

# NATIONAL PARKS *Magazine*



The Stehekin River  
Northern Cascades, Washington

*October 1960*

# The Editorial Page

## **The Yellowstone Powerboat Hearings**

DURING THE LATTER PART of August, the Department of the Interior held several hearings in and around Yellowstone National Park to take testimony for and against the National Park Service's proposal to establish two use-zones on the waters of Yellowstone Lake.

These two proposed zones would divide the lake into a northern part, comprising some eighty percent of the whole area, which would be open to owners and users of powerboats, and a southern part, of some twenty percent, in which powerboating would be prohibited. Immediately concerned in the setting aside of the southern twenty percent of the lake is the protection of park wildlife. In particular, the measure is designed for the protection of bird nesting grounds from the roar and wash of speedboats. Among the birds using these nesting grounds are the white pelican, double-crested cormorant, Caspian tern, California gull, and the trumpeter swan—this latter bird being one of our species presently threatened with extinction.

We feel, however, that there is a larger question involved; the right of the vast majority of Yellowstone visitors, who are not speedboat enthusiasts, to enjoy the lake—not twenty,

thirty, or seventy percent of it, but all of it—as a clean and restful part of the whole preservation, unspoiled by the noise, oily water, and garbage that go with speedboating *en masse*.

At the time this editorial is being written and consigned to the printer, there is no indication of what the Secretary of the Interior's decision in the Yellowstone Lake case may be. But in any event, one fact stands out clearly: the hearings should not have been necessary in the first place.

Powerboating has no proper place on lakes or ponds in our national parks. The construction of powerboat accommodations, like those recently initiated at Yellowstone Lake under the Mission 66 plan, will merely encourage the organized powerboaters to make demands for access to other, and eventually all, lakes and waters of our nationally preserved areas.

Already, as a result of getting one foot firmly planted inside the threshold, a powerful national boating club is able to say, in regard to the Yellowstone zoning proposal in particular and the purposes of national parks in general: "Public recreation is supposed to be the paramount consideration." In this particular instance, "public recreation" obviously means the freedom to make an esthetic shambles of a gemlike lake in a remarkable park.

The National Parks Association feels that the public use of speedboats on lakes within our national parks is a direct violation of not only the spirit but the letter of the act adopted by Congress in establishing the National Park Service. ■

## **Orbiting the Optics**

IT IS DEEPLY GRATIFYING to learn that, by 1963, this nation may have a telescope—technically styled an Orbiting Astronomical Observatory—flying around the earth. While the editor has never personally experienced the need for a flying telescope, he can understand the enthusiasm of those who might benefit from a peep into outer space unhampered by the vagaries of the earth's atmosphere. While pointing at the earth, it is said, the machine is not expected to return any worthwhile pictures. (It is not clear, from available information, whether this is due to a lack of worthwhile pictures, or to technical considerations.)

Cost of a flying telescope should be somewhere between ten and twelve million dollars—a reasonable price, we think. We did have, after due consideration of the matter, some temptation to trade in one flying telescope and donate the proceeds to the Park Service toward purchase of national park inholdings, or some other equally mundane purpose. ■

Typical shoreline habitat for nesting geese, ducks and trumpeter swans is delta of Trail Creek, below, on Southeast Arm of Yellowstone Lake.

National Park Service



The noise and wake of speedboats, such as those racing and weaving on Yellowstone Lake, below, is a threat to habitat of nesting waterfowl.

National Park Service



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Paul M. Tilden, Editor

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**THE OCTOBER COVER**

Deeply entrenched among the wild peaks and the glaciers of the North Cascades of Washington State, the Stehekin River tumbles from the crest of the range through dense forests to fiord-like Lake Chelan. No roads from the outside bring their hurried pace to clash with the leisure of the Stehekin Valley—a leisure in tune with the ancient geological and ecological rhythms of a vast surrounding wilderness.

A Photograph by Paul Bergman

**THE NATIONAL PARKS AND YOU**

Few people realize that ever since the first national parks and monuments were established, various commercial interests have been trying to invade them for personal gain. The national parks and monuments were not intended for such purposes. They are established as inviolate nature sanctuaries to preserve permanently outstanding examples of the once primeval continent, with no marring of landscapes except for reasonable access by road and trail, and facilities for visitor comfort. The Association, since its founding in 1919, has worked to create an ever-growing informed public on this matter in defense of the parks.

The Board of Trustees urges you to help protect this magnificent national heritage by joining forces with the Association now. As a member you will be kept informed, through NATIONAL PARKS MAGAZINE, on current threats and other park matters.

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*Red Rock Lakes—home of*

# The Trumpeter Swan

*By Charlotte B. Norris*

*With Photographs by Winston E. Banko*

WHEN A SPECIES becomes extinct—be it mammal, bird, or other—something has gone from the world that can never be replaced. The magnificent trumpeter swan, largest and shyest of North American waterfowl, faced extermination only a few years ago along with the passenger pigeon and other native forms of wildlife. Humans had not set out deliberately to rid the country of this noble, white-plumaged bird; but its survival as a species was seriously endangered by gunners with nervous trigger fingers, who found this ordinarily low-flying target irresistible.

Fortunately, in 1935, when an actual count showed only seventy-three living trumpeters in the United States, the 40,000-acre Red Rock Lakes Migratory Waterfowl Refuge was established on public lands and lands purchased by the Bureau of Biological Survey, an organization that is now part of the Fish and Wildlife Service. This land has been dedicated by the American people to the preservation of the rare trumpeter swan; and here, in company with lesser waterfowl, the birds may nest and brood their young, unmolested. The boundaries of the refuge are indicated by markers bearing the symbol of a flying goose.

### A Primitive Setting

Approximately 7000 feet above sea level, Red Rock Lakes Refuge is a five-by-fourteen-mile area in the mountain-rimmed Centennial Valley of southwestern Montana, west of Yellowstone National Park and adjacent to the Continental Divide. Here, in our last primitive frontier south of Alaska, where aspens give way to Douglas fir and spruce on the higher elevations, deep banks of winter snow melt throughout the summer to furnish most of the sanctuary's necessary open water for lakes and ponds. The refuge is reached by an unimproved dirt road that connects the village of Monida, Montana, on Highway 91, with State Highway 191.

The trumpeter swan, *Olor buccinator*, once ranged over much of North America, with nesting grounds in Canada and the United States, primarily west of the Mississippi River. During the winter migrations, the snowy white birds, with a six-foot wingspread and

capable of flying eighty miles an hour, traveled as far south as Northern Mexico. But as civilization advanced westward, lakes, marshes and sloughs were drained for agricultural purposes, and the grounds where trumpeters might nest in solitude became highly restricted.

It was natural that the early settlers should occasionally shoot a cygnet, a young swan, as a change in menu from deer and bison; but the market hunters, who killed the birds for their handsome skins, were the ones who wrought wholesale devastation. Between 1853 and 1877, the Hudson's Bay Company sold 17,671 swan skins to London dealers, and many of these skins are thought to have been those of the trumpeter.

It is easy to understand, then, why these birds had practically vanished by 1900. During the early years of the twentieth century, their resonant, trumpet-like calls could be heard only on remote lakes and marshes of the Yellowstone region.

Red Rock Lakes was a "natural" for the swans until the latter part of the nineteenth century, because the area was still in a wild, unsettled con-

dition. In 1900, newcomers to the area began collecting cygnets to sell to parks and zoological gardens, at \$75.00 a pair. Adult swans were not molested; on the contrary, they were carefully protected so that they might rear additional young birds. In 1918, a law was passed to prohibit market hunting; and this put a stop to cygnet collecting as well.

### Trumpeter's Nesting Grounds

Red Rock Lakes Migratory Waterfowl Refuge is now the principal nesting grounds of the trumpeter in the United States, with nearby Yellowstone National Park a rather poor second. The lakes and marshes of Red Rock comprise about 13,000 acres of shallow water, with mucky bottom composed of a mixture of decaying vegetation, plankton, and a tremendous abundance of aquatic plants, with vegetation usually growing to the water's edge. The lakes of Yellowstone, mostly volcanic in origin, have shorelines that are often timbered, with deep waters toward the centers, so that trumpeter habitat is mostly marginal. The waters of both areas are tempered in extremely cold winters by warm springs, and no size-

Shown in the photograph below is an aerial view of the lakes, sloughs and marshes of the Red Rock Lakes Migratory Waterfowl Refuge in the wild Centennial Valley of Southwestern Montana.





⤴ A group of trumpeter swans, accompanied by a number of lesser waterfowl, float on the waters of their winter quarters. The wings of swan pair at left are raised in a "display" attitude.



⤵ After an incubation period of from 33 to 37 days, trumpeter swan eggs (which may be seen at the left in the background) hatch into cygnets that are covered with a grayish-white down.

able area is frozen over for any length of time.

The principal concentrations of trumpeters are at the shallow Upper and Lower Red Rock Lakes, with their miles of open shoreline, and at Swan Lake, which is really a sealed-off marsh draining into Upper Lake during high spring water. Dotted with islands of bulrushes, Lower Lake furnishes an ideal habitat for the trumpeter swan.

Late in February, adult birds begin to spend less time loafing and feeding on the surface of the water, and more time on the adjacent snow fields grooming their feathers to a high gloss and gazing with soft, brown eyes at members of the opposite sex. As the courtship season approaches, the birds seem to grow even larger as they give forth bursts of trumpeting, the horn-like volume and resonance of which may be heard for several miles.

By mid-March, trumpeting has increased, and the female, or pen, is so highly impressed by the voice, the splendid plumage, and the polished black bill of the male, or cob, that courtship reaches a peak.

Having started to pair at the age of three years—and normally beginning to nest at five—the permanently mated birds seek nesting sites in the marsh on abandoned muskrat houses at the edge of open water, usually concealed by tules and sedges.

#### Constructing the Nest

Nest-building is a partnership job, with the pen probably doing most of the work. Beginning with sedge and plant parts placed on a mucky, fibrous base, the material used for the nest becomes coarser toward the top where it tends to blend with its surroundings. It is rendered stable by mountain bog birch clumps—sometimes willow—and

all approaches are protected by surrounding water to a depth of four feet. The total height of the nest is about five feet from bottom to top, approximately two feet being above the waterline so that the interior will remain dry to receive a clutch of up to nine large, ovoid, off-white eggs.

Meanwhile, as spring rides in on the yet-chilling wind, many forms of wildlife emerge to share the Red Rock Lakes refuge with the trumpeters. Against the spectacular backdrop of rugged, snow-patched mountains, the great Shiras' moose browses on the leaves of the willow—a tree also fancied by the beaver. Black bears shuffle along icy streams that contain grayling and rainbow trout. A herd of antelope, stepping delicately, appear in the cover of aspens to drink before sunrise, while a swimming otter makes a liquid "V" in water growing pink

with the dawn. A mink, silent and rigid as the rock on which it crouches, hopes to capture an ouzel that is walking under water in search of aquatic insects.

Stately blue herons and other stilt-legged birds patrol the shallows, hopping for the unwary frogs; while overhead, wrens swing on slim twigs and six kinds of swallows dip and bank.

All day long, small perching song birds trill and ripple. An occasional person-to-person disagreement sounds sharply between two Virginia rails. Blending with the high cry of black terns, the squeal of a marsh hawk, and the quacking of golden-eyes and others of the duck clan are the whistles, the grunts, the roars, and the bellows of mammals of the area. All this to the accompaniment of splashing, gurgling water, the wind in the evergreens, the brush of reeds and sedges; but the aloof trumpeters can produce clarion notes that might well surpass this symphony in volume, if not in harmony.

#### The Cygnets Hatch

In about thirty-five days from the laying of the first egg, the cygnets begin to chip their shells. Their grayish down gradually dries out, and they become active within the confines of the nest, which they leave as soon as the weather permits. Then, chaperoned on both sides by proud, attentive parents, the cygnets swim about close to their home, while the adults stir up the mucky bottom with strong bills and webbed feet. Aquatic beetles, small crustaceans, soft-shelled water snails, and insects and their larvae all float to the surface, where they are quickly seized by the youngsters. For three weeks the cygnets subsist on a ninety-five percent animal-matter diet, then gradually begin to feed on the basal, tender parts of sedge, milfoil, and pondweed. Then they learn to seek out the starchy tubers and rhizomes of various aquatic plants, finally eating the leaves and stems as well.

While the adults gradually begin to leave the cygnets for brief intervals, they keep watch while their offspring learn to shift for themselves; and it is believed that the family unit does not break up entirely until late in March of the following year, when the breeding season approaches again.

When the flight feathers of the cyg-

**Mrs. Norris, who lives in Los Angeles, has been a resident of California for more than twenty years. As a free-lance writer, she has produced many articles on wildlife, conservation, and the outdoors for magazines like *Horticulture*, *American Forests*, and *Natural History*.**

nets have developed, a flight lesson is first presented—the cygnets watch while a parent takes off into the wind, running with widespread webs on the surface of the water, head and neck outstretched, wings beating powerfully, legs stretching back to parallel tail feathers. The adult circles, and returns to glide down the wind. The feet and legs are extended forward, and the bird skis on the surface before making bodily contact with the water. The initial efforts of the juniors are little more than clumsy exercises; but in a surprisingly short time they are able to fly with their parents.

Many trumpeters elect to winter in Red Rock Lakes Refuge, where they live in rather isolated wilderness surroundings at a considerable distance from humans. They are extremely wary, even though they are fed regularly every day throughout the time of severe winter cold. Others prefer

the harder way and make the short flight southeast across the mountains into Idaho to the North Fork of the Snake River. Winter distribution of trumpeters outside the refuge is almost always determined by the availability of food and the absence of humans.

Since so many trumpeters have been mistakenly shot for geese, it is no longer legal to shoot snow geese—or any other large waterfowl—in the States of Colorado and Wyoming, and in some of the counties of Idaho and Montana over which the trumpeters must travel.

The conservation of the nation's wildlife resources has become one of the major issues of our time. In the case of the trumpeter swan, the 1957 census showed a decided upturn, there being 488 of the birds counted that year in the United States. Out of this number, 204 were logged in the Red Rock Lakes Migratory Waterfowl Refuge, and sixty were noted in the Yellowstone National Park area.

Although most trumpeter swans must now live in restricted areas, these birds will remain a valuable part of America's wildlife legacy—living reminders of the days when their forebears winged confidently along the flyways, wild and free. ■

**In the foreground, a trumpeter swan nest is located in an old muskrat house on a cattail island in Lower Red Rock Lake. Runoff from the Centennial Mountains in the background, shown here in the month of June, provides a relatively stable water supply for the Refuge lakes and marshes.**



**T**HE POTOMAC RIVER RISES IN the Appalachian Mountains, flows for nearly four hundred miles in a northeasterly to easterly direction, and then turns southeasterly to the Chesapeake Bay. Divided by nature into two distinct portions—one a fast-flowing upper river frequently narrow and rocky with precipitous tributaries—it becomes a broad, sedate waterway as it meanders past Washington and gently laps the corn and tobacco fields of tidewater Virginia and Maryland. The Potomac River Basin embraces more than 14,500 square miles of land.

As American rivers go, the Potomac is relatively small. In comparison with western and midwestern rivers, it might be classed merely as a large tributary. But considered in relation to the other rivers of the North Atlantic slope, it is second in size, exceeded only in this respect by the Susquehanna.

Throughout most of its length, the Potomac is open to the general public—the canoeist, the hiker, the angler, the hunter, the summer cottager, and the year-around homeowner. It is one of the few rivers not harnessed and hobbled to industrial use. It winds through pleasant valleys and hills steeped in the history of our country from its earliest days.

Captain John Smith explored the tidal reaches of the Potomac, up to Little Falls, in 1608. Towering forests lined the banks, he reported. Perch, alewives, and black bass abounded in the crystal-clear depths. The fish about his boat were "lying so thicke with the heads above the water" that his men amused themselves by dipping them out.

Into the Potomac in 1634 sailed the *Ark* and the *Dove*, bearing Leonard Calvert and his brother, "with near twenty other gentlemen of very good fashion and 300 labouring men well provided in all things." Among the passengers was a Jesuit missionary,

From the upper reaches of the river to tide-water, the Potomac flows through a relatively unspoiled land of farms and forests, much of which is of national historical significance. In the aerial photograph at the right, which shows a segment of the peaceful Potomac near Washington, D. C., there is little to suggest that this is one of the most polluted rivers in the nation, a river that is deathly sick.

## A plan for the redemption of

# The Much-Abused Potomac

Father Andrew White, who called the Potomac "the sweetest and greatest river I have ever scene . . ." But 300 years have passed, and the Potomac has suffered at the hands of man—from silting as erosion from farm and pasture swept away topsoil and subsoil, from industrial and mine wastes, from the sewage of urban populations.

### The Filthy Potomac

Today the Potomac, as it flows past Washington, is an open cesspool. In places the river bottom is covered with solid sewage ten feet deep. As a District of Columbia health officer recently described it: "It is sick unto death, for it carries, as it courses along, all the man-made filth that he is able to bestow . . . a sickly portrait of a noble river." Enough raw and par-

tially treated sewage is dumped into the Potomac and its tributaries each year to fill one hundred and fifty Pentagon buildings.

Visitors to Washington, the "Capital of the World," might reasonably expect to find a recreational mecca, with fine bathing beaches, neat marinas, and wholesome fishing grounds. They find instead a natural sewage lagoon.

The Potomac could be Washington's greatest recreational asset, as valuable as Seattle's Lake Washington or Miami's Gold Coast. Instead, it gets dirtier with each passing day.

But although the river is sick, the case is not hopeless. The causes of the malady are known. With the right approach, a great and sweet Potomac can be found again. The first and most

essential measure is an end to pollution.

### Everybody's Business

Piecemeal solutions have been tried in the past, but the solutions have never caught up with the growing pollution problem. The asset of a clean stream would be shared by all; the problem of a dirty stream is shared by all. The solution must also be shared by all.

The Coordinating Committee on the Potomac River Valley, composed of private citizens representing widely divergent interests and backgrounds, has recently completed a three-year study of the problem Potomac. Members of this civic-minded group, working without remuneration, interviewed fifty experts in related fields and

logged thousands of man-hours in research and study before issuing their report, *Potomac Prospect*.

Committee members share one common bond: Guiding the development of the Potomac River Basin in a fashion best suited to serve the needs of those directly affected, and the needs of the nation as a whole.

The Committee's Plan is essentially a "Clean River Plan." It is based on the premise that the Potomac, the Patuxent, and all their tributaries, into the most remote headwaters, must be made clean and kept clean. The plan would achieve a number of objectives. It would gradually eliminate all pollution from the Potomac, at no greater net cost per capita for sewage treatment than present costs for the general standard of eighty percent effectiveness.

It would promote the conservation of water—our most vital natural resource—assuring an adequate and safe supply of water without the need for any dams, and at no increase per capita over present costs. It would be instrumental in the preservation of large areas of our natural environment, and it would insure waterways throughout the Potomac Basin that would be safe for swimming, all forms of water sports—such as motorboating

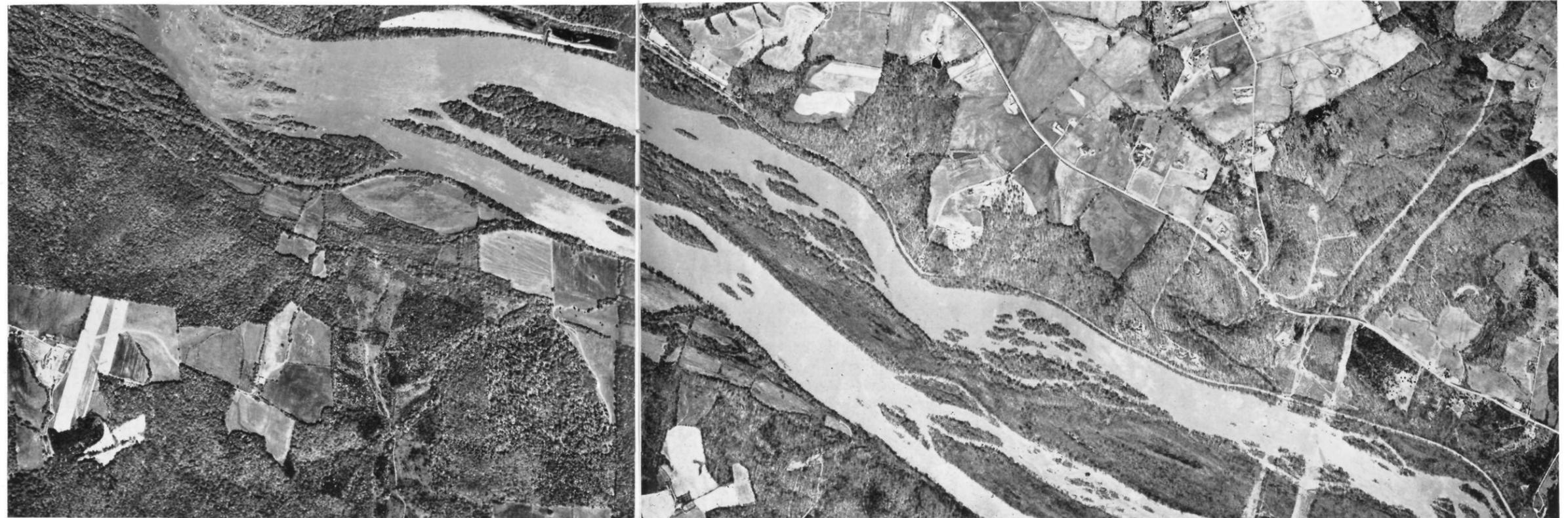
and canoeing—waterfowl, and fish life.

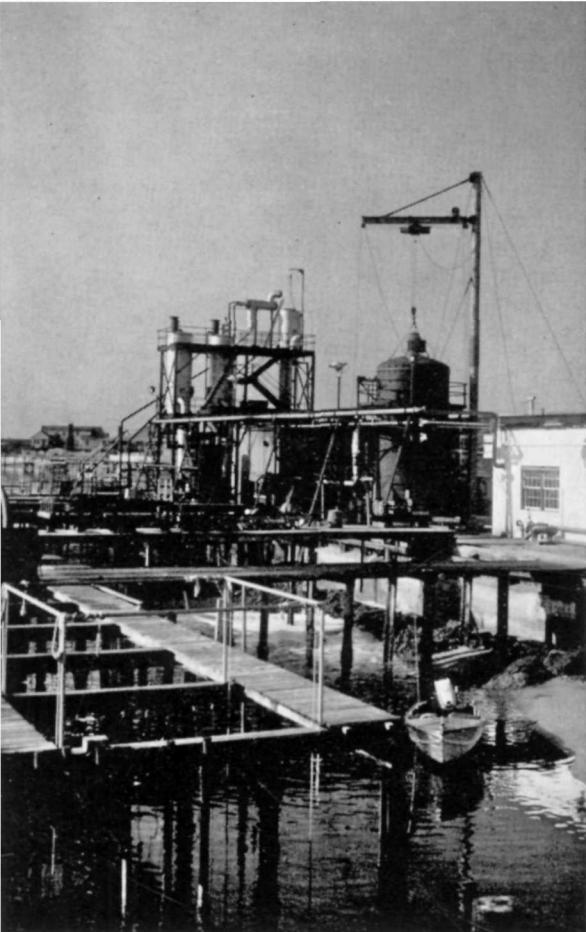
The elimination of pollution would be accomplished progressively over a period of forty years. No raw sewage from any source would be discharged into the waterways of the Potomac or Patuxent Basins after the year 1975. All sewage treated by sewage plants in the Potomac or Patuxent Basins would be given complete treatment (primary, secondary, and chlorination of the effluent) by methods which would remove at least ninety percent of all contamination by the year 1975, at least ninety-five percent by the year 1990, and one hundred percent by the year 2000. No industrial wastes, or water used in industrial processes, that contained any contamination would be discharged into the waterways of the Potomac or Patuxent Basins. All farming, urban development, and timbering within the Potomac and Patuxent Basins would comply with modern soil conservation techniques and reforestation practices by the year 1970.

### A Working Basis

These goals are politically realistic and economically feasible. Achievement should be based on State legislation and municipal ordinances, preceded and followed by educational and promotional campaigns.

Photograph courtesy Commodity Stabilization Service, U.S.D.A.





Office of Saline Water

Under the "clean Potomac" plan, the dissolved mineral salts emanating from sewage treatment operations would be eliminated from the river by evaporation or distillation. A pilot plant for the distillation of fresh from salt water, operated by the Department of the Interior's Office of Saline Water at Wrightsville Beach, North Carolina, is shown in the picture above.

The Committee is aware that, while increased efficiency of present sewage treatment methods results in the reduction of contaminating elements in the effluent, it does not appreciably reduce the quantity of dissolved mineral salts. Up to the present, the volume of water needed to "flush" pollution past Washington has been adequate to provide a sufficient dilution of the mineral salts, and to prevent the undue growth of algae in the upper estuary. It is impossible to tell with certainty at just what point the natural flow of the river might be inadequate to provide the necessary dilution of these mineral salts.

However, the Committee holds that, by the year 2000, the mineral salts in the effluents from treatment plants will be removed by evaporation-distillation techniques, such as are now being per-

*The Potomac River, which during the first part of the seventeenth century was styled by Jesuit Father Andrew White "the sweetest and greatest" river he had ever "seene," is still a great river, although hardly a sweet one. Turbid and malodorous with silt and sewage, the Potomac—and the many Potomacs that course the nation under other names—flows as a watery monument to the myopia of America in dealing with one of its most precious natural resources, water. This article has been adapted from a review of the full report prepared by the Coordinating Committee on the Potomac River Valley, which is titled "Potomac Prospect." Copies of this publication may be obtained on request from Room 709, The Wire Building, 1000 Vermont Avenue N. W., Washington 5, D. C.*

fectured for the economic distillation of fresh water from salt water.

It might be pointed out here that the economical conversion of saline or brackish water is no longer a matter for hopeful speculation—it is an accomplished fact. Indeed, the year 1960 turned a milestone in the nation's yet-modest efforts to take advantage of the limitless quantities of salt and brackish water available; this year, the town of Coalinga, California, put a demineralization unit for the conversion of brackish well-water into operation to supply its inhabitants with pure, fresh drinking water.

Industrial wastes, too, will be treated by this technique, or some other effective method. This would result in a one-hundred-percent pure sewage effluent—one that would contain no organic or inorganic materials—no bacterial, chemical or radioactive contamination, and there no longer would be even the problem of adequate dilution. Actually, the addition of evaporation-distillation facilities to sewage treatment plants would have commenced well before the year 2000 under the Committee's plan, and the requirement for water to dilute the mineral salts in the effluents from conventional sewage plants would have been diminishing steadily.

Once pollution is thus completely eliminated, there will be adequate water for all reasonable purposes without the necessity for constructing huge impoundments to insure water for dilution—impoundments that would destroy the natural environments of our waterways.

#### Rainfall Governs Flow

The quantity of water in the streams and rivers of the Potomac Basin depends upon the amount of rainfall over the area. During the past eighty-eight years, since accurate records have been kept, the average long-term precipitation has been more or less constant in amount, the average annual precipitation for the past twenty-two years being approximately equal to the average for the past eighty-eight years.

This is reflected by the flow of the Potomac, which shows that, for the past sixty-five years, the flow has been relatively uniform, on a cyclic basis. Thus there is good evidence that a water crisis from progressively diminishing rainfall is not in prospect.

If the daily river flows of the Potomac, Patuxent and Occoquan equalled at all times their average daily flow of 7.5 billion gallons, such flows would be adequate to supply the requirements of the Potomac Basin for

all foreseeable time. However, such is not the way of rivers.

During drought conditions, the flow of the Potomac drops to less than a billion gallons a day in the Washington area. During such times, the water that would be needed by metropolitan Washington in excess of the river's natural flow would be available in the upper estuary of the Potomac—seventy-five billion gallons of it—as by such time, under the Committee's plan, it would be virtually free of contamination. It is not a matter of common knowledge that the upper estuary of the Potomac, extending downstream from Washington well beyond Fort Washington, some twenty miles below the city, is fresh rather than salt or brackish water.

The solution advanced by the U. S. Army Corps of Engineers is to “flush” pollution past Washington. To assure water for this purpose in progressively increasing quantities—to be released in periods of low river flow—the Corps proposes the impoundment of billions of gallons of supplemental water by means of a series of large dams and reservoirs above Washington.

For the record, the Corps has no “official” plan as yet, as it is still in the throes of “studying” the problem, and has not as yet come up with “official” recommendations.

Damming the Potomac would be an economic folly, a human tragedy. Damming the river would mean destroying the scenic Potomac gorge above Great Falls. It would mean flooding thousands of acres of good farm land on the tributaries. It would mean inundating many miles of the historic Chesapeake and Ohio Canal and other areas rich in wildlife and the diversified flora of mountain, piedmont, and coastal plain.

### Dams Not Needed

No dams are needed to convert the tidewater Potomac at Washington into a mecca for water-sports enthusiasts. Let the river be cleaned of pollution and the Potomac, from its source to the Chesapeake, will extend an invitation surpassing anything to be found behind dams.

**The Potomac, seen at the right not far above Great Falls Dam near the city of Washington, is one of the few large rivers of the nation unmarred by large-scale industrial development.**

It is incomprehensible how any enlightened citizen of our country can, in this day and age, contend that untreated sewage, contaminated sewage effluent, polluted industrial wastes, and the valuable top-soils of our farmlands should continue to be dumped or washed into the waterways of our nation, especially in the historic and scenic river that flows through the very heart of the nation's capital city. As highly civilized and as wealthy as is this nation, these practices are both barbaric and intolerable.

The conclusion of the Committee is, that the costs of full treatment under its plan—the elimination of pollution—will be infinitely less than the cost of the dams. One hundred percent treatment has the merit of solving the

problem. “Flushing” by means of dams would merely mitigate it, and poorly. Funds would be spent on a half-way measure, and the real problem would have been evaded.

The final “comparison” between the plans should be made on a dollars-and-cents basis. Such a comparison shows dramatically that if this were the only criterion, the Clean River Plan would be easily the winner. With all pollution eliminated and the waterways virtually pure, there would be water for all reasonable purposes for the residents of the Potomac Basin—whatever their number might be—for all time to come. The goal is clear—a clean river and a healthy land. The remedial measures at hand leave only a need for the will to act. ■

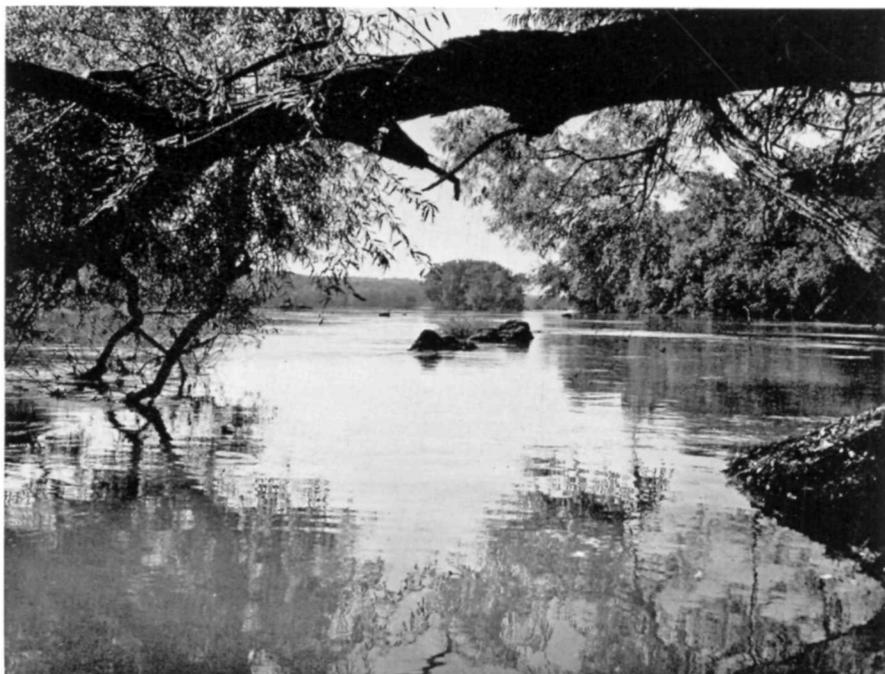
Abbie Rowe, National Park Service

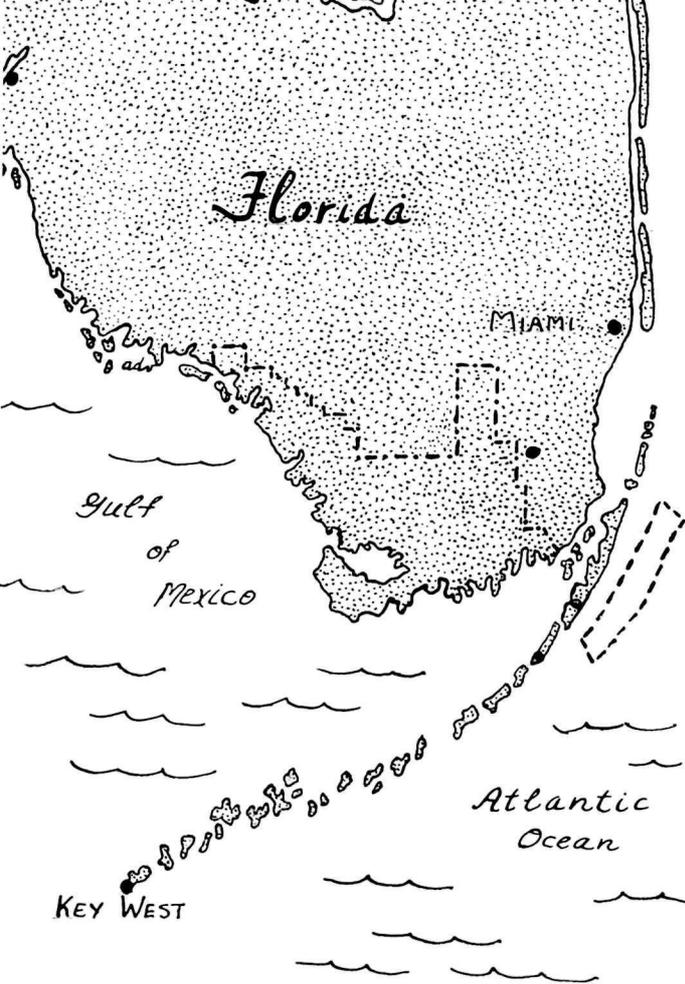


The Potomac River Basin possesses a vast recreational potential, not only for picnickers like those at the right, who are enjoying a cookout at Cabin John, Maryland, but for fishermen, hikers, campers, and outdoor enthusiasts of every sort.

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Abbie Rowe, National Park Service





*The Key Largo  
Coral Reef Preserve:*

# *Our First Underseas Park*

By Gilbert L. Voss

On March 15, 1960, the Key Largo Coral Reef Preserve, first wholly underwater park, was established by presidential proclamation. This preservation, about seventy-five square miles in area, is indicated by dashed lines in map above.

**A**LTHOUGH THEY ARE NOT as long or as well known as those of the Great Barrier Reef off Australia, the reefs that fringe the Atlantic side of the Florida Keys are incredibly beautiful in their own right, and what is perhaps more important, they are readily accessible to the hundreds of scientists as well as the millions of visitors who come to Florida each year.

For this, and a number of other reasons, the signing of a proclamation by President Eisenhower, March 15, 1960, setting aside a section of this underwater wonderland for posterity, is an event of great importance to conservationists, marine biologists and other scientists, skin-diving cameramen, rod-and-reel fishermen, and the thousands of ordinary tourists who will view its amazing submarine growth and formation from glass-bottom boats.

The Key Largo Coral Reef Preserve, as it is called, lies a short distance offshore from Key Largo, within an hour's drive of metropolitan Miami. While parts of other reservations—St. John, in the Virgin Islands; the Exumas, in the Bahamas; and the Florida Bay section of the Everglades National Park—include submarine areas, this is the first *totally* underseas park, with only low-tide fragments of shallow reefs and lighthouses breaking the surface of the open ocean.

### **Small But Spectacular**

As public parks go, the Preserve is not very large, being only twenty-one miles long and about four miles wide, but it contains seventy-five square miles of spectacular underwater formations, including both lagoon and barrier reefs, and scores of colorful and

unusual species of fish. From its seaward slope rise two lighthouses—Carysfort Reef Light near the north end, perched on steel piles within a stone's throw of the Gulf Stream, and Molasses Light at the south end. Carysfort is a manned light, operated by the Coast Guard; and Molasses is an unattended beacon, marking the shallow waters of Molasses Reef.

The barrier reef is not an unbroken line of coral, but is composed of numerous shallow reefs, some barely breaking the surface and others marked only by a white line of surf. Carysfort Reef consists of stag and elkhorn corals on an old coral reef base. South of it lies The Elbow, another region of tree corals, and a favorite haunt of skin-divers.

Farther southward and set back slightly from the outer border is Key Largo Dry Rocks, one of the most

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**This article, by Dr. Gilbert Voss of the International Oceanographic Foundation, is copyrighted, 1960, by Sea Frontiers. It is reprinted here by kind permission.**



Reefs within the new preserve have snared many ships in times past. In the picture at the left, a skin-diver examines an anchor.

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Photographs by courtesy of the Marine Laboratory, University of Miami

Handsome coral formations, like the brain coral in the picture at right, below, are protected from the crowbars of collectors.

»

beautiful submerged islands of corals in North America. Its reef is covered with tree corals, massive brain corals, and waving purple sea feathers and fans, among which slowly swim in dazzling profusion queen triggers, French angels, green parrot fish, surgeon fish, sergeant-majors, bar-jacks and a host of others. At low tide, bits of the reef rise above the surface as a landmark, and the remains of old wrecks meet the eye. Farther south spreads French Reef; then come the long sweep of Molasses Reef and the anchorages between.

The reefs have a long and exciting history, too. Sailing along their edges, Ponce de Leon saw the islands or keys behind, and called them *Los Martires*, or "the martyrs." Spanish galleons were wrecked on the hidden fangs of the corals, and wreckers in later years saved many a life and cargo from the raging seas sweeping over them. From the 1840's onward, these wreckers were licensed wrecking-masters with headquarters at Key West, which became the largest salvage depot in the United States because of the dangerous pas-

sage by the reefs. Audubon, the great naturalist and student of bird life, cruised along Hawk Channel between the reefs and the keys. Their beauty also entranced Louis Agassiz, who wrote the first scientific report on the reefs and their life.

In recent years, the reefs have led a more prosaic existence as the home of fishermen and spongers, turtlers and smugglers. Grouper and snapper also live among the corals. The reefs give protection to numberless gaudy fishes, and shelter the crawfish, or southern spiny lobster. Their bulwark-like line protects the grass flats, where the queen conch lives.

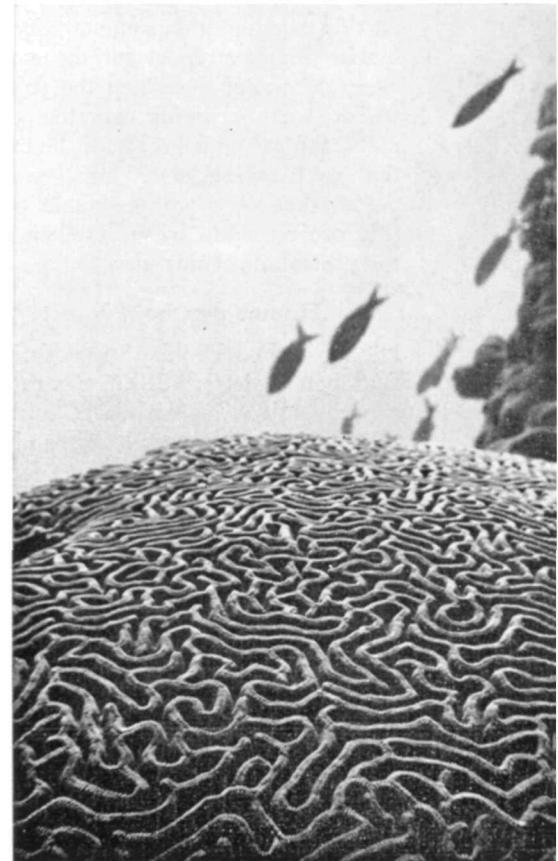
#### Animals at Work

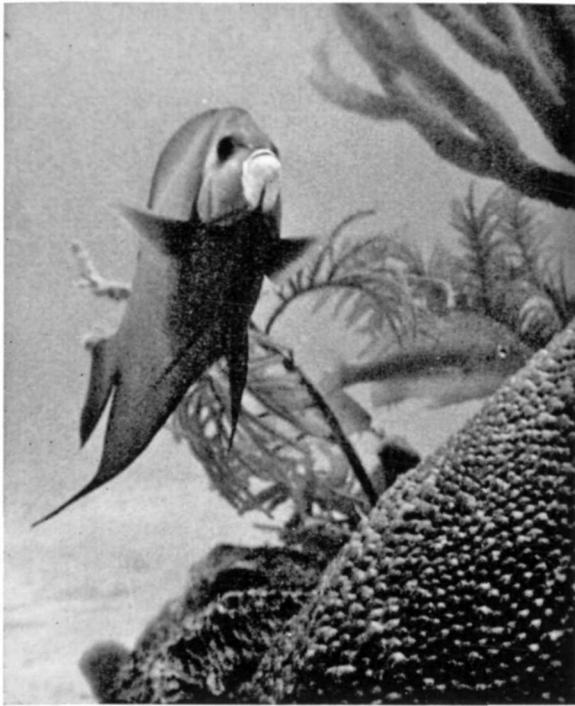
The corals themselves are formed by millions of tiny soft-bodied colonial animals, laying down lime obtained from the sea. Except for the massive brain corals, the stony skeletons are fragile even when alive. They are torn up and overturned by hurricane seas, and they live perilously, at the northernmost range of corals along the Atlantic coast.

Until the twenties and thirties of the present century, the reefs were unmolested by man. But in the late thirties the tourists began to come to Florida, and a new industry arose, the sea-life novelty trade. Great mounds of queen conches were considered the trade mark of the curio store, and they all came from the Florida Keys.

Eventually Florida's conch populations were exhausted, and the shells were imported from the Bahamas. With the shells were offered corals, and the supply of beautiful white branches could never equal the demand. Coral collectors descended upon the reefs in everything from outboard boats to barges, and with the aid of crowbars and hoists began to tear the coral reefs apart. Cleaned and bleached, coral filled the shelves of hundreds of curio dealers.

Commercial shell collectors turned the reefs upside down for rare shells, and tropical fish collectors added to the despoliation. Skindivers prowled the region, ready with spear and gun to kill angelfish, queen trigger fish, and everything that swam. Slowly, but





Many kinds of colorful fishes, like the angelfish shown here, inhabit the lagoon and barrier reefs of the underseas preserve.

«

ever faster, the reefs began to change.

In 1957, a biological conference concerned with the preservation of the natural resources of south Florida was held in the Everglades National Park. At this meeting, after summarizing the marine biology report for the conference, the writer described the damage which was occurring on the outer reefs, and recounted some of the events that were taking place. He then suggested that no more profitable scientific project could be undertaken than the protection of this area.

#### Launching the Project

Charles Brookfield of the National Audubon Society, and Dan Beard, then superintendent of the Park, immediately upheld the suggestion, and the areas were depicted on a chart for the benefit of those persons unacquainted with the reefs. The result was surprising. Dr. John Davis, of the University of Florida, made a motion that the Department of the Interior and the National Park Service should be petitioned to save the area, and unanimous consent was given by the meeting, with a telegram sent to Washington before the day was over.

Seldom has an idea gained such momentum with so little resistance. The concept of a coral reef park was not

new. When the Everglades National Park was established, a tract of reef in approximately the same area was included, but with a corridor across the Keys from the mainland. This corridor, however, raised bitter opposition from both mainland and Key property owners. The reefs were excluded and the project was dropped and forgotten for several years.

The new proposal did not include any land areas, and hence avoided this situation. Especially active in support of the new park were the members of the Upper Keys Kiwanis Club—which was joined by many other civic and conservation groups in Dade and Monroe Counties—and by the National Audubon Society, as well as such individuals as John Pennekamp, of the *Miami Herald*, and Herbert L. Alley, of Tavernier.

A major obstacle was the problem of ownership of the offshore bottoms. Both the State and federal governments claimed parts of it, and action was held up until this Gordian knot could be cut. The Department of the Interior's Assistant Secretary for Fish and Wildlife, Ross Leffler, was a strong supporter in Washington, and made several trips to Florida to see at firsthand the areas involved, and to talk with interested people and or-

ganizations. Kiwanis spokesmen followed up with trips to present the case to other officials in Washington, and to see Governor Collins in Tallahassee.

#### Division of Control

On December 3, 1959, Governor Leroy Collins gave the control of the bottoms, to the three-mile limit, to the Florida Board of Parks and Historic Monuments. The proclamation by the President placed the remaining area beyond the three-mile limit, to the edge of the continental shelf, in the control of the Secretary of the Interior for a permanent preserve.

The establishment of the Key Largo Coral Reef Preserve insures the undisturbed growth of the reef and the conservation of its marine life. It provides a breeding and nursery ground for reef life that will benefit all of the surrounding reefs from Fowey Rock to Key West. The reef has been of particular interest to students of marine life because of its accessibility to American scientists, and its marginal character. Oil geologists have studied it with increasing interest as portraying events of the past in the formation of oil-bearing structures. Visiting marine biologists, with their base at the University of Miami, come from all points of the world to see it and to study its life.

Commercial coral and shell collecting will be prohibited within the preserve as well as tropical-fish collecting and spear fishing. Skindivers armed with cameras will be welcome, along with rod-and-reel fishermen, and all of those who enjoy natural undersea attractions.

#### Boat Trips Planned

Plans are now under way by the State of Florida to provide glass-bottom boat trips to the coral reefs from a headquarters on Key Largo. In years to come, hundreds of thousands of our nation's people can enjoy the splendors of the reefs, the brilliantly-colored fishes and the majestic scenery of the waving sea feathers and fans along the preserve's surf-washed slopes. Here, where the Keys are only a dark line shoreward and the purple waters of the Gulf Stream roll close by to seaward, they will enjoy one of nature's grandest views. ■

# NPA at Work

## Dr. Murie Urges Support For Yellowstone Regulations

On August 24th, the Department of the Interior held one of its three scheduled hearings on the National Park Service's proposed Yellowstone motorboating regulations at the Lake Hotel, Yellowstone Park, Wyoming.

Testifying in behalf of the National Parks Association at the hearings, in favor of the Service's proposed regulations, was Dr. Olaus J. Murie of Moose, Wyoming, member of the Association's board of trustees.

In stressing the prime purposes behind the establishment of our national parks and park system, Dr. Murie told the hearing that the question of closing the south arms of Yellowstone Lake is more significant than would appear at casual glance. What are national parks? What are they for? These and other questions loom important in the decision that will be made on the Yellowstone zoning regulations, said Dr. Murie. "We must get back to the place where a national park is something special," he testified in part. "There are many places where those who desire speed for its own sake . . . can have such fun. . . ." "A national park," said Dr. Murie, "should be considered a dedicated place for the more quiet, contemplative kind of enjoyment."

Briefly, the Park Service proposes to zone Yellowstone Lake into two sections—the northern section, in which powerboating would be permissible, and the southern section, including the Southeast Arm, the South Arm, and the small Flat Mountain Arm, where, in the interest of Park wildlife, motorboating would be banned. (See September magazine, page 16). This latter area comprises only some twenty percent of the Lake's area; but the proposal has met with extreme opposition on the part of organized powerboaters.

## Executive Secretary Testifies at Padre Island Hearing

The proposed Padre Island Seashore Park should be big enough to accomplish its purpose of protecting scenery, wilderness, wildlife, and natural outdoor recreational opportunities, according to Anthony Wayne Smith, Executive Secretary of the National Parks Association, testifying in hearings before the Senate Subcommittee on Public Lands in Washington, D. C., on August 26, at the invitation of Senator James E. Murray, chairman of the Committee.

The Park should include the entire

# The Parks and Congress

The chart below records the progress of significant parks and conservation legislation introduced during the 86th Congress which adjourned early in September. Only the major bill is referred to in each category (i.e., Wilderness Bill, Senator Humphrey's S. 1123) although more than one bill may have been introduced on that subject. See past issues of *National Parks Magazine* for descriptions of these bills. All bills not cleared for final action are dead, although they may be introduced as new bills in the 87th Congress.

|  | HOUSE     |          |          |        |          | SENATE    |          |          |        |          | Final Action* | Signed | Vetoed |
|--|-----------|----------|----------|--------|----------|-----------|----------|----------|--------|----------|---------------|--------|--------|
|  | Committee | Hearings | Reported | Passed | Rejected | Committee | Hearings | Reported | Passed | Rejected |               |        |        |
| Arctic Wildlife Range                          |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Bridge Canyon Dam                              | x         |          |          |        |          |           |          |          |        |          |               |        |        |
| C & O Canal Park (Foley)                       | x         | x        | x        |        | x        |           |          |          |        |          |               |        |        |
| C & O Canal Park (Beall)                       | x         |          |          |        |          | x         | x        | x        | x      |          |               |        |        |
| Cape Cod Seashore Park                         |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Dinosaur Monument Boundaries                   | x         |          | x        | x      |          | x         |          | x        | x      |          | x             | x      |        |
| Grand Canyon Mining Claim                      | x         |          |          |        |          |           |          |          |        |          |               |        |        |
| Great Basin National Park                      |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Great Salt Lake National Park                  |           |          |          |        |          | x         | (1)      |          |        |          |               |        |        |
| Haleakala (Hawaii) National Park               | x         |          | x        | x      |          | x         |          | x        | x      |          | x             | x      |        |
| Hubbell Trading Post Historic Site             | x         | x        | x        |        | x        |           |          |          |        |          |               |        |        |
| Indiana Dunes National Monument                |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Mount Rainier Headquarters                     | x         |          | x        | x      |          | x         |          | x        | x      |          | x             | x      |        |
| Multiple Use of Forests                        | x         | x        | x        | x      |          | x         |          | x        | x      |          | x             | x      |        |
| North Cascades Park Study                      | x         |          |          |        |          |           |          |          |        |          |               |        |        |
| Oregon Coast Seashore Park                     |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Padre Island Seashore Park                     |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Point Reyes Seashore Park                      |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Prairie National Park                          | x         |          |          |        |          |           |          |          |        |          |               |        |        |
| Rainbow Bridge Protection                      | x         | x        | x        |        | x        | x         | x        | x        |        | x        |               |        |        |
| Salmon River Preservation                      |           |          |          |        |          | x         |          | x        |        |          |               |        |        |
| Sawtooth Mountains Park Study                  |           |          |          |        |          | x         |          |          |        |          |               |        |        |
| Seashore Parks (C. Cod, Padre Is., Ore. Dunes) |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Water Pollution Grants                         | x         | x        | x        | x      |          | x         | x        | x        | x      |          | x             |        | x      |
| Wilderness Bill                                |           |          |          |        |          | x         | x        |          |        |          |               |        |        |
| Zion National Park Boundaries                  | x         | x        | x        | x      |          | x         | x        | x        | x      |          | x             | x      |        |

(1) Scheduled.

\* Cleared for consideration by the President.

island up to the boundaries of the State parks on the north and south ends, should extend not less than a mile out into the Gulf, and should preferably extend to the mainland on the west side of the

Laguna Madre, according to Mr. Smith.

Acquisition up to the boundaries of the State parks is desirable to prevent speculative real estate development, as

(Continued on page 19)



## Conservation News Briefs

### Michigan Parks Association Gives Acreage

During the early part of July, the last parcel of land needed to round out the State of Michigan's South Manitou Island Natural Area Reserve was presented to the Michigan Conservation Commission as a gift of the Michigan Parks Association. The area, on the west side of South Manitou Island in Lake Michigan, is one of fine duneland and forest, with a rich flora that includes that State's largest known balsam fir, as well as a white cedar that is thought to be the world's largest.

Legal problems associated with the acquisition of the eighty-acre tract, which has been eyed for its stand of timber, made private funds necessary to place it in public ownership; the necessary money was donated to the Association's land acquisition fund by the Michigan Natural Areas Council, which in turn had obtained it as an interest-free loan from the Nature Conservancy of Washington, D. C.

The Michigan Parks Association, which has been organized for less than a year, was also active in helping to promote additional acreage for the badly-crowded East Tawas State Park, on the east side of the Michigan Peninsula.

### Family Camping in National Parks

National Park Service Director Conrad L. Wirth recently announced that nearly a forty percent increase in public camping facilities has been provided since the Mission 66 program was initiated in July, 1956, when 12,800 campsites were available to visitors in national parks. Today there are 17,285 campsites and spaces located in four hundred campgrounds and camping areas in sixty areas administered by the National Park Service. These range in size from the one-half-square-mile Timpanogos Cave National Monument in Utah, with two campgrounds and twenty-six campsites, to the 3,400-square-mile Yellowstone National Park with twenty-five campgrounds and 1584 campsites.

By 1966 the National Park Service will have 30,000 campsites available, with ample facilities to meet the needs of more than 100,000 campers per day.

### Ross's Goose Increases

The 1960 Fish and Wildlife Service inventory of Ross's goose—a bird once reduced to a flock of some two thousand individuals—shows that its total population now stands at an estimated 18,300, nearly three thousand more than last year's figure, and the highest number recorded since the Service commenced its inventories six years ago. Ross's goose, which winters in the Central Valley of California, nests in the Perry River area of the Canadian Arctic; it is the smallest of our geese, the mature bird, white with black wing-tips, being only some twenty-three inches long.

### Two Elected to Parks Advisory Board

Secretary of the Interior Fred A. Seaton recently announced the election of two new members to the Advisory Board on National Parks, Historic Sites, Buildings and Monuments as replacements for Dr. E. Raymond Hall, of Lawrence, Kansas, and Carl I. Wheat, of Menlo Park, California, whose six-year terms expired June 30. (Department policy limits board memberships to single terms.) The new members are Dr. Stanley A. Cain, professor and chairman of the Department of Conservation at the University of Michigan, and Robert Lawrence Stearns, president of the Boettcher Foundation, of Denver, Colorado.

### Audubon Society Acquires Wild Maine Island

On August 13th, the National Audubon Society of New York City accepted the deed to a three-hundred-acre wilderness island in Muscongus Bay, on the coast of Maine, as a wilderness and wildlife sanctuary. This new spruce-and-balsam-covered unit in the Society's nationwide

chain of wildlife areas was a gift of Mrs. Millicent Todd Bingham, of Washington, D. C., who for nearly half a century was a summer resident on neighboring Hog Island. The island will be known as the "Todd Wildlife Sanctuary" in honor of Mrs. Todd's mother, who acquired most of the island in 1910 to prevent it from being lumbered. It will serve not only as a wildlife sanctuary—it is noted for its bird life—but also as a laboratory for the training of conservation teachers and leaders, and for scientific research.

### New Superintendents Named

Director of the National Park Service Conrad L. Wirth has announced the appointment of Eliot Davis, district park ranger at Yellowstone National Park, as superintendent of Grand Portage National Monument in Minnesota, and that of Benjamin Harrison Davis, historian at the Roosevelt and Vanderbilt National Historic Sites, as superintendent of Antietam National Battlefield Site in Maryland. Grand Portage, established earlier this year (see page 19, August magazine) is an area of some 700 acres on the north shore of Lake Superior, preserving a historic overland trail and its surroundings. Antietam is the scene of the Civil War engagement that marked the end of General Lee's first invasion of the North, in 1862.

### Dates and Places

**Keep America Beautiful, Western States Conference**, October 14, Biltmore Hotel, Los Angeles, California.

**Southeastern Association of Game and Fish Commissioners**, Annual Meeting, October 23-26, Biloxi, Mississippi.

**Society of American Foresters**, November 13-16, Sheraton-Park Hotel, Washington, D. C.

**Great Salt Lake National Park Hearings**, tentative dates November 16-18, Salt Lake City and Ogden, Utah.

# *The Parks of the Congo—*

## *a world heritage gravely threatened*

By Harold J. Coolidge

*Conservationists the world over are deeply concerned for the integrity of the great national parks of Africa's Congo and for the safety of the valuable animal and plant species preserved within them. In the following article Dr. Harold J. Coolidge, member of the National Academy of Sciences and trustee of the National Parks Association, briefly describes the Congo parks, their scientific and esthetic importance, and steps that have been taken to protect them.*

NO CIVILIZED NATION could remain indifferent to the possible destruction of the unique international heritage of African fauna and flora that has been effectively and totally protected in the more than ten thousand square miles of the four great national parks to be found in the Congo and Ruanda-Urundi.

In 1925, Carl Akeley, naturalist, explorer and writer, encouraged King Albert of Belgium to establish the Albert National Park for the protection of the mountain gorilla in the volcanos of the Lake Kivu region of the eastern Congo.

During the past thirty years—and under the inspiring leadership of Victor Van Straelen, a far-sighted Belgian naturalist—the Institute of the Parks of the Belgian Congo and Ruanda-Urundi, with its International Board of Directors and support from the Belgian government, built up a strong group of Congolese rangers who, under the direction of a few dedicated Belgians, administered these great areas and assisted a large group of scientists to carry out a wide range of research in the physical and natural sciences. Inventories were made of the animals and plants found in the parks, so that they are perhaps the most extensive scientifically-studied large tropical areas anywhere in the world. The Institute has already published many volumes of scientific reports resulting from these studies, and more are in preparation.

The Albert National Park is shaped

like a stalk of asparagus, and includes 3122 square miles of territory. It extends along the Uganda border from the snowy summit of 16,795-foot Mt. Ruwenzori, in the north, 150 miles south to the complex of volcanos on the shores of Lake Kivu, and includes a beautiful *Hagenia* forest in the 9000-foot saddle of the Virunga volcanos, where Carl Akeley lies buried in the heart of the mountain-gorilla habitat. The Albert Park not only has the most spectacular scenery of all the Congo parks, but it also includes a wide range of varying ecological environments.

### **The Garamba Park**

In the northeast Congo, extending south from the Sudan border, lies the great Garamba park of some 1930 square miles, made up primarily of grassy plains surrounded by wooded and savanna-covered rolling hills where elephants, giraffe, antelope and hippos, as well as more than 600 white rhinos, find their home. In the southern Congo, in Katanga, lies the great Upemba park of 4528 square miles, two-fifths the size of Belgium. This contains a variety of habitat from grassy plains to wooded mountains, as well as extensive papyrus marshes, and is the only park not adjoining an international frontier. Upemba is a paradise for the wild game of the southern Congo region.

On the border between Ruanda-Urundi and Tanganyika lies the Kagera National Park, established in 1934, containing 690 square miles of hills, lakes, swamps, and savanna

country of special interest botanically and entomologically, as it lies east of the Congo Nile watershed.

The latest news indicates that the small cadre of Belgian officials who administer these parks has had to leave. Congolese, unaware of the values of the areas for conservation and for the future, are moving in, preparing to destroy the animals that have become tame through years of protection. The question arises whether, with the international scientific and conservation interest that the world has in these sanctuaries, there is not some kind of intervention that would still save them.

Messages have been sent to Prime Minister Lumumba and to Messrs. Hammarskjold and Bunche of the United Nations. UNESCO has sent a high officer of its staff to look into the situation, and the International Commission on National Parks of the International Union for the Conservation of Nature and Natural Resources, if requested by the Congolese authorities, plans to send a small technical mission with the blessing of the United Nations to assist the local park administrative authorities.

### **Cattle Invasion Halted**

One of the threats to the gorilla sanctuary in the Albert Park has been invasion of the forest by Watusi and their cattle. A recent report informs us that the new Congolese conservator acted decisively in this matter, and that twelve such cattle were shot and fifty-six confiscated. As a result, the forest on the Congo side of the Virunga volcanos is again free of cattle!

The problem of the expense of maintaining the Congo parks will be a major one for the Congo government, in spite of their scientific and potential economic value. Let us hope that international agencies working with the United Nations can help to find a solution that will enable them to be preserved for future generations. ♦

## The Editor's



## Bookshelf

**THE TRUMPETER SWAN:** by Winston E. Banko. Number 63 in the U. S. Fish and Wildlife Service's *North American Fauna* series, 1960. The Superintendent of Documents, Washington 25, D.C. With maps, charts, and many black and white illustrations, index, and bibliography. 214 pages in paper cover. \$1.00.

Were there a published list of yearly "best buys" in conservation and preservation reading, the reviewer feels that Winston Banko's *The Trumpeter Swan* would easily qualify in general reader interest among the top few entries for 1960. For a dollar bill, the bird enthusiast, the ornithologist, and every other person interested in the saving of endangered American bird and other animal species may follow the fortunes and history of the trumpeter swan, from its condition of near-extinction in the earlier years of this century to some 488 birds in the United States alone (1957) and a total of perhaps 1500 on the North American continent.

"For all practical considerations," says the author of *The Trumpeter Swan*, "it has been saved from an immediate threat of extinction in this country." Playing a vital role in the salvation of the trumpeter in the United States has been the Red Rock Lakes Migratory Waterfowl Refuge, a 40,000-acre mountain, lake and marsh terrain in the wild Centennial Valley of southwestern Montana's Beaverhead County, set aside for the protection and study of the trumpeter swan under the jurisdiction of the U. S. Fish and Wildlife Service's Bureau of Sports Fisheries and Wildlife.

Mr. Banko was assistant manager and then manager of the Red Rock Lakes Refuge from 1948 to 1957. This scientific—but nonetheless highly readable—volume is actually a report of the author's studies there, buttressed by a wealth of legendary, historical and geological material pertaining to the trumpeter and its Montana refuge.

Contributing in no small measure to the typographical excellence and general worth of the volume are the photographic

illustrations of several competent cameramen—among whom is the author himself—and the simple but professional line illustrations of chapter headings.

—P.M.T.

**PARQUES NACIONALES NORTEAMERICANOS:** by Luis A. Bolin. Editora Nacional, Madrid, 1960. 115 pp., illus. 130 *pesetas*, approximately \$2.17 at current rate of exchange. (Text in Spanish.)

Señor Bolin, information consultant of the Spanish Embassy in Washington and well-known as a European specialist in tourism, is an *aficionado*. When you translate that word into the American expression "fan," it becomes entirely apt, for in this unpretentious but informative little volume the author has displayed a charmingly perceptive love of the twenty-eight national parks he has visited in the United States.

The value to the Spanish or Spanish-language reader goes beyond the brief but adequate description of the parks. The author has included in the volume an illuminating account of those things that make the parks what they are—legislation, principles and practices. His interest in the interpretive work done by the National Park Service is shown not only by his comments, but by the inclusion of several pictures showing interpreters in action.—*Freeman Tilden*.

### A Quick Glance at . . .

**NATIONAL FOREST VACATIONS,** United States Department of Agriculture, U. S. Forest Service. 66 pp. Illus. From the Superintendent of Documents, Washington 25, D. C. 30¢—This tempting handbook, nicely illustrated with national forest scenes, is an invitation to enjoyment of America's national forest lands—some hundred and eighty million acres of them. From picnicking and fishing to skiing and mountain climbing, the booklet describes the opportunities for outdoor recreation available in these multiple-use preserves. It contains an extensive guide to the names, sizes and facilities of our national forests, State by State.

**NATURAL RESOURCE USE IN OUR ECONOMY,** by William H. Stead; including **STUDY AND TEACHING AIDS,** by George L. Fersh. Joint Council on Economic Education, New York, 1960. 88 pp. \$1.25 single copy, \$1 ten or more.—For teachers of any grade level. Discussion of problems pertaining to drain on natural resources by population growth, accelerated industrialism, wars, rising living

standards. Also problems of supply through intelligent scientific and economic activity. Develops physical science aspects of the problem, though illuminating economic aspects.

Study guide for presentation in classroom and economic analysis of subject included. Can be obtained from Conservation and Resource-Use Education Project, Joint Council on Economic Education, 2 West 46th Street, New York 36, New York.

**THE CAHUILLA INDIANS,** by Harry C. James. Westernlore Press, P.O. Box 41073, Los Angeles, California, 1960. Illus. 185 pp. \$7.50—The story of the Cahuillas of Southern California, who they were, how they lived, their legends, ceremonies and problems. Stories about Fig Tree John, and the original "Ramona."

**A PRIMER ON WATER,** by Luna B. Leopold and Walter B. Langbein. Department of the Interior, Washington 25, D. C., 1960. 55 pp. Illus. 35¢—Written in non-technical language for general readers. Explains hydrology, the science that concerns the relation of water to earth. Also describes development of water supply and use.

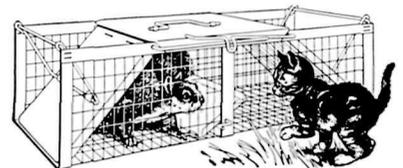
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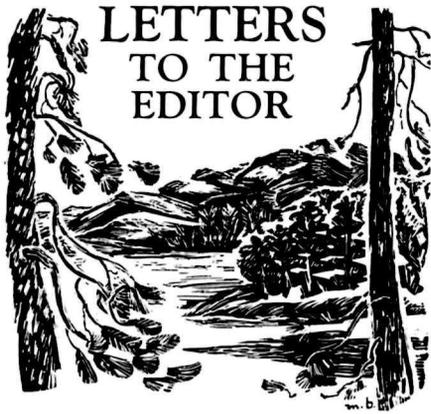
"NEWS OF THE PEDESTRIAN MOVEMENT and Its Work." 25¢, Pedestrian League of America, 90 Church Street, #1308, New York City 8, New York.

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### Toll of the Automobile

The preservation of park areas has become very serious now due to the new highway programs of the Federal government. Vast areas are being carved out of recreation areas to satisfy the space needs of the vehicles that will bring in their train roadside desecration, destruction of land and wildlife, filth, and disorder. In the conflict between the pedestrian and motorist for space, freedom of movement, and safety, we must press for safeguards to conserve our park and recreation areas.

LEO WILENSKY, SECRETARY  
Pedestrian League of America  
New York City, New York

### "Hazards" of Road Questioned By Former Superintendent

Having served as Superintendent of Black Canyon of the Gunnison National Monument area from 1949 to 1955, I would like to call your attention to one misleading statement in Robert B. McCoy's "High Rocks and Much Water" in your August magazine. The statement, which could possibly have considerable effect on travelers who might be interested in visiting the North Rim of the Canyon, reads: "The north rim is reached from Colorado Route 92, just east of Crawford, by a fourteen-mile gravel road that is one of the most hazardous drives in the State. . . . On this route, the most likely trouble would be large rocks falling from the rimrock high above the narrow shelf road."

Granted that a portion of Route 92 from Sapinero on U.S. 50 to Crawford might be considered a "hazardous" drive; but I can recall no such road conditions on the fourteen-mile drive from Crawford to the rim. This road traverses rolling foothills from Crawford, and the interesting drive along the rim is certainly not hazardous. Visitors can use the north

approach from Delta to Crawford and eliminate the "hazard" on the Sapinero route.

RUSSELL L. MAHAN  
Wupatki National Monument  
Flagstaff, Arizona

• Reader Mahan is certainly qualified to speak with authority in the matter; communication with author McCoy, who is well acquainted with the byways of the West, reveals him unwilling to modify the statement. The editor can act only as referee in the difference of opinion; he has never traveled the road in question.—*Editor.*

### Suggestions Concerning Park Souvenirs

Your recent article on national park souvenirs was particularly timely to me because we had only just returned from Yosemite, restored by its beauty (although for a few moments harrowed during our sojourn by an attempt to find some sort of tasteful gift for a friend at home). I understood well Mr. Hellman's feeling of distress. I understood, too, the other participants in the article when they said that there must be many souvenirs available at modest sums; but I think most of them were guilty of a sort of snobbery far worse than that of which they felt Mr. Hellman had been guilty. Their implication was that to be cheap things must be in bad taste. And that is nonsense.

A simple, irregular piece of bark, perhaps lightly waxed to bring out its beauty of texture, and flattened in a small area to take a small calendar pad, for example, could be produced for a few cents; it need not be bad taste. The garish and the gaudy which offended Mr. Hellman (and myself) were not necessarily cheap at all, and how crudely they would stand in comparison to the lovely

rough-finished redwood frames I recall my father making for photographs brought back from Sequoia (when we went there during my childhood.)

Who should make some of these simple craft-things for our national parks? Why, most naturally, some of the nation's handicapped veterans and others, under the direction of a person whose eye is trained to know beauty. For it is not a small thing—this taste of the American public for junk. Under the pressure of dollars it has spread its corruption to the native arts of other countries all over the world—Mexico, Japan, many others. Do work to start a backfire, won't you?

BARBARA C. HORTON  
Pasadena, California

### Souvenirs That Are Inexpensive But Suitable

I was much interested in your article in the July magazine regarding souvenirs sold in the national parks. I sincerely hope that some way will be found to get rid of the "junk" and still have inexpensive but suitable souvenirs.

BARBARA B. M. GROVES  
North West River  
Labrador

### Reader Approves Park Service Stand

I was very glad to hear about the proposal to keep motorboats out of the three southern arms of Yellowstone Lake. If it were up to me, I would restrict all of Yellowstone Lake to canoes and rowboats without motors. I hope that this proposal is followed by one to restrict all lakes except Jackson Lake in Grand Teton National Park to canoes and rowboats without motors.

STANLEY HIGGINS  
Los Angeles, California

### NPA at Work

(Continued from page 15)

the National Park Service opens the island to recreational use. Extension well out into the Gulf and to the mainland is necessary to protect migrating birds.

Witnesses for present land owners and developers urged that the length of the proposed park be severely reduced.

In harmony with the declaration of the Trustees of the Association in May, 1959, Mr. Smith recommended that the Secretary of the Interior should have discretion not to acquire subsurface petroleum

and natural gas rights, and power to regulate extraction; a witness for an oil company urged that the Secretary should have no authority to acquire subsurface rights or to issue regulations.

The Secretary of the Interior has recommended a total length of eighty-eight miles for the park, leaving some twenty-nine miles for State parks and private development, a boundary eastward about 1500 feet out into the Gulf, and westward to the east side of the Intra-Coastal Canal. The Yarborough bill, S. 4, has been revised in accordance with the Secretary's recommendations.



Frank Jensen

# *The Student Conservation Program*

*of the National Parks Association*

*has now completed its fourth successful summer. It is a voluntary work and conservation education program for interested and qualified high school, college and graduate students, who assist national park personnel in the performance of administrative, interpretive, protective and scientific duties. Participants in the program acquire invaluable experience for future conservation positions as they acquaint themselves with the principles and problems of conservation and preservation through actual work in the field. They receive no monetary reimbursement; their wages lie in a sense of worthwhile contribution to our national park system, to the cause of conservation, and to the national welfare.*

The Student Conservation Program is financed by the donations of philanthropic organizations and by the contributions of many generous individuals. Further information concerning the program and its goals may be obtained from:

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