department permit since 1968, brought an immediate and intense reaction from a coalition of groups interested in the protection of Assateague Seashore-NPCA, the Citizens Committee on Natural Resources, the Committee to Preserve Assateague, and other organizations and individuals. NPCA, with a long-time interest in protecting the seashore in a natural condition, immediately got in touch with

the Interior Department and demanded that the Engineers' permit for construction of the pier be canceled. Shortly thereafter the National Park Service exercised its authority and revoked the permit. For the Engineers, the decision to abandon plans for the pier was announced by acting Chief of Engineers Maj. Gen. Frank Koisch, who indicated that an attempt would be made to find a suitable site elsewhere.

Trans-Alaska pipeline On March 20 the Department of the Interior made public its final environmental impact statement on the proposed oil pipeline in Alaska from Prudhoe Bay to Valdez. According to the Department, no action would be taken on oil company applications to construct for a period of at least forty-five days from the time of release of the final environmental impact statement. The statement was contained in six large volumes, plus an additional three volumes covering economic and security aspects of the pipeline.

At the news conference in Washington at which the impact statement was made public, Dr. William T. Pecora, Under Secretary of the Interior, stated that no further public hearings on the matter would be necessary, since there had already been "ample opportunity for substantive comment" before issuance of the final statement. He also indicated the Department's feeling that a public hearing on the final statement "would be a circus."

On March 22, NPCA President A. W. Smith sent President Nixon the following telegram:

"Trans-Alaska pipeline question of paramount importance

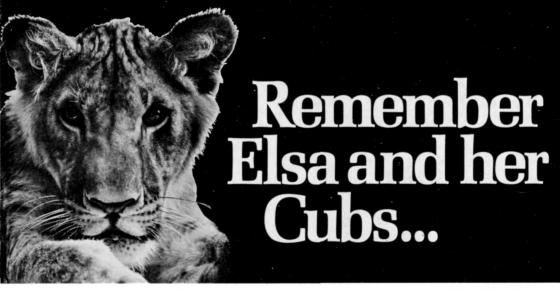
to American people. Urge you instruct Council on Environmental Quality to hold public hearings on 90 days' notice on impact statement released by Interior Department. Under Secretary Pecora's statement that public hearings would be a circus is in conflict with American democratic tradition. Public should have ample opportunity to study lengthy impact report with supplements and obtain expert advice. Thereafter it should have ample opportunity to express its views orally and in writing to an impartial agency. Interior is not entitled to sit as judge and jury in its own case. The merits of alternative routes such as Mackenzie as against Valdez should be examined in the light of full public information and discussion in a sincere effort to serve the true interests of the American nation."

Concessions management In early March NPCA filed suit under the Freedom of Information Act seeking records indicating how the National Park Service operates its concessions management program. The suit, filed with the U.S. District Court for the District of Columbia, came after attempts by NPCA to get the Service to voluntarily release such data concerning five concessioners. The Interior Department and its secretary, Rogers C. B. Morton, and Director George B. Hartzog, Jr., of the Park Service were named as defendants. The suit was filed by the Institute for Public Interest Representation (INSPIRE) at Georgetown University Law Center. INSPIRE undertook a study of the Service's concessions management program at NPCA's request to determine to what extent existing concessions programs meet stated objectives of the Service and the needs of park visitors; what Service concessioner reviewal processes are, what standards are followed, how much the concessioners make and how much they put back into their operations.

The complaint alleges that INSPIRE twice has been denied access to the desired information by the Service, and that an administrative appeal filed in late 1971 with the Interior Department has not been answered. "We disagree with the Park Service's contention that the financial records of its concessioners are sacrosanct and not subject to public scrutiny," said Richard B. Wolf, deputy director of INSPIRE, "and we feel the Service's inordinate delay in answering our requests constitutes a violation of the spirit of the Freedom of Information Act, which calls for prompt disclosure."

ICC petition As reported in the March magazine, NPCA has petitioned the Interstate Commerce Committee to block further increases in railroad freight tariffs on the grounds that the ICC failed to comply with requirements of the National Environmental Policy Act in fixing the cost of transportation of recyclable materials such as scrap iron and steel at more than twice the rate of raw materials, thus reducing their marketplace competitiveness with primary natural resources. ICC recently has responded to the petition by submitting an environmental impact state-

Continued on page 32



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ment on the freight rate increase matter. NPCA now is analyzing the statement, evaluating its adequacy, and preparing comments pertinent to it.

Energy hearings The Senate Commerce Committee recently held public hearings in Washington on a proposed amendment to the Powerplant Siting Act of 1971 which would create a five-member federal board to carry out an energy research and development program. The board would be directed to research and develop "improved means of production, transmission, distribution and consumption of electric energy with minimum impact on the environment."

Testifying on the proposed amendment on invitation for NPCA, the Environmental Policy Center, and Friends of the Earth was Wilson Clark, energy policy coordinator for the Environmental Policy Center. Mr. Clark characterized current federal and private research and development programs in cleaner forms of energy as "dismal," and said that for the most part federal agencies and private industry have not shown the necessary interest in developing more efficient energy technologies and sources, including solar energy, the fuel cell, magnetohydrodynamic energy production, fusion, and others.

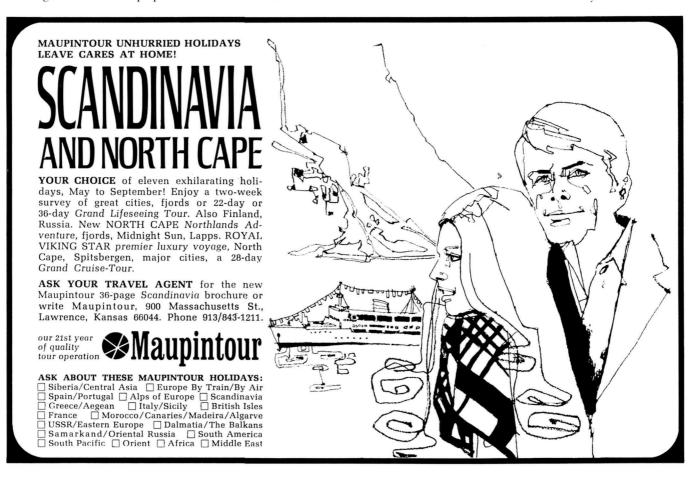
Indicating the general support of all three organizations for the proposed amendment, Mr. Clark suggested that among other ways in which the measure could be strengthened, there might be a more generous allocation of funds for investigation of "adverse social, environmental or economic effects of proposed or present technologies." He also expressed his hope that special attention might be given the "number one" national energy priority—development of ways and means to "level the load" of electric utilities so that future power plants can be built to meet 24-hour needs and not just peaking needs.

Gulf Islands Seashore During mid-March the National Parks and Recreation Subcommittee of the House had under consideration an amendment to the public law establishing the Gulf Islands National Seashore off the coasts of Florida and Mississippi. The amendment would provide for public acceptance of a Mississippi offer to donate Magnolia State Park as part of the national seashore, and would provide the Park Service with additional funds for development and maintenance of the enlarged seashore.

In response to an invitation to present its views on the matter NPCA testified that in its opinion the state park offer ought to be accepted. It pointed out that the additional funds needed as a consequence might not be as large as anticipated, since the donation would relieve the Park Service of the need for acquiring certain private lands for the seashore. NPCA suggested that the organic act for the seashore might be further amended by making the Gulf Islands National Seashore Advisory Committee a permanent body (it was originally established for a ten-year period) so that the committee could continuously review the area's ever-changing pattern of visitor use and needs.

Padre Island lease Among several problems that remain to be dealt with at Padre Island National Seashore on the Texas coast are those of leased private properties and squatter cabins that have been erected on artificial lands created by dredging and cleaning in the Intracoastal Waterway by the Army Engineers, who are charged with maintenance of the waterway. These latter lands, which actually are spoil banks, eventually become valuable nesting, roosting, and resting habitat for many species of waterbirds, including a number currently carried on the list of endangered species. As squatters move in to build fishing shacks, the birds move out.

Another issue at Padre Island concerns the phasing out of private structures in the seashore that are under lease with the National Park Service. One such holding, a private cabin in Tract 12 of the seashore, currently is up for lease renewal with the Service. NPCA recently has written the



Service urging that the lease, which runs for a five-year period, not be renewed. It was pointed out that renewal would not be in the public interest, that occupants of the cabin originally understood that the parcel of land was eventually to become part of the seashore, and that they had had a number of years in which to phase out their involvement. Renewal of the lease, said NPCA, would make it virtually impossible for the Service not to renew other existing leases in the seashore.

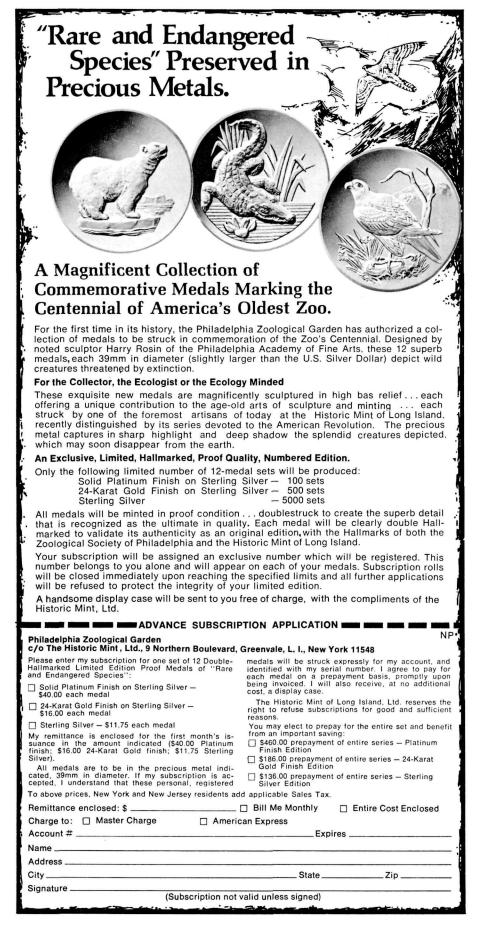
Solar energy The fourth and final lecture of NPCA's Conservation Education Center series for spring 1972 will deal with one phase of a matter currently much in the public mind-that of the generation of "clean" energy. Wilson Clark, staff researcher for the John Muir Institute in Washington, D.C., and associate editor of Energy Digest, will canvass the feasibility of solar energy as a source of clean power-a source which, incidentally, has so far been largely ignored in official planning. Date of the lecture is May 19; the time, 8 p.m., at the auditorium of the Smithsonian Institution's Museum of Natural History in Washington. All members of NPCA in a position to attend, and all members of the general public, are invited. There is no admission charge.

Rockefeller Parkway Currently there are several measures before Congress that would create a John D. Rockefeller Memorial Parkway out of existing roads in and between Yellowstone and Grand Teton national parks and establish a national recreation area on lands between the two parks.

On invitation, NPCA has submitted a statement to the House Subcommittee on National Parks and Recreation opposing the parkway and recreation area ideas. NPCA pointed out that both proposals could only aggravate an already severe seasonal traffic problem in the parks, and argued for rerouting of existing Highway 89 (which traverses both parks and which would be designated as a national parkway) so as to bypass the two preserves entirely, with suitable access to both. The use of private vehicles in the parks should then be discouraged, NPCA said, adding that public transit systems should replace the private vehicle altogether in both areas if visitation continues to increase.

Annual appeal NPCA's annual appeal to members for funds over and above yearly membership dues now is under way, and President A. W. Smith has pointed out the Association's special need at this time. In this, the centennial year of the national park idea, NPCA is intensifying its efforts to save the parks from commercialization and overdevelopment.

The National Park Service predicts that



more than 213 million people will visit the parks this year. Skyrocketing visitation poses a serious threat to the beauty and meaning of park system units through increasing automobile traffic, noise, pollution, litter, and danger to wildlife. This year especially NPCA considers it vital to push hard for a reversal of Service policies that favor commercial development in the parks and to inform the public of the growing threat.

NPCA is the only major conservation organization in the nation with park protection as a primary concern, and the effectiveness of its work is limited only by the funds at its disposal. Members are urged to respond as generously and as soon as possible so that NPCA efforts can be redoubled this year.

Predator poisons The Environmental Protection Agency has ordered a halt to interstate shipment of all pesticides registered for use in controlling predatory animals, and has banned interstate shipment of thallium sulphate, registered for rodent control but also widely used in predator control. Several months ago NPCA and a number of other environmental organizations had petitioned EPA for such action.

The agency also has initiated action for voluntary recall of stocks of the poisons from warehouses, dealers, ranchers, and farmers. Specifically, the EPA order canceled and suspended federal registrations for nineteen products based on the chemicals thallium sulphate, cyanide, strychnine, and sodium monofluoracetate (Compound 1080). Two additional poisons based on thallium sulphate had been suspended by EPA after the notorious Wyoming eagle-killing incident of last year.

What effect the cancellations may have on a massive fox poisoning program by strychnine that has been going on in Tennessee under auspices of that state's fish and game commission remains to be seen. Through Dr. John W. Grandy IV, NPCA's administrative assistant, wildlife, the Association has registered its vigorous opposition to an unnecessary, nonselective poisoning program. The commission's program seems also to look toward similar treatment for the state's coyote population. "If a true emergency exists," Dr. Grandy wrote the commission, "control by unselective methods may be the only way to solve it. However, absent such an emergency, the use of poisons such as strychnine is clearly unnecessary and excessively destructive to the environment. NPCA believes that the State of Tennessee should seriously evaluate more selective controls."

In his letter to the commission Dr. Grandy noted the increasing concern of Americans over predator poisoning, and cited the recent Executive Order on the matter as evidence of that concern.

conservation news

Predator control report In conjunction with the recent presidential message to the Congress on environmental matters, members should be aware that the Interior Department's Advisory Committee on Predator Control report has been released and is available to the public. Among other recommendations the committee urged a halt to poisoning of predatory wildlife, no predator control whatsoever on legally designated wilderness areas, and federalstate control of predators only with funds specifically appropriated by Congress and the states. The report is available from either the Bureau of Sport Fisheries and Wildlife, Department of the Interior, Washington, D.C. 20240, or the Council on Environmental Quality, 722 Jackson Place, N.W., Washington, D.C. 20006.

ENCONA statements Through its steering committee the Environmental Coalition of North America, nonprofit public service conservation organization headquartered in Washington, D.C., recently adopted statements on a number of current environmental issues.

Addressing threats and actual instances of industrial plant shutdowns blamed on financial requirements of environmental protection standards, the Coalition urged the Environmental Protection Agency to hold regular public hearings, by request of any concerned party, to explore the real reasons for plant shutdowns. In some cases, the statement explained, the existence of environmental protection standards becomes "a convenient pretext to justify a decision [to close a plant] already

made or impending." The statement said "the announcement that such course will be taken often may be used to urge resistance to environmental protection measures by businessmen and others in the affected communities. . . ." The Coalition recommended development of long-range measures within the American economic system to avoid imposition of hardships on employees and communities when environmental protection measures are taken.

In another statement the Coalition urged Secretary of the Interior Rogers C. B. Morton to examine thoroughly the Mackenzie River and other overland routes through Canada as alternatives to the trans-Alaska route of an oil pipeline from Prudhoe Bay. The statement said that a land route would avoid a number of dangers inherent in the cross-Alaska route, in particular oil spills in Valdez harbor and the open sea. The Coalition reiterated its "grave doubt" that any tapping of the Prudhoe Bay reserves is advisable at present but urged serious consideration of the Mackenzie route as a "sensible compromise."

The Coalition addressed a second statement to Interior Secretary Morton encouraging him to make extensive withdrawals from Alaskan lands for protection of recreational and scenic resources under authority of the Native Claims Act. The Coalition cautioned that withdrawals should not be made at the expense of the rights and interests of Alaskan natives. Since the statement was made, Interior has announced its land withdrawals, summarized in the following story.

A CITIZEN'S VOICE IN GOVERNMENT

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

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

The best source of information for such purposes is the official Congressional Directory, which can be bought through the Government Printing Office, Washington, D.C. 20402, at the price of \$5.50. It tells you who your senators and congressmen are and lists the membership of the various Congressional committees. It also gives full information on the personnel of the various executive bureaus of the government whom one may contact about administrative programs and policies.

The Coalition also urged the director of the Water Resources Council, W. Donald Maughan, to approve the proposed water resources standards published by the council. These standards, the statement said, will help shift emphasis of water-related management projects toward pollution prevention at source and away from big construction programs on the nation's rivers.

A statement sent to Dr. James R. Schlesinger, chairman of the Atomic Energy Committee, expressed the Coalition's disturbance over "the lack of a rational and balanced energy policy for the nation."

Shaping Alaska's future At least an image of the pattern of future land ownership and management in the nation's last frontier state, Alaska, began to form during March with Secretary of the Interior Morton's initial announcement of land withdrawals under the Native Claims Settlement Act, signed by the President in December 1971, and the earlier Alaska Statehood Act.

By the nature of Alaskan economics the Secretary's decisions were bound to be controversial. From the point of view of the state many if not most of the withdrawals were highly unsatisfactory and were greeted with considerable hostility, including official threats of future legal action. From the standpoint of conservationists and environmentalists the Secretary's initial decisions were, in the main, acceptable and praiseworthy. The breakdown of land withdrawals for various purposes went like this:

For Alaskan natives under the Native Claims Settlement Act, 40 million of the state's vast 375-million-acre expanse, plus nearly a billion dollars in settlement of long standing claims, lands to be chosen from 99 million acres of federal lands. For the State of Alaska a present 50 million acres of the 102 million due it under its statehood act. For federal purposesnational parks, national forests, wildlife refuges, and other specially designated federal areas, 80 million acres. Several million acres were withdrawn for other purposes, including routes for the trans-Alaska pipeline from Prudhoe Bay to Valdez and other possible lines from

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Centennial Year stamps Designs for the final two stamps of the National Park Centennial Year series have been made public by the U.S. Postal Service. The first, of sixcent denomination, publicizes the Wolf Trap Farm Park near Vienna, Virginia,



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and will be issued June 16. The second, of 15-cent denomination, features a view of the Alaska Range and Mt. McKinley in Mt. McKinley National Park, to be issued July 28. Both stamps will be in the usual large commemorative stamp format.

Power plant safety On behalf of the Environmental Coalition of North America, Chairman A. W. Smith recently commented that a proposal to allow newly built atomic power plants to operate on an interim basis without public consideration of environmental impact is "highly objectionable." The recommendation is under consideration in proposed amendments to the Atomic Energy Act and the National Environmental Policy Act.

In a March 23, 1972, letter to Senator John O. Pastore, chairman of the Joint Committee on Atomic Energy, Smith wrote that environmental impact statements must be filed for the public to learn whether the plants can operate safely. If they can, Smith said, preparation of adequate impact statements would not be difficult. If a plant is not proven safe it should not be permitted to operate. Precautions can be taken to minimize inconveniences from the few brownouts or blackouts that might occur if new plants do not operate on schedule, the letter said.

Impact statements on federal actions affecting the natural environment are required by the National Environmental Policy Act. The proposal to lift NEPA safeguards with respect to atomic power plants, Smith wrote, strongly suggests that the plants are not considered entirely safe.

Cliff retires After 10 years of service Edward P. Cliff retired April 29 as chief of the U.S. Forest Service. His successor to that post will be John R. McGuire, who currently serves as Forest Service associate chief.

McGuire, 55 years old, began his career with the Forest Service in 1939. He moved to Washington in 1962 as assistant to the deputy chief for research. He became deputy chief for programs and legislation in 1967 and assumed his present position in 1971.

Assault on NEPA When the President of the United States signed the National Environmental Protection Act of 1969, he remarked that the present decade "must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters, and our living environment."

As a general declaration of national intent those words and their implications seemed, in most quarters and at the time, good and bearable; payment of the mentioned debt had somewhat the sound of a distant appointment with the dentist—a matter to be dealt with in the ripeness of time. Now, a bare two years later, some

part of that early sense of euphoria has evaporated.

The act has, in many cases, cramped the style of progress, as progress mostly has been understood in America since early days. In particular, conservationists have been demanding the production of the environmental impact statements required by NEPA that examine the effects of all manner of major federal actions and projects on the nation's lands, waters, and air. In many cases the demands have been supported by the courts, to the considerable embarrassment of "progress," and the environmental impact statement has become a vital tool in the kit of conservation.

It has become obvious in recent months that a none-too-subtle reaction to the requirements of NEPA has been in progress in the worlds of both industry and bureaucracy. Many projects-big dams, big canals, big roads, even big bridges-have been delayed or halted. The slowing down or halting of such projects, necessitated by conscientious review of environmental considerations, has become a source of irritation and is being reflected on the political scene. There is talk of relieving the Atomic Energy Commission of certain NEPA requirements. There are complaints from federal bureaus that court decisions under NEPA are "delaying development of natural resources"-the sale of offshore oil leases, to mention a specific example. There are suggestions that "orderly programs," such as dam building and irrigation projects, are being brought to a halt. There are threats of industrial plant closings should provisions of NEPA be enforced. In brief, there are many straws flying in today's winds which suggest that a higher quality environment would be fine were it not so bothersome and expensive to achieve.

Conservation and environmental leaders of the nation generally are aware of the growing industrial and bureaucratic pressures for a tooth-pulling operation on NEPA—the gathering counterattack, if you will—and all members of NPCA also should be fully aware of the current situation in this regard.

conservation docket

Public Hearings

The House Subcommittee on National Parks and Recreation has scheduled public hearings in Washington for May 11 and 12 (subject to possible change) on a number of bills, including recent Administration measures, for establishment of the proposed Golden Gate National Recreation Area near San Francisco.

The Senate Subcommittee on Parks and

Recreation has scheduled public hearings in Washington on S 2411, which would establish the Cumberland Island National Seashore in the Sea Islands of Georgia. On May 25, the same subcommittee will hold public hearings in Washington on S 866, establishing the French Pete Creek Intermediate Recreation Area on 39 square miles of virgin Oregon wilderness in the Willamette National Forest.

The National Park Service has scheduled public hearings for May on its wilderness and master plans for Dinosaur National Monument in Utah and Colorado. On May 25 a hearing will be held at the Vernal Junior High School in South Vernal, Utah, beginning at 9 a.m., while on May 27 a hearing beginning at the same hour will be held at the Moffat County Courthouse in Craig, Colorado. A packet of information on the Service's wilderness and master plans, with a map of proposed wilderness in the monument, may be obtained from the Superintendent, Dinosaur National Monument, Box 101, Dinosaur, Colorado 81610; or from the Midwest Region, National Park Service, 1709 Jackson St., Omaha, Nebraska 68102.

After a bill is introduced into Congress, it is referred to a standing committee of House or Senate, which may then refer it for initial consideration to an appropriate subcommittee. Public hearings on a measure may be called by the subcommittee, and later by the full committee. NPCA members, as citizens, are free to write committee and subcommittee chairmen asking that they be placed on a list for notification in the event of hearings. Members not able to attend hearings may submit a statement for the hearing record, which will be taken into consideration during committee deliberations. Copies of bills may be obtained from the House Documents Room, Washington, D.C. 20515, or from the Senate Documents Room, Washington, D.C. 20510. The abbreviations HR and S, below, indicate House and Senate bills respectively. The best source of information for names and addresses of committee and subcommittee chairmen. as well as members of the various committees, is the official Congressional Directory, which may be purchased through the Government Printing Office, Washington, D.C. 20420 at \$5.50 postpaid.

Measures recently introduced into the Congress bearing on national park system matters, or previous measures on which action has been taken, are:

DELAWARE WATER GAP: HR 13225 and HR 13396, identical measures to authorize an increase in land acquisition funds for the Delaware Water Gap National Recreation Area. To Interior and Insular Affairs Committee.

GLEN CANYON: HR 13042 and HR 13550, each of which would formally establish the Glen Canyon National Recreation Area in Arizona and Utah. The two bills differ somewhat in their provisions concerning mining rights and roads. To Interior and Insular

PISCATAWAY PARK: The Senate Interior and Insular Affairs Committee has held inconclusive hearings on S 1291, which would permit land acquisition in fee and authorize appropriations for a Piscataway National Park in Maryland. It was decided that no action on the matter should be taken until the Administration agreed on the plan.

PUUKOHOLA HEIAU: HR 1462, establishing a Puukohola Heiau National Historic Site in Hawaii, has been reported favorably by the House Interior and Insular Affairs Committee.

CHIRICAHUA: HR 13368, designating wilderness in Arizona's Chiricahua National Monument. Interior and Insular Affairs Committee.

LAVA BEDS: HR 12996, designating wilderness in California's Lava Beds National Monument. Interior and Insular Affairs Committee.

PINNACLES: HR 13041, designating wilderness in California's Pinnacles National Monument. Interior and Insular Affairs Committee.

NATIONAL TRAILS: HR 13148, HR 13212, HR 13399, and S 3191, amending the National Trails System Act to provide for a study of a possible William Bartram Trail in Alabama. To House and Senate Committees on Interior and Insular Affairs.

BUFFALO RIVER: S 7, establishing the Buffalo National River in Arkansas, was signed into law by the President March 1.

Measures introduced recently on fish and wildlife matters included:

ALASKAN REFUGES: HR 13416, designating certain lands in Alaska as units of the national wildlife refuge system. Referred to House Merchant Marine and Fisheries Committee.

ENDANGERED SPECIES: S 3199, providing for the conservation, protection, and propagation of species or subspecies of

Affairs Committee.

fishes and other wildlife threatened with extinction or likely to become so. To Senate Committee on Commerce.

MARINE MAMMALS: HR 10420, for the protection of marine mammals and establishment of a Marine Mammal Commission, passed the House with amendments.

PREDATORY MAMMALS: HR 13152, HR 13153, HR 13261, and S 3334, authorizing the Secretary of the Interior to assist the states in controlling damage by predatory animals, to establish a research program, and to restrict the use of toxic chemicals as a control method. To House Merchant Marine and Fisheries and Senate Commerce Committees.

Measures of general interest to conservationists and environmentalists introduced or acted upon included:

ISLAND PROTECTION: S 3164, making it national policy to protect and manage those islands of the nation having unique values, authorizing a study for recommending

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such islands for inclusion in national systems, and encouraging state island protection and recreation programs. To Senate Interior and Insular Affairs Committee. Land-Use Policy: HR 12940, S 3175, and S 3177, to establish a national landuse policy and authorize the Interior Secretary to make grants encouraging and assisting states in preparing land-use programs for the protection of areas of critical environmental concern. House and Senate Interior and Insular Affairs Committees.

Tree Planting: HR 13089, to accelerate programs of tree-planting on national forest lands in need of reforestation. House Committee on Agriculture.

CLEARCUTTING: HR 13884 and HR 13885, to establish a commission to investigate and study the practice of clearcutting

timber on federal lands. House Committee on Agriculture.

ATOMIC ENERGY: HR 13731, amending the Atomic Energy Act of 1954, as amended, to require applicants for licenses to construct and operate utilization or production facilities to obtain a construction permit from the Atomic Energy Commission prior to commencement of construction. To Joint Committee on Atomic Energy, which has held hearings. ATOMIC ENERGY: HR 13732, amending the Atomic Energy Act of 1954, as amended, to authorize the Atomic Energy Commission to issue temporary operating authorizations for production and utilization facilities under certain circumstances. To Joint Committee on Atomic Energy.

Noise Control: S 1117, providing for regulation of public exposure to sonic

booms, passed by the Senate and sent to the House.

SEABED MINERALS: HR 13904 and 13076, providing the Interior Secretary with authority to promote the conservation and orderly development of the hard mineral resources of the deep seabed pending adoption of an international regime for the purpose. To both House Committee on Interior and Insular Affairs and House Committee on Foreign Relations.

NEPA AMENDMENT: HR 13752, to amend the National Environmental Policy Act of 1969 to provide for interim licensing of the operation of certain thermoelectric generating plants. Referred to House Merchant Marine and Fisheries Committee. That committee's Subcommittee on Fisheries and Wildlife Conservation held hearings on the bill in March.

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kind, or any such program which is to be realistic and effective, must be couched and practiced in terms of the distinctive cultures and subcultures and by persons closely in touch with the economic and social conditions of the people involved. The work must be done by the teachers, social workers, physicians, and ministers, who are already serving the needs of the people, and in the dialects and against the background of the customs and religions of the particular communities. The necessary technical and economic assistance must come from the world community, in large part from the more affluent nations.

STEP Two in a rational planetary population program would be to offer economic motivation and security to persons consenting on a completely voluntary basis to terminate fertility permanently after two children. Simple low-risk techniques of oviduct ligation or cauterization are becoming available for women, involving no external abdominal surgery, and vasectomy is available for men.

The levels at which economic rewards should be set can be determined only by experience. The compensation would be an immediate inducement, but if properly handled could afford a measure of the economic security which parents expect from children in countries without social security systems.

Not the slightest suggestion of any ethnic, economic, national, regional, or other prejudice or discrimination can be allowed to touch the program, lest it destroy itself.

DOTH COMPONENTS of such a plan would obviously rely significantly on governmental action; indeed, on world agency action, at least a World Population Fund of considerable size, made up of contributions by the more affluent nations in proportion to GNP. Financial grants, preferably matching grants, would be involved. The rapid training of the necessary technicians would be part of the program.

Most students of the problem would agree that the obvious fiscal measures should be employed in the various countries; mainly, in the last analysis, tax benefits or penalties; and that the obvious public assistance should also be provided: free technical and medical advice, supplies, and services, and free public clinics.

But, providing a foundation for all such measures in public opinion and established customs, a broadgauge normative educational program would be essential; and the use of volunteer missionaries to spread the word could lift much of the burden from the public purse and move the program along more rapidly.

In AMERICA, the population missionaries should focus on three targets: the poverty areas of the rural countryside; the poverty neighborhoods of the big cities; and the once-affluent, privileged suburbs, where the superstition that everything, including the size of families, can grow to infinity, has been most destructive.

The method should be person-to-person, and need not be dependent on governmental action, however desirable this may be in addition. Population education centers could be organized, from which the teaching and assistance could be provided. Dedicated men and women would offer their services at these centers in accordance with their special training and capacities. There has been a fine tradition of self-support in the voluntary parenthood movement; such efforts should now be redirected toward the establishment of a morality based on the two-child maximum.

THOSE WHO DOUBT the value or necessity of such work should re-visit the urban and rural slums of America, and reflect again on the horrors of Calcutta. Mere human survival, and certainly the quality of life for all people on the planet, and even more assuredly the continuing existence of thousands of cherished forms of plant and animal life throughout the globe, hang now in substantial measure on dealing resolutely, intelligently, and with a profound moral understanding, with the basic issue of overcrowding. Let those who profess love for humanity turn their hands to the greatest mercy: toward the stabilization and reduction of human numbers.

—Anthony Wayne Smith

We're "Bearish" on the Environment



Photo: John & Frank Craighead

It's what we HAVEN'T DONE that counts!

Never before in its 53-year history has your Association been more involved on a broader front of conservation activities. The annual report of the President and General Counsel in this month's Magazine points to substantial and significant accomplishments.

Yet, for all this, we barely have made a dent in the total task. The opposition grows stronger, more aggressive; the ground won must be held and new progress must be made.

So the NPCA asks its members for contributions over and above annual membership dues to finance a constantly increasing work load.

These will be "DOLLARS TO DO MORE."

IF YOU DID NOT RECEIVE A CONTRIBUTION COUPON IN THE MAIL, USE THIS ONE. YOUR CANCELLED CHECK IS YOUR RECEIPT. THANK YOU.

And all of them will be deductible for federal income tax purposes.

Appeals for these extra funds are in the mail to all members and contributors. We hope that you will respond as generously as you can—and as soon as you can.

For literally there's a world to be saved—and the progress your Association makes will be measured to a large extent in terms of your financial support.

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