NATIONAL PARKS *Magazine*

Autumn Sunset:
George Washington National Forest

Special Education Issue

October 1961

The Friends of Wilderness

A Guest Editorial by Robert J. Ferris

THE COLONIAL INHABITANTS OF AMERICA, and later the citizens of the newly formed United States of America, could be roughly divided occupationally into three distinct groups: the town dwellers, the farmers, and the frontiersmen.

As the American Indian was subdued and the eastern seaboard became civilized, a generation of adventurers migrated westward, searching as eagerly for challenge, adventure and isolation as those who remained behind sought comfort and security. Once the frontiersmen had opened up a new territory, they were followed by the farmers, who destroyed the isolation that the advance guard cherished most, and forced it to move still farther west. The farmers, in turn, were followed by the townsfolk. This story was endlessly repeated until the forests were depleted, the prairie turned by the plow, and cities and towns dotted the landscape from coast to coast. Migrating Europeans had conquered a new land, and had established an agricultural society, with little regard for esthetic values—especially the values of the land.

Then the industrial revolution swept westward, as had the agricultural revolution. The young, strong nation was a nation of builders—builders of cities and roads and machines and all that went with them—and a destroyer of the esthetic and even the subsistence values of the land. The wilderness adventurer was relegated to the realm of history. But has the wilderness adventurer really disappeared? I doubt it.

Love of Adventure a Human Trait

The love of adventure is as old as mankind itself. It has never died. The wilderness adventurer still exists, although perhaps not as a distinct breed of man like the "mountain man" of the 1830's. Today he is found in the city and on the farm as well as in the more remote areas. He is both rich and poor, with or without position, and he cuts across all the lines that divide the many human occupations. He may or may not belong to a conservation organization—perhaps is not even aware that such organizations exist. Whatever his surroundings, he possesses a kinship of spirit with those who followed the wilderness trails of yesterday. He is the modern frontiersman.

Suppose such a wilderness enthusiast probes the conservation movement with the notion of contributing to a worthy cause. He will first find, of course, that the conservation movement is strong and growing. He will find, too, that it embraces many philosophies, and includes within its sphere other groups, many of which are not organized primarily to fight for wilderness preservation. He will discover, for example, that the hunters of the nation are a large group with able spokesmen, not necessarily pledged to wilderness preservation. Intensive game management appeals to many within this group.

Then there are many governmental organizations that employ thousands of people in conservation work. Among these are organizations like the U. S. Forest Service, the Fish and Wildlife Service, the Soil Conservation Service and others, including the Game and Fish Departments of the many States. He will find that there are different and sometimes contrary purposes among these agencies. The Fish and Wildlife Service has, for example, a predator control branch charged with the destruction of certain wild animals which are wholly protected by the National Park Service. The Forest Service supervises logging prohibited entirely by the Park Service on lands within its jurisdiction. The policy of governmental agencies varies, but since each agency has authority over different kinds of lands, this is not as illogical as it might seem at first.

Conservation Field Entertains Diverse Interests

Within the conservation field are people who are not there primarily because they love nature and the outdoor life. Many foresters, for example, see only merchantable timber in the green forests; some wildlife researchers are more attuned to the spirit of a Louis Pasteur than to that of a Davy Crockett. This is natural. The field is wide, and there is room for many attitudes and many talents.

Our friend soon discovers, too, that conservationists do not always march shoulder to shoulder, and do not always face the world as a united group. Sometimes, like the "six and seventy jarring sects" of Omar's poem, they "confute." This might well be expected, considering the ceaseless unrest and conflict that has always characterized human relations.

Among this tangle of seemingly conflicting agencies, organizations and individuals are the conservationists who battle especially for the preservation of the nation's remaining wilderness areas. These are the people who, whatever their occupations, are the spiritual kinsmen of the "mountain men" of earlier days.

It may at the very least be said that the wilderness preservation enthusiast defends a cause that is clearly not a selfish one. It cannot be said that he would preserve for himself that which he will long remain to enjoy. He appreciates wilderness, and opposes with all his vigor the ever-burgeoning plans for more and more wilderness destruction in the rather vague name of "progress."

It is the writer's sincere hope that our conscientious questioner will be inspired to hang up his coat, roll up his sleeves, and formally join the champions of the wilderness. These are the people who, like the frontiersmen of the early days of our expanding population, are in the vanguard of the motley conservation army. ◆

NATIONAL PARKS *Magazine*

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Paul M. Tilden, Editor

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The October Cover Photograph

From a point near Reddish Knob, in the George Washington National Forest near the border of the two Virginias, the eye follows the soft October colors of Timber Ridge as it curves toward the Virginia Piedmont in the blue distance.

A George F. Blackburn Photograph

This special education issue is designed to serve as a classroom aid in presenting information about out national park system and the concepts of conservation and preservation. It is available to schools, teachers and libraries at fifteen cents per copy, or three copies for thirty cents. Prices for larger quantities will be furnished upon request.

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 permanently preserve 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.

Dues are $5 annual, $8 supporting, $15 sustaining, $25 contributing, $150 life with no further dues, and $1000 patron with no further dues. Contributions and bequests are also needed to help carry on this park protection work. Dues in excess of $5 and contributions are deductible from your federal taxable income, and bequests are deductible for federal estate tax purposes. As an organization receiving such gifts, the Association is precluded by relevant laws and regulations from advocating or opposing legislation to any substantial extent; insofar as our authors may touch on legislation, they write as individuals. Send your check today, or write for further information, to National Parks Association, 1300 New Hampshire Ave., N.W., Washington 6, D.C.

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Children, Classrooms, and Conservation

By George L. Fersh

IN CONSIDERING THE MANY DEVELOPMENTS and the many problems of our present-day society, it should not, it seems to me, be at all difficult to breathe life into conservation and resource-use education—to "energize" it, so to speak. Why, then, do we not have more teachers and administrators who are excited about this area of education?

One need only scan the daily paper to become aware of a number of emerging developments which I think even people in conservation and resource-use education have not understood sufficiently. The population problem, the growth of urbanism and suburbanism, the phenomenon of rising living expectations, industrialism, scientific acceleration—these and many other problems and developments demand that we take a new look at what we are doing.

What are the implications of these developments for conservation and resource-use education? What new emphases must we bring into resource-use education in view of these developments, beyond what we have already been doing?

Certainly, the matter of *space allocation* deserves top priority in conservation and resource-use education. With so many of our youngsters living in urban areas, they must learn how to solve the problem of how best to allocate space in metropolitan areas and regions. For example, they must decide among their needs for industries, shopping areas, government buildings, parks, schools, playgrounds, roads. This is resource-use education. They must identify their needs and problems and they must learn to discover possible solutions.

Another area that requires much greater emphasis than ever before is *water development.* In an article appearing in the *New York Times* less than a year ago, Vice-President Johnson (then Senator) identified the water problem as the number-one resource problem. He said that if the Democrats came into power, they would move full steam ahead in desalinization of water and other developments to guarantee a solution of this problem. Today, more than one thousand cities have to ration water because they do not have enough to meet all their industrial and health needs. We now use 250 billion gallons of water a day. By 1980, we will need 600 billion gallons a day. This is the kind of problem our young people must come to grips with in their conservation and resource-use education classes.

Another major emphasis for conservation and resource-use education is the subject of *recreational, esthetic, and*

Dr. George L. Fersh is director of the Conservation and Resource-Use Education Project, Joint Council on Economic Education, New York City, and the associate director of that organization. This article is based on his address to the Fifth Annual East Central States Conservation Education Conference at Michigan State University in November, 1960; it appears here by permission of the Joint Council on Economic Education.

cultural outlets. Living in an urban environment and in an industrial society, people require more (qualitatively and quantitatively) mental relief outlets in the form of recreation, esthetic satisfaction, and cultural development. Here are a few figures that appear in a book (which I recommend highly) called *Land for the Future,* by Clawson, Held and Stoddard, published recently for Resources for the Future, Inc., by the Johns Hopkins Press. By the year 2000, the demand for municipal parks and playgrounds will be four times greater than today; for State and county recreation centers, sixteen times greater; for the remote types of sites such as ocean fronts, deserts, and mountains, forty times greater. These are tremendous increases! It is obvious that we in conservation and resource-use education are obliged to provide this knowledge to our students and to help develop the understanding to guarantee that property necessary for these outlets will be available for future generations.

The Need for Trained Resources Personnel

Another major priority concerns *trained personnel in the resources field.* If we have to husband our resources to the extent that we do, then we need trained personnel. Students should come to grips with the analysis of this problem. What are the needs? What are the means by which we can meet these needs? How can we get State governments to take a more careful look at their budgets to provide adequate pay so that trained personnel remain in key spots? Resource-use education must also consider ways we can secure people to do research in all resource fields. How can we get the scientific people we need to keep up with the competition from other nations and to keep up with the pressures from our growing population? How can we get biologists, chemists, physicists, and others to come up with the bright ideas to help us carry on research in fusion, desalinization, and other areas?

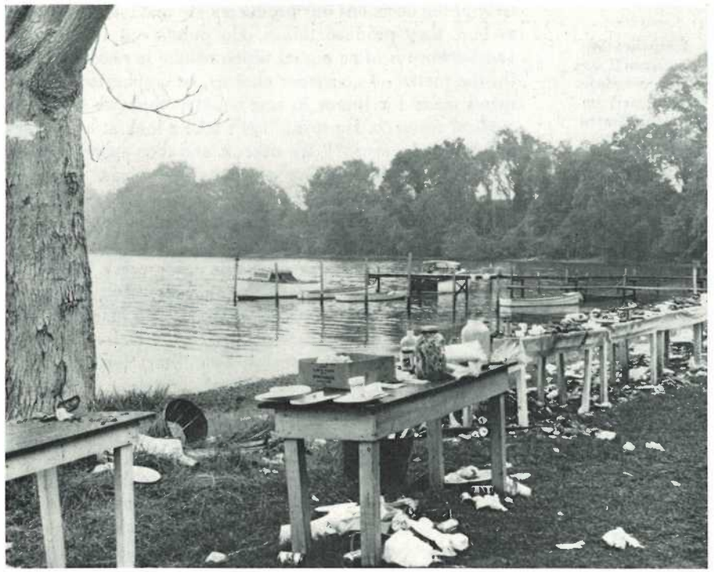
Another major emphasis for conservation and resource-use education emerges from contemporary developments. We must do far more to improve *consumption practices* of our people. After all, there are many ways to lick the problem of balancing limited resources and unlimited wants. Certainly, one of the important ways is to look at what we are consuming to see if it makes good sense. We must not merely assume that it does. It seems to me that we in resource-use education must help students question the value of our consumption patterns. Another book which I highly recommend—*The Waste Makers,* written by Vance Packard and published in 1960 by David McKay Company—raises some pertinent points. The author points his finger particularly at the decisions our producers are making with regard to how they produce things. He points out that built-in obsolescence is often a goal which results in needless waste. On the matter of consumer choices, he emphasizes that we spend more for liquor in our country than we spend for medical research. He says: "Let's take a look at our values. Do they make sense?" We overeat and then spend fortunes on costly weight-reducing products and plans. Does this make sense? How can the rest of the world look at our behavior and say that we are a sensible and rational people? We have fifty cars for every car that is being produced in the Soviet Union. Do we need this many cars? Should we perhaps cut down on expenditures of these types so that the same resources can be used to make needed machine tools, for example? One way in which the Soviet Union is moving to conquer the world is not only by military force, as many people see it, but by long-range trade practices, by developing the kinds of products that they can make available to other peoples of the world. They manufacture machine tools to send throughout the world, for example. This is their entry to other countries—not guns, but tools. As a result they produce four machine tools for every one machine tool we produce today. But we boast fifty cars for every one car they produce. How long can this go on? Thus, the whole matter of consumer practices is an important aspect of conservation and resource-use education.

A Multiplicity of Governing Bodies

Interstate and regional cooperation with regard to resources is another consideration for the resource-use education curriculum. In a recent magazine article, Robert O'Brien points out how the multiplicity of governments we have restricts wise resource-use and wise resource development. The governments of fourteen of the largest cities in metropolitan regions in the United States have fifty-five hundred independent units of local rule. You can see the difficulties of trying to get easements and zoning laws and of trying to get orderliness out of water pollution programs when you have all this "sovereignty" in so many separate groups. More than 1000 separate units of government (boroughs, counties, townships, cities) serve the 15½ million people in the metropolitan region of New York. Think of the complexity in making decisions about responsibility and taxation. Students must learn how to deal with the whole matter of interstate and regional cooperation. What are the needs? How can they be met?

Another major area that we must deal with in resource-use education is *international cooperation.* We must teach that our destiny is wrapped up completely with what is happening in Africa, Latin America, and the Far East, for example. This is truly one world and we cannot escape it. If we get overpopulated places with underdeveloped resources in any part of the world, the pressures are going to be felt throughout the rest of the world. What can we do to achieve greater international cooperation? What exchanges of knowledge and materials make sense so that peoples of the world can survive on the highest possible living level?

Another new emphasis we must give in resource-use education is on *legislation and the role of government.* As I have traveled throughout the country, I have found study



The photograph at left was taken the morning after a group picnic at Point Lookout, scenic spot in Charles County, Maryland. It is worth many words in pointing up the national need for development of a cultural responsibility.

In the field of water development and conservation, today's young people will inherit a system of sadly polluted rivers from which to meet the expanded water needs of the future. At right: the Potomac, in a National Aquarium exhibit.

of this topic to be a most neglected one. Rarely do you find people coming to grips with the laws in their State that pertain to water, to forestry, and to land. What are the regulations? Students should know about resource laws and they should analyze them critically. Are they really doing the job for our times? We have many outdated rules and laws on the books. Youngsters should examine them and begin to make up their minds about needed legislation and the appropriate role for government with regard to food, drugs, health, and research development.

The Necessary Sense of Responsibility

Finally, an emphasis I would always add is developing a *high sense of individual responsibility*. Our country today needs a citizenry with the highest sense of individual responsibility more than ever before. Individuals make the decisions in our country. We must recognize that we must do all we can to get individuals to take themselves very, very seriously. They must look at their consumption practices; they must look at their group efforts; they must examine their citizenship role; they must look at the problem of family planning. They must do all this with a great sense of responsibility.

Now then, what results can we expect from placing these new emphases in resource-use education? What are the goals we seek? Foremost among these goals is the ability to intelligently *support appropriate legislation*. The intelligent support of appropriate expenditures for conservation and resource development programs is more necessary today than ever before since fewer people are directly engagd in farming, forestry, mining, and other forms of technical work in the resources field. Thus, personal and direct self-interest plays a much smaller role in resource decisions. Instead most of our people are city people, and their impact upon conservation and resource-use is going to be through indirect action as citizens. They will contribute to conservation and resource development by understanding our laws related to zoning, natural sites, anti-pollution measures, intergovernmental cooperation. They will learn about agencies, research priorities, making the most out of our waterways, and similar resource information and issues. These are some things they will learn about that will enable them to support legislation intelligently.

Retaining Sanity in a Chaotic World

A second outcome that would result from the new emphases is the development of a *genuine appreciation of natural resources*. What I mean here is that we are going to help young people find some outlets so they can retain serenity and sanity in the kind of world in which they live and will live. When you live and work in a large city as I do (I do not really; I live nearby, but I am in the city enough to know why I do not live in the city), you are fully aware of the effects of honking horns, the constant noise of industry, and the psychological pressures of dense population. People will have to get away from the hustle and bustle of the city to be able to retain their mental equilibrium. We shall be helping young people to develop a deep understanding of and a love for the outdoors, for hunting and fishing, and for viewing America's natural wonders and sites of beauty. As people begin to think in terms of deriving gratification from our natural sites and resources, they will take the action that is necessary to retain these gifts of nature forever for the people of our nation.

I am reminded of a little story that I read in the *Reader's Digest* one day. An American went to the office of a Kyoto businessman and was kept waiting five minutes. A secretary apologized and said: "Please understand, a blossom on his desk has just opened, and he must contemplate it." Our Japanese businessman was a man who could experience deep satisfaction by watching a blooming flower; he placed a greater value on time for the appreciation of beauty than on pushing ahead with business matters. Surely some of our people should be educated to appreciate our natural resources in this true sense.

Role of the Informal Group

Another very important outcome is the ability to *work seriously within informal groups for desirable end results.* People cannot wait for election day and figure that "that's it." They must be active in garden clubs, zoning commissions and other kinds of civic groups which are concerned about safeguarding resources on an everyday basis.

Another outcome of the new emphases in resource-use education is *appropriate conduct both as workers and producers*. Our young people will learn to take their responsibilities seriously, to see to it that they do not waste resources either as workers or as producers. They will learn to become creative as workers and producers in getting more out of all the resources that come their way. As I illustrated earlier, another major outcome would result in more and more *wise consumers.*

Finally, I come to the objective of the development of *competent career people in the resources field.* I imagine that discussing this outcome last may stir up some feeling among people. However, I have done this intentionally to over-emphasize, if necessary, the fact that we should not spend so much time upon the technical side of resource-use education alone. We should go on to say: "Now, what are the implications of what you have learned for legislation?" "What are the implications of what you have learned for research development?" "What are your obligations to others so that they may benefit from your knowledge of good soil practices and forestry practices?" With the new emphases for resource-use education which I have suggested, career people in the resources field will become more competent in their professions and as citizen leaders. ■

Teachers and other interested persons desiring the complete text of Dr. Fersh's address, which is available in pamphlet form under title of "Children, Classrooms, and Conservation," should write to the Joint Council on Economic Education, 2 West 46th Street, New York 36, New York.

The Questions People Ask

What Is a National Monument? A Park? A National Forest?

WHAT IS THE NATIONAL PARK SYSTEM?

The national park system is composed of parks, monuments and other areas of important scenic, historic, prehistoric and scientific interest. It is administered by the National Park Service of the Department of the Interior. The first area in the national park system was Yellowstone National Park, established in 1872.

How many areas are there in the national park system? Are they all the same?

There are 189 areas in 43 States, divided as follows:

30 parks	5 battlefield sites
86 monuments	14 historic sites
9 historical parks	14 memorials
12 military parks	10 cemeteries
1 memorial park	3 parkways
3 battlefield parks	1 seashore recreational area
1 battlefield	

A new category will be added when a large part of Outer Cape Cod, Massachusetts, becomes our first national seashore park.

How does an area become part of the national park system?

An area with superlative scenery or features of scientific or historic interest may qualify for inclusion in the national park system. The National Park Service conducts studies in order to determine which areas merit inclusion in the system; the Advisory Board on National Parks, Historic Sites, Buildings and Monuments may recommend areas to the Secretary of the Interior; or members of Congress may initiate legislation to propose areas for inclusion. Eventually, it takes an act of Congress to bring an area into the national park system, although in the case of monuments and historical sites, the President can issue an establishing proclamation.

What is the Advisory Board on National Parks, Historic Sites, Buildings and Monuments?

The Board is a group of eleven private citizens appointed by the Secretary of the Interior to make recommendations on selection, preservation, maintenance and administration of parks and development of programs of research, and education. Each member is competent in the fields of history, archeology, architecture, conservation, natural history, or recreation.

What is the difference between a national park and a national monument?

A national park such as Yosemite is established to preserve outstanding examples of scenery in a primeval wilderness. National monuments, such as White Sands or Harpers Ferry, in most cases are established to preserve some outstanding historical or scientific features.

What is the difference between national parks and national forests?

National parks are units of federal land which preserve as far as possible a natural scene in its original condition. They are used for public enjoyment. National forests are units of federal land maintained primarily for the conservation of natural resources. They are managed under a concept of multiple use which permits timber cutting, grazing, mining and recreation.

With all the trees in national parks, why isn't timber cutting permitted?

Less than one percent of the nation's forest land is in the national park system. Park forests are a source of beauty and inspiration because of their primitive character. They are like museums where the natural processes may continue undisturbed. As we continue to harvest our other forests, undisturbed natural areas become a rarity. In this way the scientific, economic and social values of undisturbed park forests increase in importance.

How does the National Park Service keep the forests and other vegetation in this natural state?

The Park Service controls fire, prevents loss from forest insect or disease epidemics, eliminates damage from wildlife browsing, eliminates non-native plants, and prevents or repairs damage by human activity. In areas of historical significance, the Park Service maintains or restores vegetation to coincide as nearly as possible to the conditions prevailing at the period which the area commemorates.

Why is hunting prohibited in parks if they are for public enjoyment?

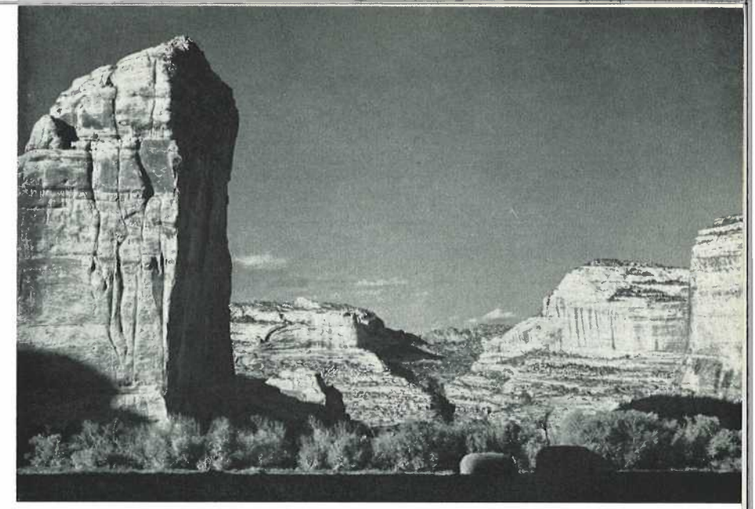
In order to preserve the natural environment of the area, the National Park Service permits only a minimum of human interference in the parks, such as camping, swimming, boating, hiking. If hunting were permitted, the natural processes would be seriously disturbed by the depletion of wildlife.

What is Mission 66?

Mission 66 of the National Park Service is a conservation program that came about when visitation in the parks increased at a phenomenal rate. It is working to provide adequate physical facilities, a program of interpretation, increased protection of parks, and a research program to meet these objectives. The ten-year program is scheduled for completion in 1966, the 50th anniversary of the establishment of the National Park Service.

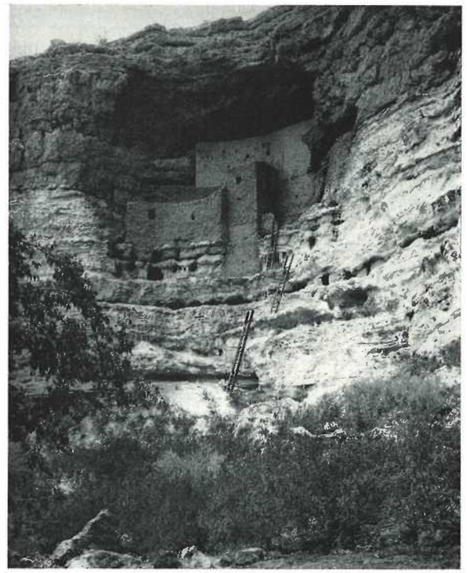
How can I find out more about the national park system?

Visit the areas; obtain publications from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C.; become a member of the National Parks Association and receive *National Parks Magazine*.

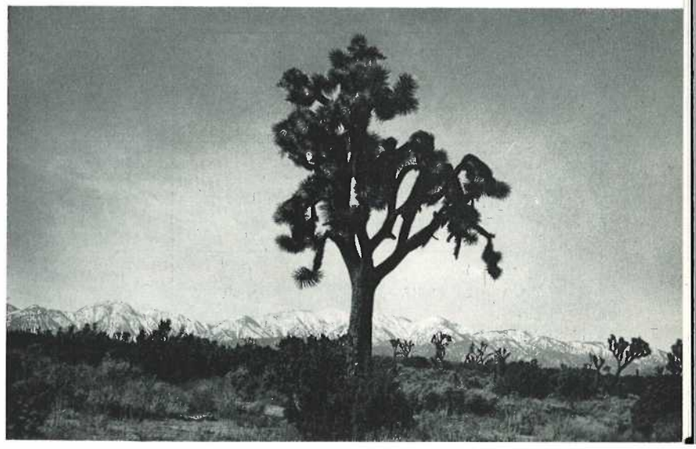


Dinosaur National Monument
Utah-Colorado

The National Monuments



Montezuma Castle National Monument
Arizona



Joshua Tree National Monument
California

An Up-to-Date Glance at Our National Monuments

The national monuments appearing in the chart section below have been chosen largely on the basis of geographic distribution and diversity of reasons for establishment. Since national monuments are established to protect and preserve areas or objects of outstanding historic or scientific importance, there is a wide divergence among them in actual physical size. It should be emphasized that mere size alone is unimportant in evaluating a monument; a preservation of ten acres is just as "important" as one of a million. A map locating the parks and monuments appears on the back cover.

Monument and Address	Date Established Area in Acres	Special Features and Educational Opportunities
BADLANDS Box 72, Interior South Dakota	1939 111,530	Colorful Badlands of South Dakota—*mako sica* of the Dakota Indians and *mauvaises terres* of early French trappers—are remnants of a vast sheet of fine Oligocene sediments still being actively eroded by water and wind. Fossil relics of animal life; small modern mammals and birds.
BLACK CANYON OF THE GUNNISON Box 157, Fruita, Colorado	1933 14,206	Imposing and formidable canyon cut deep into rocks of San Juan Mountain region of Colorado by Gunnison River. Much wildlife, including scarce Rocky Mountain bighorn sheep, black bear, mule deer, elk. Ancient pinyon pines; wildflowers. *Descent of canyon difficult, dangerous.*
CAPITOL REEF Torrey, Utah	1937 39,173	Named for their resemblance to the coral reefs of the seas, the massive multicolored domes of Capitol Reef are one edge a great eroded earth-fold in the wild canyon country of southern Utah. Within area are the relics of early Indians; the plant and bird life of pinyon-juniper forest.
CASTILLO DE SAN MARCOS Box 1431, St. Augustine Florida	1924 20	Built during latter part of 17th century by Spanish to protect hold on New World, this fort, in remarkable state of preservation, is massively built of coquina, or shell-stone, blocks; was never taken by force of arms despite many attacks. Was used as military prison during 19th century.
CASTLE CLINTON Liberty Island, New York 4, N.Y.	1950 1	Built just prior to the War of 1812 in defense of New York City, Castle Clinton had checkered history as fort, public garden, opera house, emigrant landing depot and city aquarium. Was saved from destruction during 1940's as historic building; is now being restored to War of 1812 condition.
CEDAR BREAKS c/o Zion Nat. Park, Springdale, Utah	1933 6172	Erosion of limy sediments known as Wasatch formation has produced pastel-hued cliffs and spires on grand scale in Cedar Breaks. Some volcanic activity apparent also as lava flows. Many wildflowers in season; trees include bristlecone pine, spruce; mule deer, smaller mammals.
CHACO CANYON Bloomfield, New Mexico	1907 21,509	Preserved within this monument are the ruins and relics of a southwestern civilization of a thousand years ago—that of the Pueblo people. Outstanding is Pueblo Bonito of some 800 rooms and 32 ceremonial chambers; also cruder pithouses and pottery which date back even earlier.
CHESAPEAKE & OHIO CANAL 479 North Potomac Street Hagerstown, Maryland	1961 4800	Comprises right-of-way of historic C & O Canal, with its locks and other structures, on Maryland side of the Potomac River. Extends from Seneca, Maryland (near Washington, D.C.) to Cumberland, western Maryland, in narrow strip of 165 miles. Rich variety of plant and bird life.
COLORADO Box 157 Fruita, Colorado	1911 17,693	Spectacular monument to the forces of erosion working in relatively soft stone, Colorado also exhibits other geological phenomena like faulting, folding of earth's crust, lapses of geological time. Fossil remains of ancient saurians; numerous modern mammals, including small bison herd.
CRATERS OF THE MOON Box 188 Arco, Idaho	1924 48,184	Along a zone of weakness or "rift" in earth's crust a series of lava flows has here produced a small-scale exhibit of many volcanic phenomena —lava, spatter and cinder cones; lava tubes; volcanic bombs; collapse caves; pit craters, somber volcanic scenery. Lava supports some plant life.
CUSTER BATTLEFIELD Box 116, Crow Agency Montana	1940 765	Preserves the sites associated with the destruction of Lt. Col. George A. Custer's command in the battle of the Little Bighorn during U. S. Army's campaign against Sioux and Cheyenne Indians, 1876; visitor follows story through dioramas, photographs and maps. Is also national cemetery.
DEATH VALLEY Death Valley, California	1933 1,907,760	Remarkable for true desert scenery, geological story, Death Valley also offers fascinating human story of hardship and adventure, early mining of borax minerals. Rich variety of desert plant and animal life; Nelson bighorn sheep, wild burros, desert kit fox, bobcat; 615 plant species.
DEVIL'S TOWER Devil's Tower, Wyoming	1906 1347	Site of a great basalt-rock intrusion from which surrounding rocks have weathered away over ages, leaving some 865 feet of harder intrusive standing free as immense tower, 1000 feet in diameter at base, 275 feet at top. Interesting prairie-dog "village" near monument entrance.
DINOSAUR Box 621 Vernal, Utah	1915 209,744	Spectacular wilderness canyon country surrounding confluence of Green and Yampa Rivers on Colorado-Utah border; famous as locality for fossil dinosaur remains; much evidence of prehistoric Indian occupation; rich in plant life of desert and mountain; many mammals both large and small.
EDISON LABORATORY Box 126 Orange, New Jersey	1956 1½	Preserves the original buildings at West Orange, New Jersey, in which Thomas Alva Edison, great American scientist and inventor, conducted organized inventive research for many years. Museum of Edison inventions; original Edison scientific and research library of some 10,000 volumes.
EL MORRO El Morro, New Mexico	1906 1279	Smooth side of great sandstone buttress southeast of Gallup, New Mexico, was used by Pueblo Indians and early Spanish explorers of American Southwest as a "blackboard" for names, inscriptions of various kinds while encamped at pillar's base.
FORT FREDERICA Box 367 St. Simons Island Georgia	1945 250	Preserves the ruins of an important English fort and strong-point in the 18th-century struggle between England and Spain for eventual control of the New World and its riches. Constructed between 1736 and 1742 by General James Oglethorpe as protection for the Carolinas and Virginia.
FORT LARAMIE Fort Laramie, Wyoming	1938 214	Was first an important post for fur trappers and traders during earlier part of 19th century; then strategic U. S. Army post and stopping point for west-bound emigrants. Station on Cheyenne-Deadwood stage route. Preserves remains of 21 historic fort structures.
FORT SUMTER U. S. Customs House Charleston, South Carolina	1948 2½	Fort in Charleston Harbor, South Carolina, over which the first shell of the Civil War burst on April 12, 1861. Originally built as a coastal fortification by U. S. Government after the War of 1812. Guided tours, museum.
FORT VANCOUVER Vancouver, Washington	1954 90	Preserves the site of historic Fort Vancouver, for many years the great trading post and supply depot for the people of the fur trade in the Pacific Northwest during middle part of the past century. Was later an important U. S. Army post.
GLACIER BAY Box 1781 Juneau, Alaska	1925 2,274,595	Second largest monument in system, preserves high mountain and broken shoreline topography of southeastern Alaska which is great treasurehouse of scientific, scenic values. Innumerable glaciers, glacial relics, wilderness forests; rich mammal population; many species land and water birds.
GREAT SAND DUNES Box 60, Alamosa, Colorado	1932 36,740	Large-scale dunes formed under special climatic condition lying against high southern Colorado mountain range are of importance both scenically and scientifically. Considerable range of plant life, from grassland through dune and forest-land types.
HARPERS FERRY Box 117, Harpers Ferry, W. Virginia	1944 1500	Harpers Ferry, at point where Potomac River breaks through Blue Ridge Mountains, famous as scene of John Brown raid on Government arsenal building just before Civil War; many historic buildings, scene of much Civil War activity in town and on surrounding heights.
JEWEL CAVE c/o Wind Cave Nat. Park Hot Springs, S. D.	1908 1275	Fine example of limestone cavern in South Dakota's Black Hills; much of interior coated with calcite crystals, from which name derived; land within monument supports many wildflower species, prairie and mountain birds, numerous small mammals.

An Up-to-date Glance at Our National Monuments

Monument and Address	Date Established Area in Acres	Special Features and Educational Opportunities
JOSHUA TREE Box 875, Twentynine Palms, California	1936 557,935	Preserves rich flora and fauna of high desert country, highlighted by rare yucca species called Joshua-tree. Interesting oases with native *Washingtonia* palm; many cactuses, wildflowers. Relics of prehistoric man; much mammal, bird, reptile life; entire area of great geological interest.
KATMAI c/o Mt. McKinley N.P., McKinley Park Alaska	1918 2,697,590	Wilderness scene of one of greatest volcanic outbursts of historic time, commencing June 6, 1912. Produced desolate Valley of Ten Thousand Smokes, activity of which now on reduced scale. Also protects valuable native mammals; Alaskan brown bear, moose, wolf, weasel, wolverine, otter.
LEHMAN CAVES Baker, Nevada	1922 640	On eastern side of Wheeler Peak, in Snake Range of Nevada, monument preserves limestone caverns abounding in many-shaped and many-colored "dripstone" formations—stalactites, stalagmites, columns, grotesque figures. Many have been used as burial chambers by prehistoric Indians.
MONTEZUMA CASTLE Box 218, Camp Verde, Arizona	1906 842	Remarkably well-preserved prehistoric Indian dwelling on cliff-side, probably abandoned by farmer-inhabitants in early 15th century for unclear reasons. Detached section of monument protects prehistoric Indian well and associated pueblo ruins, and irrigation ditches.
MOUND CITY GROUP Box 332, Chillicothe, Ohio	1923 67	Protects 24 burial mounds of prehistoric Hopewell Indian civilization of Midwest, with associated relics of copper, bone, stone and wood. Exhibits and dioramas help visitor in understanding of Mound City story. Many other prehistoric Indian sites in general area.
MUIR WOODS Mill Valley, California	1908 504	Named for famous naturalist and writer John Muir, area preserves representative virgin stand of Pacific Coast redwood, *Sequoia sempervirens.* ("Big Tree" redwood of the Sierra Nevada is *Sequoia gigantea*).
OCMULGEE Box 936, Macon, Georgia	1936 683	Area rich in relics of early southeastern Indian cultures, including some of great antiquity. Guided visit through restored Master Farmer ceremonial and governmental earth-lodge; museum and exhibits, archeological literature help to trace life and customs of southern mound-builders.
ORGAN PIPE CACTUS Box 38, Ajo, Arizona	1937 330,874	Preserves a large and especially fine expanse of Sonoran-type desert, in which flourishes a surprising variety of plant and animal life. Outstanding locality for spectacular organ-pipe cactus, many other cactus species; mammals include wild pig, antelope, coyote; brilliant wildflower display.
PETRIFIED FOREST Box 518, Holbrook, Arizona	1906 94,161	Great scenic and scientific preserve includes part of many-tinted Painted Desert, profusion of colorful agatized logs representing forest trees of Triassic time. "Rainbow Forest" saved from destruction by Arizonans after stamp mill was built to convert petrified logs into abrasive.
PIPESTONE Pipestone, Minnesota	1937 283	Significant as the quarrying place for catlinite, or "pipestone," prized during the past by many American Indian tribes in production of ceremonial pipes. Area was by custom common property among Indians, and use of soft, red stone is still reserved to Indians of all tribes.
RAINBOW BRIDGE c/o NPS Region 3 Box 1728, Santa Fe, New Mexico	1910 160	Spectacular natural bridge with 278-foot span and 309-foot height, graces Bridge Canyon in wild, rough, scenic country of arid southeast Utah; is largest known natural bridge. Superb example of erosion by meandering stream under specialized conditions; has been seen by relatively few.
RUSSELL CAVE Bridgeport, Alabama	1961 310	An outstanding archeological site in northeastern Alabama that has yielded artifacts indicating human habitation over a period of some 9000 years, from 7000 B.C. to approximately 1650 A.D. This national monument, recently established, has not as yet been completely investigated.

Monument and Address	Date Established Area in Acres	Special Features and Educational Opportunities
SAGUARO Route 8, Box 350 Tucson, Arizona	1933 63,284	Where the Lower Sonoran life zone fingers into southern Arizona, the grotesque saguaro cactus thrives, weighing to 10 tons and towering as high as 50 feet. This monument preserves a representative "forest" of saguaro, along with other plants, mammals and birds of a hot and arid climate.
SCOTTS BLUFF Box 136, Gering, Nebraska	1919 3452	Rocky eminence near Nebraska-Wyoming border from which traces of old Oregon Trail are visible; epitomizes spirit of great westward migration of past century. Museum with exhibits, relics, dioramas; many Oregon Trail paintings of William H. Jackson, pioneer artist.
TUMACACORI Box 6, Tumacacori, Ariz.	1908 10	An old mission church, still largely intact after many years of desertion and damage by treasure-hunters, brings to the mind of the visitor the days when Spain and the Spanish missionaries taught Christianity among the Indian tribes of what is now the American Southwest.
WHITE SANDS Box 231, Alamagordo, New Mexico	1933 146,535	A strange desert in which dunes are composed of dazzling white gypsum rather than sand occupies the Tularosa Basin of New Mexico; it is partly preserved in this monument as a scenic and scientific area of great interest. Some animals adapted to landscape through color changes.

Ackia Battleground, Mississippi. Site of Chickasaw Indian village and battleground.

Andrew Johnson, Tennessee. President Johnson's home.

Arches, Utah. Large-scale sandstone erosional forms.

Aztec Ruins, New Mexico. Ruins of southwestern Indian town.

Bandelier, New Mexico. Ruins of prehistoric Indian dwellings.

Big Hole Battlefield, Montana. Scene of battle between U. S. Army forces and Nez Perce Indian group.

Booker T. Washington, Virginia. Birthplace site of famous American Negro educator.

Cabrillo, California. Memorial to discoverer of San Diego Bay.

Canyon de Chelly, Arizona. Prehistoric Indian ruins.

Capulin Mountain, New Mexico. Recently extinct volcanic cinder cone.

Casa Grande, Arizona. Unusual prehistoric Indian ruin.

Channel Islands, California. Preserves unusual marine plant and animal forms.

Chiricahua, Arizona. Strange rock shapes of great scenic and geological interest.

Devil's Postpile, California. Remarkable basaltic lava flow, exhibiting aggregation of angular columns.

Effigy Mounds, Iowa. Examples of bird and animal-shaped Indian mounds.

Fort Jefferson, Florida. Built in 1846 to control Florida Straits.

Fort Matanzas, Florida. Important early Spanish fort.

Fort McHenry, Maryland. The defense of this fort was the inspiration for the writing of our national anthem.

Fort Pulaski, Georgia. Early 19th-century fort.

Fort Union, New Mexico. Ruins of key fort on Santa Fe Trail.

George Washington Birthplace, Virginia. Site of First President's birthplace, family tomb.

George Washington Carver, Missouri. Birthplace site of famous American Negro scientist.

Gila Cliff Dwellings, New Mexico. Well-preserved prehistoric cliff-dwellings.

Grand Canyon, Arizona. Scenic, geologically interesting section of Grand Canyon of the Colorado River.

Gran Quivira, New Mexico. 17th-century Spanish mission.

Grand Portage, Minnesota. Site of historic explorer's portage.

Homestead, Nebraska. Site of first claim under Homestead Act of 1862.

Hovenweep, Utah-Colorado. Prehistoric towers, pueblos, and cliff-dwellings.

Lava Beds, California. Exhibits of volcanic phenomena.

Meriwether Lewis, Tennessee. Burial place of explorer Meriwether Lewis.

Natural Bridges, Utah. Spectacular sandstone natural bridges.

Navajo, Arizona. Large and elaborate cliff-dwellings.

Oregon Caves, Oregon. Remarkable limestone cavern.

Perry's Victory and International Peace Memorial, Ohio. War of 1812 naval battle memorial; commemorates century of peace between the United States and Canada.

Pinnacles, California. Unusual rock formations, caves.

Pipe Spring, Arizona. Historic Mormon fort.

Sitka, Alaska. Site of Indian stockade where Kik-Siti Tribe made last stand against Russian settlers.

Statue of Liberty, New York. Commemorates Franco-American cooperation during American Revolution.

Sunset Crater, Arizona. Geologically recent cinder cone.

Timpanogos Cave, Utah. Colorful limestone cavern.

Tonto, Arizona. Well-preserved Pueblo cliff-dwellings.

Tuzigoot, Arizona. Large late prehistoric pueblo ruins.

Walnut Canyon, Arizona. 800-year-old cliff-dwellings.

Whitman, Washington. Oregon Trail landmark.

Wupatki, Arizona. Fine prehistoric pueblos.

Yucca House, Colorado. Large prehistoric Indian pueblo; not excavated, not open to public.

News Briefs From the Conservation World

NPA Initiates Conservation Education Center

The National Parks Association has announced the establishment of a Conservation Education Center for the Greater Washington Region. With the aid of a foundation grant, the new center will consider conservation problems in the metropolitan area of Washington, D.C., in a series of ten public lectures on the problems of urban green space, mountain wilderness, timber resources, water supply, farming resources, Chesapeake fisheries, watershed management, historical heritage, and recreational resources. The lecture series, open to the public without charge, will run from October, 1961, to May, 1962. It will be augmented by educational field trips, film showings, and photographic and other exhibits.

Dr. Edward Higbee, Professor of Geography at the University of Delaware and author of *The Squeeze: Cities Without Space* (NPM, June 1961, p. 18) will be the new center's first lecturer on the topic of "Green Space for Cities," on October 9. The second talk, on October 30, will be a discussion of mountain wilderness by Dr. Harry G. M. Jopson, Professor of Biology, Bridgewater College, Bridgewater, Virginia. Both lectures will be held at the Smithsonian Institution Auditorium, Natural History Museum, Tenth Street and Constitution Avenue, at 8:15 p.m. The first field trip will be an exploration of the main Potomac River Valley and some of its tributaries on October 21 and 22.

For reservations and further information on lectures and field trips, contact Orville W. Crowder, Manager, Conservation Education Center, 1300 New Hampshire Avenue, N.W., Washington 6, D.C.

Newest Park Threatened By Radar Installation

Recalling past controversies over military installations near White Sands National Monument and a proposed radar center at Kennesaw Mountain Battlefield Site in Georgia, military plans for a possible radar installation in Haleakala National Park on the island of Maui, Hawaii, threaten one of the main visitor attractions in the new park. In his speech at the dedication of the park in July, Assistant National Park Service Director Hillory Tolson said that according to representatives of the Air National Guard, the summit area of Haleakala volcano would be fenced for radar facilities, barring visitors from access to the finest view in the park.

"Haleakala is a most effective attraction for visitors from other countries and the mainland," Mr. Tolson remarked. "The desecration of Haleakala National Park by inappropriate use, merely because it's easier, more convenient, or cheaper to do a project here, rather than elsewhere, lessens its attractiveness to visitors."

"To deny unrestricted access to this of all points," Mr. Tolson stated, "is to deny visitors the right to the grandest, most distant, most complete vista on Maui. As a reward for his long trip to the mountaintop, the visitor will find himself up against a fenced radar station . . ." Mr. Tolson added that there must be equally feasible sites for a radar installation which would not interfere with the view from the mountain.

National Park Service officials have indicated that they will be alert to any further developments in the matter.

Canada Erects Memorial to Whooping Crane

To commemorate the twice-yearly migration of the whooping cranes over Saskatchewan, the Canadian Department of Transport has erected a monument at the city airport of Regina, Saskatchewan. Designed by sculptor-naturalist Wolfram Niessen, the monument (photograph below) consists of two life-size birds of cast aluminum, one poised for flight, the other in full flight. The rare whooping cranes, now thirty-six in number, were chosen to represent all birds that use the north-south flyway through Canada.

The Canadian monument is an impressive addition to the bird monuments of the world. Other monuments in North America include the California Gulls in Salt Lake City, Utah, commemorating the flock that saved early Mormon settlers from a plague of insects, and the memorial to the extinct passenger pigeon in Wyalusing State Park, Wisconsin.

Footnotes on Education

Conservation education in the primary and secondary schools of Massachusetts should get a boost from the State's new law providing for a Supervisor of Conservation Education within the State Department of Education . . . Television viewers in Columbus, Ohio found geology lessons sprinkled among the usual programming of westerns and comedy last spring when the Columbus Board of Education, Ohio State University and the Ohio Division of the U. S. Geological Survey presented a series of half-hour programs on the earth and its history. Fifth- and sixth-grade teachers reported excellent results in related classroom projects . . . A "domestic Peace Corps" has been proposed by a bill in Congress to establish a 12,000-member Youth Conservation Corps. Young men and women would aid federal and local governments in park, forest, water, and soil conservation activities . . . Outdoor education got a breath of fresh air in Montgomery County, Maryland, when the schools initiated outdoor classes during the recent summer vacation. Two-week sessions at the pilot Monocacy School will provide material for a study on outdoor education for the entire county . . . A nationwide program for the development of natural science centers will be sponsored by the newly-organized Natural Science for Youth Foundation. The first model center is at Westport, Connecticut; the second in Tallahassee, Florida, is scheduled for completion this fall. Foundation headquarters are at 114 East 30th Street, New York City, president is John Ripley Forbes . . . The National Park Service publishes much descriptive material on national parks. They report: "A little boy from the San Francisco elementary schools wrote in recently: 'Please send me a lot of information about everything you have. Thank you.' And this was done."

College Credit for Tour Of National Parks

Students of Marshall University in West Virginia earned from three to six college credits as they toured our national parks this past summer. Under the leadership of Professor N. Bayard Green, Chairman of the Zoology Department at Marshall, participants studied methods of land utilization, water resources, protection of park lands, and recreation developments. As part of their course in wildlife conservation they collected and identified plants and animals and considered the ecological relations of the wildlife to its habitat.

The college tour covered twenty-two States in six weeks. Among the national park areas the students visited were Yellowstone, Glacier, Crater, Yosemite, Bryce, Zion, and Grand Canyon National Parks, and Petrified Forest National Monument.

American Education Week
November 5–11

Private Funds Sought to Save Worthy Areas

In an August visit to Sagamore Hill, Long Island—home and summer White House of President Theodore Roosevelt—Secretary of the Interior Stewart L. Udall said that he hopes to "enlist the imagination, dedication—and funds" of the nation's philanthropists and foundations in a campaign to help save our rapidly vanishing park lands, wilderness, and seacoast recreational areas. Sagamore Hill, as well as the Roosevelt birthplace in New York City, have recently been donated to the federal government, with money for their upkeep, by the Theodore Roosevelt Association as prospective national historic sites.

"No longer is conservation simply a matter of saving outstanding natural features from people who exploit them. It is a matter of saving places for people. We cannot wait," declared the Secretary.

Purdue Aid to Teachers Contributes to Conservation

Professor Howard H. Michaud of Purdue University's Department of Forestry and Conservation reports that in the eight years of his department's conservation teaching assistantship program, four graduate students have earned the M.S. degree in conservation. One now has a doctorate and will work as a government ecologist, another is State Forester in Colorado, a third is working toward a Ph.D. in conservation education. This year's graduate will teach high school science and biology.

The two-year assistantship program combines half-time teaching duties with studies in agronomy, biological sciences, forestry, wildlife management and general conservation. Two years are required to complete the M.S. degree. The university plans to continue its program of aid to students of conservation.

Prairie Park Report

During the middle of August the National Park Service released a 23-page report on a tract of some 60,000 acres of prairie grasslands in Pottawatomie County, Kansas, which the Service hopes may eventually become a national park.

The report and park proposal is the outgrowth of a number of years' study of representative grassland areas ranging in locality from North Dakota to Texas. The publication, which was financed by private donation, is handsomely executed both in text and illustration, and is available from the National Park Service, Washington 25, D.C., or from the NPS Region Two Office, 307 Federal Office Building, 106 South 15th Street, Omaha 2, Nebraska.

Senate Passes Pt. Reyes Bill

Just prior to presstime, the United States Senate passed, without objection on a voice vote, the Engle-Kuchel bill *(S.476)* to establish a Point Reyes National Seashore on the California coast.

Your National Parks Association at Work

The Marble Canyon Case

On June 26, 1961, the National Parks Association petitioned to intervene in the Marble Canyon Case before the Federal Power Commission. The case involves primarily the application of the Arizona Power Authority to construct a high dam on the Colorado River for the purpose of generating hydro-electric power upstream from Grand Canyon Park; it would back up water to the foot of the Glen Canyon Dam, the reservoir of which will rise into Rainbow Bridge National Monument unless protection is provided.

The immediate peril of the Marble Canyon project to the national park system is that the City of Los Angeles has introduced a revised approach involving an enormous diversion tunnel to carry ninety percent of the water of the Colorado River from a dam at Marble Canyon to a power plant at Kanab Creek, downstream from Grand Canyon National Park. The Commission granted intervention on July 21 and the Association promptly filed Interrogatories and Answers by Horace M. Albright, Newton B. Drury, Ellery Fosdick, consulting engineer, and Anthony Wayne Smith, as executive secretary and general counsel.

The purport of the Interrogatories and Replies is that the Kanab Creek project would involve a huge tunnel under a portion of the park, an adit or construction entry with attendant roads, construction facilities, and spoil banks in the park, and impairment of the park by the diversion of a preponderant part of the flow of the river past the park. It is contended that these results would be in conflict with specific provisions of the Federal Power Act, with the policy of the National Parks Act, and with the established national policy for the protection of national parks and monuments.

This is the first time that any conservation organization has sought to intervene in a case before the Federal Power Commission, although the Commission exercises the full authority of the Federal Government to issue licenses for major storage and diversion projects to privately and publicly owned utilities, and no Congressional action is normally required for such issuance. In this instance, as in others, the possibility of serious damage to the national park system and to the natural resources in other locations is great.

The Kanab Creek Study

The Association has protested to the Secretary of the Interior against the execution of a contract between Los Angeles and the Reclamation Bureau for a study of the feasibility of the Kanab Creek project, discussed above, but the Secretary has in effect rejected the protest. The following reply by the Association to the Secretary sums up the correspondence and the issues:

August 23, 1961

DEAR MR. SECRETARY:

Your letter of August 21st about Los Angeles financing a Federal survey of the proposed Kanab Creek diversion of the Colorado River past Grand Canyon National Park has come.

We note the sequence of events: our telegraphic protest against the execution of the agreement for this study on June 29th; the execution of the agreement on July 6th; and your letter in reply to us dated August 21st; such procedures make it difficult for unbiased, non-profit, public-service organizations such as ours to fulfill their responsibilities to the public.

With your reply in hand, we find it necessary to renew our protest. We note the following:

This is a situation where the Bureau of Reclamation has accepted $10,000 from a municipal corporation to make a Federal study of a project involved in a case pending before the Federal Power Commission.

The municipal corporation or its instrumentality has a major interest in the case as a party to the case and as the probable major licensee of the project.

The Bureau made the original surveys for the project and favored construction; the current study will presumably be favorable to the project. This would appear to be the reason why the prospective major licensee of the project is financing the study; the results thereof will presumably be made available to the Commission and may tend to influence its decision favorably toward the project.

Congress has not seen fit to make any appropriation for such a study, and this appears to be the reason for the arrangement which has been worked out.

The intrusion of the tunnel into Grand Canyon National Park, the construction of an adit within the park, and the necessary concomitant roads, spoil banks and construction facilities (which last you do not mention) would all be in violation of the Federal Power Act, as well as the policy of the National Parks Act; the acceptance of non-Federal funds for a Federal study of the feasibility of such violations is highly objectionable.

Quite aside from the physical intrusions on the park which the Kanab Creek project involves, a diversion of some ninety percent of the flow of the Colorado River through Grand Canyon Park would result from this project. Such a diversion would be an intolerable impairment of Grand Canyon Park, and one which would bring a wrathful and rising protest from the conservationists all over America; on this aspect of the development your letter does not even touch.

We see no difference for purposes of this discussion between what you refer to as "a reconnaissance-type study and a memorandum report" and a field investigation, which you say you have forbidden.

In our opinion what you refer to as "office reappraisals" of old Reclamation Bureau studies should be done only on Federal funds duly authorized and appropriated by Congress, or from funds contributed by persons having no private or local advantage to be gained by the study.

This Association yields to none in its admiration for your distinguished leadership in the management of the natural resources of America; we are, therefore, all the more regretful that you should have sanctioned the execution of an objectionable special-interest agreement of this kind.

ANTHONY WAYNE SMITH

Proposed Camping Limits

The Association has commended the Director of the National Park Service, Conrad L. Wirth, on recently proposed regulations limiting the stay of campers in national parks and monuments, as follows:

DEAR MR. WIRTH:

We were glad to see the proposed regulation limiting camping in the parks and monuments to fourteen days during the intensive public-use season. This regulation looks in the right direction if we hope to protect the parks against unlimited overcrowding.

ANTHONY WAYNE SMITH

The Motorboating Issue

The Association has protested to the Director of the Park Service against a further relaxation of regulations controlling motorboats in national parks and monuments, as follows:

DEAR MR. WIRTH:

This Association wishes to record its formal protest to you against the revision of National Park Service regulations in such manner as to permit the launching and operation of motor-propelled boats on park and monument waters not accessible by a commonly used public road.

It has been our understanding that your policy has been to forbid such use; hence the new regulation constitutes a relaxation of restraints which is highly undesirable. It represents a further disintegration of control over the expansion of motorboating into the park system, previously reflected in the objectionable new regulations permitting the almost unlimited use of motorboats on Yellowstone Lake.

We also object to the terms in which this announcement was couched; the statement that the purpose of the amendments is to protect and preserve the natural beauty of the parks and monuments is a misrepresentation.

ANTHONY WAYNE SMITH

NPA Educational Program Outlined at Conference

Missoula, Montana, was recently the host city to one of the year's important conservation gatherings when delegates met to attend the annual conference of the Conservation Education Association, held from August 14th to 17th.

Representing the National Parks Association at the conference was Dr. John H. Cover of Washington, D.C., Association secretary and executive committee member who, in addition to conference attendance, was also able to make a tour of inspection of Glacier and Yellowstone National Parks for the organization.

In a statement prepared by NPA Executive Secretary Anthony Wayne Smith under title of *The Conservation Education Program of the National Parks Association*, Dr. Cover summarized the history and purposes of the Association and its chief educational instrument, *National Parks Magazine*. The paper pointed out how, because the national parks cannot be isolated in the total conservation picture, the Association also takes an interest in the national forests, State parks and forests, wildlife refuges and wildlife management in national parks and forests, and even in city planning for "green spaces." It briefly summarized the Association's four-year operation of its experimental Student Conservation Program, since adopted by the National Park Service as a special activity. The statement read by Dr. Cover also announced a new educational activity of the Association, the Conservation Education Center for the Greater Washington Region, an account of which is to be found on page 14 of this magazine.

The real problem in education today, according to Secretary Smith's statement, lies in the question of what to teach, rather than in the techniques of teaching; that the teaching problems are questions of substance rather than of method. It was noted that the Association was originally concerned with teaching enough people that there are a number of places in the nation of great beauty which should be preserved. Then, according to the statement, the Association found it necessary—and still finds it necessary—to defend such places, once acquired, against various invasions and compromises, including excessive road and facility construction. The conference was told the Association also teaches that there should be a few areas in the country where representative animal life may be seen undisturbed in its natural habitat. Dr. Cover said, in behalf of Secretary Smith, that the Association is also interested in the development of ecological methods of timber management and utilization outside the parks which will protect wildlife, watersheds, recreational opportunities and scenery.

The general aim of the Association's activities, according to the statement, is to tell enough people that preservation of a reasonable amount of untouched natural environment is an important thing for human life, and that a true experience of nature is necessary to the full development of a mature and civilized person; that the natural environment in one form or another is essential to everyday living.

Finally, the paper as read by Dr. Cover said that the great explosions of population, technology, and supercity of the past century are threatening remaining natural environment with rather complete destruction, and that in the judgment of the Association such destruction is deeply wrong from the human point of view. This, it was said, is the central problem of the educational work the Association is trying to perform.

Association Presents Views On Great Basin Park Bills

During late July and early August, House and Senate Committees on Interior and Insular Affairs heard testimony on bills of Rep. Baring and Sen. Bible of Nevada (*H.R.6873* and *S.1760*) to establish a Great Basin National Park.

In testimony submitted for the Association upon invitation, Executive Secretary Anthony Wayne Smith said that the Association had endorsed establishment of such a park as early as 1958, with boundaries generally conforming to those of the Baring-Bible bills. He noted, however, that protection accorded mineral exploration by the two similar bills is far too sweeping, and not in accord with park policy. Secretary Smith said that any mining or prospecting allowed under the bills should be completely terminated in five or ten years at most. He also noted that grazing privileges in the area seem far too generous. The Association is gratified, however, that neither bill contains any provision for hunting within the proposed park, said Secretary Smith.

A Letter to an Aspiring Conservationist

Dear Student:

In your recent letter to us, you asked how you should go about preparing for a career in conservation. I like your choice. You are thinking of entering a field that utilizes the talents of many specialists, yet permits each specialist to perform his duties within a framework of principles that are necessary to the kind of living we have known in our country, and the kind of living that we would like to maintain. Working in conservation is fruitful, not only because of the satisfactions that come to naturalists, librarians, rangers or researchers in the performance of their duties. It is fruitful because it contributes to the well-being of our land, our government, and every citizen who depends upon the products as well as the refreshment and beauty our land gives. If you love the outdoors, if you are healthy and self-reliant, if you have an interest in preserving the natural wealth of our country, you have chosen an appropriate career for yourself.

I assume you are still in high school. I need not tell you to work hard in your courses; I am sure you do. But you can do more than that. Is there a nature center in your area that you may visit? Is there a hiking club? Are there local public nature preserves? Is there a section of your library devoted to nature study? Your after-school hours can reinforce your classroom learning if you are alert to the opportunities in your community.

You may be able to travel during summer vacation. Have you thought of working in one of the national parks, or in some agency connected with preservation of lands for resources and recreation? If you would like to start making plans now, why not write to one of the following for more information on summer jobs: U. S. Civil Service Commission, Washington 25, D.C., for the leaflet *Summer Employment in Federal Agencies;* Student Conservation Program of the National Park Service, Room 922, 50 Rockefeller Plaza, New York 20, New York for a brochure on summer work in the national parks; National Park Service, U. S. Department of the Interior, Washington 25, D.C., for *Seasonal Employment in the National Park Service* booklet; Advancement & Placement Institute, Box 99, Station G, Brooklyn 22, New York for *Summer Jobs,* listing 14,000 possible openings ($3.00).

Of course, this is just a beginning. Are you planning to go to college? If so, you will want to major in one of the basic sciences for specialized work in biology, botany, geology, forestry, or wildlife; but do not overlook the flexibility of a liberal arts course if you lean toward administrative work. Some electives in conservation, geography, government and political science will help you to understand the desk activities that support workers in the field. If you are planning to teach, your curriculum may permit some of these electives. In any case, choose your college carefully, read the catalogs thoroughly with your objective in mind. A college that lists a single course in conservation may be a good choice if you are majoring in the sciences; but one offering more courses in conservation, political history and economics may be best if you have less specific plans.

At this point, I would like to remind you of the kinds of jobs you can prepare for. As you run over the list, you will see that your preparation may cut across many specialized fields, or concentrate in one. In conservation you can work as a teacher, naturalist, forester, park ranger, wildlife specialist, soil engineer, geologist, botanist, ornithologist, biologist, zoologist, ecologist, urban planner, park administrator, recreation director, librarian, or journalist. You may perform research in a lab or at a desk, take moving pictures or still photographs, illustrate publications or edit them. You may draw maps, write books, serve in a public relations capacity or as an information officer. You may be an administrator in one of the many conservation agencies, or a secretary to an administrator. You may have one of these jobs with the federal government, perhaps in the Department of the Interior's National Park Service, Fish and Wildlife Service, Geological Survey or Land Management Bureau. You may choose the Forest Service or Soil Conservation Service of the Department of Agriculture. Your own State offers opportunities in its Fish and Game Commission, State parks or Conservation Service; and locally, there are nature centers, museums, parks and private estates employing conservationists. All over the country foundations and associations are potential employers. Magazines and newspapers, farms and ranches, public utilities, railroads and land management companies hire specialists in conservation. Even some foreign governments seek well-trained conservation workers. The opportunities are available, as you can see. When the time comes for you to make inquiries, you may want to get a copy of the *Conservation Directory* which lists the federal and State agencies and officials as well as the many private associations, leagues and foundations in conservation work. It is published by the National Wildlife Federation, 1412 16th Street N.W., Washington 6, D.C., and priced at fifty cents.

As you progress in your college career, or in your first job after college, you may discover the need for more knowledge of a specific field of conservation that can only be gained through graduate work. Some colleges, like the University of Michigan, offer graduate courses in natural resources. Purdue University and Ohio and Montana State have concentrations in conservation education. Familiarize yourself with college catalogs, read course descriptions, choose carefully. Also, be alert for the scholarships and fellowships available to students of conservation. Both graduate and undergraduate students may apply for scholarships and fellowships offered by the National Wildlife Federation for work in conservation and related fields. Write to the Executive Director at 1412 16th Street N.W., Washington 6, D.C. The Wildlife Management Institute, 709 Wire Building, Washington 5, D.C. also offers a limited number of fellowships, scholarships and grants-in-aid to graduate students in the field of wildlife management. Organizations like the Boy Scouts of America, General Electric Foundation, Sears Roebuck Foundation, New York Zoological Society and Woods Hole Oceanographic Institute make scholarships available from time to time. Ask your reference librarian for *Fellowships in the Arts & Sciences* by Michael Schiltz, or the *National Register of Scholarships and Fellowships* by Juvenal L. Angel. You will be encouraged by the number of grants available.

Finally, if I haven't given you enough to think about by now, you may want to read more about the field you have chosen. If the following references leave you with more questions, I hope you will write again.

Sincerely yours,
Anita DeVivo
Editorial Secretary

Careers in Federal and State Fish and Wildlife Service #254; Institute for Research, 537 S. Dearborn Street, Chicago 5, Illinois, 1958. 24 pp. $1.00.

Occupation Brief #149, Science Research Association, 57 W. Grand Avenue, Chicago 10, Illinois. 45 cents.

Wildlife Training & Employment Leaflet #352 by Daniel Leedy. Publications Unit, U. S. Fish and Wildlife Service, Department of the Interior, Washington 25, D.C.

Free and Inexpensive Materials for Teachers

Unless otherwise specified, single copies of all publications should be free of charge.

● *Bulletin on Conservation Education* lists new publications, films, classroom aids, news in the field. Quarterly. Also, *The Conservation Foundation,* a description of the organization and its publications. The Conservation Foundation, 30 East 40th Street, New York 16, N.Y.

● *Test of Reasoning in Conservation.* A 40-minute objective test for high school students, and manual. Educational Testing Service, Princeton, New Jersey.

● *Resource-Use Review.* Teaching suggestions, recommended reading, news, book reviews and abstracts on conservation education. 20 pp. Joint Council on Economic Education, 2 West 46th Street, New York 36, New York.

● *Bibliography of Teaching Aids, 1961-62* for classroom study of forests and forestry. Also *Keep America Green* poster, *Forests and Trees of the U.S.* map and *Growth of a Tree* chart. American Forest Products Industries, Inc., 1816 N Street, N.W., Washington 6, D.C.

● *Audubon Nature Bulletins* (formerly bulletin of School Nature League). Illustrated leaflets on natural history topics for use as educational aids. Also complete list of other bulletins and charts. National Audubon Society, 1130 Fifth Avenue, New York 28, New York. 15 cents.

● *Natural Areas for Schools,* a pamphlet kit including studies by NPM contributors John Brainerd and Verna Johnston. Nature Conservancy, 2039 K Street N.W., Washington 6, D.C. $1.00

● *Conservation Bibliographies for Teachers; Conservation in Science Curriculums, Elementary and Secondary; Recent Curriculum Materials 1958-60;* and *Conservation Education in Social Studies.* Bulletins numbered 2, 3, 4 and 5 respectively. Conservation Foundation Curriculum Center, San Fernando Valley State College, Northridge, California.

● *Manual for Outdoor Laboratories.* A guide for the development and use of schoolgrounds as outdoor laboratories edited by Richard Weaver. 84 pp., paperbound. Interstate Printers and Publishers, 19-29 North Jackson Street, Danville, Illinois. $1.25

● *Conservation Quickie* is a teaching aid describing classroom projects in soil, water, forests, wildlife and minerals. Office of the Secretary, Conservation Education Association, Inc., Eastern Montana College of Education, Billings, Montana. $3.00 per 100.

● *Outdoors in New Mexico* series of illustrated wildlife booklets. Published by New Mexico Department of Game and Fish, Santa Fe, New Mexico.

● *Help Keep Our Land Beautiful.* A 16-page "comic-book" format tells the story of a family tour through the U.S. and what they learned about conservation. Soil Conservation Society of America, 838 Fifth Avenue, Des Moines 14, Iowa. 20 cents.

● *Geology Reference Series for Science Teachers* includes "Sources of Geological Information" (S-1), "Selected References for Earth Science Courses" (S-2), and "Films for Earth Science Courses" (S-3). List of other pamphlets available. American Geological Institute, 2101 Constitution Avenue N.W., Washington 25, D.C. Single copies, 10 cents.

● *Opportunities for Graduate Study and Research in the Resources Field* by R. G. Gustavson discusses the great adventure one may encounter in the academic pursuit of solutions to resource problems. Reprint No. 16. Resources for the Future Inc., 1775 Massachusetts Avenue, N.W., Washington 6, D.C.

● *Planning, Policy Making and Research Activities—U. S. Department of the Interior.* A May 1961 report by the staff of Resources for the Future, Inc. on problems of resources administration. 44 pp., paperbound. See address above. 50 cents.

● *Publications of the United States Department of the Interior* lists leaflets and reports of the Secretary's office, Bureaus of Indian Affairs and Reclamation, and Land Management, Fish and Wildlife Service, National Park Service and other offices. Division of Information, Department of the Interior, Washington 25, D.C.

● *Areas Administered by the National Park Service,* booklet of tables showing areas and features of the national park system. 51 pp. 20 cents. Also *The National Park Story in Pictures,* 88 pp. 65 cents. Superintendent of Documents, Government Printing Office, Washington 25, D.C. 20 cents.

● *Price List 35* includes titles of illustrated leaflets on individual national park system areas. Superintendent of Documents at above address.

● *Maps of Eastern and Western United States* locate areas of the national park system. 29 x 23 inches. Superintendent of Documents at above address. 20 cents each.

● *Guarding Our Wildlife Resources* and *Homes for Birds* information leaflets. U. S. Fish and Wildlife Service, Department of the Interior, Washington 25, D.C., 35 and 15 cents respectively.

● *The U. S. Fish and Wildlife Service, Its Responsibilities and Functions.* Circular 97, 44 pages. See above address.

● Film on *Watershed Conservation,* 11-minute sound and color, 16 mm. Based on President Kennedy's special message to Congress on natural resources. Director, Bureau of Land Management, Department of the Interior, Washington 25, D.C.

● *1961 Supplement to 1960 Educational Film Catalog* lists 650 titles. Circulation Department, Audio-Visual Center, Indiana University, Bloomington, Indiana.

● *National Parks Magazine,* Second Educational Issue (February 1961) and Historical Issue (May 1959). Limited supply. Also film list. National Parks Association, 1300 New Hampshire Avenue N.W., Washington 6, D.C. 10 cents each.

Letter . . . *(continued)*

Nature's Guardians: Your Career in Conservation by Harry E. Neal. Julian Messner, Inc., 8 W. 40th Street, New York 18, New York, 1956. 192 pp. $3.50.

Careers in Conservation, Soil Conservation Society of America, 838 Fifth Avenue, Des Moines 14, Iowa.

Career Employment in the National Park Service, National Park Service, Department of the Interior, Washington 25, D.C.

Forestry Schools in the U. S., Forest Service, Department of Agriculture, Washington 25, D.C.

PHOTOGRAPHIC CREDITS IN THE OCTOBER MAGAZINE

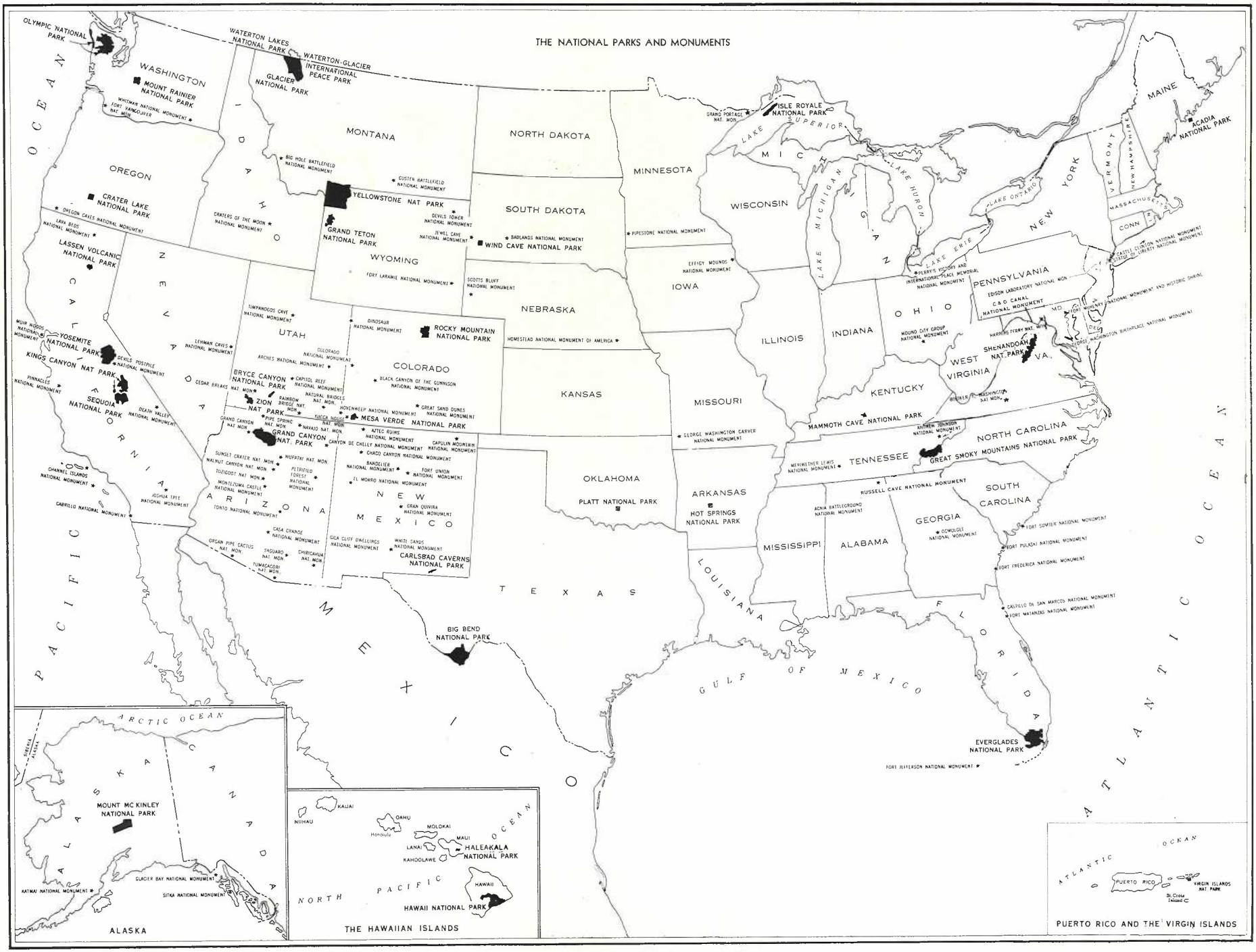
Page 6: Keep America Beautiful, Inc.

Page 7: United States Fish and Wildlife Service

Page 9: Upper, Martin Litton; middle, National Park Service; lower, Weldon F. Heald.

Page 14: Saskatchewan Photo Services

Page 20: Adapted from a National Park Service drawing.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