

# National Parks & Conservation Magazine

The Environmental Journal

October 1975



# The Gates of the Republic

**A**S WE EXAMINE the planetary crisis and the food and mineral resources likely to be available to meet it, we return constantly to the basic problem of proliferation.

The prospect is for the doubling of world population from 4 billion at present to 8 billion within thirty-five years, and perhaps 10 billion before anything like stabilization can be achieved.

Rising death rates attendant upon malnutrition and consequent disease, striking mainly at children, may slow this upward climb; what a brutal solution!

It is mainly the poor countries that will suffer. They have been unable, for the most part, thus far, to get their population growth under control. Not so the industrial countries, many of which are close to replacement fertility rates, with a prospect of stable populations after a lag attributable to age structures.

Massive economic aid has been proposed for the poor countries for industrialization and modernization of agriculture, and further assistance for population stabilization. The cartels may help the raw materials countries, but there may be little enough that can be done by the rich countries to help the poor until the overcrowding can be controlled.

**I**N AMERICA, as in a number of the other industrial countries, the younger generations have made favorable decisions about family size which could unlock many other problems. The total fertility rate in the United States fell to 1.86 in 1974, meaning that on the average every woman will have that number of children in her lifetime. If the average were 2.1, the nation would stabilize its population after a lag occasioned by the large number of women of childbearing age now in the population.

If the rate of 1.86 could be lowered, it is possible that population stability might be achieved by the end of the century. If an ethic of not more than two children per woman could be firmly established, it is possible that the rate might fall to 1.6 or 1.7. Present samplings of intentions suggest that this will not occur, but the outcome depends on what is done.

These forecasts disregard immigration. Legal immigration is running at a net of about 360,000 a year, not counting the Vietnamese refugees. Illegal immigration may be adding another million persons a year.

Immigration aside, the stabilization of population, which would result from a rate of 2.1 in time, and a gradual reduction of population which would result from a lower rate in time, would ameliorate a multi-

tude of pressures on the American social and economic system. These factors are seldom examined with precision because our national folklore has decreed in the past that growth will always be with us.

Consider the question of energy, seemingly an insoluble problem. In spite of the obvious need to conserve and economize, the consumption of energy per capita has been rising: automobiles, air conditioning, appliances, and manufacturing. The prospect is for a steep upward climb; but per capita consumption must necessarily reach a ceiling eventually, and the real problem is the growth of population at the ultimate per capita consumption levels. The prompt stabilization and reduction of population at home would save our fossil fuels, forestall destructive strip mining, put a brake on the race toward nuclear power, with its grave environmental and genetic dangers, and reduce our dependence on foreign countries.

**H**IGHWAYS AND TRAFFIC involve the same considerations. The rising price of gasoline may well cut back on our extravagant use of the automobile. But we have built ourselves into a situation where we all have to get around. Were there not so many of us, and certainly not so many as there are going to be in another fifty years, our cities would not be blue and brown with gases from our cars and impossible to penetrate in rush hours at more than a crawl. Again, the per capita factor is significant.

At present the nation has a severe housing shortage. We have never been able to get the housing industry organized to produce the shelter we need, particularly for the poor. But the problem is compounded by the need for millions of new houses every year to take care of the new families. If stabilization and reduction of population could be achieved, much of the new construction, except for replacement, would be unnecessary. In brief, we would not have to work so hard building shelter, and could concentrate on maintaining and enjoying the buildings we have.

In respect to food, the situation is little different. Incredibly, the world's most powerful industrial and manufacturing nation must also become the principal food exporting country in the next few decades, perhaps the next century. We seem destined to bring all our marginal farmland into production and to dose our soils with fertilizer and insecticides and herbicides without limit. We shall indeed be exporting our soils, and turning petrochemicals into food by passage through plants. The prices of food at home will rise

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# National Parks & Conservation Magazine

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FRONT COVER Hawaiian geranium, by R. J. Shallenberger

BACK COVER Wild hibiscus, by Derral Herbst  
"Wiliwilinui," by Ken Nagata

*The geranium on the front cover is one of the Maui varieties of the endangered Geranium multiflorum, which, unlike geraniums elsewhere, has evolved as a shrub. The typical form of this species, from the island of Hawaii, was not found again from the time of its discovery and was believed extinct until 1935, when a specimen was brought in for identification by an entomologist. It has not been found since then. Hawaiian species of Hibiscus were hybridized with species from other parts of the tropics to produce the amazing number of showy cultivated varieties of Hibiscus grown in Hawaiian gardens. But the wild species, showy but mostly smaller, are now very rare. Rollandia angustifolia, or "wiliwilinui," is a typical rosette-shrub, with large curved flowers typical of the Hawaiian members of the Lobelia family adapted for pollination by honeycreepers. Unless protected, all these Hawaiian species and many more will likely disappear. (See page 4.)*

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# The Deflowering of Hawaii

Large samples of all kinds of habitat must be preserved inviolate if a significant number of Hawaii's endangered species of plants is to be saved from extinction

by F. R. FOSBERG

**S**EVENTY PERCENT of Hawaii's species of plants are in danger of extinction.

To understand how that statement can be true and why it is important, we must first look at the ways in which plants and animals develop on isolated islands.

Islands are a natural museum for the study of evolutionary processes. Charles Darwin developed the theory of evolution by observing the results of natural selection and adaptation in isolated populations of animals in the Galapagos Islands. The Hawaiian Islands are by far the most isolated and environmentally diverse of islands, exhibiting wide variations in elevation, exposure, wind, temperature, rainfall, soil, and geologic age. Hawaii, therefore, provides the evolutionist with an exceptional microcosm for studying natural phenomena. Many of the same evolutionary processes and phenomena that have helped to develop the diversity of life on the continents have also occurred in the Hawaiian Islands, where many different kinds of plants and animals have evolved from a small number of original species. Because

*Argyroxiphium kauense*, which grows about six feet tall, is a close relative of the famous silversword of Maui and is found only in one locality in the Kau District on Hawaii. Here a few plants are still found, exposed to the ravages of goats and cattle.

these islands encompass a much smaller area than continents and because they are isolated from other land masses, they have fewer species, and the evolutionary interrelationships among species, climate, and habitat are more obvious.

One of the most striking examples of Hawaiian evolutionary relationships occurs between the remarkable honeycreeper family of birds (*Drepaniidae*) and their food supply. Many of the honeycreepers have hollow, tubular tongues that enable them to suck nectar from flowers. Other species of honeycreepers have long, slender, curved beaks to aid them in getting their food in the form of nectar and insects from the long, curved flowers of the Lobelia family of plants. Evolutionists might fairly ask, however, whether the honeycreepers adapted themselves to their food supply or whether the long, curved flowers of the lobelias might be an adaptation to pollination by drepaniid birds; the relationship is nevertheless obvious.

On islands such unusual phenomena as woodiness in normally nonwoody plants such as violets, lobelias, geraniums, and plantains stand out. Gigantism, rosette tree habit, upland species of seashore plant groups, and disproportions of certain forms of plant growth characterize island floras. The incidence of such botanical oddities poses questions that may be an-

swered if scientists are able to continue to study these phenomena.

The animals of islands show comparably bizarre features—flightlessness in birds, gigantism, adaptation to cave life, intricate courtship behavior—which also pose interesting evolutionary and ecological questions.

Very few terrestrial vertebrate animals were able to colonize oceanic islands except, of course, birds. The only native terrestrial Hawaiian mammal is the Hawaiian hoary bat, a flying mammal. This bat and the few reptiles that managed to populate the islands were small and probably arrived rather recently in geologic terms. These waifs had no great evolutionary impact, but the almost complete lack of large plant-eating animals had very important implications in the evolution of the plants that originated on the islands.

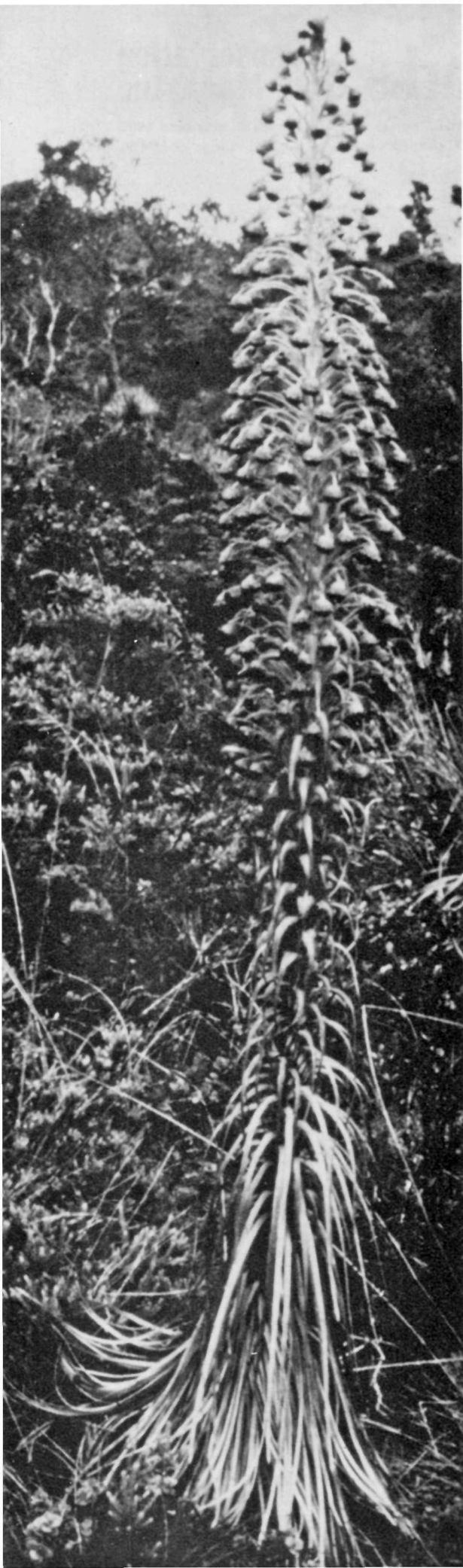
Hawaiian plants did not develop botanical defenses such as prickles, stinging hairs, acrid or poisonous properties, or tough root systems that plants have developed in areas where large herbivores were present. Hawaiian plants did not need such protection. Of the more than 2,400 species and varieties of native flowering plants in Hawaii, 97 percent of which are found nowhere else in the world, only about three species have prickles or other armaments. These three species clearly came to the island armed,

*Delissea undulata*, a weird, unbranched rosette tree up to thirty-five feet tall, is a member of a genus of the lobelia family found only in the Hawaiian Islands. All species of this genus are on the point of disappearance. The forests where they live are exposed to ravages of cattle, cattle ranchers, and foresters; and the young plants do not have much chance to survive.

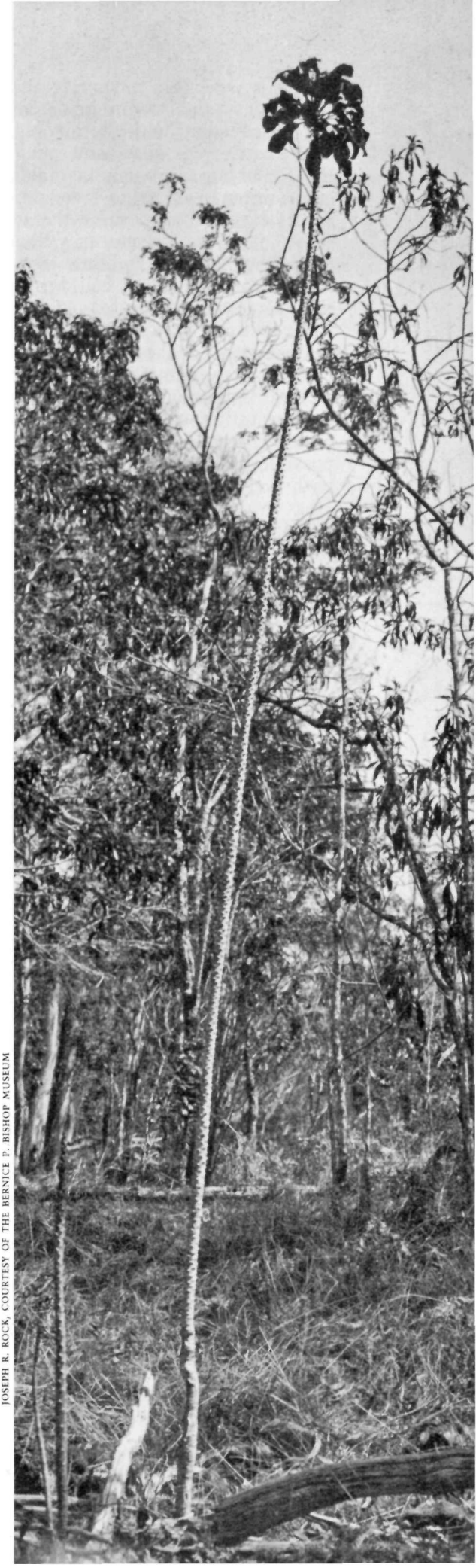
as they are found elsewhere as well as on Hawaii and belong to prickly genera.

**H**AWAIIAN PLANTS did not need protection, that is, until Captain James Cook introduced goats and English pigs in 1778 and Captain George Vancouver brought with him sheep and cattle in 1793. With the best of intentions, these two men completely changed the natural course of events. The introduction of these animals was a catastrophic occurrence unmatched even in the millions of years of volcanic activity that formed the archipelago. The Hawaiian flora, evolving in a volcanic environment, had developed means of surviving the frequent eruptions of lava and ash, and growing and thriving on the new land surfaces. But these same plants were defenseless against the trampling and browsing of four-footed invaders.

Not only were the unique native plants themselves vulnerable to the ravages of these beasts but the Hawaiian forests, opened up by grazing and trampling, were invaded by nonnative plants. Otherwise, these newcomers would have found it difficult to gain a foothold in habitats already fully occupied by well-adapted native plants. Many of the exotic species of plants had been transported from areas where they had to evolve defenses against browsing animals



DERAL HERBST



JOSEPH R. ROCK, COURTESY OF THE BERNICE F. BISHOP MUSEUM

and thus were able to survive and to occupy and dominate areas newly opened up by the herbivores.

The cattle, pigs, goats, and sheep, too, found a marvelously favorable environment, where no large predators except man posed a threat, where even the diseases to which they were victims at home were absent, and where they could multiply almost uncontrolled. At first these animals were even protected against man by taboos imposed by the chiefs, to permit their survival and multiplication. The impact on the vegetation was catastrophic, so much so that it is now almost impossible to know the exact nature of the vegetation that covered large areas in pre-European times.

Of course, the coming of the first humans, the Polynesians, to Hawaii—about 400 A.D.—brought about great changes in the natural environment. Some species of plants doubtless disappeared as a result of subsistence farming of suitable areas. However, we will never know much about the changes wrought by the early Hawaiians in the more than one thousand years between the Polynesian discovery of the islands and the arrival of the Europeans; the early Hawaiians had no written language.

We can be sure, however, that their impact was minor compared with that of the American immigrants who introduced plantation agriculture. Monocultures of sugarcane and pineapple left no room on suitable land for any other plants except a few exotic weeds, camp-followers of man, that were adapted to cultivated land.

Cattle-ranching on a large scale, also developed by American immigrants, intensified the effects of feral animals on wild vegetation and resulted in clearing of vast areas of native forest and substituting introduced forage grasses and their accompanying weeds.

Certain of the introduced grasses and weeds are pioneers, well-adapted to rapid occupation of any open ground in sunny situations. These plants have become abundant on new ash and lava sub-

strates, crowding out less well-adapted native species. The same types of exotics quickly colonize areas of bare soil that have been disturbed by human activities.

Finally, with the enormous increase in the human population, the building of roads, and availability of automobile transport, few places in the islands are too remote for human habitation. Certain habitats, especially lowland areas near beaches, and even rocky shores, are rapidly being built up to colonies of weekend, vacation, and retirement homes, not to speak of enormous new tourist hotels. Such development constitutes direct competition for living space between humans and what is left of the native lowland plants, a competition to which there is only one likely outcome.

**A**WARENESS of the increasing scarcity and even total extinction of many of the remarkable species of Hawaiian plants is not new. Dr. Joseph Rock, famous explorer and botanist, who dominated Hawaiian botany in the first and second decades of this century, called attention to the fact that only single trees remained of the antediluvian-looking *Clermontia haleakalanse* and the strange endemic genus *Hibiscadelphus*, a hibiscus with flowers curved perhaps to fit the beaks of the honeycreepers. He also reported that only a few trees remained of the beautiful tree cotton, *Kokia drynarioides*, of the island of Hawaii; that only one tree remained of a similar tree cotton from Molokai, which has since disappeared; and that the one tree cotton formerly found on Oahu had vanished.

Dr. Rock deplored the grazing of cattle in such natural collections of rare and extraordinary trees and shrubs as were found in Puu Waa Waa and Kipuka Puaula on Hawaii and Auahi forest on the leeward side of Haleakala Volcano on Maui. He and others signaled the destruction of the remarkable flora of the island of Lanai because of overgrazing by feral and domestic animals.

Throughout the six decades of this century a few persistent voices, mostly botanists and naturalists, called attention to the serious plight of the native plants and animals of the islands. Unfortunately these people were not heard or heeded in the right places. Those men who controlled land-use policies had room in their minds for only one serious activity—making money. The destruction of the habitats essential to the continued existence of Hawaiian plants was stepped up as new opportunities to make money appeared. Fortunately some of the wetter areas were afforded some protection as water reserves when it became evident that water was a limiting factor in sugar production.

Most deplorable of all was the attitude of a few landowners, ranch and estate managers, and experiment station officials who understood and appreciated the interesting native biota of the islands, and some of whom even entertained themselves by collecting and studying ferns or land shells, but who separated these interests completely from their business activities. Some of these men were in an excellent position to protect and preserve areas essential as habitats of unique plants. They could also have educated and persuaded their friends and relatives in similar positions. As a group they might have been able to save many of the most important localities where species of plants have since disappeared forever. They and their stockholders might have been slightly poorer, but the people of Hawaii and of the world would have gained a richer environment to live in and enjoy.

**U**NTIL RECENTLY, knowledge of the precarious condition of the Hawaiian flora (and fauna) was in a more intuitive than factual state. Certain cases were well known and documented. Most were suspected or known but with no solid data and little or nothing written down. For more than twenty years, with the help of



DERRAL HERBST

*Alsinodendron trinerve*

A commonly observed tendency of Hawaiian plants is to evolve a conspicuously woody habit in groups of plants that ordinarily are small herbs elsewhere.

*Alsinodendron trinerve* is an amazing relative of the lowly chickweed, which, in isolation under Hawaiian conditions, has evolved into a shrub three to five feet tall.

*Hesperomannia lydgatei*, for which a good name would be "thistle tree," is a woody member of the sunflower or daisy family. The species of this genus inhabit montane rain forests and are all extremely rare and susceptible to grazing animals.

*Geranium arboreum* is actually a small tree, the culmination of evolution of woodiness in the Hawaiian geraniums. It has also evolved a rather curved flower, as have a number of other groups of plants in Hawaii. It is exceedingly rare and local in one of the gaps in the walls of the great volcano Haleakala (House of the Sun) on the island of Maui.



DERRAL HERBST

*Hesperomannia lydgatei*



DERRAL HERBST

*Geranium arboreum*

many colleagues, I have been assembling a card file of species of plants considered rare, endangered, or extinct in the Pacific Basin, but no organized effort was made to document the situation.

During the past decade, however, with the rise of general environmental awareness in Europe and North America, a consciousness arose that valuable and interesting species of animals and plants were disappearing. The expression "endangered species" became familiar. In 1969 the Endangered Species Act

was passed by the U.S. Congress to afford protection to endangered species—but only animals were mentioned. In 1973 this oversight was amended and plants were specifically included, and the Smithsonian Institution was instructed to prepare a report on endangered species of plants in the United States.

In connection with the preparation of that report, an effort was made to develop and complete the part of my card file that pertained to Hawaiian plants. A systematic

effort was made to consider and evaluate, species by species, the condition of all the ferns and flowering plants of the Hawaiian Islands.

This effort resulted in a list of rare, endangered, and extinct plants of the Hawaiian Islands that contained 1,765 species and varieties, of which 273 were considered possibly already extinct. Of these, 1,088 were deemed in such precarious state that they were included in the list that made up the body of the Smithsonian's report to

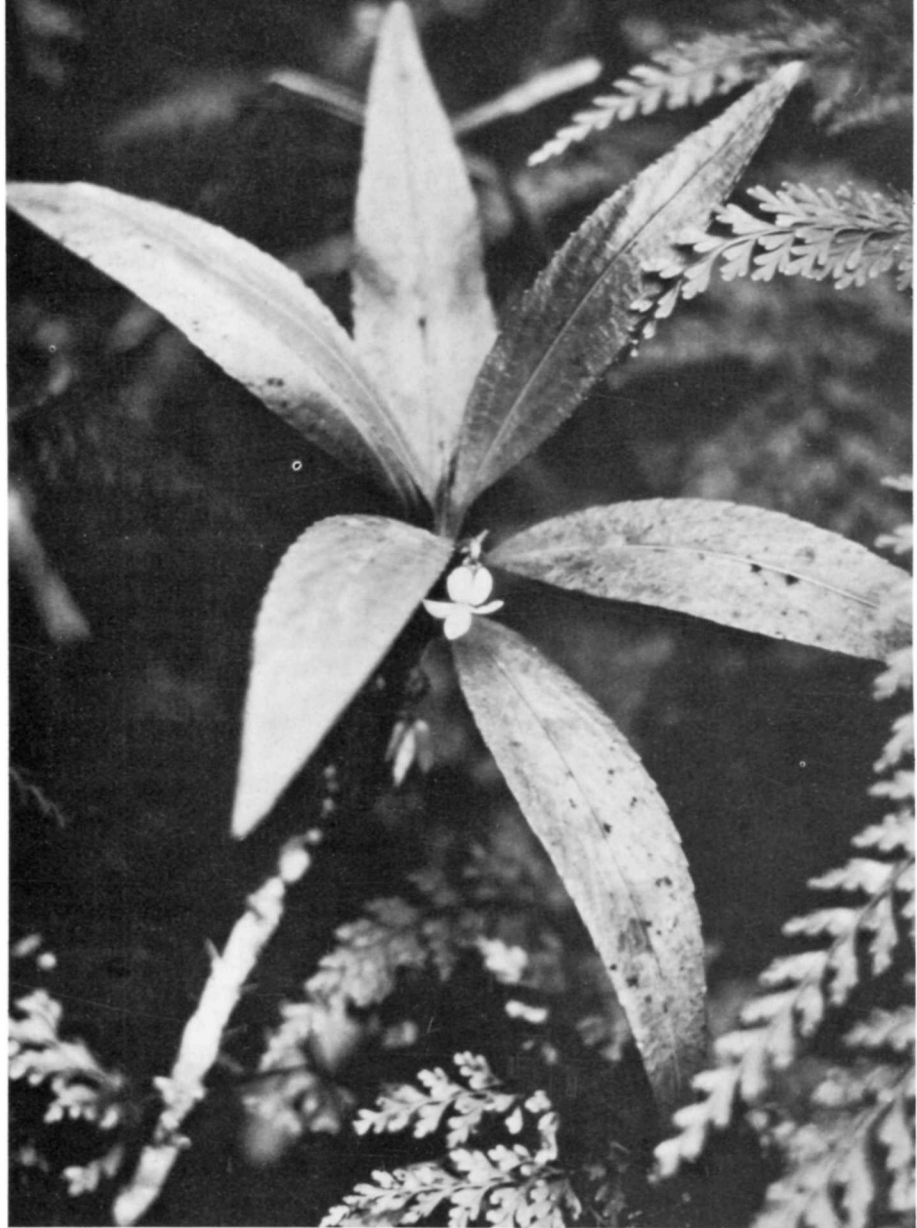
Congress, the first step toward their being officially protected by federal law. The original Hawaiian list was published by Dr. Derral Herbst and me as the first number of a new botanical journal, *Allertonia*, issued by the Pacific Tropical Botanical Garden, in Hawaii.

The length of this list came as a shock to a great many people, including its authors. This was the first time that the facts were ever put down on paper, or that anyone had real evidence that 70 percent of the remarkable Hawaiian flora were in danger of disappearance.

It is with dismay that we contemplate the fact that in all likelihood after a few years no one will ever again see a tree lobelia (*Cyanea*), a thistle tree (*Hesperomannia*), a tree geranium, a shrubby violet (*Viola trachelifolia*), a bush chickweed (*Alsinodeudron*), a Brigham's gardenia, a kauila (*Colubrina*, *Alphitonia*), or any one of hundreds of other unique and wonderful Hawaiian plants, or any of the insects, land snails, or other animals that depend on them for food and habitat. This situation is a stark example of the many things that are happening today to make the world no longer a place to live a rich, varied, and satisfying life, but only a place that may support a bleak and impoverished existence—or, all too possibly, not even that.

**WHAT CAN WE DO?** Is there any way to stop this appalling loss of plant and animal life, which makes Hawaii one of the most fascinating places on earth? Has the situation deteriorated past the point of no return? Some of us think not. Certainly we will lose some species; but if we want to save the great majority, the knowledge is available to do it.

No plant can survive without a suitable habitat. Suitability differs from species to species. Some plants thrive on disturbance—they are called weeds. Some plants need sun; others can grow only in the shade of forests. Some need good drainage; others grow in swamps. Some need, or at least tolerate, salt.



*Viola helena* is a woody violet, not one of the tall shrub violets, but a rare species confined to bogs on Kauai.

Most Hawaiian plants cannot withstand browsing and trampling; they need protection from herbivorous animals.

Some people think that rare species can be protected by moving them into botanic gardens. Certainly protection from cattle can usually be provided, and expert gardeners can, with enough money, reproduce or simulate many natural situations. In theory this should be the perfect solution, but in practice botanic gardens can be only an indispensable but temporary measure comparable to a hospital for gravely ill people. The hazards of relying solely on botanic gardens to preserve endangered

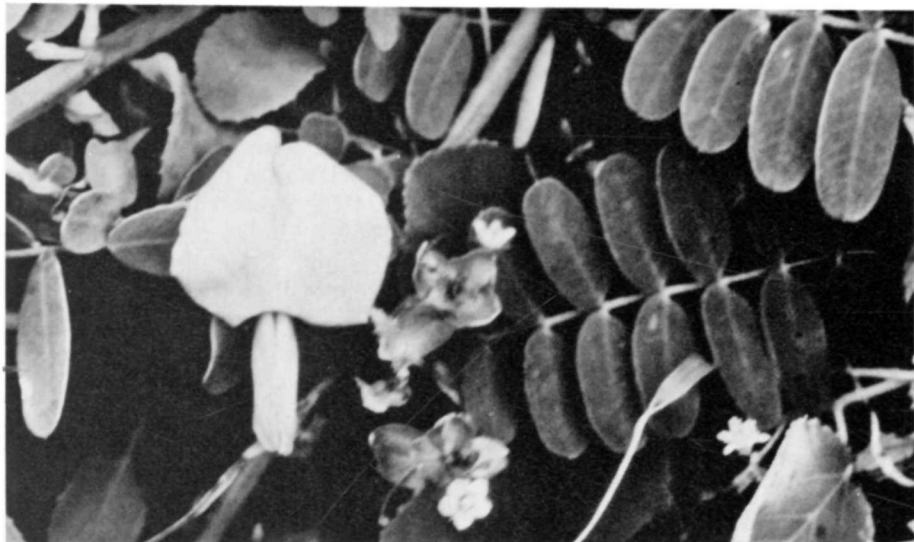
species of plants are many. There is the laborer who mistakes the herbicide for the insecticide or the gardener who cannot resist selecting the best, the color variant, or the bizarre mutant, so the species does not stay the same but becomes a cultivar. There is a tendency in botanic gardens to maintain pioneer ecological conditions—that is, conditions suitable for the first colonists on new or bare mineral soil in full sun—even for climax species, which inhabit stable, shady, rich forest situations. Worst of all, impermanence, change in policy, loss of interest, inflation, and financial difficulty—all these affect such "luxuries" as



KEN NEGATA

*Bidens cuneata* (above) is found growing on tuff, or consolidated volcanic ash, on Diamond Head, the conspicuous volcanic cone that is a Honolulu landmark. A few plants still persist on the hot dry rim and upper slopes of this crater.

*Sesbania tomentosa* (below), a native shrub of the bean family with beautiful salmon or red flowers, inhabits principally coastal sand dunes but has almost vanished under pressure of human activities.



DERRAL HERBST

botanic gardens, which are the first places to feel budget cuts or to lose support altogether.

**T**HE ONLY reasonably sure and reliable way to save most rare plants from extinction is to set aside sufficiently large and numerous samples of all natural habitats so that these species can continue to live their normal lives under the conditions that favor them.

In Hawaii the range of natural habitats is becoming known, and good samples of these habitats can be preserved in several ways. The two national parks—Hawaii Volcanoes and Haleakala—form a fine

start. The present administration of Hawaii Volcanoes National Park on the Big Island is very much aware of its responsibility to protect the endangered species growing within its boundaries and to prevent others from becoming endangered. But it faces formidable problems in carrying out these responsibilities. Ridding the park of feral goats and pigs is a Herculean task that until very recently has been shirked. However, progress is being made.

The problem of aggressive exotic plants in habitats that are naturally early in vegetational succession is an almost impossible one. Much careful work is required even to

have a hope of eliminating such plants as broomsedge (*Andropogon*), blackberry (*Rubus*), strawberry guava (*Psidium cattleianum*), pamakani (*Eupatorium riparium*), banana poka (*Passiflora*), and many others. Some of the more closed vegetation types not too close to roads pose less serious problems with weeds, if protected from feral animals.

The goat problem in Haleakala National Park on Maui, at last report, was not even being seriously approached. It is probably too much to expect, in times of budgetary problems, that the necessary funds and manpower will be utilized for this purpose.

The state of Hawaii has the legal apparatus for an effective system of natural areas, thanks to the efforts of conservationists allied with some far-sighted legislators. However, the responsible agencies in the state government have implemented this act at a pace that would let most species become extinct before reserves were created to protect more than a small fraction of them.

Unfortunately, the attitude seems to be that only land that is of no conceivable use for anything else is available for natural reserves. This will protect a few species, mostly those that need it least for the very reason that no one wants to farm or build on the bare lava-flows where they live. More species of plants grow on good land than on poor land, however. The species most threatened are those in the lowlands where people want to build houses, roads, hotels, and golf courses.

If we are to save any significant number of the endangered species of Hawaiian plants, a certain amount of the valuable land, enough to provide at least several sizable samples of each sort of habitat, must be set aside and legally protected.

Several conservation organizations are interested in doing a share of this, but mostly they are made up of not very wealthy people. One or two of them have seemed stable enough that certain





KEN NEGATA

*Brighamia insignis* is a remarkable rosette shrub of the *Lobelia* family neither closely related to nor much like anything else on earth. It is found on a few bare lava sea cliffs on the older Hawaiian Islands but has almost disappeared.

landowners have donated significant pieces of property and may donate more. If these pieces of land can be protected from the "barbarians that build bridges" and roads, a good start will be made.

Ultimately, however, the public interest in saving the 1,500 or more species that seem on the way out will necessarily be expressed through their governments at all levels. Only governments can afford to build highways. If they can build highways because the public wants them to, the public can also direct them to establish adequate nature preserves.

Environmental consciousness is, belatedly, becoming a political force. People are beginning to question the old robber-baron system of values. This new awareness has begun to work some near-miracles and can be made to do more. If the people in Hawaii want their children and grandchildren to be able to see a tree lobelia, an *ape-ape*, or a wild hibiscus, it is still within their power to make it possible. But time is fast running out for many of these beautiful and curious plants. Perhaps what we do in matters like this is the real measure of our civilization, or at least of our culture. ■

#### ADDITIONAL READING

Fascinating detailed accounts of the phenomena of evolution of island life, especially that in Hawaii, can be found in three brilliant books by Professor Sherwin Carlquist—*Island Life* (1965), *Hawaii, A Natural History* (1971), and *Island Biology* (1974). A modern history of the Hawaiian Islands can be found in *Shoal of Time*, by Professor Gavan Daws (1968). These books are rewarding reading and will give a background to what the world is losing with the disappearance of the native flora and fauna of the Hawaiian Archipelago.

A distinguished and widely published botanist and ecologist, Dr. F. Raymond Fosberg is curator of botany at the Smithsonian Institution's National Museum of Natural History. He has been chairman of the Pacific Science Association's Standing Committee on Botany and has served several terms as vice president of the Nature Conservancy. His work for two decades compiling data on endangered species of plants of the Pacific Basin formed the basis of the list of endangered Hawaiian plants in the Smithsonian's *Report on Endangered and Threatened Plant Species of the United States*, presented to Congress in January 1975.

#### Editor's Note

#### GET THE GOATS!

The National Park Service's Natural Resources Management Plan for Hawaii Volcanoes National Park, released early in 1974, properly focused on protecting and restoring depleted endemic plant populations in the park. Unfortunately, the plan called for "reduction and control" of feral animals rather than their complete eradication from the parks. Fences and "deputy rangers" would be used to help reduce and control the animals. However, protecting and restoring endangered species of native Hawaiian plants is clearly impossible without completely eradicating feral goats and pigs from park ecosystems.

NPCA has been involved for many years with the problem of goats in Hawaiian parks. In February 1974 the Association protested the Hawaii Volcanoes National Park Natural Resources Management Plan, calling for stronger action with respect to eliminating feral animals within the enclosures once the fences were built.

The administration of Hawaii Volcanoes National Park should be commended for its progress on the feral animal problem. Fences are 65 percent complete, and goat reduction programs are actively underway. However, no progress on a goat removal program is evident at Haleakala National Park—nor has a similar natural resources management plan been prepared.

NPCA members can help this serious situation by writing the National Park Service to urge completion of fencing in and around Haleakala and readoption of the goal of *complete eradication* of goats and pigs from these parks in a carefully supervised, humane manner. Write to:

Hon. Gary E. Everhardt  
Director, National Park Service  
Washington, D.C. 20240

See also *Endangered plants*, page 20.

# California's Channel Islands

The Channel Islands are still unprotected 15 years after NPS called for protection

article & photographs

by STANLEY MEDDERS



*The Channel Islands National Monument consists of two tiny but dramatic islands—Anacapa and Santa Barbara—with rugged coasts, many coves, and small beaches where seven types of pinnipeds play, rest, and breed.*

**T**HE CHANNEL ISLANDS off the southern coast of California cover more than a quarter million acres and extend some 150 miles along the California coast, 10 to 70 miles from the mainland. For two and a half centuries these eight islands endured the destructive activities of fur gatherers, market hunters, and introduced livestock. Today potential oil spills, pollution, possible real estate development, and the U.S. Navy threaten to destroy these beautiful, wind-swept islands.

**T**HE CHANNEL ISLANDS were discovered in 1542 by the Spanish explorer Juan Rodriguez Cabrillo. When the Spaniards arrived, the islands were inhabited by the Chumash Indians. The rocky beaches teemed with Guadalupe and Alaska fur seals, sea lions, and elephant seals; and shy sea otters abounded in thick kelp beds offshore. Magnificent colonies of auklets, pelicans, cormorants, petrels, murrelets, and puffins inhabited the cliffs and beaches; and luxuriant inland marshes played winter host to the thousands of grebes, terns, herons, and loons that annually traveled the Pacific

Flyway. Bald eagles and ospreys soared over chaparral-covered gorges; and quails and mourning doves flourished in thick fields of cholla cactus. Tiny island foxes, no larger than rabbits, stared out through slitted eyes—an adaptation the animals evolved over the centuries to protect them from blowing sand and sea glare.

This sea-girt paradise soon began to change, however. By the end of the sixteenth century, Spanish sailors had discovered the islands' rich sources of protein; and for the next two centuries they frequently raided the cliffs and beaches to stock their larders with eggs and seal meat.

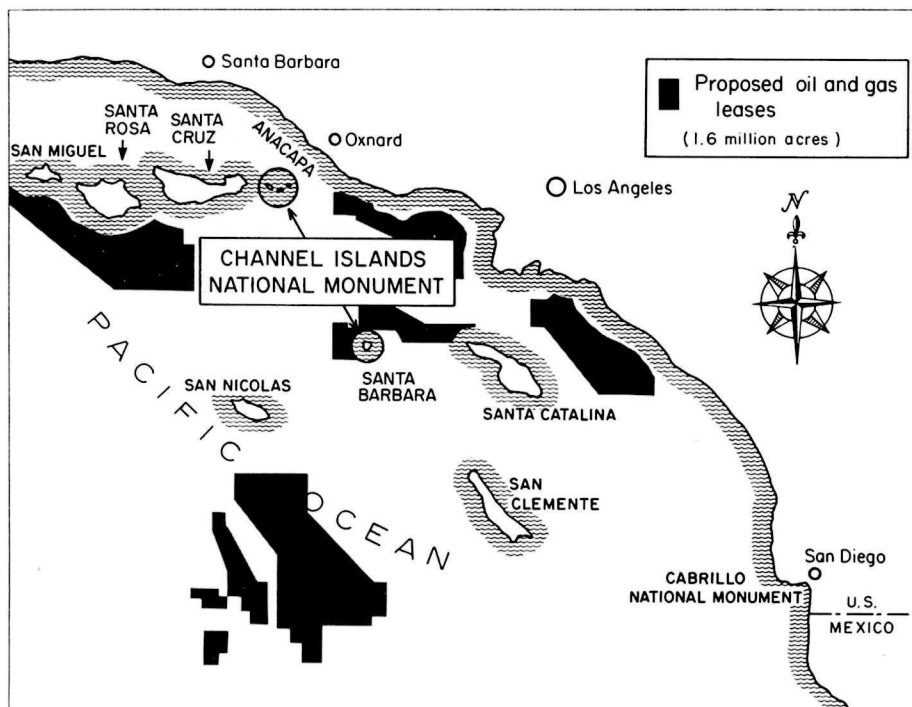
With the arrival of Russian explorers in the early 1800s, wholesale butchery of the islands' wildlife began. By 1870 Russian pelt gatherers not only had slaughtered hundreds of thousands of fur seals, but had almost wiped out the once populous herds of elephant seals and sea otters. Many of these peaceable animals were clubbed to death, and their salted meat (known as jerky) was stored in holes in the rocks until brigs arrived with barrels and crates to transport the jerky, furs, and oil to

China and the Russian colonies on the northwest coast of the United States.

Americans, too, had discovered the islands' wildlife and, particularly during the 1800s, had almost succeeded in eradicating what pinnipeds—aquatic carnivorous animals such as seals and walrus—the Russians had not slaughtered. By the early 1870s, sea otters, whose pelts brought about twenty-five dollars each, had been driven to the edge of extinction; and elephant seals, once numbering in the hundreds of thousands, had been reduced to only a few hundred survivors.

Colonies of birds were also critically reduced in numbers because of the collection and marketing of millions of eggs; and even island plants, many of them unique to the area, were subjected to almost irreparable damage by cattle, sheep, hogs, goats, and burros brought to the islands by early ranchers. Because of this destruction of vegetative cover, erosion became a serious problem and remains so even today.

**A**S MUCH in danger now as in the past, though for different



Santa Cruz, Santa Rosa, and San Miguel have been proposed for federal protection in the National Park System, in addition to the two islands of the Channel Islands National Monument. At right, Anacapa Island has the most magnificent and richest tide pools on the Pacific Coast, where a wide variety of sea life can be found—gobies, opaleyes, chitons, octopus, anemones, starfish, hermit crabs, and a panoply of other fascinating creatures. Oil leasing will bring disaster.

reasons, these fragile islands still harbor a fascinating array of plants and animals despite the great numbers destroyed in the past four centuries. Anacapa and Santa Barbara, each about one square mile in area, were together named a national monument in 1938.

These two islands are characterized by high sea cliffs where gulls, cormorants, and the endangered California brown pelican nest. Both islands are treeless except for a few island cherries and ironwoods; and they display a magnificent array of spring wildflowers, many found nowhere else.

Both Anacapa and Santa Barbara consist of rocky terrain where succulents grow in close proximity to such desert cacti as prickly pear and cholla, and are covered with yellow-flowered gum weed and sagelike *Suaeda*. Anacapa is liberally sprinkled with red-flowering *Dudleya*, a succulent thought to be extinct on Santa Barbara until six plants were recently discovered there.

The small sandy beaches of both islands offer hospitable and often dramatically beautiful resting areas for marine animals. Santa Barbara harbors large rookeries of sea lions, also common at Anacapa. Occasionally sea otters, sea elephants, and the rare Guadalupe fur seal appear on the beaches or in the kelp beds near the islands' rocky shores.

Although the national monument contains a fascinating variety of natural adaptations in the plant and animal kingdoms as well as excellent examples of volcanism, faulting, erosion, and canyon development, it is the larger islands of the chain that constitute a veritable museum of biological, archeological, and even paleontological diversity. On these other six islands, comprised of Santa Catalina, San Clemente, San Nicolas, Santa Cruz, Santa Rosa, and San Miguel, are some 220 species of birds—thirty resident, ten native, the remainder migratory—and more than eight hundred varieties

of plants, about a tenth of which are separate species or subspecies. Surviving land mammals, all with interesting differences from those found on the mainland, are the spotted skunk, ground squirrel, white-footed mouse, harvest mouse, and island fox.

The island fox, *Urocyon littoralis*, is found on all the islands except on Anacapa and Santa Barbara and is similar to the mainland gray fox but with unique differences. Because of centuries of inbreeding, this fox weighs only about four and a half pounds; and unlike most foxes, he is diurnal as well as nocturnal.

Most flora and fauna of the islands, in fact, are fascinatingly different from those on the mainland.

Even the islands themselves are vastly different from one another. The largest, Santa Cruz (97 square miles), owned by the Stanton and Gherini families, has extensive acreage of grassland where livestock graze; numerous brooks; forests of pines festooned with Spanish moss; beautiful wooded areas of oak, holly, and ironwood; and extensive fields of prickly pear cactus.

Santa Rosa, too, is luxuriant with plant life as well as rich in archeological and paleontological values. Owned by the Vail and Vickers Ranching Company, this mountainous island is surrounded by kelp beds that provide a rich habitat for a variety of sea life. On land, where much of the island's 86 square miles is devoted to grazing, are lush fields of grass sprinkled with unique varieties of wildflowers.

San Miguel (22 square miles), the westernmost island of the chain, is administered by the U.S. Navy. Covered with sparse vegetation because of overgrazing in the past, San Miguel harbors one of the largest known colonies of sea elephants, six other species of pinnipeds, a distinct variety of island fox, several pairs of nesting American eagles, and magnificent rookeries of sea birds, both on the main island and on ten-acre Prince Island just offshore. Fifty Chumash village sites dot this ancient land-

scape; and fossils of Ice Age dwarf elephants, which reached a shoulder height of between six and nine feet, have been discovered here as well as on Santa Cruz and Santa Rosa. The Channel Islands are mountaintops that were once part of the California mainland. When this land area broke up, the elephants, as well as the island foxes and certain species of plants, became stranded relicts.

Of the three islands south of the national monument, Santa Catalina (76 square miles), owned by the Wrigley family, is a sprawling tourist area and resort community; and both San Clemente (56 square miles) and San Nicolas (22 square miles) are administered by the Navy and are used as either target ranges or missile firing and tracking stations. As a result of these destructive activities, plants, animals, and historic sites have suffered unbelievable damage.

**I**T IS the three northern islands near the national monument, however, that are the scene of impassioned controversy. The realization by conservationists that immediate action was imperative to save this fragile ecosystem reached its apogee with the Santa Barbara Channel oil blowout in 1969 and the subsequent discovery that DDT, washed out from the shore, was responsible for so much egg-shell breakage in California brown pelican nests that few birds were being hatched.

Fear for the islands' future had already been heightened when conservationists, aware of what development had done to Santa Catalina, discovered that the Gherini family had requested in the early 1960s approval from Santa Barbara County to change the zoning on Santa Cruz from agricultural to commercial in order to build a resort community that would accommodate three thousand people. Because of this apprehension, renewed interest was suddenly aroused in the Pacific Coast Recreation Area Survey completed by the National Park Service in 1959, a study that concluded that the Channel Islands



FRED E. MANG, JR., NATIONAL PARK SERVICE

represented an area of such great scientific and cultural value that their unparalleled inland, seashore, and offshore marine areas should all be preserved.

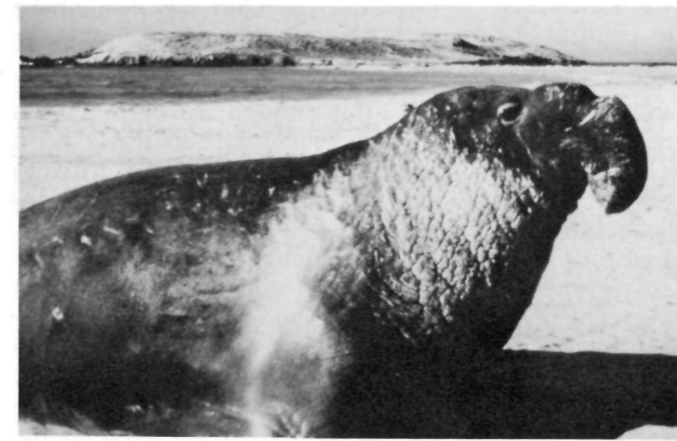
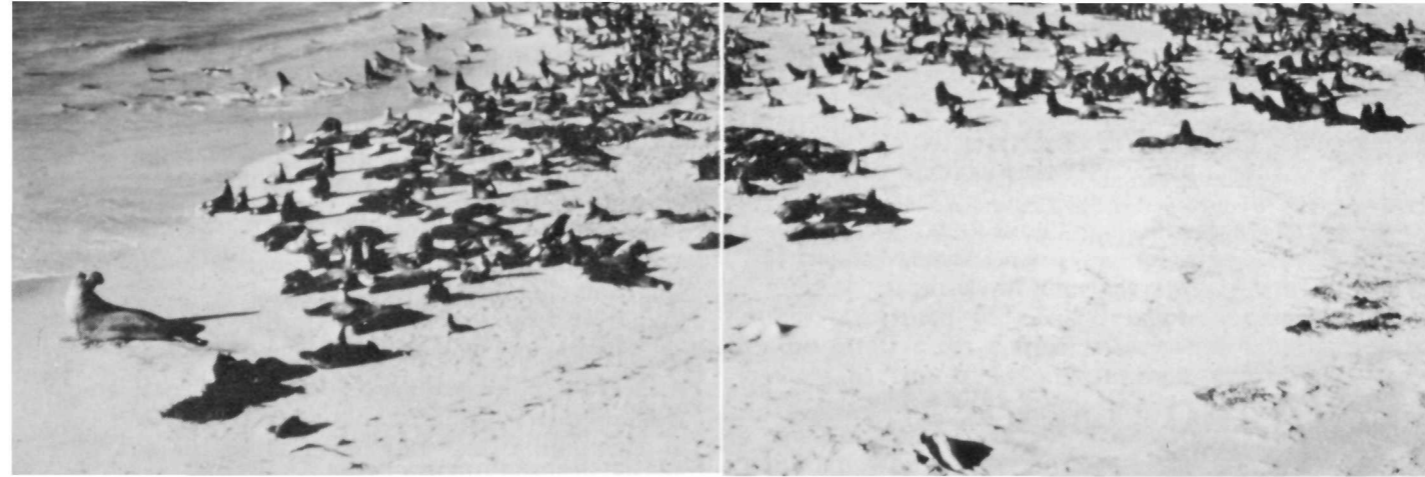
After the oil blowout, newspaper articles began to extol the unequalled tide pools of Anacapa where gobies and opaleyes dart among multicolored anemones and sea urchins; the rich abalone beds that lie just off the coast of several of the islands; the multitudes of bonito, mackerel, sardine, sea bass, and dolphin that inhabit the coastal shelf around all the islands; and San Miguel's strange caliche forests—ancient trees buried by sand, their decomposed trunks having become hardened and filled with calcium carbonate until eventually these "sand-mold forests" were exposed by wind erosion.

The first bill aimed at saving those wondrous island resources through creation of a Channel Islands National Park—comprised of the present national monument

plus Santa Cruz, Santa Rosa, and San Miguel—was introduced in 1963. Although this bill died in committee, many others followed. In the meantime, island owners fought resolutely to retain their land rights, and the U.S. Navy seemed just as determined to maintain control of San Miguel.

**T**HE STRUGGLE to retain control of the islands, the increasing number of pollutants washed out to sea, the continuing destruction of native flora, and even the imminent threat of development, serious as they all are, pale beside another threat so dire that Senator John V. Tunney has called it "a nightmarish blueprint for disaster." This threat is a plan by the Interior Department itself to lease 1.6 million acres off the southern California coast in the vicinity of the Channel Islands for oil exploration.

The proposal has potentially staggering environmental impacts on the Channel Islands, as outlined



The giant coreopsis, a "tree" sunflower (left), reaches ten feet in height with huge golden flowers in spring. At top, seals and sea lions bask on San Miguel, which harbors one of the largest known colonies of sea elephants. Above, harbor seals, almost wiped out in the past, today appear frequently around all the Channel Islands.

Elephant seals (above) were once hunted to such an extent that herds of hundreds of thousands had been reduced to several hundred by the early 1870s. Under protection, they have made a comeback in recent decades. California sea lions (right) use the Channel Island coves and beaches for resting and breeding grounds. Development will change that.

by the Bureau of Land Management's (BLM) final Environmental Impact Statement (EIS) released in August 1975. BLM needed five volumes and 3,389 pages to delineate these impacts.

BLM admits that impacts resulting from accidental oil spills are "inevitable" and statistically "unavoidable." As much as 109,886,742 gallons of oil can be expected to spill into Channel Islands waters during the forty-to-sixty-year life of the program, including 68,111,484 gallons from tanker and barge spillage. These predictions are based on recent performances of the oil industry in offshore drilling operations.

Microorganisms can degrade many components of crude oil. However, complete oxidation of only one gallon of crude oil would require all the dissolved oxygen in 320,000 gallons of water—less if atmospheric oxygen is available.

Thus, oxygen-deficient conditions can be expected under oil slicks, resulting in effects on marine ecosystems that are still largely unknown. (Much of the oil from the Santa Barbara blowout is believed to have settled in the Santa Barbara Channel where oxygen is already deficient and is probably not present in sufficient quantities for further decomposition.)

Some marine organisms exist exclusively in—or are "endemic" to—Southern California waters. The EIS states: "... severe or chronic alteration of [certain] areas of the environment could eliminate endemic species forever. It is doubtful that a single large spill could wipe out many if any subtidal [and bottom-dwelling] species by itself. The effect of widespread chronic oil pollution or a large oil spill in combination with other types of environmental alterations is not known, but could conceiv-

ably contribute to the extinction of some of these endemics."

Concerning the seal populations of the Channel Islands, the EIS predicts: "Of all the dangers involved in this proposed lease, that to pinnipeds is potentially the worst. Simple platform installation of exploratory drilling off San Miguel Island could cause the elimination of sea lions, fur seals, and harbor seals from their principal breeding area in Southern California. Further leasing off San Nicolas Island and other islands in the future could prolong the elimination of these species from Southern California for many years. A large oil spill could cause mortalities to fur seals and sea otters and respiratory failure to cetaceans" [porpoises, whales].

In commenting on the draft EIS, the National Park Service objected to the proposed leasing program and requested a delay. Objections

were based in part on the value of the Channel Islands as natural preserves and on the fact that the larger islands are under consideration for inclusion in the National Park System. The BLM responded to this objection by offering to include an additional three-mile buffer zone around pinniped and seabird rookeries of Santa Barbara and San Miguel islands and similar buffers around other areas of "special biological significance." Such a small "buffer" is laughable in view of the regionwide impacts expected and the fact that, as the EIS points out, a single major oil spill can create a 500-square-mile slick.

California has repeatedly threatened to sue the federal government over this sale, but the Ford Administration seems determined to proceed toward its goal of energy independence in spite of adverse environmental impacts.

WHEN we consider these multiple threats, there is no question that the struggle should continue for some type of protection for these strange and beautiful islands that the U.S. Department of the Interior has described as unrivaled evolution factories, biological laboratories, and maritime museums. The big question is how to protect an area of outstanding natural and historic values as a preserve in the face of massive industrial development. Certainly these fragile island ecosystems cannot sustain heavy visitor pressure either. Vegetation is still struggling to recover from centuries of destruction by feral animals.

Nor is heavy visitation compatible with the protection of village ruins, fossil deposits, nesting sea birds, and breeding pinnipeds; so perhaps a solution is the pure park-wilderness concept whereby all areas of fragile vegetative cover,

bird rookeries, and seal breeding and basking grounds—as well as those of historical and paleontological value—are off limits.

Today, though, as the battles rage among conservationists, oil companies, potential developers, and ranchers—of whom the latter three groups oppose national park protection—the most immediate need is to formulate an ecologically sound plan for resource use off the southern California coast that provides adequate and meaningful protection for the wildlife and other natural values of these fascinating island ecosystems. ■

**A native Californian and frequent contributor to these pages, Stanley Medders has long been concerned with preservation of the environment and wildlife of the California coast. A high school language teacher, he has done much to interest his students in environmental matters.**



## Exploring Earthman's World

Exploring Earthman's World is a series of essays, co-edited by Darwin Lambert and the editors and published intermittently, which is intended to foster the kind of man-earth relationship that will lead to creative ecological harmony.

# The Ancient Roots of Our Ecological Crisis

by J. DONALD HUGHES

And on the pedestal these words appear:  
"My name is Ozymandias, King of Kings;  
Look on my works, ye Mighty, and despair!"  
Nothing beside remains. Round the decay  
Of that colossal wreck, boundless and bare  
The lone and level sands stretch far away.  
—Percy Bysshe Shelley

**T**OURISTS who visit ancient ruins in the Mediterranean area today are familiar with the kind of scene Shelley described, if their vision is broad enough. Shattered statues and broken columns of vanished societies stand inside other ruins so vast we often do not see them: the ruins of the natural environment that these very civilizations depleted, causing their own destruction in the process. Boastful King Ozymandias' fallen monument was a product, at least in part, of Shelley's imagination. But the poem is a fairly good description of much that can be seen today in that part of the world. The ruins of Roman cities recently excavated from the Sahara sands—cities that once exported tons of wheat and great quantities of olive oil—are not imaginary. Neither are the remains of ancient Greek seaports now isolated miles from the coast by alluvial deposits, the result of soil washed down from mountains that were deforested in ancient times by charcoal burners and timber cutters, then overgrazed by herds of goats and sheep.

The once-prosperous cities of Mesopotamia are now mounds in

the desert, and the famous "Fertile Crescent" that once supported them is a shrunken remnant, as revealed in photographs taken from space. There is a close interconnection between ruined cities and ruined land. Their association with each other is not an accident of history, but a pointed and ironic lesson in ecological imbalance.

**T**HE LESSON is ironic because we would not have expected it to happen, given the attitudes of the ancient peoples toward nature. The Greeks recognized mankind's oneness with nature and actually worshiped nature in the guise of gods who embodied aspects of it, such as Zeus, who inhabited mountaintops, and Artemis, who protected the creatures of the wild. The preserved natural areas, groves of trees around springs in particular being considered sacred to the gods, and forbade hunting, fishing, cutting of trees, and cultivation within the precincts. We might be tempted to call these sanctuaries some of the earliest national parks. But they were small, isolated islands in a denuded, eroded landscape.

The Romans had what seems a genuine love of nature, celebrating fields and forests endlessly in Latin literature. "There is nothing that gives either you or me as much pleasure as the works of nature," said a first-century writer. But the Romans treated the actual landscape like a conquered province. Evidently good attitudes alone

were not enough to maintain the balance of human societies with nature. Ecologically, the road to hell was paved with good—but inadequate—intentions.

The ancient Persians valued nature, deeply abhorred pollution in any form, and tried to guard the purity of water and all the other natural elements. But this respect did not prevent them from allowing the deforestation, overgrazing, and erosion that reduced most of the Iranian countryside to rocky desiccation. Perhaps the process of environmental deterioration went on so slowly that they did not understand what was happening.

**T**HE GREEKS did see. In the *Critias*, Plato vividly described the changes suffered by his homeland in two generations, including deforestation, erosion, and the drying up of springs:

What now remains compared with what then existed is like the skeleton of a sick man, all the fat and soft earth having wasted away, and only the bare framework of the land being left . . . for there are some mountains which now have nothing but food for bees, but they had trees not very long ago . . . the soil it had was deep, and therein it received the water, storing it up in the retentive loamy soil; and . . . provided all the various districts with abundant supplies of springwaters and streams, whereof the shrines which still remain even now, at the spots where the fountains formerly existed, are signs which testify that our present description of the land is true.

But Plato suggested no remedy. The despoiling of the land went on

Aristotle closely observed nature, but he conceived of the world within a rational framework, assigning to everything, including minerals, animals, and plants, a highest purpose, which was the service of mankind. His thought, authoritative for centuries in the Arabian countries and Europe, helped to justify the cavalier use or misuse of nature according to human whim. Theophrastus was the only ancient Greek to grasp ecology in anything like the modern sense of the word, but his writings were eclipsed by those of his more famous teacher, Aristotle. (Theophrastus' most ecological work, *On the Causes of Plants*, has never been published in English.)

**W**HERE THE GREEKS were philosophical about the treatment of nature, the Romans were practical—but not consistently so. While they parceled out their forests and rangelands to private syndicates for exploitation, they failed to see the possibilities of advances in technology, and they stifled the research that might have enabled them to understand nature better. Roman emperors supported orators and philosophers but ignored or persecuted researchers in the sciences, theoretical or applied. Tiberius, on hearing that a flexible glass had been invented, had the inventor's workshop destroyed and the inventor suppressed. Vespasian similarly rejected a new column-moving machine. Romans also failed to apply older knowledge they possessed. Knowing from experience how to treat the land to guard its fertility, they nevertheless reacted to political, military, and economic crises by using wasteful methods that failed to support nature, and as a direct result nature was unable to support the Romans. Erosion, exhaustion of resources, debilitating pollution in several forms, certain diseases, food shortages, and ruinous inflation resulted and interacted with other forces to assure that the vast entity called the Roman Empire would disappear or be changed

beyond recognition. The decline and fall of Rome had an ecological dimension.

Thus our modern ecological crisis has roots in ancient times. Although damaging changes in the natural environment are far more rapid and widespread today, mankind has always been challenged to find a way of living with nature, and many responses to the challenge were first formulated in ancient civilizations. Perhaps we can learn from the ecological successes and failures of these earlier societies as we look to the future.

**W**E MUST BEGIN by recovering some of the attitudes of respect for the earth that some ancient peoples felt but later lost. Today, these attitudes will have to develop again from many sources within a pluralistic human community, as people from varying traditions come to see the necessity of caring for the earth in order to preserve life itself and improve the quality of life. In addition to ancient sources like the Judeo-Christian concept of stewardship (so distorted in later Western history), we can also draw upon others like the American Indian feeling for the land and its creatures, ideas of reverence for life like those found in Albert Schweitzer's thought and in some Eastern philosophies, and new concepts based on contemporary insights.

**Dr. J. Donald Hughes is well qualified to write on the environmental history of the Mediterranean Basin. He holds his Ph.D. in history from Boston University and has taught ancient history at the University of Denver since 1967. But his interest in nature goes back to his childhood in southern California. As a boy he hiked and camped in the coast ranges and the Sierras and became familiar with the plants and animals he found there. For two years he attended the Oregon State College School of Forestry and worked during summers on trail and fire crews in Willamette National Forest and Yosemite National Park. He completed his undergraduate education at the Uni-**

But we must not repeat the ancient failure to carry attitude into action. No wise environmental policy can be based on ignorance of the workings of nature. We need to make a concentrated effort of research, to study the ecosystem in its many-splendored facets and interrelationships. It is crucial that we do this now, before much of the evidence about nature's workings is altered, marred, or erased by human activities.

We need to find ways to use our technological abilities to minimize the destructive impact of our civilization upon the natural environment, and in doing this we must be willing to accept freely certain limitations upon our actions that affect the earth.

History provides us with many examples of ancient civilizations that failed to adapt themselves to live in harmony with their ecosystems, that depleted their environment and exhausted their resources, and that exist today only as ruins within eroded and desiccated landscapes. That fate might also await our own civilization, but this time on a global scale. Ancient history is a warning and a challenge to our attitudes, our ability to understand, our technical competence, and our willingness to make far-reaching decisions. The challenge will not go away, and the response we will make is not yet clear. ■

versity of California, Los Angeles, graduating in 1954 with a degree in botanical genetics. Even after receiving his Ph.D. in history, Dr. Hughes continued his interest in environmental interpretation, spending seven summers as a ranger-naturalist at Grand Canyon National Park, where the National Park Service commissioned his first book, *The Story of Man at Grand Canyon*, published by the Grand Canyon Natural History Association.

His most recent book, *Ecology in Ancient Civilizations* (University of New Mexico Press, Albuquerque, 1975, \$9.50), provides many more thought-provoking details on the theme discussed in this essay.

# Interior Probes Park Concessions: Private Ownership = Management Problems

NPCA Staff Report

THE SECRETARY of the Interior commissioned in October 1974 a Concessions Management Task Force to study National Park Service (NPS) concessions management practices and policies with the objective of planning short-term and long-range goals for improving the system. The Task Force report was sent to Congress in May and made public in June 1975.

The investigation was long overdue. For years NPCA has been publishing articles, editorials, and staff reports on the threats of concessioner operations to national park environments. Yet, not until MCA-Universal invaded Yosemite National Park with its media-based promotions and commercial television filming activities in the park, and former NPS Director Ronald H. Walker awarded a controversial contract for campsite reservations to the infant Park Reservations Systems, Inc. (PRS), did the issue of national park concessions stimulate even token reform efforts by the Department of the Interior.

The Concessions Management Task Force, composed of five employees of the Department of the Interior, spent only about fifty days gathering data and interviewing people with knowledge of concessioner operations. They visited the MCA-owned Yosemite Park and Curry Company in Yosemite and the Fred Harvey Company in Grand Canyon. They interviewed concessioners, National Park Service personnel, representatives of the Washington, D.C.-based Conference of National Park Concessioners, and representatives of environmental organizations, including NPCA.

The Task Force report itself is certainly not a reform effort. The report contained eight recommendations and one statement of "concern." Most of the recommendations were aimed at

streamlining NPS procedures in concessions management and avoiding political scandals like MCA's penetration of Yosemite's earlier master planning efforts.

The memorandum from the Task Force stated, "In recent years, the rise of vocal conservation groups on the one hand and large business organizations on the other has focused attention on the development of concessions in the National Park System as a very visible battleground of the larger preservation versus use issue. To oversimplify, the conservation groups have been calling for reduced concession operations within the parks, and business, in the form of the concessioners, has been pressing for the expansion of such facilities."

The Task Force clearly recognized the problems that arise from the trend toward conglomerate-owned concession business. The report expressed this concern: "We use the term 'conglomerate' because . . . it is the current euphemism for the trend of Park Service concession operations being bought up by large business interests which are sometimes accused of looking upon the concession more as a capital investment than as a substantive business operation *with a special responsibility to the public.*" (Emphasis added.)

The MCA and PRS problems were in evidence when the Task Force stated, "Proper concessions management . . . is hampered by the fact that concessioners are well aware of their ability to influence decisionmaking by making direct appeals to political figures or to the higher levels of the National Park Service or the Department of the Interior."

IN SPITE of its excellent grasp of the many problems associated with

concessioner operations in the national parks, the Task Force report issued only one recommendation that seriously threatens the status quo of business in the national parks: "Possessory interests in concessioner facilities should be granted only when there are no alternatives."

Possessory interests allow national park concessioners, operating in parks on a contractual basis only, to own and convey real property built on public park land. Concessioners do not possess actual title to their property; but if a concessioner loses the right to operate in the park, compensation must be paid for this loss.

The effects of possessory interests have been threefold. First, concessioners inevitably build up large vested interests in each national park, resulting in aggressive profiteering often at the expense of public service in the parks.

Second, although the Park Service may wish to terminate a concessioner contract on the basis of poor service to the public, the high cost of compensation for possessory interests may deter this decision. Thus, the Park Service is badly handicapped in managing concessioners because management directives can be disregarded by concessioners unless the Park Service shows the unlikely capability of buying out possessory interests. The Task Force said that "the concept of possessory interest makes more difficult the task of phasing out concession operations no longer consistent with proper preservation and use of parklands."

Third, citizens find themselves at a disadvantage when arguing the need for concessioner phase-outs, because they must not only confront the appropriateness of concessioner facilities but also the priorities for applying scarce fiscal resources to hundreds of

important NPS programs. Concessioner phase-outs must be weighed against the need for acquiring and protecting new parklands, inholdings, and historic resources.

The Task Force summarizes that the granting of possessory interests amounts to a sale of part of our parklands for the sake of financing visitor facilities, and that the loss of proper governmental control over concessioner operation is part of the price of that sale.

UNFORTUNATELY, the foundations of policy allowing private possessory interests to build up in our national parks stem from congressional action. In 1965 Congress passed the Concessions Policy Act (PL 89-249), which specified guidelines for private investments in national park concessions, including provisions for possessory interests. However, conservationists need to be extremely wary of any attempts to amend the Concessions Policy Act of 1965. Concessioners will probably fight hard through their Washington-based lobby, the Conference of National Park Concessioners, to retain the existing language. Failing that, the concessioners may introduce their own amendments to further weaken Park Service leverage in concessions management, or to open the national parks even wider to private exploitation.

In broaching the topic of amendments to PL 89-249, the Department of the Interior has performed a vital public service to all citizens interested in national parks. NPCA will be following this program closely and will report on the progress of these efforts.

See page 20 for an "NPCA at Work" report on the General Accounting Office concessions investigation focusing on Yosemite. ■



El Tovar, Grand Canyon National Park



Old Faithful Inn, Yellowstone National Park



Ahwahnee Lodge, Yosemite National Park

Faced with concessioners' possessory interests in such huge, elegant structures as these and many other lesser facilities, the National Park Service is unable to properly manage concessioners and, with its budget restrictions, cannot buy them out. The result is inability of the Park Service to enforce management directives to concessioners when their profit objectives conflict with park resource preservation.



# NPCA at work

**Controversial concessioner operations in Yosemite** National Park came under congressional scrutiny again this year. Continuing joint committee hearings that were initiated on December 20, 1974, Chairman John Dingell of the Small Business Subcommittee on Activities of Regulatory Agencies and Chairman William Moorhead of the Government Operations Subcommittee on Conservation and Natural Resources reconvened the session to hear testimony from the General Accounting Office—the congressional investigative agency—and representatives of private business interests operating within the park.

NPCA staff members Toby Cooper and Destry Jarvis and other former witnesses in these hearings were aghast when, on the last day of this second joint session, the subcommittees allowed Jay S. Stein, vice president of the Music Corporation of America and principal corporate officer in charge of the MCA-owned Yosemite Park and Curry Company, to deliver a brief statement and step down from the witness stand without any questioning on the major controversial topics concerning MCA's concessioner operations in Yosemite.

"Basically," said Mr. Stein, "the relationship of a concessioner to the National Park Service is that of a contractor to his contracting party. The National Park Service contracts with the concessioner to provide those services to the public which the contract calls for." This and many other bland promises of good behavior went unchallenged. Mr. Stein was not held accountable for the inappropriate actions of MCA in Yosemite National Park.

MCA's concessioner operation, under the management of Jay Stein, was responsible—at one time or another—for perpetuating, advocating, or promoting numerous profit-oriented developments in Yosemite. MCA has proposed construction of a "fast-food service" on scenic Glacier Point, 150 new all-weather motel units in Curry Village, an aerial tramway to Glacier Point, keeping Tuolumne Meadows—a

fragile subalpine meadow that is normally snowbound—open to winter traffic, expansion of facilities at Badger Pass ski area, and various other development proposals for Yosemite Valley and the backcountry. The concessioner conducted travel promotions for the park throughout California, and last year especially aroused public indignation for its use of public resources for private profit when it filmed the short-lived television series "Sierra" in the park. Mr. Stein was not asked whether and how the MCA contract with NPS called for such activities.

Apparently, Congress is willing to take MCA's promises at face value. However, NPCA is not, because our fear is that MCA, having escaped the brunt of congressional criticism in this investigation, will revert to its former heavy-handed tactics in dealing with the Park Service.

The General Accounting Office, as the investigative arm of Congress, has fully documented situations at several parks that represent a broad spectrum of concessioner problems related to NPS administrative procedures. These problems include preferential contract renewal procedures, price regulation, franchise fees, conventions in Yosemite, NPS noncompliance with the National Environmental Policy Act, inadequacy of NPS concessions management staff, and unbelievably low office and warehouse rental rates charged to MCA's Washington, D.C.-based subsidiary, Landmark Services, which conducts tours through the National Capital Parks. This report, entitled *Concession Operations in the National Parks: Improvements Needed in Administration*, is available from the Comptroller General of the United States (Washington, D.C. 20548).

**Mammoth Cave National Park's major concession**, the Mammoth Cave Hotel, is promoting—even during the peak summer visitation periods—use of its visitor facilities for such nonpark activities as bridge parties, banquets, and wedding parties.

Upon learning about this situation, NPCA vehemently protested to the General Manager of National Park Concessions, Inc., Garner Hansen, who runs the concession in this national park. NPCA told Mr. Hansen that his advertisements "reflect a serious misunderstanding of both the purposes for which national parks were established and of the functions which concessions are meant to serve in the parks." We further pointed out that these non-park-related, resort-type activities come at a time when the National Park Service is moving toward a policy of discouraging—if not prohibiting—convention-type business in the parks, at least during summer visitation periods.

Charging that banquets and bridge and wedding parties increase the concession's adverse impact on park resources, NPCA called for adoption of a more responsible attitude and higher standards of service to the park visitor by the concessioner. NPCA cited the Concessions Policy Act (PL 89-249), which requires that developments in the park must be consistent to the highest practicable degree with the preservation and conservation of the areas, while providing only those facilities that are necessary and appropriate "for public use and enjoyment of the national park area."

**The threat of extinction for many species of plants grows each day** that lists of candidates for federal protection are bogged down in a maze of bureaucratic procedures required before the plants can be listed under the Endangered Species Act of 1973.

At present the man-caused extinction of hundreds of species of plants seems inevitable due to the low priority that the nation so far has given to protecting endangered plants and to the fact that protecting them now is most often a race against time to prevent people from destroying plant habitats, collecting, or otherwise contributing to the demise of species.

As many NPCA members know from previous reports of our ongoing efforts to assure the protection of endangered plants, the 1973 law directed the Smithsonian Institution to prepare a report on endangered plants for Congress. In January 1975 the Smithsonian reported to Congress, listing approximately 10 percent of vascular

plants native to the continental United States (including Alaska)—about 2,000 kinds of plants—as “endangered,” “threatened,” or “recently extinct.” In addition, it *conservatively* listed 50 percent of Hawaiian vascular plants (see pages 4–10). The Smithsonian made recommendations on timely protective actions.

Almost six months later, following NPCA protests that the Interior Department was procrastinating on this issue, Interior’s Office of Endangered Species (OES) published a notice that it considers the Smithsonian report a petition under the Endangered Species Act, thus formally beginning a review of the lists, with the assistance of recently hired staff.

The new endangered plants program staff consists of *two* botanists who are struggling in earnest with the awesome task of reviewing the status of several thousand species of plants. It is unfortunate that the understaffed OES has allocated or authorized funds for only two botanists to work on this critical area. With the review and status report for each species reportedly taking at least thirty person-days of work, it will take years to list and protect all the endangered plants effectively.

Despite severe staff and funding constraints, some progress is detectable. OES recently published a proposed

rulemaking in the *Federal Register* for all the plants (and animals) listed on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora. These are the plants that the Convention signatory nations agreed are endangered and affected by trade. This rulemaking procedure will require a *minimum* ninety-day review period before any species can actually be listed as endangered but will probably take considerably longer with only two botanists in OES to work on them. Preparations are now underway for another proposed rulemaking for species on Appendix II of the Convention (those that *may become* threatened with extinction due to trade).

In addition, OES has begun to work on the list of seventy-seven plants identified in the Smithsonian report as being commercially exploited. This list includes several species of cacti, orchids, and carnivorous plants such as the Venus fly trap.

Severe staff constraints, both in OES and in the Smithsonian’s Office of Endangered Flora, coupled with a lack of funds to contract out the preparation of the essential status reports to other botanical experts will surely slow the listing process tremendously—perhaps allowing the extinction of some of the very plants that the process is intended to preserve.

Members who wish to express their concern should write to the Interior Department to urge that a higher priority be placed on the review and subsequent listing of endangered and threatened plants in the United States, along with a larger allocation of funds and more personnel to carry out this task. See the January, April, and July 1975 issues for more information:

Hon. Nathaniel P. Reed  
Assistant Secretary for Fish,  
Wildlife & Parks  
U.S. Department of the Interior  
Washington, D.C. 20240

**If we are not entitled to breathe clean air in our national parks** and other wild places, to clearly see the stars by night and the natural vistas by day—where then shall we turn?

NPCA has been urging the federal government to safeguard these areas by properly enforcing the Clean Air Act of 1970, working on the basic assumption that national parks require the cleanest, clearest air possible.

This basic assumption is currently being challenged in the Southwest by a planned complex of giant coal-fired powerplants. As detailed in the July 1975 issue of *National Parks & Conservation Magazine*, fully one-fifth of the National Park System is located in the region of the proposed industrialization, which will seriously pollute the air, decrease visibility, and bring many developments that will adversely affect national park units.

The Clean Air Act requires prevention of “significant deterioration” of air quality in areas of the nation in which the air is now cleaner than the minimum national standards set by the Act. Under regulations developed by the Environmental Protection Agency (EPA) to implement this requirement, there are three possible categories for such clean-air areas.

NPCA urged *immediate* Class I (“no deterioration”) designation for all national parks and monuments, national wildlife refuges, and national wild and scenic rivers. However, for the present EPA has classified all clean-air areas as Class II.

This second category would allow “some deterioration,” for example, 1,000-megawatt coal-fired powerplants to be spaced twenty-five miles apart, in areas near our national parks.



BETSY H. GAGNE

*This endangered geranium, a depressed but woody bog species, is confined to two bogs in the Hana Forest Reserve, Maui, Hawaii, at an elevation of about 5,600 feet.*

EPA regulations permit reclassification to either cleaner (Class I) or dirtier (Class II) categories following review of applications from the states or federal land managing agencies such as the National Park Service.

NPCA has been urging reclassification to Class I for national park units. Following our pleas in the July Magazine for Interior Department action to protect the parks, as well as subsequent inquiries, NPCA learned that the Park Service (NPS) now favors reclassification to Class I for all units of the National Park System except those of less than 1,000 acres and those that fall within one of the Standard Metropolitan Statistical Areas (where presumably the air is dirtier).

This approach requires the surmounting of two major hurdles, however. First of all, at present higher Interior Department officials have not approved the NPS Class I recommendation, and major conflicts could occur over energy development policy if the NPS proposal is seen as inhibiting progress toward the Administration's goal of energy independence.

Secondly, the NPS has estimated that compliance with EPA reclassification procedures, which require extensive consultation with state officials and public hearings, could cost up to \$50,000 per park area, little—if any—of which is currently available.

In an effort to eliminate the time and money required to comply with EPA procedures, the NPS recently endorsed amendments to the Clean Air Act of 1970 that would automatically give Class I designations to the majority of the units of the National Park System. The Senate Subcommittee on Environmental Pollution has approved this proposal, which currently awaits action by the full Public Works Committee along with a number of other Clean Air Act amendments.

The Park Service has concluded that Class I designation for the parks could halt development of all air pollution generators, such as fossil-fuel plants, within fifty miles of parks.

If you are concerned about preservation of air quality, peace and quiet, and the natural resources of our parks, write or telegraph President Ford to

urge Administration support for reclassification of national park areas to Class I under EPA regulations to prevent "significant deterioration" of air quality:

Honorable Gerald Ford  
The White House  
Washington, D.C. 20500

**Developments related to the proposed Kaiparowits powerplant already have begun to violate the integrity of at least one unit of the National Park System in the Southwest.**

NPCA learned with dismay that an enclave within Glen Canyon National Recreation Area is planned for use as a staging area to provide housing for workers and their families who will be needed at a future time for the development, mining, construction, and ultimate operation of the mammoth coal-fired powerplant, which will be located not far from this and other park units. Furthermore, to service this enclave, which is owned by the State of Arizona, an underground transmission line has been illegally constructed on Park Service property.

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NPCA recently commented on a draft environmental impact statement on an after-the-fact application for a special use permit for this transmission line. In urging the Park Service to deny the application, NPCA Arizona representative Robert Coshland cited this Association's general policy of advocating the phasing out of visitor housing and its relocation outside of park boundaries to relieve the "people pressures" that threaten many park units with overuse.

It is particularly shocking in this case that the transmission line and "Greenehaven," the development it will serve, are not even related to the recreational purposes of Glen Canyon.

NPCA pointed out the irony in the fact that this transmission line is associated with the proposed Kaiparowits powerplant, which would emit 100,000 tons of air pollutants each year and would have an adverse impact on the very NPS unit crossed by the transmission line.

Denial of the application for the transmission line would not prevent the Greenehaven project because on-site power generation can be installed. However, NPCA pointed out that the Arizona Water Commission could prevent the project by denying it a pumping permit. The 3,000 acre-feet of water that Greenehaven would use would be charged against Arizona's 50,000 acre-feet share of the Upper Colorado Basin's supply—a share that has already been fully allocated. NPCA urged soliciting comments from the water commission. Without water, Greenehaven would be a failure, and the Arizona State Land Department then might be more willing to negotiate a land exchange.

**Sport hunters might be pursuing the Pacific walrus soon** if U.S. Fish and Wildlife Service Director Lynn Greenwalt adopts the recommendations of the FWS administrative law judge.

A moratorium on walrus hunting, except by Alaskan natives, has been in effect since the passage of the Marine Mammal Protection Act of 1972, but the Fish and Game Department of Alaska is requesting FWS to waive the moratorium.

As reported in the July 1975 Magazine, in hearings before Judge Joseph Kennedy NPCA has protested the pro-

posal on the grounds that if FWS approves the waiver, the walrus hunt would be controlled under Alaskan law, which is inadequate. NPCA objected to the way Alaskan law permits killing of pregnant and nursing females, does not require full utilization of walrus killed, places no restrictions on caliber of weapons used and makes no requirement for shooting only on land.

In addition, NPCA pointed out, Alaskan game management operates under the "maximum sustained yield" principle rather than the "optimum sustainable population" (OSP) principle required by the Marine Mammal Protection Act.

Although the judge recommended allowing sport hunting, he incorporated into his decision almost all of NPCA's recommended changes to strengthen the regulations for the hunt. As the basis for his decision the judge stated that there should be *no* waiver of the moratorium unless the OSP level has been reached, and that the moratorium would be automatically reimposed if the number of

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walrus falls below the OSP. Data compiled during the administrative hearings reveal that the walrus population is presently between 140,000 and 200,000. Upon the evidence of expert testimony, the judge determined that this number is within the range of the OSP. Thus, the judge recommended that a maximum retrieved kill of 3,000 walrus be allowed. If the kill exceeds 3,000, the moratorium would be reimposed.

However, the judge qualified his recommendation by requiring a number of major changes in Alaskan law to ensure nonwasteful hunting methods, as NPCA had previously urged: He recommended that FWS allow the use of only high-caliber rifles, prohibiting shotguns, clubs, bows and arrows, nets, etc.; that the director prohibit any shooting of walrus in the water, thus avoiding large numbers lost by sinking; that FWS prohibit shooting nursing calves or calves less than eight months old; and that females should be shot only for subsistence purposes, not merely for their ivory.

However, the judge rejected NPCA's contention that walrus hunting regulations should require maximum utilization of walrus. That is, NPCA has maintained that after killing a walrus,

the hunter should be required to make use of meat, hide, ivory, etc.—rather than killing only for a trophy head, for instance. Such a regulation would avoid waste, thus potentially reducing the total number of walrus killed.

In addition, the judge recommended that trade in walrus ivory and hides be permitted. Carved ivory has been a principal source of income for Alaskan natives, while bull walrus hides are used as a buffer in metal polishing.

While recognizing and accepting the role of walrus in the diet and native crafts of Eskimos and Aleuts, NPCA has expressed reservations about the resumption of sport hunting. However, because present law permits sport hunting when the population is at the optimum sustainable level, NPCA has concentrated its efforts on assuring that Alaskan law is made to conform to the requirements of the Marine Mammal Protection Act. The judge's decision will accomplish this—if it is accepted by FWS Director Lynn Greenwalt.

Members should write the director to urge acceptance of the administrative law judge's strengthening amendments to the Alaskan application to lift the moratorium on the taking of Pacific walrus:

Lynn A. Greenwalt, Director  
U.S. Fish and Wildlife Service  
Washington, D.C. 20240

**To save Glacier National Park** in Montana from serious environmental degradation and the Flathead River watershed from needless pollution, NPCA has strongly urged U.S. Secretary of State Henry A. Kissinger to investigate a coal mining proposal in Canada and to lead the Department of State in a course of action designed to bring multilateral agreement on finding alternatives to the development.

Rio Algom Mines, Ltd., is a British industrial conglomerate with interests in Canada. Rio is interested in developing a coal mine in the Cabin Creek watershed, just eight miles from the U.S. border and Glacier National Park. The Cabin Creek area is reportedly underlain by 150–180 million tons of coal.

Cabin Creek flows into the Flathead River, which forms the western boundary of Glacier National Park. Destruction of this watershed, with adverse effects on our national park, would be an irredeemable loss.

NPCA pointed out that Glacier National Park has been one of our treasured national wilderness parks for

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more than sixty-five years. The rugged mountain peaks of this park have been celebrated internationally as well as by our own people; together with Canada's Waterton Lakes National Park, Glacier is part of the Waterton-Glacier International Peace Park; and the "Man and the Biosphere" program sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO) has recently approved the designation of Glacier National Park as a "biosphere reserve."

NPCA told Secretary Kissinger that the problem can be solved only by expedient and carefully directed action on the part of the two governments involved. Certain Canadian officials are claiming that no action needs to be taken until Rio Algom files the necessary permit applications for mining, but meanwhile Rio is investing heavily in planning—making a reversal of their position unlikely in the future.

NPCA members are urged to write to Secretary Kissinger to ask that he immediately initiate multilateral talks with the Canadian government in order to find alternatives to the Cabin Creek mine proposal:

The Honorable Henry Kissinger  
Department of State  
Washington, D.C. 20520

**For the vacant post of Secretary of the Interior**, NPCA has recommended to President Ford that he consider three outstanding environmentalists: Russell W. Peterson, Chairman of the Council on Environmental Quality; Russell E. Train, administrator of the Environmental Protection Agency; and Nathaniel P. Reed, Assistant Secretary of the Interior for Fish, Wildlife, and Parks.

NPCA President A. W. Smith remarked that any one of the three "would bring an excellent balance into the work of the Department of the Interior in terms of both developmental and environmental protection. They could hope for strong support both from people like ourselves who favor the responsible utilization of our resources and from those, again like ourselves, who are deeply concerned with the protection of a good life environment for human beings everywhere."

Stanley K. Hathaway, who was nominated by President Ford for the

post and confirmed after lengthy Senate hearings, resigned in July.

**One of the first decisions facing the new Interior Secretary**, when he is nominated and confirmed, will be whether to approve the application for designation of the New River in North Carolina as a state-managed component of the National Wild and Scenic Rivers System. Shortly before Interior Secretary Stanley Hathaway's resignation



tion, North Carolina Governor James Holshouser, Jr., met with him to urge him to swiftly approve the state's application.

NPCA President A. W. Smith then contacted the Interior Secretary, also urging approval. Incorporation of that portion of New River into the Wild and Scenic Rivers System is important because the river is well qualified; it is one of the largest free-flowing, clean rivers remaining in the East.

In addition, the national designation would allow the 44,000 acres of farmland surrounding the river to remain in agricultural production, thus producing an annual revenue of \$13.5 million, rather than subjecting this land to inundation by the twin reservoirs of the Blue Ridge Project, a pumped-storage power project of American Electric Power System. The Blue Ridge Project would produce an annual revenue of approximately \$6.7 million for the project's fifty-year lifespan.

NPCA members are urged to write the Interior Department, expressing support for North Carolina's application:

Secretary  
U.S. Department of the Interior  
Washington, D.C. 20240

## news notes

**The grizzly bear is now listed under the Endangered Species Act** as a "threatened" species in the lower forty-eight states, but the U.S. Fish and Wildlife Service (FWS) rulemaking, published on July 28, 1975, permits sport hunting of grizzlies in Montana and "taking" by officials of bears considered to be depredating.

The listing of the grizzly under the Act means that, except for certain circumstances prescribed by the regulation, it is now unlawful to kill, capture, harm, harass, import, or export a grizzly bear anywhere in the lower forty-eight states, or to sell any parts or products of grizzlies in interstate or foreign commerce.

Today there are only several hundred grizzlies in the United States south of Canada, and their range has been reduced to the point where virtually all occur in three ecosystems: the Selway-Bitterroot in Idaho and Montana; the Yellowstone, covering parts of Idaho, Montana, and Wyoming; and the Bob Marshall in Montana. These ecosystems are composed mostly of federal lands, including Glacier, Yellowstone, and Grand Teton parks.

Increasing encroachment by humans, such as Forest Service road-building and clearcutting in national forests, is degrading the remaining wilderness habitat of the grizzly, and FWS says habitat disturbance prompted the grizzly's listing as a "threatened" species, which is defined as a species likely to become endangered throughout all or a significant portion of its range.

Other authorities on the grizzly have been emphasizing that although habitat preservation is crucial, it is insufficient by itself due to the grizzly's vulnerability to excessive man-caused mortalities.

Humans generally have waged a continuous war—involving poisons, traps, and guns—against this awesome carnivore that once ruled the West. With the support of the federal government, stockmen over the years have wiped out thousands of grizzlies based on the claim that the bears represent a significant threat to livestock.

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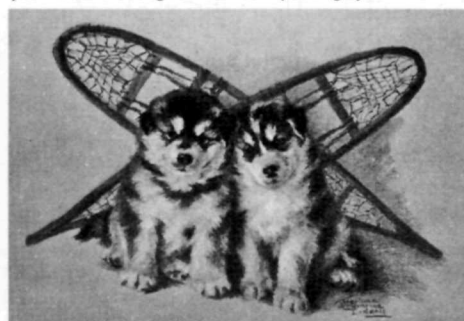
**3058 TAKE TIME TO SEE** "...The distant hills and mountains high...A timid deer, etc." 24 line nature poem by Ray F. Zaner. "May Peace be your Gift at Christmas and your Treasure through all the Year" painting by Garé Barks



**3023 A COVEY OF QUAIL** "This time of year when the air's full of cheer and fields are covered with snow; What could be better in this chilly ol' weather than to wish Merry Christmas to all that we know!" painting by Herb Booth



**3003 FOREST BENEDICTION** "I am the light of the world..." St. John 8:12 "May the Peace and Joy of Christmas be with you through all the Year" painting by Allan Husberg



**3054 "To have joy one must share it, happiness was born a twin." Old Indian Saying "Wishing you a Christmas Season filled with Love and Happiness"** painting by Josephine Crumrine Liddell



**3068 THE GIFT OF HEAVEN'S LIGHT** "To one and all we pray the gift of light— and...may a star lead you, etc." "May the Peace and Happiness of the Christmas Season abide with you through all the Coming Year" by Garé Barks



**1142 A CHRISTMAS MORNING HANDOUT** "Never too cold for kindness, Never too deep the snow, To wish you the Merriest Christmas Our good Lord can bestow!" painting by Bernard P. Thomas



**3001 "Therefore am I still a lover of the meadows; and of all that we behold from this green earth, etc." from William Wordsworth "Merry Christmas and a Happy New Year"** painting by Garé Barks



**3055 MERRY CHRISTMAS** "Holiday Greetings and Best Wishes for the New Year" painting by William S. Tilton



**3011 MASTER OF HIS LAND** "May the Peace and Joy of Christmas be with you through all the Year" painting by Doug Van Howd



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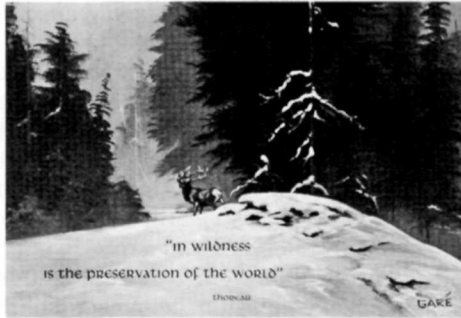
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**3046 PINE SQUIRREL** "Joy is the Spirit of Christmas — Peace is the Hope of the World." "May you have a happy Christmas." painting by Elmer Sprunger



**3009 COUGAR IN THE CHRISTMAS NIGHT** "When shall all men's good be each man's rule, and universal peace be like a shaft of light across the land." from Tennyson "Merry Christmas and Happy New Year" painting by Garé Barks



**3019 "To have joy one must share it, happiness was born a twin." Old Indian Saying "Wishing you a Christmas Season filled with Love and Happiness"** painting by Richard Amundsen



**3004 "In the heart of the wilderness Christmas has come ...Glory to God in the highest. Peace on earth, good will toward men!" "May Peace be your Gift at Christmas and your Treasure through all the Year"** painting by Garé Barks

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zly habitat in recent years—pointed out by a recent court decision that the Park Service was negligent in abruptly closing garbage dumps at Yellowstone National Park—have resulted in increased man-bear encounters harmful to grizzlies and humans. Roadbuilding has opened up areas to poachers and hunters, who once were aided by uncontrolled hunting in Montana.

In cases of defense of human life, the recent rulemaking would of course permit grizzlies to be killed anywhere. In addition, however, authorized federal or state officials can kill bears "to remove demonstrable but nonimmediate threats to human safety or to prevent significant depredations on livestock lawfully on the premises," after "reasonable efforts to live-capture and release unharmed in a remote area" have failed.

When the FWS issued a proposed rulemaking in January, NPCA objected to allowing killing on public lands of depredating bears that are not directly threatening human lives. NPCA maintains that grizzlies, which are a public value, must take priority over losses to private livestock interests that benefit from leasing public lands and thus are heavily subsidized at public expense.

In the Bob Marshall ecosystem, excluding Glacier National Park, sport hunting of the bears may continue under the rulemaking, if the total number of bears reported killed from all causes each year does not exceed twenty-five. NPCA maintains that sport hunting of grizzlies is not justified under the Endangered Species Act.

To justify sport hunting of this threatened species, FWS claims that regulated sport hunting will create an "adequate fear of man" in the grizzly, thus reducing depredations and threats to human safety.

FWS has not offered any scientific evidence on grizzly behavior to support this contention, and some people believe that hunting may actually stimulate aggression toward humans by grizzlies. More importantly, there are inadequate population data to justify the hunting quota.

Regarding the poaching problem, the facts that unlimited numbers of hunters will be issued licenses and that those killing a grizzly must pay a trophy fee of approximately \$25 when they report a kill, and the vastness of the Bob Marshall ecosystem, many

people feel that the reporting of grizzly deaths under the quota system will not be accurate and that humans, rather than grizzlies, will get the benefit of the doubt.

**Conservationists are urging the U.S. Postal Service** to produce a group of commemorative whale stamps in view of U.S. efforts to protect the great whales. The U.S. whaling industry has been phased out and all whale products are banned from entering this country. The whale has become a symbol of endangered species.

As pointed out by the National Whale Symposium and the Environmental Defense Fund, a set of stamps would aid in correcting the mistaken impressions of the true shapes of whales, as well as forwarding the con-

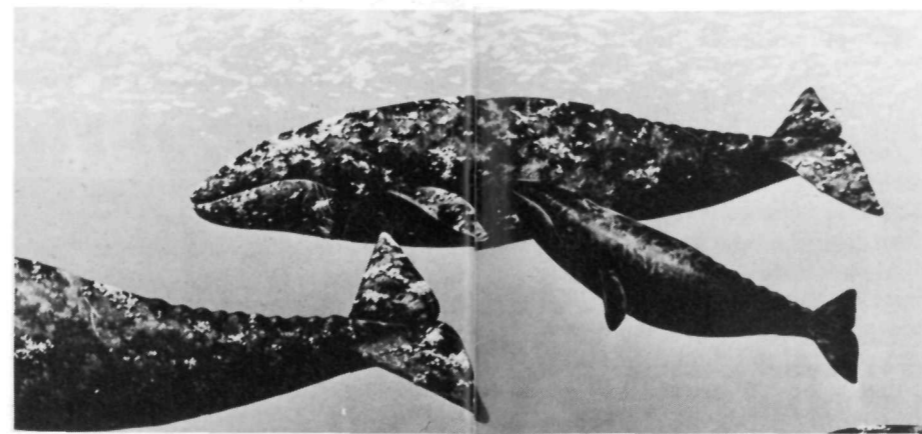


servation of the whales and honoring these beautiful mammals. Larry Foster of General Whale, who is recognized as a leading illustrator of whales, has designed a proposed set of five stamps representing the five species of great whales considered to be most rare and endangered.

If you would like to help urge the Postal Service to consider a whale commemorative series, write to: Mr. Steve Dohanos, Chairman, Citizens' Stamp Advisory Committee, U.S. Postal Service, Room 10422, L'Enfant Plaza West, S.W., Washington, D.C. 20260.

**The world's remaining whale populations will continue to decline** under the whaling policy recently announced by Japanese Prime Minister Takeo Miki, warns Rep. Alphonzo Bell of California.

"The overexploitation of these great ocean mammals is merely perpetuated by the new quotas of the International Whaling Commission," comments Bell. Premier Miki stated during his recent visit to the United States that Japan would abide by the IWC quotas. Japan defied the quotas in 1973.



*The gray whale is protected by a special international treaty, but some think that*

Explained Bell: "The International Whaling Commission represents neither international nor scientific opinion. More than half the fifteen member nations of the IWC conduct whaling operations. The sole purpose of the IWC majority is to maintain the whaling industry. The IWC has ignored the unanimous appeals of the United Nations in 1972, 1973, and 1974 for a ten-year moratorium on whaling. . . . In just twenty-six years, the IWC has legitimated the massive overkill of species after species of whales. The blue whale was all but wiped off the face of the earth by IWC-sanctioned whaling. Now the fin and sei whales are in desperate condition. The very fact that the nonindustry scientists of the IWC have recommended an almost total ban on hunting fin whales and a sharp cutback in sei whales proves that the IWC has been incapable of proper management.

"Prime Minister Miki stated that Japan will 'abide by any responsible scientific research findings' in order to preserve the great whales," states Bell. "But he surely must know that Japan bitterly objected to the recommendations of the Scientific Committee of the IWC this year. It was pressure from the Japanese delegation that influenced the IWC to overrule the scientists and allow 650 more sei whales to be killed—an increase of 41 percent in the sei whale quota."

Bell bluntly charges: "The whaling nations, particularly Japan and the Soviet Union, have heeded the appeals of international opinion and responsible scientists only when their ruthless whaling operations were not hindered. When the other IWC nations tried to

*Japan might evade the treaty. (Painting by Richard Ellis.)*

restrain Japan and the Soviets in 1973, those two countries defied the quotas. Thousands of endangered whales died because of their defiance. The Secretary of Commerce has certified that Japan and the Soviet Union are in violation of the Pelly Amendment to the Fisherman's Protective Act. The U.S. government is therefore empowered to embargo the fishery products of Japan and the Soviet Union.

"But the threat of economic sanctions has not been effective," Bell says. "Consequently, I introduced legislation (H.J. Res. 448) calling for the immediate embargo of the products of all foreign enterprises engaged in commercial whaling. This bill is aimed at the major Japanese and Soviet whaling companies which supply vast quantities of fishery products to the United States, such as tuna, halibut, salmon, crab, oysters, and caviar."

Hearings on the bill have already been held before the House Fisheries and Wildlife Conservation Subcommittee. NPCA supported the bill in invited testimony.

The declining whale population is forcing the Japanese and Soviet whalers to reduce their whaling fleets. Dozens of the fast, deadly catcher boats are now surplus. Based on tragedies in the past, conservationists now fear that these excess whaling vessels will be transferred to other companies and nations where the remorseless slaughter will continue.

Bell explains, "When Japan finally agreed to stop killing the blue whales in 1965—only after the Japanese fleets could not find a single blue whale to harpoon—the Japanese government granted licenses to the whalers to set

up unrestricted whaling operations in Chile. These Japanese 'pirate' whalers have killed more than 550 of the nearly extinct blue whales since then.

"It is obvious that the Japanese whaling industry controls the official government policy in Japan.

"If the Japanese government is sincere about controlling the excesses of the Japanese whalers," Bell contends, "then the whaling operations in Peru and Chile, owned by the Japanese whalers, should be required to halt their killing of undersize whales and the exceedingly rare humpback, right, and blue whales." Neither Peru nor Chile is a member of the IWC, so the whaling operations in those countries are totally unregulated. More than 1,800 whales are killed in the Peruvian operation alone each year, he reports.

Concludes Bell: "Japan and the Soviet Union, which account for more than 80 percent of the 40,000 whales killed each year, must begin to act responsibly. The great whales live in international waters, and therefore their fate must be decided by all mankind, not just the rapacious whalers."

## conservation docket

Recent action on bills of interest to NPCA members included:

**Interior Appropriations:** The House has approved the FY 1976 appropriation bill (HR 8773) for the Interior Department by a vote of 417 to 8. Although the total departmental budget is in excess of \$4 billion, Rep. Sidney R. Yates (D-Ill.), chairman of the Interior Appropriations Subcommittee, pointed out that agencies funded by the bill return approximately \$9.3 billion in revenues to the Federal Treasury, for a net increase.

Contained in the House bill are: \$193.8 million for the Bureau of Land Management, including \$6 million not requested by the Administration for a comprehensive rangeland improvement program—citing the neglect and abuse of the public grazing lands; \$309.7 million for the Bureau of Outdoor Recreation from the Land and Water Conservation Fund; and \$240.4

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million for operation of the National Park System to the NPS.

Of the large appropriation from the Land and Water Conservation Fund, primarily for land acquisition, the House approved \$175.8 million to the states and \$79.7 million to the National Park Service. Included among the park units receiving the NPS share will be: Big Cypress National Preserve, Florida (\$3 million); Big Thicket National Preserve, Texas (\$2 million); Buffalo National River, Arkansas (\$4.1 million); Cape Lookout National Seashore, North Carolina (\$2.6 million); Colonial National Historical Park, Virginia (\$2.5 million); Cuyahoga Valley National Recreation Area, Ohio (\$3 million); Delaware Watergap National Recreation Area, Pennsylvania (\$3 million); Golden Gate National Recreation Area, California (\$9 million); Indiana Dunes National Lakeshore, Indiana (\$3 million); Lake Mead National Recreation Area, Nevada (\$2 million); Rocky Mountain National Park, Colorado (\$1 million); Sleeping Bear Dunes National Lakeshore, Michigan (\$4 million); Virgin Islands National Park,

Virgin Islands (\$5 million); Voyageurs National Park, Minnesota (\$5.1 million); and \$15 million for acquisition of inholdings.

**Allegheny and Housatonic:** The Senate passed S 10 and S 1004, to authorize a study of segments of the Housatonic River in Connecticut and the Allegheny River in Pennsylvania for inclusion in the National Wild and Scenic Rivers System. Study segments include a 50-mile segment of the Housatonic River from the Massachusetts-Connecticut border to its confluence with the Shepaug River and a 128-mile segment of the upper Allegheny from Kinzua Dam to East Brandy, Pennsylvania. The House has not acted yet on companion bills (HR 8436, Housatonic, and HR 4540, Allegheny).

**Refuge Management:** HR 5512—The bill that would require that all wildlife refuges be managed by the Fish and Wildlife Service unless presently under joint management—has been approved by the full House Merchant Marine and Fisheries Committee and awaits the granting of a rule by the Rules Committee prior to House floor ac-

tions. This bill arose as a result of the Administration's controversial proposal to transfer three game ranges—the Charles Sheldon, Kofa, and Charles M. Russell ranges—to the sole jurisdiction of the BLM.

**200-Mile Fishing Zone:** After extensive hearings and mark-up, the full House Merchant Marine and Fisheries Committee reported out HR 200, which would extend the U.S. coastal fisheries zone out to 200 miles. Special provisions of the committee bill make it clear that the measure applies only to fisheries, that it does not take effect until July 1976, and that it will be superseded immediately by the Law of the Sea Treaty, which is currently being negotiated, when that treaty becomes effective. As approved by the committee, the bill would exempt some highly migratory fish species such as tuna from its provisions, while making it clear that its major purpose is to conserve and manage fish stocks for optimum yield.

The Senate has held hearings on, but has not yet marked up a similar measure, S 961.

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*Continued from page 2*

as a result of increased exports; there is already much hunger among us, and there will be more. These problems will be serious if our population keeps on climbing; they will be less so if our numbers fall.

**O**UR PARKS, wilderness, wildlife are all in great danger. Overcrowding and the spreading of cities have intruded destructively on plants and animals which have shared the planet with men throughout the ages. And the enjoyment of the natural setting is one of the great satisfactions of human life.

If we can stabilize our numbers, as we may be doing, and persist on that course with conviction, and even better if we can achieve a slowly falling population level for perhaps a century, we have a better chance of keeping a decent environment for ourselves and preserving the endangered plants and animals for the remainder of the human stay on earth.

The processes of government and even of business administration have become so complex in recent years in industrial countries that the human mind can hardly handle them. We have summoned the computer to our rescue, but it brings its own complexities.

Within the memory and experience of the older generations of Americans is a nation of less than 100 million. This was a country in which a city of 250,000 was thought to be large. We had space to live in; an abundance of soil, water, forests, wildlife; and domestic mineral resources for practically all our needs.

It is not atavistic to look forward to the restoration of many of the good qualities of this bygone world. Urbanization of the kind which has occurred, and industrialization as it has taken place, though we thought of them as achievements, were in reality the result of great failures of the human spirit. If a progressive restoration of the natural environment is to be achieved, the master key to success will be the reduction and eventual stabilization of our numbers at lower levels.

The method, as we have observed in the past, will be a program of moral education based on a general standard of not more than two children per woman. A formula of an average will not suffice; for no one can practice an average, and the need is for a guide for personal conduct within the requirements of the welfare of family and community. Men and women are moral, rational creatures; and conscience and mind must be addressed and permanently persuaded if long-term solutions are to be found.

**B**UT IF THE PROSPECT may be favorable in regard to family size in the present population, the problem of immigration remains. It will be a sad situation if the American people achieve the seemingly

impossible, the stability and reduction of their own numbers, but meet with defeat because hordes of invaders pour across our borders from nations which have not established population control.

The actual figures for illegal immigration are not available, but the number may be at least 800,000. Added to the 360,000 net legal immigration, it brings a total of 1,160,000. The natural increase at present is running about 1,200,000. The main problem in respect to illegal immigration is the Mexican border, beyond which a nation of 60 million people may double its numbers by the end of the century and go on to outstrip the American population before it achieves stability itself.

America was always the promised land. The poor, the dispossessed of the world, could come to our shores and find hospitality and assistance. There were fictions and legends about all this, to be sure, and yet in the large it was true. And as a nation descended from immigrants, we have always been hospitable to our friends and relatives who wanted to join us. The time has come for a solemn look at these attitudes.

If we are to stabilize and reduce our population, immigration and emigration must be equalized. Looking at the figures just quoted, we must recognize the great difficulty of this task. Yet the issue must be faced and tackled promptly, else we shall lose all the benefits of our own efforts to control domestic population growth. As rapidly as possible, the nation should move toward a policy whereby the actual emigration each year becomes the limit for legal immigration the next year, and whereby illegal immigration is halted.

**A**ND WHY SHOULD conservationists concern themselves with these problems? And why above all should the defenders of the national parks be disturbed? Surely the answers are obvious: the parks can never be protected, come what may in terms of good public administration and vigilant watchdog activity by private organizations, if the crowds keep on building up. The silences and solitudes of the parks will be shattered by the clamoring refugees from urban desolation. The forests which buffer the parks will shrink before the expansion of agriculture and the need for houses, containers, and newspapers. Wildlife will just be in the way.

And so, regrettably, the Gates of the Republic must be closed; not tightly, but until they stand only ajar. And resolutely must they be defended. Only so can America become one example among others of a nation living prudently within its means and yet enjoying the sustained abundance of the land. Only so can America keep the footing it needs to help the disadvantaged peoples of the earth in the long travail which lies ahead.

—Anthony Wayne Smith



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