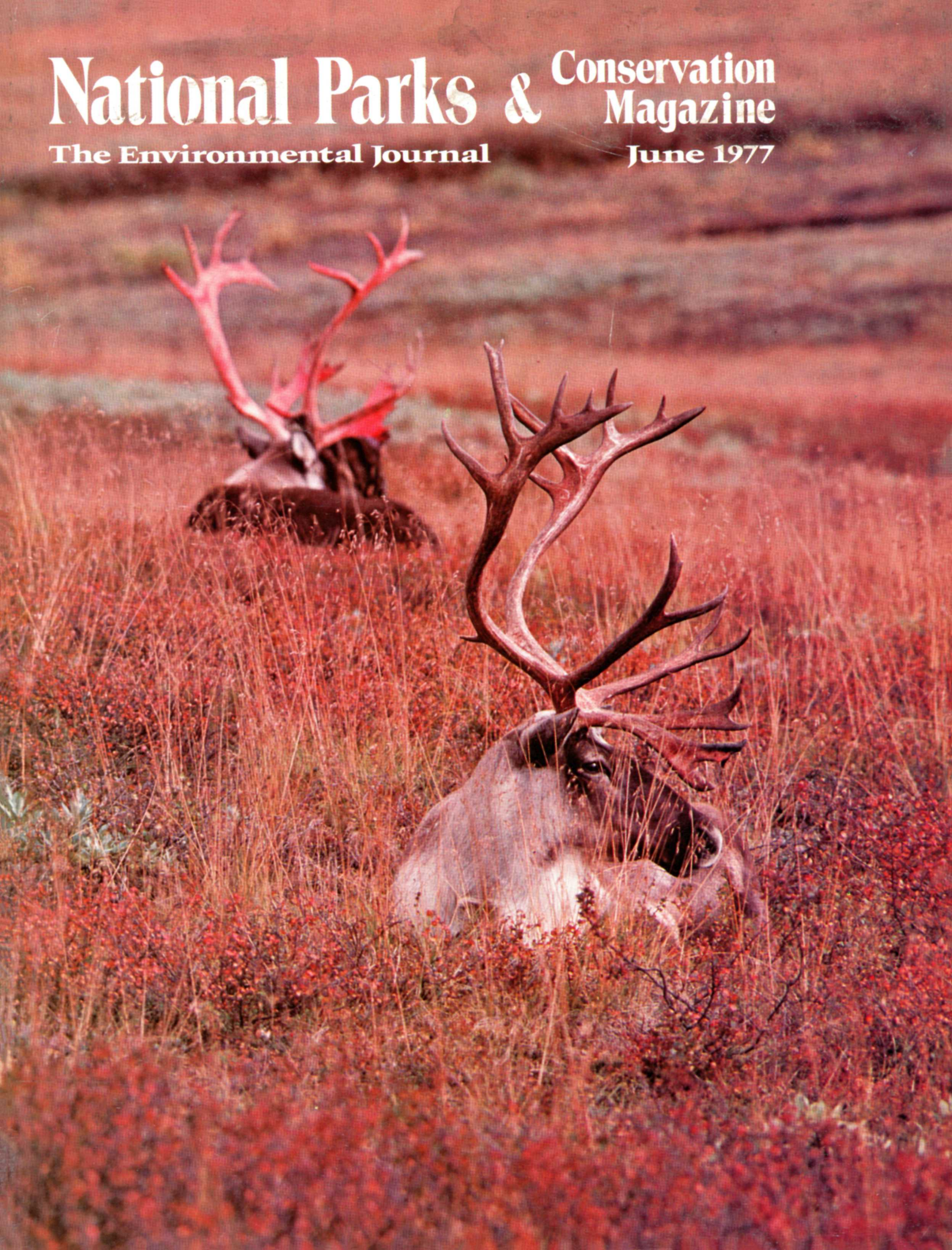
National Parks & Conservation Magazine

The Environmental Journal

June 1977



An American Springtime

SPRINGTIME came late this year after the hard winter, but poured its abundance of new life into the world with its old extravagance. After the melting snows, the spring peepers and chorus frogs awoke as always and filled the warming nights with ancient music. And then came the birds, and the morning choruses, robins searching the lawns, meadowlarks calling in the fields, red-winged blackbirds dropping metallic notes from tree-tops. You may follow the cool creek through the pasture, discover the fragile trout lily in an earthy nook, and everywhere bluebells. You can breathe more freely again, looking ahead toward the abundance of the unfolding year.

Spring came also to the public life of America. For those who remembered an old mission toward freedom but found themselves too often locked in partnership with tyranny, there was a new call for liberty. In place of the habitual acceptance of a deadly weight of armaments, there was a voice for at least a beginning cut in the arsenals of insanity. And instead of drifting with the tide of nuclear proliferation, the new President proposed to stem it.

In keeping with the spirit of Spring, the rivers of America may once again run free. No doubt the last useless and destructive dam has not yet been built, but the challenge has been raised. We look ahead to strong programs for the restoration of the land, for the rigorous control of strip mining, for the protection of farmlands, for the recovery of the forests. And we have confidence that as the mortal dangers of nuclear power are constantly more clearly understood, this nation first, and others perhaps later, will turn toward the sun and the winds to harness by an advanced technology the energy needed by an industrial society.

THE REVOLUTION which has occurred may be much more profound than supposed. When the new people arrived, in many cases there had indeed been nobody there. Youthful enthusiasts stepped into positions of power, and no one to gainsay them. Their judgment in some instances has been poor, and their inexperience occasionally colossal. But their spirits are high, and their desire for change; new deeds are astir in the land.

For our part, with our particular mission for the wildlands of America, we shall press for the better protection of the great primeval national parks with more confidence that our voices will be heard. We shall concern ourselves with the difficult problems of plans and money for the recreational parks near the cities with more assurance that the needs of city people for contact with nature will be understood by those in power. We shall believe it possible once again to unfold programs for the restoration of generous open space in the cities, coupled with industries and homes for all.

WE SHALL BELIEVE that the new legislation governing the forestry agencies will be administered for the restoration of natural balances, not for simple-minded economic productivity. We shall dare to suppose that an Administration concerned for human rights will lend its aid toward the humane treatment of animals and the survival of endangered species everywhere.

We shall watch for and support a rigorous restraint upon the deadly chemicals, pesticides, herbicides, additives, nuclear wastes, the modern multiplicity of carcinogenics, which have been poisoning our world. A vast indignation has been building up throughout the nation about these atrocious dangers; the new President will have strong support from the people in these matters, in spite of the interests, and he has proposed to stay close to the people.

WE WELCOME the emphasis on conservation expressed in the President's message on energy and elsewhere. The humane purposes of an industrial society are not served by a squandering of natural resources or the dissipation of the industrial product. The true industrial purpose is the release of human beings from drudgery and poverty into a life of security, sufficiency, leisure, and opportunity for esthetic and intellectual fulfillment. Toward these ends conservation is indeed a moral imperative.

There may well be a closer conjunction between the President and Congress than some of the first skirmishes have suggested. The new men and women who came to the Capitol in recent

Continued on page 31

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The Environmental Journal **Vol. 51, No. 6, June 1977**
NPCA · National Parks & Conservation Association · NPCA

COVERS Noatak wildlife, by Stephen J. Krasemann
From its origin in the glaciers of Mount Igikpak—the highest peak in the western Brooks Range in Alaska—the Noatak River flows 434 miles to Kotzebue Sound. This largest untouched river basin in America is the migration route for Alaska's largest caribou herd (front cover) and breeding ground for many species of migratory birds (plovers, on back cover). The entire area is proposed for designation as wilderness and addition to the National Park System. (See page 4.)

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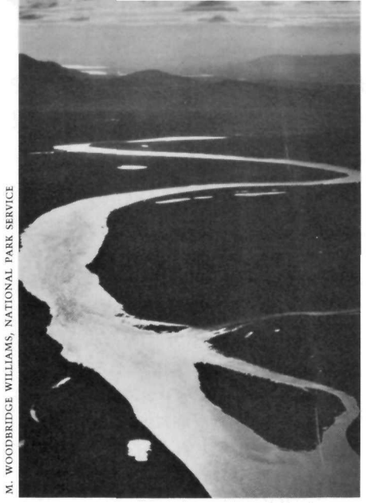


M. WOODBRIDGE WILLIAMS, NATIONAL PARK SERVICE

The largest untouched river basin in America
is proposed for addition to the National Park System

Arctic Splendor Along the Noatak

by JAMES W. GREENOUGH

DALL EWE AND LAMB, FROM A PHOTO BY STEPHEN J. KRASEMANN

THE NOATAK RIVER of northwestern Alaska is as truly arctic as it is wild. Its entire watershed lies well above the Arctic Circle. The Noatak rises in the central Brooks Range and flows westward, parallel to the range, curving south only in the last quarter of its 700-kilometer (434-mile) journey to Kotzebue Sound on the Arctic Ocean. The Brooks Range splits into two distinct mountain ranges at its western end, channeling the Noatak through a valley that contains only one permanent human settlement—the Eskimo village of Noatak. The waters of the Noatak River are usually crystal clear during the late summer, although this clarity may change in a matter of minutes after a heavy rain.

Nearly all the uninterrupted wilderness through which the Noatak flows is included in the proposed Noatak National Preserve, a 7.6-million-acre addition to the National Park System. Besides the Noatak River basin the preserve would include the basin of the Squirrel River, which drains the Baird Mountains adjacent to the Noatak on the south. The Squirrel, 80 kilometers (50 miles) long, is the largest tributary of the Kobuk River.

With the exception of a few cabins, the land adjacent to the Noatak River seems as empty of the human presence as it was ten thousand years ago. During the late summer weeks several small bands of people may be seen floating parts of the river. In the fall hunters travel 150 to 200 kilometers up the river in power boats; and later in October, after freeze-up, the snow machines of hunters and trappers bring a few people onto the land.

Away from the relatively easy access provided by the river, however, the land remains as it was, a realm inhabited by foxes, moose, grizzly and black bears, wolves, wolverines, Dall sheep, waterfowl, and the remaining caribou of the arctic herd. On the longest day of the year not even twilight graces this land, and the shortest day has no more than a couple of hours of predawn greyness.

Recently I took a combined kayaking and backpacking trip with a friend down the Noatak from near the glaciers of Mount Igikpak—the highest peak in the central Brooks Range—to the waters of Kotzebue Sound, where the Noatak mingles with the Arctic Ocean and spreads to form an immense delta. Our journey along the river, with extensive sidetrips, took us through varied arctic regions of incomparable beauty. We passed through six well-defined regions in all, each with its distinctive mood, barriers to easy travel, and wildlife.

THE HEADWATERS of the Noatak, the river's first distinct unit, lie partly within the proposed Gates of the Arctic National Park. Near Mount Igikpak, where the Noatak is born, the valley floor is pleasingly narrow, nowhere more than three kilometers across. On either hand steep rock walls face rugged mountains that rise to 2,700 meters (8,858 feet) above sea level. As we floated down the river from its headwaters, we saw not one real tree for more than 300 kilometers (186 miles), an omission that almost totally deprived us of a sense of scale. At times the surrounding mountains seemed to be toy hills—miniatures in fine detail—that we could cross in a few steps. At other times they assumed a grandeur reminiscent of the 4,500-meter (14,400-foot) peaks of Colorado or the Sierra crest viewed from the east. Local bush pilots firmly believe these peaks to be higher than U.S. Geological Survey topographic sheets indicate, and they may be correct. The Geological Survey is now resurveying this area.

Hiking near the headwaters of the Noatak is relatively easy, if assessed by the extremely difficult standards of arctic hiking in general. In the lowlands we generally walked through sedge tussocks of small to medium size, perhaps up to half a meter (1½ feet) in height. Tussock walking can be about the most difficult type of arctic hiking. For every step up onto the top of a tussock—a spongy mass of organic matter too wobbly to stand on but too firm to ignore—there is another step down into the narrow, boot-clutching crevasse that surrounds it. The tussocks of the upper Noatak, however, are relatively small and firm.

The upland slopes are sometimes easier to traverse, but one is apt to encounter impassable canyons where side streams enter the valley. At times of low water, sand and gravel bars provided us with good travel, though they were intermittent. We encountered thick willow only occasionally in small patches in this area of the Noatak.

River travel is easier than walking, of course, and the Noatak has no rapids with more than regular, medium-sized standing waves anywhere at normal water level. The floater should be prepared for considerable rock dodging and for shallow spots at normal, late summer flows. At higher water levels—which can come anytime following a rain—the river changes drastically; particularly in the first 100 kilometers (62 miles) of its course the boater would be well advised to use caution. In the rapids near Douglas Creek we narrowly missed a dangerous-looking sousehole 20 meters (65½ feet) across when the river was swollen and tumultuous from rains.

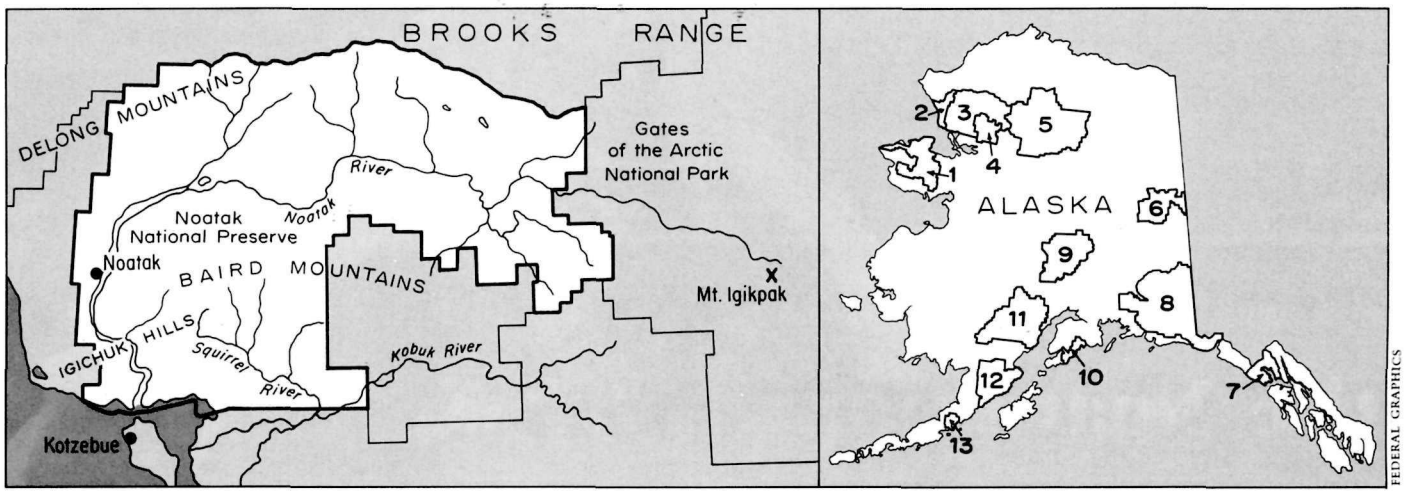
Caribou still migrate through the passes of the upper Noatak. The part of the arctic herd that traverses this area has probably been less decimated than the groups that pass closer to human habitations. The herd in the total proposed preserve area is estimated at 58,000. In the fall of 1976 Governor Hammond attempted to have the northwestern area of Alaska declared a disaster area because of insufficient caribou to feed the families that still rely on subsistence hunting, so great has been the caribou's recent decline in numbers. Moose are common in the headwaters section, and arctic grizzly and wolf are also frequently seen. The lesser yellowlegs is the most conspicuous species of bird. It frequently flies around a hiker who ventures too close to its nest, repeating its shrill whistling cry.

In the sense of pure grandeur, this upper section of the Noatak Valley may be the most beautiful. It is the most dramatic, with instantaneous weather changes and vistas constantly altered by the awesome closeness of the mountains and openness of the land.

Portage Creek enters the Noatak in this section and marks Portage Pass, a route between the Noatak and the Alatna and Koyukuk river valleys to the west. This pass has been long used by Eskimos coming east from the coast and by early white explorers and anthropologists coming west from the early explored areas along the Yukon River.

A large pingo situated within a few hundred meters of the Noatak River dominates the valley topography near the mouth of Portage Creek. Pingos are sedimentary mounds unique to arctic topography. Where erosion has not significantly altered their slopes, they are cone shaped and up to 20 meters (65½ feet) tall. They have been raised into their cone shape through freezing and thawing action in the arctic soil. This particular pingo, near Portage Creek, is 18 meters (59 feet) high and offers a spectacular view east to Mount Igikpak.

APPROXIMATELY 100 kilometers (62 miles) from its source, the Noatak flows out of the mountains, the valley widens, and the retreating ranges become more rolling on either side. Here the Noatak basin, the second region of the Noatak, begins. The Noatak basin is probably the most significant wildlife habitat on the river. The Baird Mountains and the Delong Mountains are clearly divided here, and the valley floor between them is as much as 65 kilometers (40 miles) across and about 125 kilometers (77½ miles) long. Migratory birds by the tens of thousands, from areas as distant as Asia and the tip of South America, breed throughout this vast basin during the summer months. During one season even a casual observer may see common and arctic loons, horned grebes, long-tailed and parasitic jaegers, arctic terns, and numerous ducks on the river and on



Proposed Noatak National Preserve

1. Chukchi-Imuruk National Monument
2. Cape Krusenstern National Monument
3. Noatak National Preserve
4. Kobuk Valley National Monument
5. Gates of the Arctic National Park
6. Yukon-Charley Rivers National Preserve
7. Glacier Bay National Monument
8. Wrangell–St. Elias National Park-Preserve
9. Mount McKinley National Park
10. Kenai Fjords National Monument
11. Lake Clark National Park
12. Katmai National Monument
13. Aniakchak Caldera National Monument

the lakes that dot the basin. Birds of prey such as the rough-legged hawk in both color phases, the gyrfalcon, owls, and the golden eagles are also seen, particularly in places where the river cuts shallow but steep-walled canyons in the flat plain.

The red fox is the most common mammal along the river in the basin area. It appears frequently along the river bank as well as in the camps of travelers through the basin. A red fox once entered our camp and sat down within 8 meters (26 feet) of us, unafraid of even our dog. Moose also seem to flourish in this area. Bears and wolves are less common than in other regions, although one may see signs of their passage.

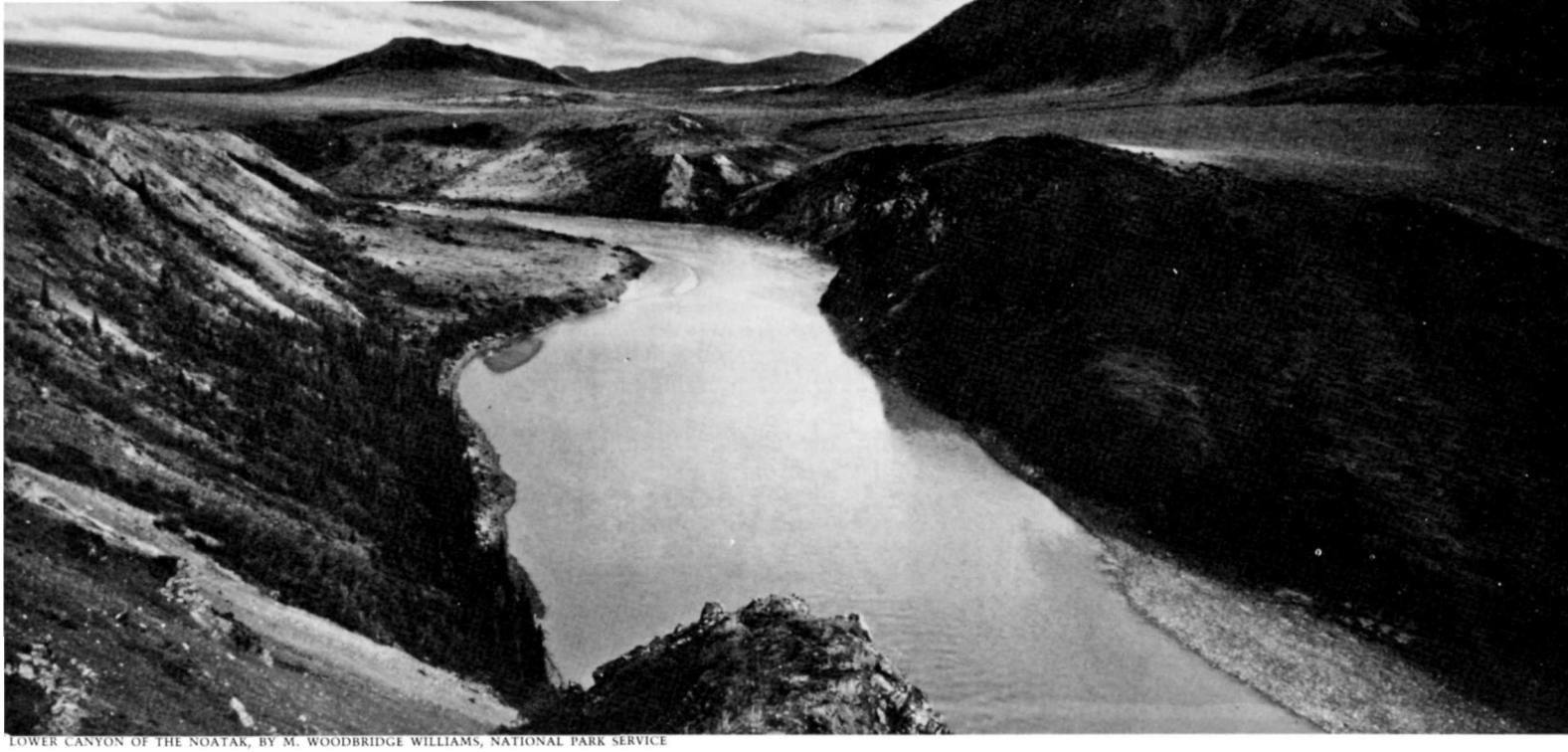
Walking through this basin area varies from easy to impossible, with the latter condition prevailing. The chief obstacle to travel is almost impenetrable brush, mostly various types of willow. If one can gain some altitude, the walking is a little easier; but then the alder thickets and sedge tussocks become a serious problem. Generally speaking, the only reasonable routes of travel in the Noatak basin are the rivers and larger streams.

The beauty of the Noatak basin is one of absence rather than presence. The flatness of the land, the distance of the vistas, and the repetition of gravel bars and cutbanks alternating sides left to right as the river meanders through seemingly endless bends—all have a subtle appeal. Here far more than when confined by the mountains to the east, visitors experience the feeling they may have expected of the Brooks Range—that of being entirely alone in a huge and empty world. When two bull moose wandered into our view along a gravel bar one day, we wondered where, in all that flatness, they had been concealed. When they wandered out of sight, we were even more amazed, for it seemed they had vanished before our eyes in a land as flat and almost as bare as a playing field.

If one travels at a leisurely pace, the mountain ranges west of the Noatak basin rise slowly day by day from the horizon, almost as the Rockies must have risen before the early travelers across the plains of Kansas and eastern Colorado. The mountains in these ranges bear tongue-twisting names such as Maiyumerak, Uggiruk, and Misheguk—all derived with some degree of directness from the language of the Eskimos.

THE DELONG MOUNTAINS and the Baird Mountains, having curved gracefully back from the Noatak to form the basin region, now recurve inward, converging upon the Grand Canyon of the Noatak. For about 125 kilometers (77½ miles) the Noatak passes through the canyon region, an ancient and eroded land characterized by variety and rapid change. These canyons comprise the third geographic region of the Noatak. The river winds through country as flat as the basin in some places and through spectacular steep-walled canyons reminiscent of the southwestern United States in other places. The most dramatic of these canyons are not in the so-called Grand Canyon but in the Noatak Canyon, which constitutes a 16-kilometer-long (10-mile) gate marking passage from the canyon region to the mixed conifer and deciduous forests of the flats around the village of Noatak.

The eroded peaks of the canyon region are lower than those to the east, their slopes gentler, and their valleys broader. The visitor can see fascinating isolated mountain groups such as the Poktovik Mountains, a thoroughly beautiful miniature mountain range containing at least half a dozen distinct systems of peaks and ridges. Its boundaries are perhaps fifteen kilometers by twenty-five kilometers (9 miles by 15½ miles). The range is clearly set off from surrounding mountains by broad river



LOWER CANYON OF THE NOATAK, BY M. WOODBRIDGE WILLIAMS, NATIONAL PARK SERVICE

valleys and is dissected by swift flowing streams. It derives much of its appeal from its isolation: it seems to stand as a world apart, self-contained and unique. Areas such as the Poktovik Mountains are a paradise for backpackers as well as for wildlife.

The first small stands of "cottonwood" (balsam poplar), supplementing the willow and alder, appear along the Noatak just east of its entry into the Grand Canyon. Near the Poktovik Mountains the cottonwoods increase, the willows and alders are bigger and their stands thicker than a few miles upriver, and berry bushes grow abundantly at ground level. In the Poktovik Mountains we encountered what could be referred to only as a forest of willow. Though technically speaking these stands are shrubs or brush, it is hard to think of willows that grow taller than 10 meters (33 feet) and 90 centimeters (35 inches) in circumference as anything but trees. The first stand of spruce seen on the Noatak is in the canyon section a short distance below Poktovik Creek. These trees lend a new dimension of scale and color to the world of the Noatak.

Overland travel in the canyon region is moderately difficult, once away from the river, because of brush and large tussocks, but it is also rewarding. Creek beds and higher slopes turned out to be the best routes. Unfortunately, the area between is very difficult. At one point in the Poktovik Mountains we discovered an unusually devastating combination of tussocks, steep slopes, and heavy brush.

The relatively mild environment and the isolation of sections of the canyon region contribute to what seems to be a large wildlife population. During our thirteen days in the Poktovik Mountains in August, only one day passed without our seeng some of the large mammals inhabiting the range. We saw moose, grizzly bear, Dall sheep, caribou, and wolves. Unfortunately, caribou have been subjected to particularly heavy hunting as they swim the river. Hunters venture up this far in power boats and rarely even leave the river.

WEST OF THE Noatak Canyon the Noatak flows again into a broad flatland, the fourth distinct region of the river. These flats are smaller than the Noatak basin and different in vegetation. The village of Noatak lies on the western bank of the river, roughly centered in this flatland. The Noatak River is eroding into a steep cutbank containing ice wedges and permafrost along its western bank here, undercutting much of the old section of the town. Noatak village is a busy community of approximately two hundred very friendly residents.

As the river comes out of Noatak Canyon, it turns almost ninety degrees to flow south for the rest of its course to Kotzebue Sound, approximately 160 kilometers (99 miles) away. The influence of the coast is apparent in the vegetation. The woods around Noatak Village, which is 80 kilometers (50 miles) from Kotzebue, contain white spruce and black spruce interspersed with mature stands of cottonwood. The woods are beautiful in the fall when the leaves yellow and the weather turns crisp. A wide variety of berries grows in the flats near Noatak, including the much prized Nagoon berry.

ONE OF THE most pleasant scenic treats of our trip was the Igichuk Hills region, which lies halfway between Noatak and Kotzebue. Igichuk Hills is the fifth distinct region of the Noatak. These hills are the westernmost extension of the Baird Mountains. They are composed of light gray rock, almost resembling snow in the midday light. The contrast of the blues of the water and the sky, the greens of grass, brush, and trees, the gray of the rock, and perhaps a few shades of red and yellow

Rich in wildlife, the Noatak River basin provides habitat for Dall sheep, moose, barren ground grizzly bear, and wolves. It is the major migration route of Alaska's largest caribou herd and the summer breeding ground for tens of thousands of many species of waterfowl and birds of prey.

MOOSE COW AND CALF, BY STEPHEN J. KRASEMANN

CARIBOU CALF, BY STEPHEN J. KRASEMANN

as fall approaches provides the traveler with unforgettable memories. In these hills we encountered an Eskimo man and his wife hunting moose. He told us he had been a reindeer herder in the Noatak region all his life until his herd was absorbed by a much larger herd of caribou that came through in 1967. His knowledge of the hills was truly amazing—as it would have to be to keep track of a herd of far-reaching reindeer.

THE IGICHUK HILLS are the final gate through which the Noatak River flows into the Arctic Ocean. Beyond them lies the narrow piedmont and the river delta, the sixth and final region of the Noatak. Here one may see seals and whales. The last forty kilometers (25 miles) of river are influenced by tides, a fact the river floater would do well to remember. The river in this area rises even when there has been no rain,and an untied kayak may decide to go exploring on its own. The Noatak is a large river in this area, sometimes half a mile in width. It has very little current, and nonpowered travel is heavily influenced by wind, which blows often.

The final 8 kilometers (5 miles) of a float trip to Kotzebue can be the most treacherous. Many floaters elect to hitch a ride on a fishing boat across Kotzebue Sound. The sound is a large, shal-

low body of water, and a very choppy sea can rise quickly with a change in the wind. Crossing the sound can also be the perfect climax for a perfect trip, as it was for us. We paddled these last miles to the town of Kotzebue on a dead flat sea reflecting a blood-red sunset.

There can be no question that the first 500 kilometers (310 miles) of the Noatak rank with the finest truly wild and isolated stretches of river anywhere in the United States. Below Noatak Canyon signs of man are more obvious; but if you have just spent three months—or even three weeks—away from civilization, the return can be good. The wildlife of the Noatak valley is rich, varied, and plentiful, especially in the numbers and variety of waterfowl that breed in this arctic paradise during summer months. It seems impossible to complete a long trip through an area like this without experiencing fundamental realizations and changes that make preservation of such beautiful and awesomely empty places a moral necessity. ■

Dr. James W. Greenough is a clinical psychologist in Sitka. He spends his free time pursuing his interest in wilderness travel, geology, birds, and photography. He has traveled extensively through Alaska by bushplane, kayak, raft, and foot and has spent four summer seasons in the "bush," the northern or interior Alaskan wilderness.

Editor's Note

The Challenge of the Frontier

The proposal for a Noatak National Preserve is just one part of what Interior Secretary Cecil D. Andrus recently called "the most important land allocation and conservation program in the history of this country." As currently proposed by conservationists, the program would involve more than doubling the size of the Park System and also creating new national wildlife refuges, wild and scenic rivers, and possibly forest lands—for a grand total of about 116 million acres.

Meanwhile, the public lands in Alaska are facing great development pressures. The proposed Noatak National Preserve, for instance, may be threatened in the future by mineral exploration and hydroelectric power development. Proposed roads would bisect the principal calving grounds of the Arctic caribou herd. Perhaps the most serious threat to Noatak is a pipeline corridor under consideration to service future oil and gas development north of the preserve.

Under one proposal being considered Noatak would be designated as a national range for joint management by the Bureau of Land Management (BLM) and the U.S. Fish and Wildlife Service (FWS). Although a twenty-year moratorium would be placed on development in the area, permanent administration would be left pending. The BLM is traditionally oriented to "multiple-use" administration of public lands, meaning that development is allowed along with other uses.

In contrast, the proposal many conservationists support, HR 39 (and S 500), would designate Noatak as a national preserve for protective administration by the National Park Service (NPS) in consultation with the FWS. It would also preserve the area from development by designating it as wilderness and adding the Noatak and Squirrel river systems to the National Wild and Scenic Rivers System. In recent congressional testimony presented on invitation, NPCA generally supported HR 39 but said that Noatak should be upgraded to full national park status instead of the preserve designation. The latter would allow sport hunting, which should be prohibited in Noatak. Subsistence hunting would be allowed in either case.

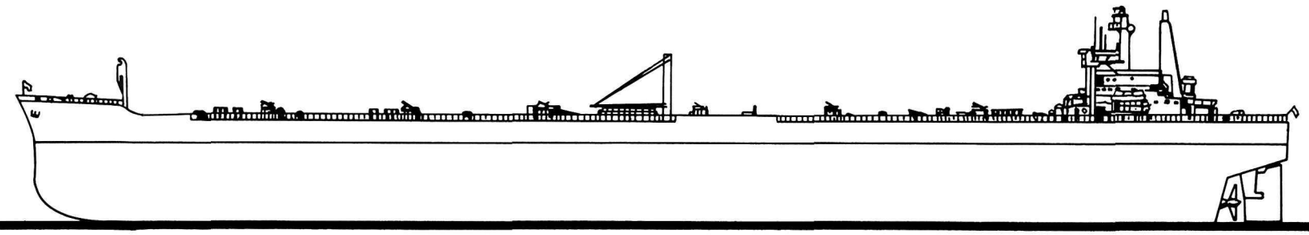
This and other legislative packages are attempts to meet a December 1978 deadline set by the Alaska Native Claims Settlement Act of 1971 for permanent disposition of *national interest* lands in Alaska.

Get Involved: Public hearings on the Alaska land proposals have been scheduled in all regions of the country. See Conservation Docket, page 27.

Shipwrecks, Pollution & the Law of the Sea

The recent spate of oil tanker casualties serves as a dramatic reminder that the world community still awaits effective international action to protect our seas

by ROBERT J. McMANUS & JAN SCHNEIDER



IN RECENT MONTHS some vengeful djinn contrived to focus public attention on the severe environmental problems attending the transport of oil by sea. It has long been known, of course, that oil in the marine environment is hazardous. A protracted battle over just how hazardous and over the cost-effectiveness of various pollution-control strategies has been waged sporadically since the *Torrey Canyon* disaster off the coast of Cornwall in 1967. In 1974 the dramatic loss of the tanker *Metula* in the Straits of Magellan and the grounding in the Straits of Malacca, between Sumatra and the Malay Peninsula, of the *Showa Maru,* laden with Japan-bound crude oil highlighted the issue. The *Showa Maru* grounding threatened the fisheries of three coastal nations that, because they border on these straits—one of the most heavily trafficked trade routes of the globe—are in a better position than most to make and enforce unilateral decisions about "freedom of navigation."

By December of 1976, however, Noel Mostert's lively and authoritative book, *Supership,* had been remaindered, and headlines of American newspapers turned to other matters. Then, once again, a series of tanker disasters reminded us of the costs and risks of energy transport.

On December 15, the Liberian ship *Argo Merchant* went aground on the Nantucket shoals, threatening both the coastal environment of Nantucket Island and the economically crucial fisheries of the Georges Bank.

On December 17, the *Sansinena,* also of Liberian registry, exploded in Los Angeles harbor, killing eight persons, injuring almost fifty others, and breaking windows as far as twenty miles away from the oil terminal where the ship was refueling.

On December 24, the *Oswego Peace* spilled 2,000 gallons of bunker oil through a hull fracture while unloading cargo at New London, Connecticut.

On December 27, the *Olympic Games* suffered a hull puncture in the Delaware River, spilling some 133,000 gallons of crude oil.

The fully laden crude oil carrier *Daphne* grounded in the harbor approach to Guayanilla, Puerto Rico, on December 28. (Fortunately, no oil was spilled.)

The new year brought more disasters. In January the Panamanian vessel *Grand Zenith* mysteriously disappeared off Nova Scotia. The Liberian *Barcola* went aground near Port Arthur, Texas. The *Mary Ann* suffered an explosion during a tank cleaning 300 miles off Norfolk. A second Liberian tanker, the *Universal Leader,* went aground in Delaware Bay. Then, incredibly, on January 18, the Liberian tanker *Irenes Challenger,* laden with more than 3,000,000 gallons of light Arabian crude oil, cracked in half 200 miles southeast of Midway Island, threatening wildlife habitat on remote and uninhabited islands of the Hawaiian Archipelago. This last incident, however, did not rate headlines; by mid-January the nation's editors had collectively decided that a tanker casualty was too commonplace to be "news."

The problem of such accidents and their environmental consequences, however, remains critical. As long as the United States continues to import more than 40 percent of its petroleum needs, we will have to bear the ecological, economic, and esthetic costs of tanker transportation. Even if U.S. imports were reduced significantly, pollution of the seas would still constitute a pressing problem for us as well as for other nations. Two well-publicized Frenchmen, Jacques Cousteau and Jacques Piccard, have warned government officials that if present trends continue, we may see the biological death of the oceans within our own lifetimes. This thought is chilling.

WHETHER OR NOT this horrifying prediction is accurate, there can be no doubt that man-made processes are contributing to the ever-increasing degradation of the world's oceans. One such process is the gradual destruction of natural ground cover caused by coastal development, with attendant increases in sedimentation and turbidity in littoral environments where so much marine life spawns and lives. A second process is the constant and cumulative addition of toxic materials to the oceans. Many materials, of course, are "toxic" in the sense that a drastic overdose may have severe local effect. But several classes of materials seem qualitatively worse than the others—namely, radioactive wastes such as the heavy metals, transuranics, organohalogens, and hydrocarbons.

To be sure, mercury always has been present in the chemical soup we call seawater, and crude oil has seeped from fissures in the continental shelf since time began. But the four classes of listed materials share several common denominators: they are persistent (degrading slowly if at all); they are bioaccumulative, carcinogenic, teratogenic, or mutagenic; and, most important, their presence in the oceans has manifestly increased by orders of magnitude as a result of human developmental activities.

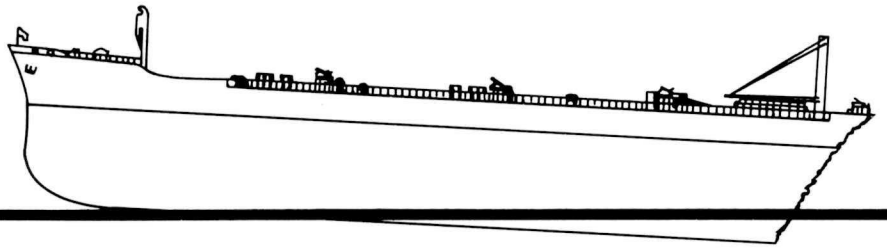
But what *are* the environmental facts regarding the oceans' health? Nobody knows for sure. Several spills in recent years have stimulated scientific monitoring efforts in their aftermaths. The 1969 blowout of an offshore oil well in the Santa Barbara channel resulted in massive short-term damage to the environment, including the deaths of at least 3,600 seabirds. But within a year, recolonization by marine species had occurred. Alfred Friendly, former president of CBS, suggested on the Op Ed page of the December 28, 1976, *Washington Post* that the 1967 *Torrey Canyon* spill, of some 118,000 tons, resulted in no discernible long-term impact. Mr. Friendly would almost surely admit, however, that our inability to discern long-term impact does not mean that there is none. As a National Academy of Sciences report has soberly pointed out, we do not know what levels of oil pollution might result in irreversible damage to the oceans; until we do, we should continue our efforts in the international control of such pollution.

The headline-grabbing tanker accidents are only a small component of the oil pollution problem. Oil pollution from ships probably constitutes less than half of the human-induced influx of hydrocarbons into the oceans. Of all oil pollution from ships, only about 15 percent results from tanker accidents. The vast preponderance comes from deliberate discharges that attend tank washing, deballasting, and demucking. At the same time, the accidental spills from incidents like those involving the *Argo Merchant* and *Irenes Challenger* have a significance greatly disproportionate to the amount of total pollution they contribute because of their concentration in environmentally sensitive coastal areas.

THE FIRST international efforts to control oil pollution from tankers were made, surprisingly, as early as 1926. But the seminal effort of modern times is surely the Convention on the Prevention of Pollution of the Sea by Oil (London, 1954). This treaty, long since ratified by the nations comprising the maritime community, primarily regulates operating discharges from ships. The basic rule of the convention is that discharges containing more than 100 parts per million of "persistent oils" (a phrase that includes crude and heavy fuel oils but excludes the highly toxic refined products known as "light oils") must occur outside "prohibited zones"—generally speaking, the area lying within fifty miles of the nearest land. The convention says nothing whatever about the content of discharges outside the prohibited zones or the aggregate outflow of oil from ships.

Several available strategies have long been recognized as practicable in controlling operating discharges, notably the "load-on-top" technique. In load-on-top operations, tank washings and ballast are not discharged directly. Instead, they are shunted off to "slop tanks" and allowed to settle out. If the voyage is long enough and the sea calm enough, the tanker can discharge relatively clean water from below the oil-water interface in its slop tanks, and its next cargo of crude oil can be loaded on top of the remaining slops. In effect, the load-on-top technique saves oil, and most modern tankers employ it. Yet many do not, and they contribute a greatly disproportionate share of total operating discharges.

In addition, steps can be taken to minimize the likelihood of accidental outflows. Besides the obvious control stategies that involve equipment, navigational aids, crew qualifications, and liability schemes, structural modifications to vessels can help—for example, defensive placement of segregated



ballast capacity and double bottoms or hulls.

The maritime community, acting under the banner of the Inter-Governmental Maritime Consultative Organization (IMCO), has developed several relatively enlightened control strategies in recent years. The 1969 amendments to the 1954 convention would for the first time apply discharge standards to vessels even when they are outside the narrow prohibited zones. At long last these amendments have been ratified by the requisite number of nations and will enter into force in January 1978. Even more important, in 1973 IMCO convened its Conference on Marine Pollution, which produced a comprehensive revision of the rules on vessel source pollution, the International Convention on the Prevention of Pollution from Ships. If ratified, the new treaty would apply to light oils; would generally require load-on-top capability; would require segregated ballast capacity for new tankers of more than 70,000 deadweight tons, thereby avoiding the oil-water mixtures that lead to most operating discharges; would ban the discharge of all oily mixtures containing more than 15 parts per million of oil within fifty miles of the coast; and, in line with the 1969 amendments, would impose effluent limits both in permissible concentrations and in total outflow per voyage, applicable to vessels wherever situated. The 1973 convention would also impose standards on tank subdivision and stability, as drafted in the 1971 amendments to the 1954 convention, and discharge standards for hazardous chemicals other than oil. But whatever its strengths, it will be of little practical significance unless the maritime community ratifies it. To date, no maritime nation has yet done so.

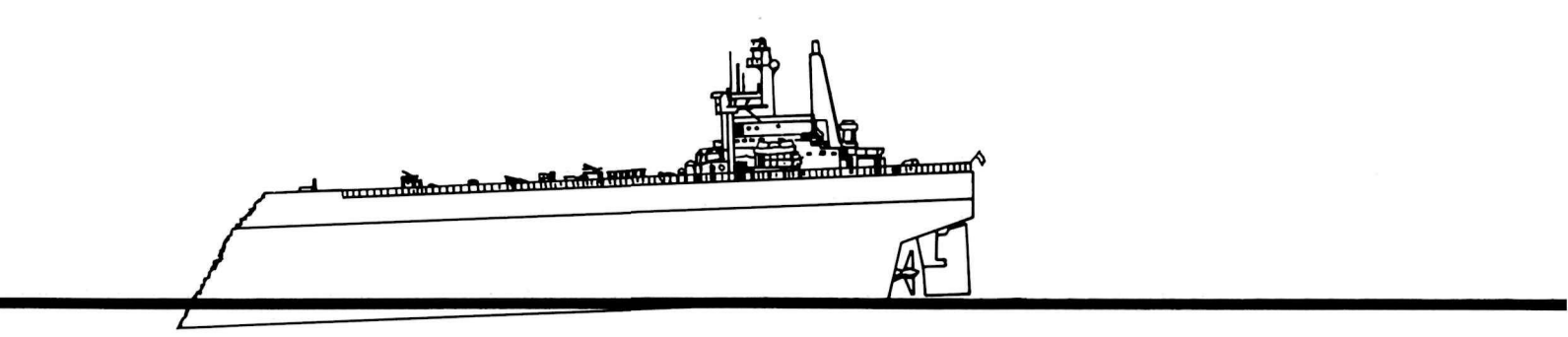
LIKE OTHER NATIONS, the United States is free under international law to impose the standards of the 1973 convention on vessels entering its ports whether or not the treaty is ever ratified. It could also require oil-carrying vessels to be equipped with structural features—such as double bottoms—that would not be required by the treaty. But one dogma that links the world's maritime community together is that all shipping should be subject to the same standards. In testimony explaining the 1973 convention to the U.S. Congress, the Commandant of the Coast Guard stated that although the treaty did not actually limit a nation's power to impose standards more stringent than its own on vessels entering its ports, it was a "central article of faith at the conference" that none would in fact do so.

Two interpretations of this "article of faith" are possible. Looked upon benignly, it merely permits the maritime states, with rational regard for the free flow of international commerce, to ensure that a given vessel need not comply with differing—or worse, conflicting—sets of standards, particularly design and construction standards. There is, however, a less benign interpretation. IMCO may be viewed as little more than an international conspiracy to cartelize tanker safety and pollution standards so as to block effective controls. Amendments to the 1973 Convention, for example, would require acceptance by signatories that account for at least 50 percent of the world's gross registered merchant tonnage. So long as the "article of faith" holds, the nations whose economic interests are most directly affected by the profitability of their maritime trade may be able to assure that safety and pollution standards represent the lowest common denominator.

Notwithstanding the prerogatives of port states to regulate shipping, current regulations do not for the most part differ or conflict significantly. Moreover, the minimal rules of the 1954 convention are to this day the only environmental standards applicable to tankers. If, then, IMCO is not the cynical and self-serving shipowners' club that some environmentalists believe, it may nevertheless be reasonable for port and coastal states to behave as if it were and to consider imposing certain control strategies unilaterally in spite of the "article of faith."

DOUBLE BOTTOMS are an example of a control plainly beyond the present contemplation of the international maritime community. The United States delegation to the 1973 convention advocated a double-bottom requirement as a partial response to the dangers posed by groundings, such as those of the *Torrey Canyon* and the *Argo Merchant*. (Senators Magnuson and Muskie favored such a requirement, and former Secretary of the Interior Rogers Morton, in testifying on the Trans-Alaska Pipeline bill, promised a skeptical Congress that tankers in the Alaskan trade would have double bottoms.) But the U.S. delegation was plainly isolated on this issue, just as it was on its advocacy of a 20,000 deadweight ton cutoff for the segregated ballast requirement. Since 1973, U.S. domestic regulations have not ventured beyond the maritime states' consensus.

Other ideas for controls abound. Segregated ballast, whether or not



it is placed in double bottoms, would provide some defensive capability to vessels involved in incidents. More important, it would help reduce operating discharges. Second-generation tankers could be required to retrofit for segregated ballast. The Coast Guard, stimulated by the recent public clamor, has now issued a Notice of Proposed Rule Making that would, if approved, require vessels of more than 1,600 gross tons entering U.S. ports to be equipped with LORAN-C (a highly accurate comprehensive radio navigational aid system). Existing international standards on crew qualifications are based on a 1936 treaty that merely requires seamen to be certified by the nation of registry but contains no guidelines about contents of examinations. More rigorous standards could be applied to crews of vessels entering U.S. waters.

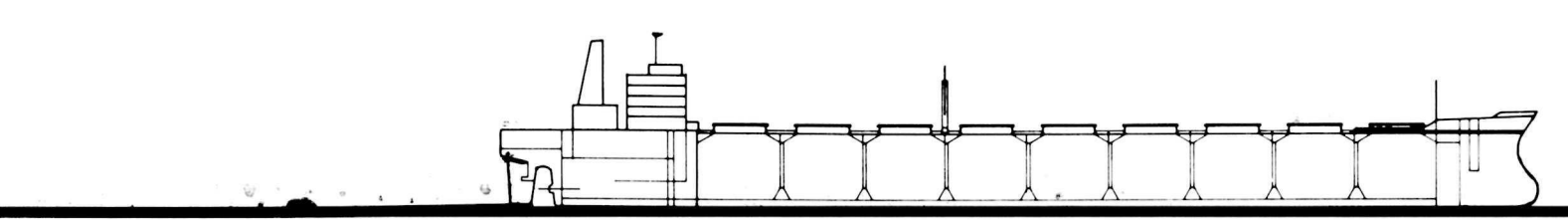
At this time, the United States seems inclined to exercise some of these options on a unilateral basis. As this article is being written, the President has just announced a broad range of initiatives that transgress the "article of faith." Most important, he has directed the development of proposed rules requiring various design and construction features for tankers over 20,000 deadweight tons entering U.S. ports. New tankers would be required to have double bottoms, and existing tankers would be required to install segregated ballast capacity, inert gas systems, and improved navigational and maneuvering features within five years, unless alternatives can be shown to afford "equivalent pollution protection." In addition, the Coast Guard has been directed to develop a set of standards for crew qualification and training and to present them at a 1978 IMCO Conference already scheduled to consider this long-neglected problem. The President's message makes it clear that the United States is prepared to move unilaterally on this front, too, in the absence of energetic action through IMCO by the international maritime community.

Congress is also moving to consider these and other unilateral options. Congress is currently considering several bills that would create a 200-mile U.S. pollution control zone. These measures include bills introduced by Senators Magnuson (S 682), Muskie (S 885 & 886), and Kennedy (S 182) and Representative Emery (HR 3711). Senator Hollings has introduced a new bill on tanker safety (S 568), as has Senator Case (S 715), which could have a similar practical effect. Even if these initiatives are not adopted, the reasons for their rejection will be well thought out and made a matter of public record. In any case, when the public—and particularly the environmental community—considers available options and government responses, it must keep in mind the unhappy fact that there are no panaceas.

ANOTHER AREA in which current international mechanisms are deficient is liability and compensation for damage caused by oil pollution. Previous initiatives in this area have sought to require vessel owners to insure against pollution damage and to provide a slush fund sponsored by cargo owners. Although in force, the 1969 International Convention on Civil Liability for Oil Pollution Damage is unratified by the United States, and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage has not yet come into force. Both treaties limit relief to damage to the territory or territorial sea of contracting states—a formulation that would have excluded damage to most of the Georges Bank fisheries in the wake of the *Argo Merchant* spill. And the 1969 convention permits a shipowner to limit his liability to about $133 per gross ton, up to a maximum of about $17 million.

As a result, President Carter's recent actions include a decision *not* to ratify these two Conventions at this time, but to seek enactment of a U.S. liability scheme with more generous compensation provisions, applicable to all tankers and oil cargoes entering U.S. ports. Inasmuch as more than 90 percent of the tankers transiting U.S. coasts do enter U.S. ports, a port state regime in this regard would probably be sufficiently protective. In order to afford adequate compensation for actual damage to their resources, however, other nations may wish to apply more stringent provisions to all vessels entering their economic zones or at least territorial seas and causing damage to coastal resources. This broad subject of liability and compensation is a fertile area for creative development of international law. In addition to questions of the nature and amount of relief to be afforded, there is a whole complex of unresolved questions as to jurisdiction to decide such cases, procedural and evidentiary standards to be applied, recognition of judgments, and availability and apportionment of relief in cases of injury to shared resources or the separate interests of two or more countries.

Meanwhile, the international community has been limping along with a series of *ad hoc* voluntary arrangements on the part of the oil companies—specifically the Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollu-



tion (TOVALOP), the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution (CRISTAL), and the newer Offshore Pollution Liability Agreement (OPOL). These Agreements are not comprehensive in their coverage and may not be adequate in the amounts of compensation provided. Moreover, the current negotiations at the U.N. Law of the Sea Conference have not made any significant progress in remedying this situation.

THE CURRENT ROUND of international negotiations at the Third U.N. Conference on the Law of the Sea is supposed to be drafting a new and comprehensive "umbrella treaty" for the world's oceans, including provisions to protect and preserve the marine environment. If such a treaty ever emerges, it is questionable whether it will represent a legal advance from the environmental point of view. The draft text now before delegates—the so-called Revised Single Negotiating Text (RSNT)—has about equal plusses and minuses in this regard.

The primary environmental achievements of the Conference thus far lie in the acceptance of certain basic general principles, none of which specifically covers pollution from ships. Most of these principles are set forth in the first sixteen articles of Part III of the RSNT, upon which consensus was largely achieved during the 1974 Caracas session of the Conference. Whether or not a new treaty emerges from the Conference, these principles are among the few developed that could be argued to be binding as norms of customary international law. Although such general principles alone are obviously not enough, the value of their international formalization at long last should not be underrated. They have never before been included in any international treaty.

Included in these general principles is the basic obligation to refrain from polluting the environment of other states or of areas beyond national jurisdiction, embodying Principle 21 on state responsibility from the 1972 Stockholm Declaration on the Human Environment. States have also agreed not to transfer pollution from one area to another, nor to transform one type of pollution into another, and on the need for certain measures of global and regional cooperation and technical assistance. They have also for the first time assumed a legal responsibility to cooperate in international monitoring programs, heretofore only voluntary. Finally, consensus has been achieved on an article, modeled on the requirements for environmental impact statements in the U.S. National Environmental Policy Act, that exhorts states to assess the effects of their activities on the marine environment and to communicate the results of such assessment to others.

ON THE negative side of the ledger, however, the balance is also weighty. Perhaps the most important debit is a sin of omission, rather than one of commission: If it is reasonably assumed that the Law of the Sea Convention will constitute the primary font of international law on marine environmental protection for the foreseeable future, then it largely fails to establish meaningful, specific legal obligations in this area as a *quid pro quo* for the valuable resource rights it would allocate among nations.

In addition, elements have crept into the RSNT that could hamper actions to prevent and abate pollution from ships. For example, Article 20 (2) of Part II of the RSNT, concerning rules applicable to the territorial sea, prohibits a coastal state from making any laws and regulations that would affect the "design, construction, manning, or equipment of foreign ships or matters regulated by generally accepted international rules unless specifically authorized by such rules." The first part of this restriction would prohibit actions already possible under the U.S. Ports and Waterway Safety Act (e.g. requirements for segregated ballast or double bottoms); and the second part might prohibit the use of the "visible sheen" test for oil pollution now in effect under U.S. law and limit us to the percentage test of the 1954 convention, at least if the 1969 amendments are not considered "generally applicable." This restrictive provision could also preclude many regulatory measures such as pilotage rules, radar and other special equipment requirements, and under-keel clearance provisions. Moreover, if construed to prohibit coastal state adoption of more comprehensive liability and compensation standards, it could even preclude meaningful and effective relief after the fact of actual damage, such as the President's recent proposals for a single national standard for oil spills.

There is conflict in the RSNT on the issue of self-protection in the territorial sea, however, as Article 21 (3) of Part III of the RSNT would allow coastal states the broad discretion to establish national laws and regulations for the prevention, reduction, and control of pollution from vessels, which is prohibited by Article 20 (2) of Part II. It is important from the environmental perspective that the Part III (Third Committee) version prevail, or that some compromise be found that does not completely negate coastal state jurisdiction.

Any such compromise, it must be said, should in no way derogate from a port state's right under existing international law to establish conditions (including design,

Cross section of a ship designed to carry either oil or dry cargo. It features separate watertight holds, segregated ballast tanks, and a double bottom.

construction, equipment, and manning standards for vessels) on port entry. Although the present text is silent on this score, a move to cripple the port state's regulatory jurisdiction in this regard was narrowly defeated at IMCO in 1973; and it is crucial that present port state rights and powers be preserved. From a parochial point of view, of course, any other result would totally undermine the President's initiatives. More important, however, any other result would destroy whatever leverage the United States and similar environmentally conscious nations may have on the development of enlightened standards through IMCO; without the implicit threat of unilateralism with regard to vessels entering our ports, we would indeed be at the mercy of the controlling clique at IMCO for purposes of virtually all vessel pollution control measures.

THE RSNT provisions could also prevent or retard meaningful protection outside the territorial sea. With very limited exceptions, the RSNT would continue to rely on the efforts of flag states to enforce violations of present or future "applicable international rules and standards" outside the twelve-mile limit. (It remains unclear just what is to be considered an "applicable" rule or standard.) If states of registry had proven willing or capable of adequate enforcement, much of this exercise in international lawmaking would have been unnecessary, and there is no reason to expect these flag states to develop any greater environmental zeal in the future. Although the text does allow for some measures of port state enforcement, such jurisdiction could be preempted under RSNT Article 38 by *pro forma* assertions of jurisdiction on the part of the flag state. Other than permitting inspections at sea under certain carefully circumscribed conditions, the RSNT would not allow a port or coastal state to take any significant enforcement measures until a vessel actually comes into its ports or territorial waters—which could be too late. In short, none of these provisions would afford any help in a situation occurring outside the proposed twelve-mile territorial sea, such as the *Argo Merchant* casualty.

Finally, the Law of the Sea Conference has made little or no headway on liability and compensation. In Principle 22 of the 1972 Stockholm Declaration on the Human Environment, states committed themselves to cooperate to "develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage"—a commitment thus far ignored at the conference. All that Article 44 of Part III of the RSNT provides is that states are responsible for fulfilling their international environmental obligations and "shall be liable in accordance with international law for damage attributable to them resulting from violation of these obligations." They are also again politely exhorted to "cooperate in the development of international law relating to criteria and procedures for the determination of liability, the assessment of damage, the payment of compensation, and the settlement of related disputes." Moreover, if Article 20 (2) is interpreted to encompass liability and compensation rules, the RSNT will have taken a giant step backward.

What all this means, in practical effect, is that for a severe tanker spill possibly causing hundreds of millions of dollars of damage, a coastal state would be subject to the internationally agreed limits of liability (e.g. now approximately $17 million in the 1969 IMCO Convention on Civil Liability for Oil Pollution Damage). Even for spills causing damage within its own economic zone or territorial sea, a coastal state could not raise those limits under the present RSNT. Nor could it elaborate the conditions and procedures in accordance with which liability is to be assessed and compensation awarded. The very most that the current conference negotiations can be said to have done in this regard is to encourage states to do better in the future.

THE RECENT SPATE of tanker casualties has once again caused sufficient alarm to stimulate review of existing measures for preventing and lessening marine pollution, particularly oil pollution. The existing agreements are sorely deficient in many ways, and most of them are not in force. The record of the current round of negotiations at the U.N. Conference on the Law of the Sea is mixed, at best: Some progress has been made, but there has been some extremely serious backsliding. Any new "umbrella treaty" on the law of the sea, if it is to deserve United States support, must reflect new realizations of the costs and risks to the environment inherent in the transport of hazardous substances, particularly oil, by sea. If the djinn who contrived to focus attention on this severe and pressing problem has at least made the American public aware of its critical nature, he is not an entirely bad sort of spirit after all. ■

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In passing this landmark law in 1973, Congress broke a decades-old tradition of hedging on effective wildlife protection, but now Congress is under pressure to weaken the law

article by MICHAEL J. BEAN
drawings by LUCIA DE LEIRIS

The Endangered Species Act Under Fire

LESS THAN four years after its enactment, the Endangered Species Act of 1973 is in trouble. Principally as a result of recent court decisions strictly enforcing the law's most protective provision, a major effort is now under way to persuade Congress that the Act must be promptly amended lest Progress itself be halted in its tracks. But what is at stake? Does the conflict consist of only a series of showdowns between public works projects and oddly named fish, crustaceans, and flora (and dreamy environmentalists)? The situation can hardly be reduced to those terms, for the crux of the matter is the ability of the Endangered Species Act to protect the growing numbers of species of wildlife and plants that are threatened with extinction.

The provision of the Act under the most attack is Section 7, which directs all federal agencies to carry out programs for the conservation of endangered and threatened species and also to ensure that actions authorized, funded, or carried out by them not jeopardize the continued existence of such species nor destroy habitat determined to be critical to their survival. Although Section 7 represents a major advance from earlier wildlife conservation efforts, it is not without limitations. Most important, it applies only when the action that threatens an endangered species is a *federal* action. Thus, for example, when the endangered Devil's Hole pupfish was faced with almost certain extinction as a result of excessive groundwater pumping on a nearby private ranch, nothing in Section 7 gave the government power to prevent it. Although the government was ultimately successful in halting the nearby pumping, the success was due entirely to esoteric principles of water law, not to the Endangered Species Act.

Despite its happy ending, the pupfish example illustrates the principle that neither private nor state action is subject to Section 7's proscriptions.

Whenever there is some measure of federal involvement, however, Section 7 comes into full play. For example, when threatened with a private lawsuit under Section 7, in late 1976 the Department of the Interior terminated its funding of an objectionable program carried out by the state of Hawaii. By maintaining populations of feral goats and pigs utilized for sport hunting, the state program was causing destruction of vegetative habitat critical to the survival of the palila, an endangered species of honeycreeper.

Similarly, in the first successful suit brought under Section 7, in March 1976 the United States Court of Appeals for the Fifth Circuit ordered a temporary halt to certain aspects of construction of a six-mile segment of a federally funded interstate highway in Mississippi. The court ordered the halt until modifications in the project were made to ensure that it did not jeopardize the continued existence of the endangered Mississippi sandhill crane or destroy habitat determined by the Secretary of the Interior to be critical to its survival.

Although the highway case was a clear affirmation of the unequivocal nature of the duties imposed by Section 7, it has quickly been dwarfed in significance by a January 1977 decision of the Sixth Circuit Court of Appeals involving Tellico Dam in Tennessee.

THE TELLICO DAM controversy and the story of how the tiny snail darter halted construction of the dam on the eve of its

Section 7 of the Endangered Species Act is needed to protect the threatened grizzly bear from logging, roadbuilding, and oil and gas leasing in its critical habitat.

completion are by now well known. (*See* "What They Didn't Tell You About the Snail Darter & the Dam," May 1977.) In its decision, the Sixth Circuit Court held that "whether a dam is 50 percent or 90 percent completed is irrelevant in calculating the social and scientific costs attributable to the disappearance of a unique form of life." Moreover, the ruling asserted that "courts are ill-equipped to calculate how many dollars must be invested before the value of a dam exceeds that of the endangered species" and stated that "conscientious enforcement of the Act requires that it be taken to its logical extreme." That holding has sent a shudder of fear through the public works establishment because of the potential impact of several currently authorized projects on species already listed or proposed to be listed as endangered. Included among these projects are the massive Dickey-Lincoln hydroelectric project in Maine, which—in addition to other adverse environmental effects (*see* pages 15–19 of the April 1975 issue of *National Parks & Conservation Magazine*)—threatens a species of snapdragon known as the furbish lousewort, and the Lafarge Dam in Wisconsin, which threatens a rare species of trailing pea plant.

As a result of the Sixth Circuit Court's decision, Congress is hearing a chorus of calls for change.

Some amendments under consideration at press time would allow exemption from the Endangered Species Act of projects already under construction, and others might more broadly dilute the power of Section 7. The House Subcommittee on Fisheries and Wildlife Conservation is expecting a GAO report on the Tellico project sometime early this summer and plans hearings after the report is issued. The Senate Subcommittee on Resource Protection will hold oversight hearings on the Endangered Species Act in July.

For the most part, of course, the calls for amending the Act are couched in terms of the question of which is more important, a multimillion-dollar dam or a three-inch fish that no one even knew existed four years ago? In fact, however, a much broader question is at the heart of this matter, and to identify and answer that question requires an assessment of the historical need for legislation to protect endangered species and the important role that the Endangered Species Act of 1973 played in fulfilling that need.

INITIALLY, wildlife conservation efforts were aimed solely at regulating the hunting of certain game species. By setting seasons, bag limits, size restrictions, and so forth, a measure of control over the direct taking of wildlife was attained. It was soon evident, however, that effective conservation of wildlife also required protection of its habitat. The most certain means of habitat protection is public acquisition. By buying up land for wildlife refuges, parks, and related areas, the government could ensure preservation of valuable wildlife habitat. Unfortunately, however, public acquisition of habitat is very expensive. With a limited supply of money available for acquisition purposes, the vast majority of lands valuable as wildlife habitat would remain vulnerable to destruction by highway and dam construction, draining, filling, clearcutting, industrialization, and so on *ad infinitum*. Thus, the challenge to lawmakers was to find some means, short of outright acquisition, to protect those remaining lands from the worst effects of such development.

1934: Fish & Wildlife Coordination Act

Congress' first effort to impose some sort of wildlife protective limitation on otherwise unqualified development authority came in 1934 with passage of the precursor to today's Fish and Wildlife Coordination Act. The 1934 Act had a very limited scope; it merely required that any federal dam-building agency consult with the predecessor agency of the Fish and Wildlife Service before construction of any dam in order to determine the feasibility of including fish ladders or other aids to migration as part of the dam's design. Beyond this duty of consultation, the dam-building agency had no obligation to accede to the views of the wildlife agency or even to actually construct any fish ladders.

Section 7 of the Endangered Species Act has been used effectively to protect the endangered Mississippi sandhill crane by requiring modifications to a new interstate highway interchange that would have destroyed portions of its habitat.

1946/1958: Fish & Wildlife Coordination Act

The Fish and Wildlife Coordination Act, as passed in 1946 and significantly amended in 1958, substantially expanded the scope of the 1934 Act. For example, it applied not only to federal dam construction but also to any other activity directly undertaken or permitted by any federal agency affecting any waterway. Such agencies were required to consult with the Fish and Wildlife Service and the wildlife agency of any affected state to obtain their views about whether potential wildlife losses could be avoided and whether opportunities existed to enhance wildlife populations in connection with the activity to be undertaken or permitted. Moreover, the views of the wildlife agencies were to be given "full consideration" by the development agency; and, on balance, the fish and wildlife aspects of the proposed undertaking were to be given "equal consideration" with its other aspects, such as flood control, irrigation, power generation, and so forth.

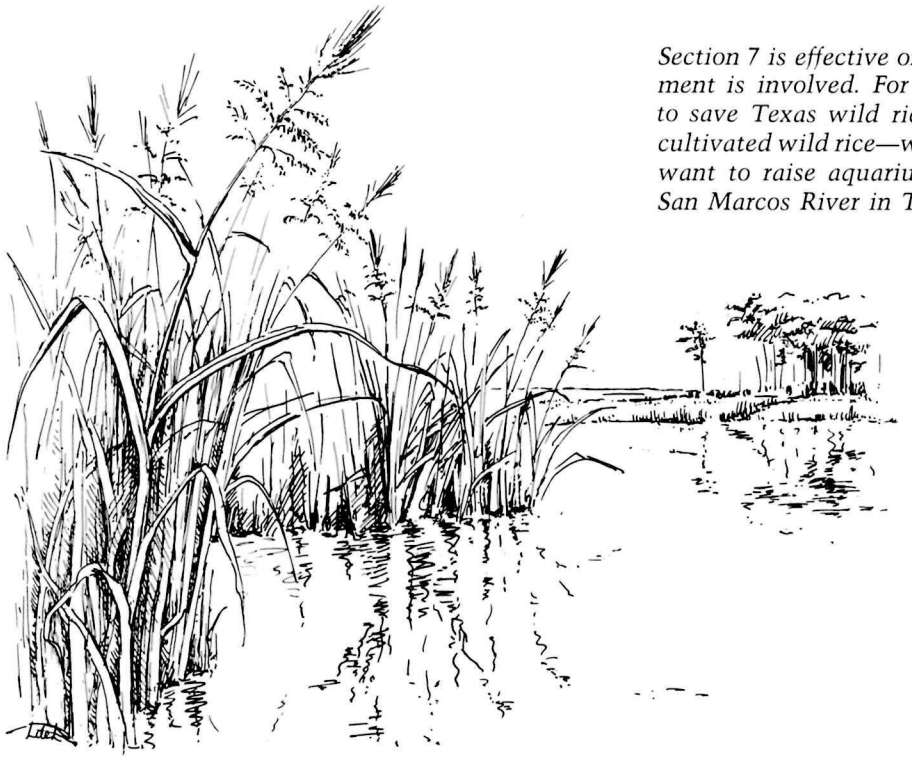
Although the Fish and Wildlife Coordination Act forced many federal agencies to become aware of the effects of their activities on wildlife, it had significant shortcomings. In the first place, by its generalized reference to "fish and wildlife," it led to the use of a system of measuring effects on wildlife in terms of hunter and fishermen "user days" gained or lost. This emphasis relegated effects on species not so utilized to secondary importance. In addition, efforts to give the statutory standards of "full consideration" and "equal consideration" concrete and substantive meaning in the courts have failed. Moreover, because the Fish and Wildlife Coordination Act contains no express provision for judicial review, some courts have even held that private citizens are without any power to insist upon compliance with its provisions, whatever their substantive content may be.

1969: National Environmental Policy Act

For wildlife conservation purposes, the much-heralded National Environmental Policy Act of 1969 (NEPA) suffers similar limitations. It compels each federal agency, when proposing an action that may significantly affect the quality of the environment, to make an effort to inform itself as to the environmental impacts of the proposed action, and then to consider those impacts in determining whether to go forward. Though NEPA has undoubtedly served to make not only federal agencies but also the public more fully aware of the environmental consequences of governmental actions and as a result has influenced to at least a degree the substance of federal decisionmaking, the essence of the statute is procedural. If the agency follows the proper *procedures* of soliciting the views of interested persons and organizations and prepares draft and final environmental impact statements that adequately discuss the consequences of the proposed action and alternatives to it, NEPA's requirements are met. In short, NEPA dictates no particular result, but rather a procedure for reaching a result.

1966: Endangered Species Preservation Act

Just three years before enactment of NEPA, Congress passed its first law aimed specifically at protecting endangered species—the Endangered Species Preservation Act of 1966. Its most significant aspect was its clarification of the Secretary of the Interior's authority



Section 7 is effective only in situations where the federal government is involved. For example, other measures must be found to save Texas wild rice—one of only three or four relatives of cultivated wild rice—which is threatened by private interests that want to raise aquarium plants in the warm springs along the San Marcos River in Texas where the rice grows.

to carry out a program of endangered species conservation. The central element of that program was to be the acquisition of habitat, for which the 1966 Act authorized some $15 million. As for the indirect protection of habitat, the 1966 Act merely directed the heads of the major federal landholding agencies to seek to protect the habitat of endangered species "insofar as is practicable and consistent with the primary purposes" of such agencies. Once again, although the policy of wildlife conservation was to influence the decisions of at least some federal agencies, it was clearly not intended to override the accomplishment of their various other statutory missions.

1973: Endangered Species Act

By 1973 it was apparent to most of the wildlife conservation community, and even to Congress, that the existing statutory formulas were inadequate to ensure protection of an ever-growing number of endangered and threatened species. Mission-oriented federal agencies, thoroughly accustomed to putting dollar-and-cents values on highways, dams, and other development projects, could hardly be expected to forego those values simply because of a project's adverse effects on wildlife. This was especially true when the affected species supported no existing commercial or recreational enterprise. Balanced against the tangible and immediate benefits of development today, the possibility that a species that might be destroyed by a given project would *someday* have great value for medical or other purposes, or that its loss would trigger a chain of ecologically disruptive events, always seemed too remote and speculative to justify foregoing development.

Aware of the institutional biases that relegated wildlife concerns to secondary importance, Congress boldly declared in Section 7 of the Endangered Species Act of 1973 that *all* endangered species—including not only dramatic species such as whooping cranes and bald eagles, but also snail darters, pupfish, and other less glamorous species—have esthetic, ecological, educational, historical, recreational, and scientific value. Accordingly, no federal agency should, by its actions, be responsible for the extinction of any species. In effect, Congress declared that the loss of a species for all time was too high a price to pay for benefits that, from a truly long-term perspective, may prove to be only ephemeral. Thus, Congress directed that all federal agencies "ensure" that their actions do not jeopardize the continued existence of any endangered species or destroy habitat critical to its survival. With the use of that unequivocal language, Congress broke its decades-old tradition of hedging wildlife protective measures with so many qualifiers and loopholes that business could proceed pretty much as usual.

ALTHOUGH the need for the bold step that Congress took in 1973 was quite apparent when viewed in light of the history of failure of earlier efforts to achieve some indirect protection for wildlife and its habitat, now that Congress' action is having its first practical consequences, the scramble is on to undo it.

Rather than allow Section 7 to be gutted in the political arena, it is important to note that it has proved sufficiently flexible to allow for resolution of the vast majority of apparent conflicts between endangered species protection and federal development. According to statistics currently being collected by the Fish & Wildlife Service, of the several hundred agency consultations in the past four years about potential conflicts only three reached an administrative impasse. Of these, the courts concluded in one—involving the Indiana bat and the Meramec Dam—that there was no conflict; in the second—the sandhill crane case—the court clearly contemplated that modifications could be made to eliminate the conflict. Only the third—the Tellico Dam case—has resulted in an outright stopping of a federal

project. Because Section 7 has proved workable in the overwhelming majority of cases involving potential conflict, any amendment now that is more broadly drawn than necessary would result in a significant undoing of a most important piece of wildlife legislation.

Thus the overriding question that must not be overlooked is whether our efforts to protect valuable wildlife habitat by indirect means short of acquisition can do no better than the familiar old formulas of "full consideration," "reasonable and practicable," "insofar as possible," and so forth that were rejected as inadequate in 1973.

Any compromise that in effect marks a return to pre-1973 standards for all projects will be a giant step backward for wildlife conservation.

Amid the clamor about choosing between a dam and a tiny fish, we must ask ourselves whether the protection now offered by the Endangered Species Act will be available in future years. After all, wildlife populations generally reflect the quality of their habitats, and destruction of habitat is by far the major cause of endangerment of species. The unprecedented acceleration in the rate of extinction of species and the developments that leave us with impoverished environments must be checked. As the Act goes, so goes not only the snail darter and the furbish lousewort, but also the grizzly bear, the bald eagle, and countless other endangered species. ■

Michael J. Bean, an attorney with the Environmental Law Institute, is the author of *The Evolution of National Wildlife Law,* the first book to provide a comprehensive legal analysis of federal wildlife law, published by the Council on Environmental Quality in April 1977.

Editor's Note

Get Involved: Help Save the Endangered Species Act

Section 7, the "interagency cooperation" provision of the Endangered Species Act, gives the law teeth to effectively protect wildlife and plants. The linchpin of Section 7, in turn, is its requirement that federal agencies proceed "in consultation with, and with the assistance of" the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) before undertaking any actions that might affect one or more protected species or their critical habitats. Those agencies waited more than three years after passage of the Act to issue draft regulations to establish a formal biological consultation process.

The FWS and NMFS proposed the draft regulations in January 1977 to help federal agencies comply with Section 7. These regulations include procedures, time frames for the rendering of opinions by FWS and NMFS, and definitions of key terms used in Section 7. In general, despite the delay, the procedural framework proposed is excellent.

However, the proposed rulemaking has several significant shortcomings. For instance, it fails to specify that the consultation process as described in Section 7 is mandatory and nondiscretionary. It says federal agencies "should" follow the procedures established; but effective implementation of the Act would require (and the regulations should specify) that whenever a proposed federal action has potential to affect the habitat of a protected species, before proceeding with the project the agency involved must obtain a written certification from FWS, based on adequate evidence, that no "critical" habitat will be affected. Even if critical habitat for a certain species has not been formally designated yet by FWS, this consultation is necessary to meet the Act's requirement that the Secretary of the Interior make the determination about whether the habitat involved is critical.

Another defect is the proposed definition of "critical habitat," which limits the term to habitat "the loss of which would *appreciably decrease* the likelihood of survival and recovery of" a given species (emphasis added). The proposed regulations likewise modify the definition of "destruction or adverse modification" of habitat under Section 7. Such definitions ignore the fact that the "likelihood of survival" of endangered species is, *because of their endangerment,* slight by definition.

Nevertheless, the proposed regulations, if strengthened as discussed here, would provide clear and effective procedures. Various federal agencies have subjected FWS and NMFS to exhaustive criticism about their roles as biological advisors under Section 7, but NPCA and other conservation groups recently assured the heads of the two environmental agencies that we support their roles as well as a substantial program of consultation that is as insulated as possible from the winds of politics. NPCA and a number of other organizations belonging to the Monitor Coalition have urged the two agencies to proceed with a final rulemaking without delay and without diluting the regulations.

Although the formal comment period on these regulations has passed, NPCA members can still help by putting on record their support for the Endangered Species Act and for an uncompromising adherence to the mandate of Section 7. Emphasize that the Act already is reasonable and flexible. Write as soon as possible to: Hon. Lynn A. Greenwalt, Director, U.S. Fish & Wildlife Service, P.O. Box 19183, Washington, D.C. 20036; and Hon. Robert W. Schoning, Director, National Marine Fisheries Service, 3300 Whitehaven Street, N.W, Washington, D.C. 20007.

Federal Feedback

In our January issue National Parks & Conservation Magazine *printed a letter from NPCA President Anthony Wayne Smith to President-elect Carter outlining suggestions for federal environmental programs. We are printing herewith the response to that letter from Secretary of the Interior Cecil D. Andrus.*

Dear Mr. Smith:

Thank you for your thoughtful letter to President Carter. He has asked me to respond to you—a task I am happy to undertake even though the concerns you pose are far more wide-ranging than those of the Department of the Interior. While I cannot speak for the Administration on those policy and program areas that are the purview of other Departments, I do support the general environmental thrust of your letter and want to share some thoughts with you.

Achieving a balance between resource preservation and wise utilization is one of the most important challenges facing our Nation. Time and again I have declared that it would be a tragedy if in our drive to improve the standard of living we were to destroy the quality of life. Our resources must be carefully shepherded so that we protect our environment today and leave a rich legacy for generations yet to come.

In allocating our government resources, we face a similar problem of balance. The National Park Service and the Fish and Wildlife Service are of strategic importance in maintaining the quality of life in America, and I am committed to seeking the funding which will meet their legitimate needs. And while we must operate within the context of the overall budget priorities to be established by the President, I am confident we will be proposing workable solutions to many of the problems you mention.

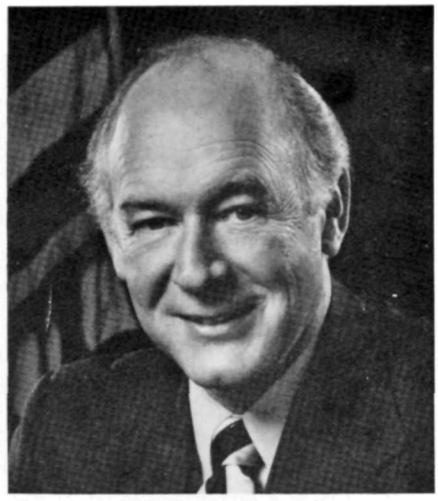
Government reorganization is, as you know, a high priority of the President. I cannot predict, at this time, the effects this will have on the makeup of the Department or the future of the Corps of Engineers or the Bureau of Reclamation. I think it is safe to say that reorganization will focus on consolidation of like functions, elimination of overlap and some programs of marginal value. Reorganization should also sharpen the mission and objectives of the Department and insure that they are carried out through cost-effective programs.

President Carter withheld from the budget, pending study, the funding for 19 dams and water projects. These and more than 300 other projects will be reevaluated to determine if they are safe, economically desirable and environmentally sound. We want to continue reclamation where the environmental and economic conditions indicate it is desirable, but we are going to proceed with great care.

I certainly concur in your concern for land use planning that will effectively provide protection for farmland, wetlands, critical areas, coastal zones and forests. We will want to work closely with the Congress on legislation to this end.

Regarding the energy problem, President Carter has stressed that conservation will be one of the keys to the future. Within the Department, our role will be to encourage necessary production of oil, gas and coal from public lands under stringent environmental controls. Already I have expressed to Congressional committees my support for federal strip mining legislation and a new offshore oil leasing bill. Although the Department is playing only a small role in the quest for renewable resource development, this program has my ardent support. Interior does have on-going research in recycling of metals, and I am very interested in this phase of my responsibilities.

As you know, in his inaugural address and subsequently, President Carter has taken a strong stand for the control, reduction and elimination of nuclear weapons. He also has spoken out against proliferation of other deadly weapons. This strategy for world peace would allow us to free financial and human resources which could be used to achieve our goals of economic opportunity and environmental quality.



Cecil D. Andrus

Aid to cities is out of my purview, however, the Department has been charged by the Congress to study the needs and problems of urban recreation and to identify opportunities to meet these needs. I do not wish to prejudge the findings of this study, but with an expanded Land and Water Conservation Fund we will be in a position to offer positive assistance through Federal, State and local involvement. In this regard, I feel it is particularly important to define the Federal role in urban recreation as well as the direction of growth of the National Park System generally.

I realize I have not dealt in specifics but we both realize there will be ample time and necessity in the near future to do so. While I cannot guarantee that your association and the Department of the Interior will always see eye-to-eye on individual decisions, the possibility of doing so will be vastly improved if we can agree on the larger context. To this end I will welcome a continuing dialogue between the Department and the entire conservation community so that we may arrive at the best informed decisions possible.

Sincerely,
Cecil D. Andrus
Secretary
Department of the Interior

NPCA at work

REDWOOD

Logger Outcry Obscures Slow Death of Ancient Park Redwoods

©HARVEY SHERMAN, 1976

Many Americans did not think much about the controversy over protection of ancient redwoods in California until demonstrators in logging trucks rumbled into their living rooms recently via the wonders of television. The loggers are protesting proposals to halt clearcutting near Redwood National Park and expand the park to save a number of the earth's oldest living creatures—redwoods including the world's tallest tree, a 367-foot giant.

Environmentalists and the Interior Department are now trying to reach the public and Congress with the news that the plans under consideration would implement an economic development and reemployment program in the logging communities while preserving important natural resources for future generations.

On April 19 the Carter Administration announced its recommendation that Congress authorize acquisition of an additional 48,000 acres of redwood lands adjacent to Redwood National Park at a cost of $359 million—all of it from existing budgetary authority and virtually none of it from tax revenues. The package would allocate $12 million for rehabilitating the Redwood Creek watershed both within and outside the park.

Commending the decision of the Administration, NPCA noted that the proposal for specific actions to mitigate loss of jobs and incomes by persons in the region is particularly meritorious. A task force of specialists is now working on that project for the Interior Department. In pointing out the necessity for the jobs project, Interior

GREAT SMOKY MOUNTAINS

Could the Smokies Be Shrinking?

"Roads shrivel parks," author Edward Abbey stated flatly in *Appalachian Wilderness.* He couldn't have been more on the mark about Great Smoky Mountains National Park, where this year close to 9 million auto riders are expected to drive along a network of roads in the most extensive hardwood forest under protection in the United States. (Speed may shrink distance, but Mr. Abbey would like to turn what is now a two-hour drive from Gatlinburg to Cherokee into something more like this: "Set a man on foot at the entrance to the park, at any entrance, with no means to proceed except by his own energy and inclination, and he faces a vista as wild and immense as that which confronted Hernando De Soto, William Bartram, or Daniel Boone.") Back to reality: The tourist industry is pressing for more roads in an NPS unit already beset with many problems.

In fact, this park astride the Tennessee–North Carolina border exemplifies the perennial NPS conflict between preservation and use. Until the relatively recent establishment of parks near major metropolitan areas, such as the Gateway National Recreation Area in New York, the Great Smoky Mountains National Park was the most heavily visited in the system.

Overuse has taken its toll, and NPS must give serious attention to use limitations. For instance, in a recent environmental assessment the Park Service says, "by 1985 most springs in the park may be unfit for drinking without treatment; some are already unfit."

The assessment addresses the role of the national park in its local, regional, and national contexts and reviews alternatives in the areas of visitor use, transportation, management of the natural environment, management of the historic and cultural features, and development of selected areas. In the coming months a new draft general management plan for the park will provide the public with an opportunity to review management concerns and suggest modifications where needed.

NPCA Board member Dr. Dan Hale recently provided the Park Service with NPCA comments on the environmental assessment.

Hale noted that the Smokies region is considered by many to be one of the finest areas in the park system and is blessed with one of the best superintendents in the National Park Service. Nevertheless, the park has been the focus of a number of controversial issues for several decades or more. Of the longstanding issues, what is perhaps the most complex debate results from a 1943 agreement among the National Park Service, Swain County in North Carolina, and the Tennessee Valley Authority. Under that agreement the TVA granted 44,000 acres to the National Park Service while reserving the right to use the lands and waters for reservoir purposes and stipulating that a road could be constructed along the north shore of the Fontana Lake within the boundaries of the park.

Since that time, strong local and national opposition has developed to the construction of a north shore Fontana road, although some people in Swain County continue to insist upon a road and an entrance to the park.

NPCA urged the Park Service to drop further consideration of either an additional transmountain road or a north shore road on Fontana Lake. The north shore road would lead to development in the southeast quadrant of the park, and NPCA opposed any road or facility construction in areas of that quadrant

Secretary Cecil Andrus said, "I think it is significant that the existing supply of old growth [redwoods] is expected to be exhausted in ten to fifteen years if present logging rates continue. Most of the people who stand to lose their jobs because of park expansion would lose their jobs during that period regardless of whether or not new lands were acquired for the park. And the country and the world would be poorer for having lost a magnificent, self-sustaining stand of these great trees."

Timber companies had earlier rejected an Interior Department plea for just a six-month moratorium on cutting in certain areas while legislation to acquire them was being considered. At press time the loggers were rapidly felling trees on critical lands just upstream from the park's world-famous Tall Trees Grove. The cutting would destroy the last "ridge-to-ridge" view for visitors to the "emerald mile" of the park. If action is not taken soon, siltation resulting from clearcutting on private lands adjacent to the park could kill the trees in the grove.

The government might still seek a moratorium on the logging through administrative or court action; Congress is also empowered to declare a logging moratorium.

In March NPCA presented testimony by invitation of the House Interior subcommittee on parks concerning legislation to expand the park by 74,000 acres that was introduced by subcommittee chairman Rep. Phillip Burton (D-Calif.). (Field hearings on the bill, HR 3813, in Eureka and San Francisco, California, were the scene of the logger protests.) NPCA endorsed enlargement of the park but also said that regardless of the final decision about enlargement, in order to ensure the preservation of the park, the federal government must take managerial controls over all watersheds that flow through it by declaration. NPCA recommended use of sections of the Redwood National Park Act of 1968 to acquire interest in timberlands. The methods proposed by NPCA would cost the government little or nothing and would enable the Interior Department to require even-flow selective harvesting. NPCA contends that use of such controls to ensure ecological forestry would protect both the park and the commercial forests from destruction and would stabilize employment in the region over the long term. ■

pending settlement of the Fontana dispute.

In relation to transportation and access, NPCA endorses the proposal to limit the number of vehicles permitted on the existing transmountain road, U.S. 441, and to establish a visitor transportation system for the park.

NPCA expressed strong opposition to any widening of U.S. 441. Dr. Hale suggested that constructing new roads and parking areas in the Smokies would be "like destroying a church to create easier access and parking for worshippers' automobiles." Instead, NPCA supported the NPS concept of designating a Foothills Parkway along the circumference of the park and urged emphasis on that approach. For the most part, the route could utilize existing roadways and would need only road signs and repairs. However, NPCA qualified its endorsement by specifying that this circumferential road project must follow present routes on the south shore of Fontana Lake instead of relying on construction of a north shore road and that no portion of it should be within the park.

NPCA recommended strongly against providing more road access into the Cataloochee Valley of the park, and putting a hundred-site picnic area there, as several assessment alternatives proposed. NPCA argued that the traditional values of the Cataloochee, an isolated valley with virgin forests and a few homesteads overtaken by vines, cannot be preserved with such access, as has been observed in the Cades Cove area of the park.

In endorsing the implementation of a visitor transportation system, NPCA urged putting a high priority on the Gatlinburg to Cherokee transmountain road corridor (U.S. 441) and the short connecting route from Newfound Gap to Clingman's Dome. NPCA pointed out that even though this system would not be mandatory at first, experience in other parks with public transportation systems has shown that visitor use and acceptance could be expected to be high.

Much of the capital outlay could be recouped from the lessening of road maintenance costs as a result of less intensive use. In addition, there undoubtedly would be a decrease in accidents, better surveillance of visitor-bear confrontations, better protection of the park's resources, and more efficient use of the roads. More visitors could see the park and at the same time visitation would have less adverse effects. NPCA pointed out in its comments that ultimately private vehicular transportation on many park roads may need to be phased out.

In order to fulfill its preservation mandate the Park Service also must implement more regulations on various types of uses of the park, NPCA emphasized. For instance, this Association recommended that no more backcountry campsites be designated. For the most part campers should be allowed to camp throughout the backcountry, but careful enforcement of regulations coupled with camper education is essential. NPCA opposed the construction of additional horse trails but indicated that with careful regulation of horseback riding, old railroad grades might be suitable for conversion to horse trails.

In regard to other types of park use, NPCA urged the Park Service to prohibit offroad vehicles and to scrap any plans for constructing special corridors or routes for bicycling. Such construction might create demand where demand does not exist.

NPCA suggested that although in general fishing is an acceptable use of the park, the stocking of streams with hatchery species for immediate capture by fishermen is unacceptable. Instead NPS should concentrate on maintaining native fish populations.

NPCA also recommended closing the Le Conte Lodge in the park at least for several years to permit research on how it has affected or could affect this wilderness area in the park.

To protect natural ecosystems, NPCA representative Hale also recommended elimination from the national park of the destructive European wild boar, an exotic species. But NPCA specified that no public hunting should be allowed for this purpose under any circumstances.

Regarding the historical and cultural areas of the park, NPCA recommended maintaining representative samples of historical structures.

Get Involved: This Association looks forward to continuing involvement in the development of a general management plan for the Great Smoky Mountains National Park, and Mr. Hale and the staff invite NPCA members with experiences in the Great Smokies or special concern for this area to write to Mr. Destry Jarvis at NPCA headquarters, 1701 Eighteenth Street, N.W., Washington, D.C. 20009. (202) 265-2717. ■

QUETICO–SUPERIOR

Year of Decision for Boundary Waters Canoe Area, Quetico

At this writing hearings were expected in May or June on a bill (HR 2820) to protect the entire Boundary Waters Canoe Area (BWCA) in Minnesota from logging, mining, snowmobiles, and motorboats and on another piece of legislation (HR 5968) to make part of the wilderness acreage a national recreation area open to logging and motorized use.

Meanwhile, at press time the cabinet of Ontario was expected to be considering in May or June whether to approve plans for an 800,000-kilowatt generating plant just north of Quetico park in the province. The coal-fired plant at Atikokan would feature no scrubbers and could spread acid rain over the pristine northern lake country, which includes not only Quetico park but also Voyageurs National Park and the BWCA in Minnesota. NPCA recently urged the State Department to authorize an International Joint Commission investigation of this matter. The Interior Department and Minnesota Pollution Control Agency also have expressed concern. (See NPCA at Work, October 1976 and January 1977.)

At the March meeting of the Canada–United States Environmental Council, many conservation organizations endorsed wilderness status for the entire BWCA and supported Hydroprobe, an Atikokan citizens group, in opposing current powerplant plans.

Get Involved: Write Premier William Davis and Minister of Energy James Taylor, Queen's Park, Toronto, Ontario; Urge reconsideration of the Atikokan generating station. ■

REGIONAL PARKS

Gund Foundation Grant

NPCA has received a grant in the amount of $25,000 from the George Gund Foundation to initiate work on regional parks and related land use planning, President A. W. Smith announced on April 1.

The program will turn around the financing and management of national park units including the Cuyahoga

Getting Involved

Dear Friends,

One of the most direct and interesting ways to get involved in conservation is to work with NPCA in Washington, D.C. Of course, not everyone can abandon their home and job to do so. But special opportunities exist for college students in the form of internships.

NPCA has operated an internship program for several years, directly involving college students in the activities of conservationists in Washington, D.C. Internships are usually tailored to the intern's capabilities and experience. NPCA interns have become involved with such issues as national parks, wildlife, water resources, endangered plants, energy, international and environmental affairs.

I came to NPCA in September 1976 as an intern for the fall quarter. The University of California, Santa Cruz, where I am a Senior in Biology/Environmental Studies, allows full credit for such working internships, giving me perhaps the 15 most worthwhile units I've ever earned. NPCA has provided me with invaluable work experience.

While at NPCA, I've worked predominantly on wildlife issues, but my activities and responsibilities are similar to those any student interning here would have. They include attending congressional hearings, meeting with other environmental groups, reviewing and reporting on legislation and environmental impact statements, writing testimony to submit on invitation to government committees, handling general correspondence, writing reports for the magazine, and of course the nitty-gritty work that everyone in public service organizations must do.

There is really no more practical or

National Recreation Area in Ohio and others elsewhere in the System.

The Gund Foundation was established in 1952 by the late George Gund, a Cleveland, Ohio, banker. It is interested in innovative programs concerning youth and the quality of the environment. It has focused mainly on the Ohio region but has broad concerns in respect to environmental matters. The NPCA program will include not only Cuyahoga National Recreation Area but the proposed Chattahoochee and Santa Monica Mountains national recreation areas and the existing Gateway and Golden Gate national recreation areas in New York and San Francisco, respectively. ■

POPULATION

NPCA Supports Fraud-Proof ID Cards for Aliens

New fraud-proof identification cards for aliens entering the United States will soon be ready for distribution, according to the U.S. Immigration and Naturalization Service (INS).

The problem of identifying illegal aliens in the United States has reached major proportions in recent years, and the development of the ID cards is a result of many years of study.

The population of this nation has swollen during the past few years in large part because of the influx of illegal immigrants at a rate of between eight hundred thousand and a million per year. This rate is almost equal to the U.S. annual birthrate of 1.2 million. The illegal immigration rate is actually expected to exceed the birthrate during 1977. The total number of illegal aliens now living in the United States is between six and twelve million. In addition, four hundred thousand aliens enter the United States legally each year. The need to control this massive addition to our population is obvious.

Because ID cards were easily counterfeited in the past, it has been difficult for the INS to identify illegal aliens. The new cards, which can be read by computers connected to a central information bank in Washington, D.C., will carry a person's picture and thumbprint as well as personal information in a code on the back. These cards will enable employers to easily ascertain whether or not an individual has legally entered the nation. Similar fraud-proof social security cards may soon be available for U.S. citizens.

Legislation is presently under con-

interesting way to learn about how things are done in Washington than to be there doing them. And even if politics is not on your list of career goals, understanding how environmental matters are administered by the government is valuable knowledge for any environment-related job.

Interning at NPCA has been more than hard work and learning; it has been exciting and enjoyable.

Application for internships should be made to Rita Molyneaux, Administrative Assistant. Applicants should send a resume that includes past environmental experience—either practical or academic—any skills that would be useful to the internship, description of areas of expertise, and an indication of the time period during which the intern would be available.

There are other ways to get involved in NPCA's work besides interning. The most effective way is to encourage your friends and school library to join NPCA (which, of course, entitles them to NPCA's exciting monthly magazine). When you "get a member," you receive a magnificent portfolio of nine beautiful nature photographs from the covers of our magazine. These photos are the work of some of the best nature photographers in the world, and they include a white border suitable for matting and framing. You'll find that they are perfect for table display. Enclosed is an envelope for you to send in when you "get a member."

Sincerely,
Kathy Barton
Santa Cruz, California

Editor's Note: Ms. Barton returned to school at the end of March. NPCA is grateful for the outstanding work she has done for this Association.

sideration in Congress that would impose penalties on employers who knowingly hire illegal aliens. Such legislation is wholeheartedly supported by the Carter Administration, according to Labor Secretary F. Ray Marshall. Because most people who enter this country illegally do so to find work, it is hoped that passage of legislation making it illegal to employ an illegal alien, along with the new fraud-proof ID cards, will solve the problem.

The effects of uncontrolled population growth on jobs available to U.S. citizens and on the welfare agencies that end up serving many illegals is well known. Overpopulation can also have a disastrous effect on natural resources, and this threat could become ever more serious if our population growth through illegal immigration is permitted to go on unabated.

NPCA is working on various aspects of the population problem with the Administration and is preparing testimony on invitation for House and Senate appropriations committees. ■

GRAND CANYON

NPS Grapples With Widespread Misunderstanding of Burro Problem

NPCA has long supported the elimination of feral burros from Grand Canyon National Park to protect native wildlife and vegetation.

Humane groups succeeded in halting for the time being a proposed Park Service plan that called for the elimination of Grand Canyon burros over a five-year period. The program would involve shooting in combination with a fencing program to prevent additional burros from entering the park. (Unfortunately live-trapping is nearly impossible due to the rugged terrain.) Interior Secretary Cecil D. Andrus, citing widespread misunderstanding of the nature of the burro problem, has ordered a full environmental impact statement followed by public review before making a final decision.

Studies conducted since 1974 seem to clearly indicate the detrimental effects of burros on native Grand Canyon plants and animals. The two to three thousand burros in the park compete with native bighorn sheep for food and water and cause extensive damage to vegetation. In one recent study a control plot had four times more vegetative cover than an area frequented by burros. The NPS plan would not affect the more than ten thousand burros outside the park on public lands in Arizona alone. The Wild Free-Roaming Horses and Burros Act protects burros on public lands outside parks.

Nevertheless, the goal of the impact statement will be to refine the knowledge about the number and location of burros and the effects of burros on bighorns and other wildlife, and to identify the areas of the park most severely damaged by the burros' presence. The impact statement is expected before December. ■

OIL TANKER STANDARDS

Shipshape At Last?

President Carter, in recognition of the serious threat to our coastal areas posed by current weak regulations for oil tankers, recently instructed the Coast Guard to redraft standards. Meanwhile congressmen are considering a wide variety of tanker regulation proposals.

Carter called for improved regulations that would force tankers to be built in ways that would reduce or eliminate the likelihood of serious spills and that would permit the United States to protect its resources from old, unsafe tankers. Spurred by the string of tragic tanker spills during this past winter as well as by the efforts of organizations like NPCA that have been fighting for adequate tanker safety regulations for years, Carter announced a comprehensive program to deal with problems of marine pollution. The program would include ratification of the International Convention on Pollution from Ships, improvement of crew standards and training, institution of a program in which the Coast Guard would board and inspect

every foreign flag tanker calling at a U.S. port, improvement of the Coast Guard's ability to respond to oil spills, passage of comprehensive oil spill liability and compensation legislation, as well as rewriting of ship construction and equipment standards. Oil companies and tanker owners will fight the proposed new standards during the regulatory process.

In testimony on invitation before the Senate Commerce Subcommittee on Merchant Marine and Tourism, NPCA expressed support for legislative efforts to protect the marine environment from damage by oil spills from tankers. NPCA pointed out to the committee the need for legislation adopting strict regulations for all tankers using U.S. ports. These regulations should require ships to have double bottoms, segregated ballasts, and inert gas systems to prevent explosions; and should set safety standards for collision avoidance radar systems and increased maneuverability. The Carter announcement and the bill subsequently approved by the full Commerce committee also called for such standards.

Samuel R. Levering of the U.S. Committee for the Oceans spoke on behalf of NPCA at the hearings and stressed that the United States has authority under present national and international law to control any ships bound for U.S. ports. Some people have advocated the establishment of a 200-mile pollution control zone off our shores, but this approach could risk serious international conflicts that are unnecessary considering that 92 percent of the ships coming within 200 miles of the United States are destined for our ports. The other tankers are all destined for either Canada, which has good tanker laws, or Mexico, with which some agreement could be reached. ■

ALASKA NATIONAL INTEREST LANDS

Hearings: This summer the House Interior Subcommittee on General Oversight and Alaskan Lands will continue its nationwide series of public hearings concerning which federal lands in Alaska should be set aside for present and future generations as national parks, wildlife refuges, forests, wild and scenic rivers, and wilderness areas. Millions of acres are at stake—including famous mountains, glaciers, and vast expanses of tundra alive with caribou, as well as lesser known habitats ranging from sand dunes in the Arctic to rainforests.

The subcommittee held hearings in April and May in Washington, D.C., the Midwest, and the South. Details about public hearings on the agenda for June and July follow:

Great Plains/Rocky Mountains: Saturday, June 4, 9:30 a.m., auditorium (2nd floor) of the U.S. Post Office Building on 19th and Stout Streets, Denver, Colorado.

West Coast: Saturday, June 18, 9:30 a.m., board room of the San Francisco Board of Education, 135 Van Ness Avenue, San Francisco, California; and Monday, June 20, 9:30 a.m., Olympic Room of Seattle Center, Seattle, Washington.

Southeast Alaska: Tuesday, July 5, 9:30 a.m., Bicentennial Building, Sitka, Alaska; Thursday, July 7, 9:30 a.m., National Guard Armory, Juneau; and Saturday, July 9, 9:30 a.m., auditorium of Ketchikan High School, Ketchikan.

Other Field Hearings: Additional hearings in August in other parts of Alaska will be announced later.

Anyone wishing to testify at a hearing should send his or her name and address in writing at least one week before the hearing in question to Subcommittee on General Oversight and Alaska Lands, 1327 Longworth House Office Bldg., Washington, D.C. 20515.

Written Statements: Individuals can also submit written statements or letters for the hearing record to the subcommittee at the above address.

Alaska Land Proposals under Consideration: The subcommittee is considering several bills dealing with d-2 lands, including a proposal (HR 39) supported by conservation groups. This bill aims to balance great development pressures in the state by preserving key natural areas for a total of about 116 million acres.

This seemingly large acreage must be put into perspective as part of what the ancient Aleuts named "the Great Land." In Alaska—a state nearly twice the size of California, Oregon, and Washington combined—size is relative. The division of the state's 375 million acres has been going on since Alaskan statehood in 1958, when the state was granted the right to choose 103 million acres from the federal domain—an unusually generous land settlement. The Alaska Native Claims Settlement Act (ANCSA) of 1971 granted Eskimos and Indians some 45 million acres of public lands. An amendment act authorized the Interior Secretary to withdraw up to 80 million acres for possible inclusion in the four federal conservation systems and to recommend additional acreage for that purpose. The amendment specified that Congress must decide on permanent protection of these national interest lands by December 1978.

With the deadline approaching and hearings underway, congressional delegations, federal agencies, and conservation organizations are increasingly debating the various proposals.

At press time Alaska Governor Jay Hammond and Senators Ted Stevens (R-Alaska) and Don Young (R-Alaska) had just announced that they would introduce a counter proposal to HR 39.

Their bill includes much less acreage and would provide for joint federal-state management of d-2 lands under a new Federal-State Land Classification Commission. Some federal lands would be set aside as "core areas" administered by the Park Service, Forest Service, and the Fish and Wildlife Service under the direction of the commission. The commission could permit some development in core areas. Other lands adjacent to the core areas would be opened to more intense development.

Meanwhile, the Bureau of Land Management (BLM), jockeying to safeguard its status as Alaska's preeminent landlord, had proposed another d-2 set-

conservation docket

tlement plan. This proposal is outlined in a thirty-page document that has been quietly circulated among various members of fish and game commissions in all fifty states.

The BLM plan diverges significantly from HR 39 not only in acreage, boundaries, and agency jurisdiction, but also in management concepts. One principle BLM described as "innovative" is the establishment of "environmental mineral management areas" in the Yukon, Koyukuk, and John River drainages and in the Yukon-Kuskowin delta area. In effect, the BLM approach would block the state from selecting large tracts of land north of the Yukon drainage and would confine nearly half the state's remaining land selections under ANCSA to interior lands left over after native villages complete their land selections.

Secretary of Interior Cecil Andrus released a statement strongly rejecting the BLM plan. He stressed that under the 1971 ANCSA, the lands in question are clearly intended as national parks, wildlife refuges, wild and scenic rivers, and forests—not BLM lands.

The Secretary referred to BLM's maneuver as a "political end-run around the intent of Congress, HR 39, and the Secretary of the Interior."

In addition, on March 3 the Interior Department told the House Interior Committee that the Administration

OTHER ENVIRONMENTAL MATTERS

Clean Air: At press time it was expected that the House and Senate would pass bills to amend the Clean Air Act of 1970 before June.

Although some of the amendments under consideration would strengthen the law, others would permit continuance of unhealthy air conditions. Included among the strengthening amendments are provisions that would designate specific areas in which no significant deterioration of air quality would be permitted; would require facilities that are presently causing reduction in visibility in "clean air" areas (areas where the air quality is better than national standards) to install equipment to control their emissions; and would reinforce present EPA regulations by permitting new pollution sources to locate in already-dirty areas only if they can obtain agreements with other polluters to decrease emissions to the point that total emissions would equal no more than the present level.

Some of the provisions that could weaken the Act include an amendment by Sen. Lloyd Bentsen (D-Tex.) that would delay deadlines for state compliance with clean air guidelines and simply require states to show that they are making "reasonable progress." Senators Donald Riegle (D-Mich.) and Robert Griffin (R-Mich.), along with Rep. John Dingell (D-Mich.) and Rep. James Broyhill (R-N.C.), will try to push amendments weakening auto emission standards and extending deadlines. The White House favors extensions and tougher standards.

A conference committee will probably hammer out differences between the two versions of the legislation this month. This past year a relatively strong bill reported out of conference was killed in the last minutes of Congress as a result of industry lobbying.

Clean Water: HR 3199, a bill that was hurried through the House Public Works Committee and the full House would gut some of the key provisions of the Federal Water Pollution Control Act. The bill would severely reduce the clout of Section 404, which directs the Corps of Engineers to protect wetlands; would allow states to approve use of federal grants for sewage treatment plants without strong guidelines for environmental and economic considerations; and would permit extensions of industry and municipal deadlines for sewage treatment plants on a case-by-case basis for two years.

In this House bill, these provisions are attached to a provision for extension of funding for sewage treatment facilities. Such extension is necessary to allow many localities to continue

still considers the 83-million-acre Alaskan proposal submitted by former Interior Secretary Rogers Morton in 1973 to be "a solid base upon which to begin congressional deliberations." However, Deputy Assistant Secretary Buff Bohlen indicated that some modifications of that proposal are warranted, and the Administration expects to address these modifications when hearings are held on individual areas. Department officials agree with sponsors of HR 39 that any Alaskan settlement should preserve for future generations intact, truly magnificent ecosystems rather than mere fragmented remnants of our natural heritage.

Next month's issue will feature a report on NPCA testimony presented on invitation in support of HR 39.

Admiralty Island: On March 24, subcommittee chairman John Seiberling introduced a legislative alternative for one portion of the Alaskan national interest lands.

The bill would designate Admiralty Island as a national preserve. Seiberling intends through the bill both to provide continued protection for this wilderness in southeast Alaska and to meet native economic goals.

A major difference between Seiberling's proposal and others such as HR 39 is that it addresses the lengthy conflict between native logging corporations and village residents seeking protection of their present subsistence lifestyle and the lands upon which these practices depend. Demonstrating commitment to protecting the natural landscape, Tlingit Indians have proposed to exchange interests in their village-owned timber for volumes of timber of equal value off Admiralty Island. The bill would enable them to do so by requiring the Secretary of the Interior to designate for that purpose alternate lands of equal or greater value elsewhere. Admiralty Island is a million-acre forested wilderness that supports abundant wildlife such as the nation's highest concentration of nesting bald eagles. ■

construction. The Senate attached the funding extensions to its public works jobs bill. Reconciling these two bills in conference could prove to be next to impossible, although most persons in both houses profess to favor both the jobs bill and funding extension legislation. The Senate, however, believes that more time and study should be given to amendments of the Act.

Energy Department: Proposals (HR 4263 and S 826) for the formation of a cabinet-level Department of Energy (DOE) were getting increasing attention at press time, and it was expected that formation of the new DOE will be the first step in the Carter reorganization program. Under the Carter plan, DOE would be responsible for energy research and development; would take over the conservation programs now shared by the Energy Research and Development Agency (ERDA) and the Federal Energy Administration (FEA); and would be responsible for regulation and distribution of fuels—including functions now handled by FEA, the Federal Power Commission, the Securities and Exchange Commission, and the Interstate Commerce Commission. DOE, however, would not have health, safety, or environmental regulatory authority.

Also on the Docket: In the Senate Environmental and Public Works Committee, hearings on oil spills by Sen. Edmund Muskie's (D-Maine) Subcommittee on Environmental Pollution will cover oil spill liability and **tanker regulation.** Sen. Mike Gravel's (D-Alaska) Subcommittee on Water Resources will hold hearings on **water resources** in light of drought conditions in some areas of the nation.

Sen. John Culver (D-Iowa), chairman of the Subcommittee on Resource Protection, plans to hold legislative hearings on nongame wildlife conservation and the **Section 404** permit program under the Federal Water Pollution Control Act as well as oversight hearings on the National Environmental Policy Act and **wildlife issues** involving the Endangered Species Act and the National Wildlife Refuge System. ■

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For further information contact Director, Teton Science School, Box 68, Kelly WY 83011. (307) 733-4765.

Continued from page 2

years arrived during a winter of adversity in Presidential attitudes. It was not Congress which failed the nation in respect to strip mining. Nor was it Congress that denied funding to the national parks. Many of the obstructionists have taken their seniority and departed. A revitalized committee structure promises new energy, greater competence, a more magnanimous outlook in Congress in the years ahead. The new Congress can be expected to welcome the new leadership in the White House in most matters, and to support, not resist the fresh initiatives.

MUCH WILL DEPEND on decisions in matters which have not thus far had much attention. The quality of life in America cannot be improved, nor even sustained, unless we can bring our numbers under control. The younger generations have done well in recent years in establishing the small family as the moral norm. The natural increase of the American nation will soon level off; but the tides of illegal immigration threaten to submerge all these good efforts. Conservationists should be making common cause with organized labor to protect American jobs and the American environment. Programs should be developed for jobs on the farms for the unemployed of the cities; farm organizations should support such programs instead of resisting immigration controls. There is strong sentiment in Congress for action; when will the Administration move?

The population issue worldwide is more deadly. Suppose it to be true, for the sake of argument, that the world could feed its present population adequately, without a destructive effect on the planetary ecosystem, if the wealth were equitably distributed. It is not so distributed, and there is small chance that this will happen before famine overtakes us and solves the problem brutally by a rapid rise in death rates. Direct approaches to the problem of proliferation become imperative in the name of humanity. If our overseas aid is to be coupled to libertarian issues and to economic efficiency, then let it be linked as well to effective efforts at the reduction of birth rates.

AS ENVIRONMENTALISTS we are inveterate internationalists. The world movement for national parks was an early-blooming flower of planetary cooperation. One of America's most generous gifts to the world was the example of its National Park System. It was a gift that belied our supposed materialism. That it was accepted so readily and spread so rapidly around the planet is a tribute to the love of life and beauty which lies serenely nonetheless in the depths of the human heart everywhere and always. But the contribution of Western Europe was of incalculable historic significance. And more recently the heroism of so many of the people who inherited responsibility for the great parks of Africa has set an example for devotion everywhere.

THE UNITED NATIONS Conference on the Law of the Sea resumes its sessions as we go to press. Unfinished, hardly begun, is the vast work for the protection of the oceanic fisheries, vital to the food supply of a hungry planet, and the restoration of the endangered marine mammals. Unfinished also is the salvation of the oceans from that pollution which is the evil hallmark of irresponsible economic systems. Also unsolved as yet is the administration of the great wealth of minerals which is thought to lie on the deep floors of the oceans, whether for the benefit of a few or of all, and whether with care for the environmental matrix of life, or ruthlessly, with the death of the world just ahead. The President's choice of Ambassador Richardson as the head of the American delegation to Law of the Sea, one of the most experienced and talented public servants America has produced in recent years, bodes well for the outcome. Environmentalists everywhere should support these efforts.

THREE MILLION YEARS or so: a long, long time have man-like creatures walked the earth. Just recently we left the savannahs for the cultivated fields, exploring the ways of agriculture. More recently we built the sprawling cities, centers of intense cooperation, but of lost contact with surrounding life. A short, short time ago came writing; later the ways of science; and now our powers outrun our sense.

The crisis deepens; on every hand the danger seems to mount; as persons and as nations we live in fear and trembling. Yet now perhaps, here in America, the winter may be lifting. Faith, hope, and charity, as in other dark days long ago, will be needed to warm our hearts until the springtime be fulfilled.

—Anthony Wayne Smith

Semi-palmated plover on nest

Golden plover with day-old chick