

NATIONAL PARKS *Magazine*



Wheeler Peak and the Matthes Glacier cirque
in the proposed Great Basin National Park, Nevada

June 1966

Why Not Plan Big?

An Editorial

WITH ALL THE INEVITABILITY, SEEMINGLY, of classical tragedy, events move toward the serious permanent constriction and impairment of wilderness in the national park system under the procedures of the Wilderness Act.

The Wilderness Act was intended, among other things, to protect wilderness in the parks, and its authors had great hopes for it; is it now to be used for the dismemberment of the parks into small wilderness areas and large zones of occupation?

We have great sympathy for the public officials responsible for the solution of these problems, and we know how heavily burdened they are; but we have no sympathy for the blindness which prevents them from seeing the true solutions.

Great Smoky Mountains National Park is to be the first case in point. The public announcement of the hearings called for by the Wilderness Act for Great Smokies proposes that less than half of the Park be given wilderness status.

Hearings on Yellowstone National Park will be held somewhat later. Meanwhile a 30-year contract with a new concessioner is under negotiation which will not reduce urbanization greatly, if at all.

The great primeval national parks and monuments were established essentially as wilderness preservations; visitation was to be compatible with such preservation.

This concept of the wilderness nature of the big parks is imbedded in the law and a century of management tradition. It has been the boast of the National Park Service that even a relatively crowded park like Yellowstone had suffered a loss of but a trivial percentage of its area to mass facilities.

There is a solution to these problems which can protect wilderness in the park and provide abundant recreational opportunity for the great crowds seeking outdoor recreation in this country every year. It lies in the comprehensive regional planning of the great areas of public and private open land surrounding all our major national parks and monuments.

Pursuant to such comprehensive planning the major portions of the big parks and all of the wilderness and primitive areas in the national forests would remain roadless. The great numbers of people who seek the benefit of such roadless areas on foot and horse, a number which is increasing rapidly every year, would hardly have room, even in such expanses,

for the enjoyment of this kind of natural outdoor recreation.

But out beyond these roadless areas, in large part in the multiple-use areas of the national forests, abundant opportunities for camping and for motorboat and automobile recreation can be provided.

Great privately operated vacation resorts should be developed in cooperation with well-financed private industry on privately owned land outside the public lands, State and Federal. At these points the public would enjoy the finest kind of man-made recreational opportunities within beautiful vistas of natural scenery: golf courses, swimming pools, and luxurious lounges, restaurants and hotels. Beautiful and comfortable coaches, driven preferably by electricity, operated by the resorts or concessioners, would carry visitors, unburdened by baggage, to the finest picnic grounds and high outlooks in the national parks and forests. The occupation of the parks and the traffic and parking loads would be greatly reduced, and there would be some chance of protecting the extraordinary natural beauty for which these reservations were established.

In Great Smokies the elements of the regional approach are simple: the TVA reservoirs and the timber harvest areas of the national forests, and the Indian lands, where desired by the Indians, would play host to the crowds. The major portion of Great Smokies Park as it exists at present, would be reserved permanently, as at present, for enjoyment of the public in roadless condition.

Setting aside for the moment the controversy over the proposed road around the north shore of the Fontana Reservoir, and the proposed new trans-mountain road, and even assuming the construction of the latter, wilderness here would begin at the roadside. The steep terrain which overlooks the Reservoir from the north is not suitable to heavy-duty occupation.

Gatlinburg and Bryson City would be further developed under joint planning arrangements as the primary mass recreation centers; other similar communities would grow up on private land throughout the TVA-Smokies region.

In the Yellowstone region the same pattern would be followed: the density of occupation of Yellowstone would be reduced, not increased; the wilderness in the Park and the national forests around it would be protected permanently; the

timber-management areas of the national forests would be opened to moderately heavy recreational use; the Bureau of Reclamation reservoirs would absorb the load of motorboat activity, liberating Yellowstone Lake; the Indians would get help in the development of recreational facilities where they desired it, on the reservations; Soil Conservation Service impoundments on ranches would pick up some of the load; large well-financed, well-planned private vacation centers would be established in cities like Bozeman and Livingston, Montana.

(continued on page 23)

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Front cover photograph by Irwin Fehr and Darwin Lambert

The Snake Range, just west of the Nevada-Utah state line, is an outstanding example of the "range" component of the West's classic basin-and-range province. Here a series of high peaks, running roughly north and south, ascend from desert level to altitudes congenial to sub-alpine plants; the line of peaks is topped by ice-carved Wheeler at slightly over 13,000 feet. Between elevations 9,500-11,000 feet on Wheeler Peak there is a grove of bristlecone pines, a part of which is shown on the front cover of this issue (the stunted trees of the ground cover in foreground are Engelmann spruces). The bristlecone has proved to be a natural chronometer for recent geologic time in parts of the West, and this issue carries an article detailing the way in which an unfortunate incident among the Wheeler grove has resulted in a sharpened focus on the question of a Great Basin Park.

The Association and the Magazine

The National Parks Association is a completely independent, private, non-profit, public-service organization, educational and scientific in character, with over 32,000 members throughout the United States and abroad. It was established in 1919 by Stephen T. Mather, the first Director of the National Park Service. It publishes the monthly *National Parks Magazine*, received by all members.

The responsibilities of the Association relate primarily to the protection of the great national parks and monuments of America, in which it endeavors to cooperate with the Service, while functioning also as a constructive critic; and secondarily to the protection and restoration of the natural environment generally.

Dues are \$6.50 annual, \$10.50 supporting, \$20 sustaining, \$35 contributing, \$200 life with no further dues, and \$1000 patron with no further dues. Contributions and bequests are also needed. Dues in excess of \$6.50 and contributions are deductible for Federal taxable income, and gifts and bequests are deductible for Federal gift and estate tax purposes. As an organization receiving such gifts, the Association is precluded by law and regulations from advocating or opposing legislation to any substantial extent; insofar as our authors may touch on legislation, they write as individuals.

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KATMAI NATIONAL MONUMENT

Largest national park system unit protects the rugged scenery and geological features of a volcanically active Alaskan terrain.

By Darrell L. Coe

ON THE SIXTH OF JUNE, 1912, one of the most violent volcanic eruptions of recorded history shook the North American continent. Emanating from the vicinity of Mount Katmai, on the Alaska Peninsula, the effects were felt throughout the north. The village of Kodiak, 90 miles to the east, was covered with more than a foot of ash, and explosions were heard in Juneau, 750 miles away. Fumes expelled into the atmosphere reached the State of Washington, disintegrating white linens on Vancouver clotheslines and tarnishing brass on Port Townsend automobiles.

The Alaskan volcanic eruption of 1912 was one of the more overpowering natural occurrences man has witnessed. Had this eruption occurred in a heavily populated area, the results would have been catastrophic. But this was not the case. The few natives who lived in the vicinity were alerted by sharp, pre-eruption earth tremors, and there was probably no loss of life. But the 1912 eruption focused worldwide attention on the Katmai region, and in the years that followed a number of scientists made the long and difficult journey to this remote corner of Alaska to study the area firsthand. The most prominent of these explorers was Dr. Robert F. Griggs, the leader of a series of expeditions sponsored by the National Geographic Society.

While Griggs and his associates were primarily concerned with the effects of the great eruption, they soon discovered that the Katmai region was much more than an area of geological interest, and as they investigated the work of the volcanos they were continually impressed by the varied and spectacular natural features of the surrounding wilderness. They published their observations both in popular and scientific periodicals, so that the gen-

eral public, as well as the scientific world, became aware of this fascinating region.

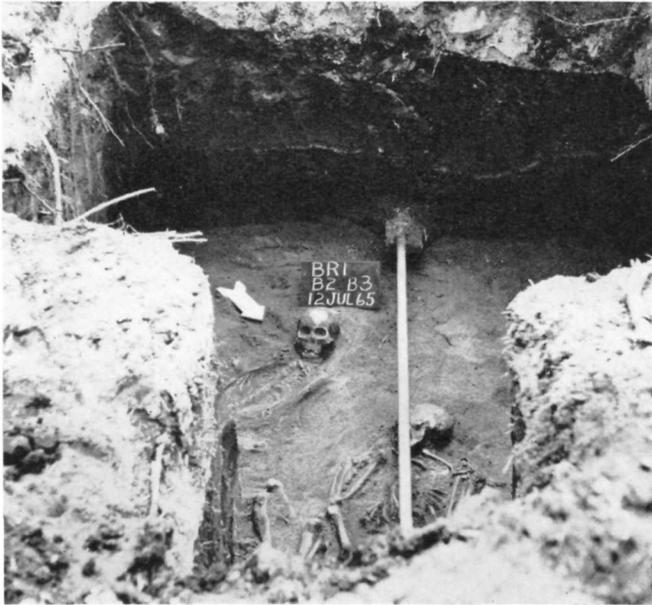
Katmai National Monument was established in 1918, encompassing a large section of the volcanic area and adjacent wilderness. In 1931 the monument was enlarged to include generous tracts of wildlife habitat and several large lakes. A number of small islands in the Shelikof Strait were added in 1942, providing protection for the sea mammals which frequent that area. Today Katmai National Monument is the largest unit of the national park system, comprising more than 4,200 square miles.

The monument contains three distinct geographic sec-

Photograph on page 4 courtesy National Park Service; photograph at right by the author

In 1953 Mt. Trident, a long inactive volcano at the head of the Valley of Ten Thousand Smokes in Katmai National Monument, erupted through a small vent on its southwest flank, extruding a viscous lava and building a new cone (photo opposite). A few fumaroles still exist in the Valley of Ten Thousand Smokes and adjacent areas; those being examined in the picture at the right are located on the rim of Novarupta crater.





Photograph by the author

Recent archeological studies have provided a wealth of information concerning Katmai's prehistory. The 1000-year-old skeletons shown above were uncovered at Brooks Camp in 1965. Excavations like this have yielded artifacts indicating a more or less continuous occupation of certain monument sites for the past 5000 years; they have also revealed ash falls showing that there have been at least fourteen major volcanic eruptions in the Katmai area since 7100 B.C.

tions. The seacoast, extending for more than 100 air miles along the Shelikof Strait from Cape Douglas to Cape Kubugakli, comprises the eastern section. This is an area of wild, unsurpassed scenery. The central coast, from Amalik Bay to Kukak Bay, is a series of deep fiords whose steep walls rise abruptly from the water for a thousand or more feet. The bays on either side of the fiords are wide and shallow with extensive sandy beaches, locally renowned for their rich razor-clam beds. In summer, Pacific hair seal swarm over the small offshore islets, basking in the sun, resting from the often rough water of the Shelikof Strait. Other offshore inhabitants include the northern sea lion and northern sea otter. The great grey whale probably comes into Katmai's bays, and the migration route of the northern fur seal is not far from the monument.

The Aleutian Mountain Range parallels the seacoast a short distance inland, forming the backbone of the monument. Capped by snow the year around and continually carved by scores of glaciers, this dynamic region comprises one of the world's most interesting volcanological districts, including more than a dozen volcanos currently or recently

In the central portion of Katmai National Monument the terrain rises steeply from tidewater and is cut by long, narrow bays. But along the northeastern monument coast scenery is more subdued and the coastal indentations less pronounced, as in the photograph below. Photo overlooks Kaguyak Bay, not far from the few shacks which constitute the "village" of Kaguyak. Occupants of the village dig razor clams at low tide during the short Alaskan summer.

Photograph courtesy National Park Service: Lowell Sumner



active. Two crater lakes are found here. Kaguyak Crater Lake provides a recognizable similarity to the famous crater lake of Oregon. Forty miles to the southwest, the emerald lake in Mount Katmai's crater rises at a rate of fifteen feet each year, gradually filling the void left when five cubic miles of the former mountaintop disappeared during the 1912 eruption. Originally it was believed that Mount Katmai had "blown up," thus forming its present crater. But today geologists believe that the top of this mountain collapsed after its foundation was siphoned off and extruded by a newly formed volcano five miles away. This new volcano, since named "Novarupta," was apparently the source of the 1912 eruption, producing the massive cloud of fine ash that covered the surrounding countryside. Novarupta, with possible assistance from near-by fissures, also belched forth a white-hot mass of ash and pumice that flowed like a giant river into an adjacent valley, quickly covering forty square miles of trees and meadows to depths of up to 700 feet. Heat from the flow of volcanic ash soon combined with surface water to form a multitude of fumaroles on the newly installed valley floor, and when the site was re-discovered by Griggs in 1916, it was named "The Valley of Ten Thousand Smokes." As the ash flow cooled the number of fumaroles decreased, and today only a few are still active. But the valley remains a spectacular scene, a desolate but beautiful expanse of yellow and pink volcanic debris cleaved by deep, narrow canyons, the products of little more than half a century of active erosion.

Some Monument Plants and Animals

The western section of the monument provides the third geographic setting—a mosaic of forests, grasslands and deep, blue lakes. Here, as on the seacoast, two life zones meet: the Arctic, found at elevations above 2000 feet, distinguished by short grasses and other low growing plants; and at lower elevations the Hudsonian, containing white spruce forests and dense stands of reedgrass. From the foothills of the Aleutian Range, where great waterfalls tumble from melting snowfields, to the extensive flats near the western boundary, this entire section supports a large and varied wildlife population.

Mink and otter hunt along the streams and rivers, many of which are punctuated by active beaver dams. Many smaller animals such as the Arctic ground squirrel, red squirrel, varying hare, muskrat and several species of mice and shrews are abundant, as are fox and porcupine. Land predators that are only memories in many localities—wolverine, lynx and wolf—are common here. Visitors to the monument are almost certain to see the large Alaskan moose, which is common both in the lakes region and along the coast. In winter, moose band together, and herds of twenty or more are readily located from the air.

The most impressive resident of the monument—indeed, of the entire Alaska Peninsula—is the brown bear. Weighing up to fifteen hundred pounds, this majestic creature frequents both life zones of the monument. The sight of a brown bear is a common but always memorable experience at Katmai. Harvesting a lush berry crop on the tundra or lumbering through a shallow stream, the big brown bear in his natural domain provides a scene symbolic of this



Photograph by the author

Moose are fairly common in the Katmai interior terrain today, although their numbers were severely depleted by the ash-fall of the 1912 Katmai eruption; this specimen was caught at lunch by the photographer. Below, an Alaska brown bear, classified by mammalogists as the largest carnivore on earth, makes his way through the underbrush of the monument.

Photograph by the author





National Park Service

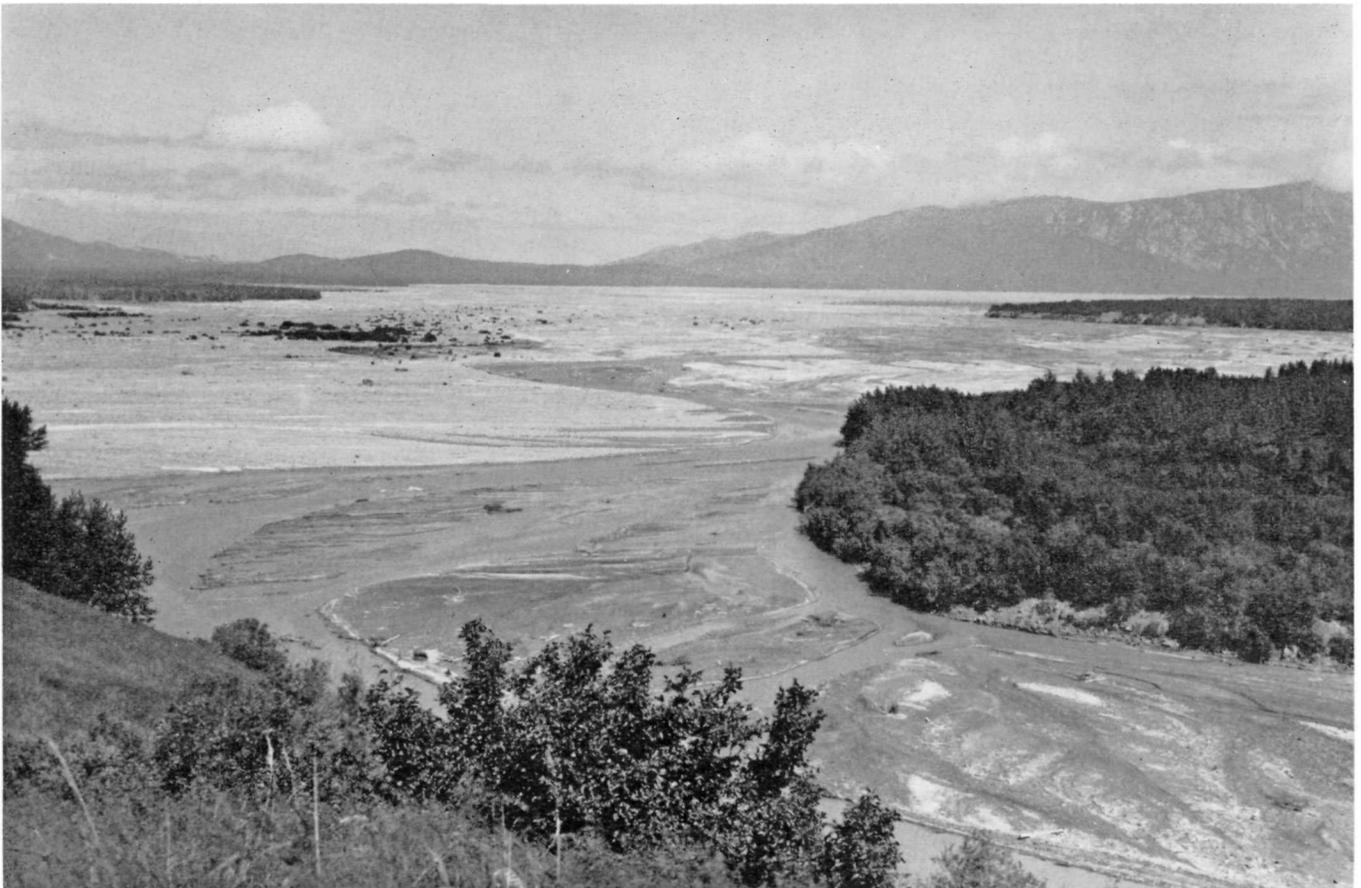
In the great ash-flow of the Valley of Ten Thousand Smokes, active erosion has produced deep, crevasse-like canyons like that of the Leythe River, above. The tremendous quantities of detritus thus removed have over the course of a number of decades been transported to the lowlands and dropped to create desolate floodplains. An example of the filling process is seen in the picture below, where the lower valley of the Ukak River, which flows into the Iliuk Arm of Naknek Lake in the western part of the monument, has been choked with a great mass of ash brought from higher elevations.

Alaskan wilderness. "When you first encounter their footprints," wrote National Park Service biologist Lowell Sumner in a 1952 issue of the *Sierra Club Bulletin*, "you are apt to stop and stare, for the hind ones measure about ten by sixteen inches, which is big enough that a man can easily stand in one with both his feet—a big man. So broad-beamed are the makers . . . that in sand and snow they leave two separate parallel lines of tracks which at a distance resemble those of a small tractor."

The sparse bird population of winter, the chickadees, gray jays, willow ptarmigan and a few other hardy, cold-weather tenants, is swelled in summer by many other species. Bald eagles nest along the streams and lakes while whistling swans occupy remote ponds soon after the ice disappears. A great variety of ducks, loons and gulls dwell on the lakes. On the beaches, colonies of Arctic terns raise their young, grimly challenging all intruders. Sparrows, warblers and robins are among the birds of the spruce forests, while the great horned owl prefers the cottonwood groves. Yellowlegs and snipe are found among the bogs and marshes, and on the high tundra longspur, goshawks and snow buntings can be seen. These and many other species of birds add to the active summer scene that is Katmai's opulent natural environment.

Katmai's fresh-water fisheries have long been held in highest esteem by anglers. The abundance of rainbow and lake trout, Dolly Varden, grayling, whitefish and northern pike encourages most visitors to test their fishing skills in the monument's lakes and streams. Beginners as well as

National Park Service



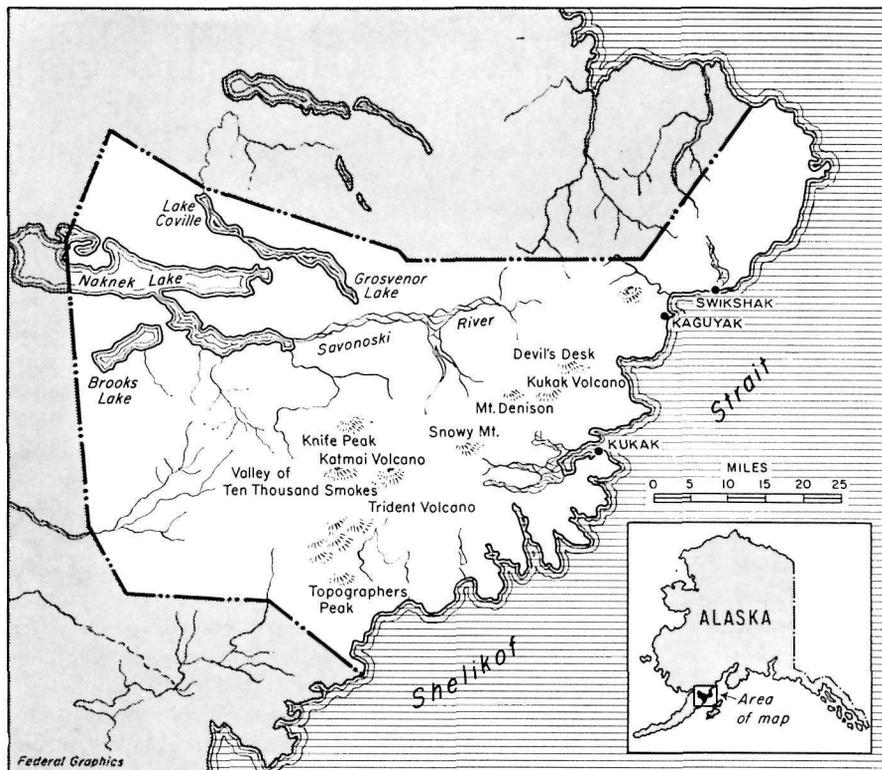
experts are frequently rewarded with prize catches. Each summer, soon after the first of July, hordes of sockeye salmon migrate up the Naknek River from Bristol Bay to spawn, and in so doing execute the final chapter in their life cycle. The interesting pageant, readily observed at many locations throughout the monument, reaches a climax in late summer when the salmon become a brilliant red, providing an easy target for such resourceful fishermen as the osprey and Alaska brown bear, whose welfare depends upon this annual phenomenon.

The salmon migration also attracted Katmai's prehistoric residents. Archeologists have located several village sites along the monument's salmon streams. One such site is Brooks River, location of the monument's summer headquarters. Excavations at Brooks River have uncovered hundreds of artifacts, indicating a more or less continuous summer occupation of this site for the past 5000 years. A second series of prehistoric village sites has been discovered along the seacoast; occupation here also dates from about 3000 B.C. The coast dwellers favored the products of the ocean, which even today remain abundant in variety and quantity.

The only important link between the people of the coast and those of the interior, or present lakes section of the monument, lay over Katmai Pass, the one gap in this section of the Aleutian Mountain Range. A fifty-mile-long foot trail led from the seacoast over the pass to the eastern end of Naknek Lake. Permanent villages were located at each end of the trail: Katmai Village, on the coast, and Savonoski, on Naknek Lake. The passage was still in use during the period of Russian occupation of Alaska and through the gold rush of 1898. Freight and passengers bound for the Bering Sea could avoid a treacherous sea voyage through the Aleutian Islands by crossing the Alaska Peninsula at this point. Not that a trip over Katmai Pass was a relaxed excursion; unannounced storms frequently funnel winds of hurricane velocity through this cut in the mountain wall. But, in many cases the route over Katmai Pass was apparently considered the lesser of the two perils. The eruption of 1912 caused the permanent evacuation of Savonoski and Katmai Village, and a section of the trail was buried under the ash flow in the Valley of Ten Thousand Smokes.

Modest Record of Visitation

Despite Katmai's spectacular scenery and profusion of interesting natural features, only two or three units of the entire national park system receive fewer visitors each year. In 1965 less than 800 persons visited the remarkable wilderness area. Even with today's elaborate transporta-



KATMAI NATIONAL MONUMENT

With an area of more than 4200 square miles—2,697,590 acres—Katmai National Monument at the base of the Aleutian Peninsula in Alaska is the largest unit of the national park system. Aside from its physical dimensions the area has also retained a great measure of wild flavor. It was originally brought into the park system to preserve the site of recorded history's second or third greatest volcanic explosion, in which several cubic miles of rock debris was blown into the atmosphere, probably by the volcano Novarupta some six miles from Katmai Volcano. With further exploration it was realized that wilderness and wildlife values of the region were also outstanding, and over the years a number of additions to the monument have been made.

tion system, the Katmai region is isolated. No road connects the monument with the outside world. A few local residents reach the monument by boat, traveling up the Naknek River from the small Bristol Bay villages or across the Shelikof Strait from Kodiak Island. But most visitors travel by air, leaving Anchorage by regularly scheduled airliner and transferring to a smaller floatplane at King Salmon, Alaska. Modest lodging and eating facilities are provided by the monument concessioner at Brooks River, where a small rustic campground is also located.

The steaming volcanos, unspoiled seacoast and large, deep lakes of Katmai remain in waiting for present and future generations. But even today this outstanding segment of northern wilderness pays its own unique dividends, for physical contact is not necessarily a requisite for enjoyment. In an era of rapidly diminishing elbow-room, the mere knowledge that this outstanding natural area exists is a comfort to many Americans. ■

Waterhole Photography

Text and Photographs by David Beatie

WILDLIFE PHOTOGRAPHY IS BECOMING a major form of recreation for the many camera fans who visit our national parks, forests, and wilderness areas. To the wildlife fancier, no other photograph matches that of wild animals in their natural setting. Even the landscape seems more exciting when a browsing deer, for example, decorates a transparency.

Good wildlife photos are not difficult to obtain if you have adequate camera equipment and working knowledge of the habits of wild animals. A good telephoto lens, however, is a "must." The keen sensory perceptions of reptiles, birds, and mammals make close approach difficult; the telephoto lens helps offset your own lack of such re-

fined senses in an outdoor environment.

Wildlife photography necessitates either game stalking or waiting for the animals to come to you. Waiting requires patience, but it is easier, more productive, and usually provides better negatives. Sitting motionless with your camera firmly in place on a stand, you have a primary advantage over moving animals. When you "shoot" from a stand of some sort, you are partially able to control the vital factors of light and background. And, because most wildlife moves and feeds in early morning and late afternoon, light becomes a major problem.

Waterholes are ideal spots to get wildlife pictures, particularly during the warmer months. Virtually all wild-

life comes to water—and the higher the temperature, the greater its need.

Selection of your waterhole stand depends primarily on direction of wind and altitude of the sun. You will want the wind blowing from the trail to you, so that potential subjects cannot smell your presence; and you will want the sun at your back. You will also want a sun-drenched area either along the game trail or at water's edge, where your subject will be outlined in sufficient light.

Choice of a stand also depends on availability of cover for your own concealment. You should have a rock, tree, or bush behind you so that your outline will not stand out sharply; you also need clothing that blends with the

Unaware and unafraid, two speckled fawns pause at a waterhole, providing an excellent photographic opportunity.



background, for animals are able to discern sharp contrasts in colors.

Your stand should be as comfortable as possible, for you may have to wait for long periods without movement or noise. Thus you will have a double advantage in having a tree or boulder against which to lean. Most animals can see a blur on the landscape even if its maker is partially concealed; but if you are motionless and quiet and the wind is blowing toward you most animals will not become alarmed.

Select the stand, then, so you will be able to watch a game trail leading to water. Deer, particularly, use the same trail day after day if they are not disturbed by man. This trail may wind through brush or down a steep gully, but there will usually be at least one spot along it where the photographer will have an unobstructed view of passing animals. This is the spot on which to focus your camera.

Many animals will announce their impending arrival at the waterhole with some characteristic sound. On a quiet day, you will hear all animals making their particular noises; and you will be amazed, for instance, at how much noise a squirrel makes when hopping around in dry leaves. With the wind blowing from trail to photographer, even a soft-stepping deer walking on soft earth can be clearly heard. Deer also frequently browse their way to water, and one may therefore be aware of their presence before they step into a clearing.

During the rutting season, which is in late autumn and early winter, bucks usually will be trailing the does. If you are after a buck photo, you will have to wait out any scrutiny by the does before you get an opportunity to photograph a buck. And to "pass inspection" requires absolute silence and immobility on your part. If a doe becomes alarmed and snorts, you will probably never see the buck that has been trailing her.

Fawns, which make their appearance in the spring, tend to be rather careless. Sometimes they trail a doe; sometimes they precede her, depending on how suspicious the doe may be. If a doe is not alarmed, her fawn may walk stiff-leggedly right up to your stand. The young mammals are curious and appealing, and provide good opportunities for camera shooting.

And in spring and summer the fawns in their dappled coats make wonderful color photos.

A word of caution: be careful about moving the camera around. Most cameras are liberally furnished with gleaming metal, and a flash of light reflected from the metal will catapult a deer into the brush. Most other wildlife will react in a similar manner, too.

If you have been getting successful deer photographs, you are probably using the right technique and will also be able to secure most of the other mammals that share a range with the deer. In my favorite stand in Texas a good deer trail is also used by rabbits, squirrels, armadillos, coyotes, skunks, and even foxes and bobcats.

Selection of a waterhole stand also provides opportunities to photograph birds. Doves always water on schedule; quail come in frequently; and killdeer water regularly. In some arid sections of the West, water is such a precious commodity that waterhole hunting of Gambel's quail is prohibited. Ponds—called tanks in the South-

west—provide opportunities for waterfowl photography, both on the flyways and at terminal points. At such places I have photographed the mallard and the wood duck drake, two birds which are (to me) unequalled in beauty of color.

Waterholes also provide convenient habitat for amphibians, and some reptiles. Frogs and turtles are good subjects for color photography. Frogs must come up for air, and turtles need sun-basking to keep their shells in condition, thereby providing excellent photo opportunities. Birds use waterholes along their flyways; animals have trails; and even squirrels have defined arboreal paths—and many of these lead to water. Tracks around a country pond attest to the heavy traffic that moves to and from water. Thus, a waterhole stand affords more picture-taking opportunities than any other part of the out-of-doors. Whether your photographic objective is reptile, bird, or mammal, the need for water will eventually bring them all in front of your lens. ■

This bighorn sheep was photographed from a sheltered spot along a trail leading to water.



Over the Years With Great

DESTRUCTION OF THE OLDEST LIVING tree thus far known on earth has sharpened the focus on the proposed Great Basin National Park in eastern Nevada where the tree lived for 4,900 years. Conservationists who have not followed in detail the vicissitudes of this Wheeler Peak-Lehman Caves section of the Humbolt National Forest, which was brought to national attention by Weldon Heald's discovery of the "desert-bound" glacier in 1955, are asking why dependable protection

for the area still has not been achieved. This article will seek the answer by examining the facts—but first let me confess my subjective bias. I was personally acquainted with the ancient tree and its remarkable setting. I believe this Great Basin sky island is destined to be dearly cherished by the American people. The banded vegetation and the open spaces alternating with deep forest strike me as scenery superior to that of more homogeneous forests and mountains. The panorama

from the high ridge over ranges and valleys, suggesting waves and troughs of a land-ocean so vast as to show the earth's curvature, can be felt as strongly as the view from the Grand Canyon's rim.

The bristlecone pine mentioned above, which had spanned the history of mankind since the first Great Pyramids were built in Egypt, was cut down and carried away by a science student assisted by U. S. Forest Service personnel and equipment. The par-

In the spacious, thinly forested upper reaches of the Snake Creek canyon, in proposed Great Basin National Park, a number of sparkling lakes occupy the cirques of vanished glaciers. Emerald Lake, seen below, is one of these.



Basin Park

By Darwin Lambert

Photographs by Irving Fehr and Darwin Lambert

ticular tree was chosen in August 1964 because the student considered it old enough to help date Little Ice Age phenomena, but no one suspected its world-record age until it was killed. The facts of this tragic mistake—which demonstrated the inadequate background in bristlecone research of the student and of the Forest Service officials—spread in scientific circles during 1965 and reached the public in comprehensible form only in February 1966. Conservationists reacted sharply.

Protests brought assurances from Edward P. Cliff, Chief of the Forest Service, that Wheeler bristlecones would not be further harmed. The Forest Service has authority to give firm protection and has demonstrated its ability to do so in the White Mountains of California where an "Ancient Bristlecone Pine Area" has been established, prohibiting removal of living or dead plants and asking all who wish to visit the "Methuselah" tree (age 4,600, oldest known there after more

than a decade of intensive study) to contact the ranger in advance. But such firm control has not been established in the Wheeler area, and there is uncertainty whether Mr. Cliff's assurances cover the whole park-study area or only the 28,000 acres called since 1959 the "Wheeler Peak Scenic Area." The assurances do not apply to the nature sculptures of dead wood which are considered by scientists to be as valuable (in place) as the living trees. Moreover, the sparse staffing is

From the higher elevations of the Snake Range near the Nevada-Utah border the hiker may look out over vast expanses of Western basin-and-range terrain. The view below looks east into Utah from a cliff at the upper end of Emerald Lake.



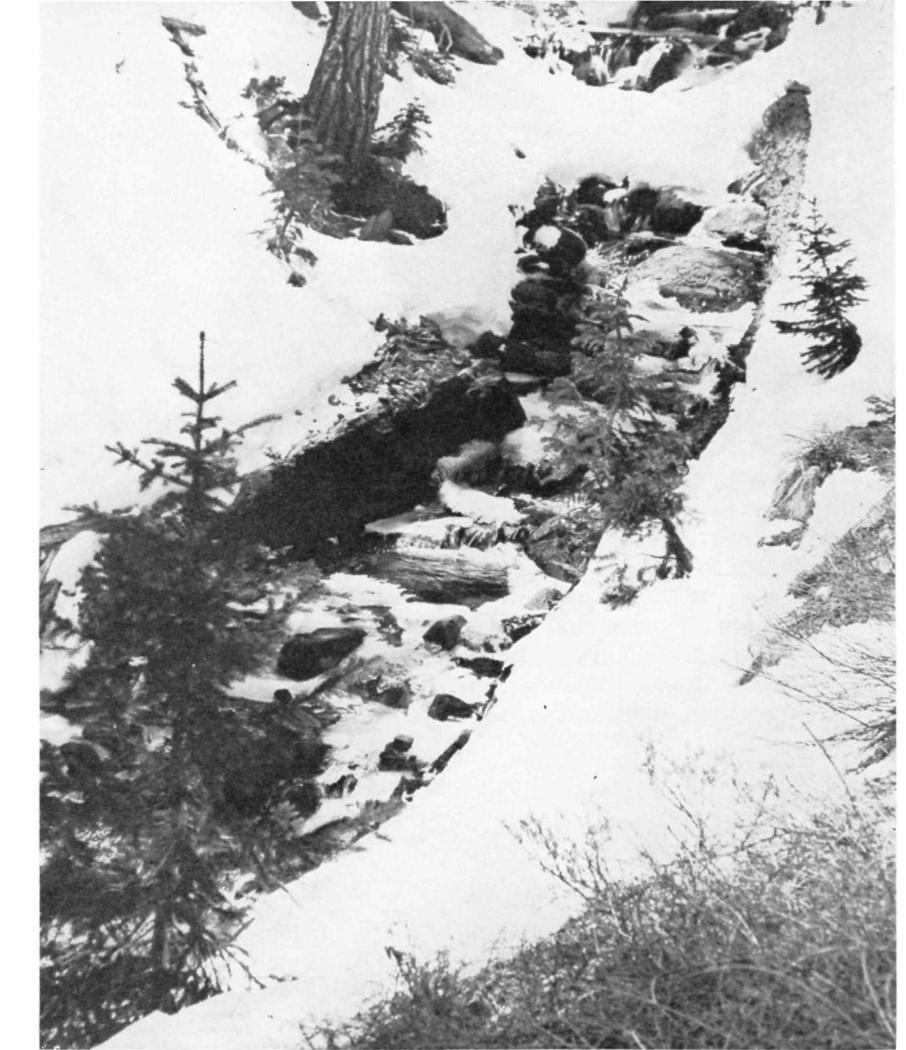
unlikely to give adequate protection, since various separate stands of old bristlecones in the Wheeler-Lehman area have become widely known. One ranger has had to spread himself over this and other large forest divisions, and little augmentation is in the five-year plan, though the Department of the Interior has calculated a full-time staff of 26, plus 11 seasonal employees, would be needed for administration and protection of the much smaller acreage studied for a park.

Loss of the oldest bristlecone—"We have a lot that are that same age and perhaps older," Mr. Cliff said in trying to justify the killing (though extensive corings in 1965 failed to locate them)—is only part of the continual whittling. A road is being pushed into the upper basin of Lehman Creek just north of the 4,900-year-old stump, to serve a projected campground near gem-like lakes. Much of this road (high on a ridge) is not considered harmful either by Forest Service or Park Service, and Mr. Cliff said over eighty percent of the scenic area would remain inaccessible except by foot and horseback. Many conservationists, however, question the wisdom of dead-ending on the botanically fragile canyon floor and oppose any campground at all in the upper basin. Crowds concentrated by development of this type would almost certainly endanger nearby bristlecones as well as rare orchids and other delicate plants.

Disruption of Landscape

Elsewhere in the study area—Mt. Washington, Lincoln Canyon, and the vicinity of Lexington Arch, to name a few examples—bulldozers are still allowed to tear through bristlecone forests in mining-claim location and assessment work. It is surprising the Forest Service has not yet used its authority to regulate such activities to avoid damage to other resources. Equally surprising is the lack of assurance against such inroads as building summer homes in attractive sections and putting rare creeks into concrete pipes.

In addition to whittling on the ground, there has been serious whittling on paper during the ten years of park study and discussion. About 285,000 acres were originally scouted, and the study area subjected to inten-



Eternal snow and underground storage send mountain streams down from the high country in proposed Great Basin Park to be absorbed by thirsty valleys of the desert.

sive field investigation by National Park Service Region Four during 1958 encompassed 147,000 acres. The southern quarter of the national forest division had been left out because it included a tungsten mine and was the primary winter habitat of deer (where hunting could keep population within carrying capacity, thus avoiding damage to the projected park's vegetation).

It was on this 147,000-acre study area that the Advisory Board on National Parks, Historic Sites, Buildings and Monuments based its 1959 findings of "National significance." Skillful opposition, however, resulted in various compromise proposals, the most extreme of which would slash specially protected land to less than a fifth of the study area. Others would involve what a National Parks Association representative said in 1961, in appearing before a Senate subcommittee on invitation, were "far too sweeping protection accorded to mineral exploration and disposal" and "far too

generous provision for continuation of grazing privileges." Many conservationists have opposed the more extreme "compromises," believing it would be better to keep the area under the Forest Service than to weaken national park standards. The Interior Department has publicly opposed plans that would drastically cut the size, insisting upon "adequate space for visitor use" and objecting to exclusion of "significant features."

Detailed descriptions of the area have previously appeared in this magazine.* The writer will merely review the major facts here:

"The Great Basin," summarized the

* See the following articles in *National Parks Magazine*: "National Park Proposed for Nevada," Weldon F. Heald, July-September, 1957; "Exploring the Baker Creek Trail," Joseph F. Carithers, April-June, 1958; "Great Basin Sky Island," Darwin Lambert, August, 1959; "Conservation and American Caves," William R. Halliday, December, 1965.

Park Service report in 1959, "is one of the major geographic divisions of North America and is not characteristically represented by any unit of the National Park System. . . . The Snake Range, culminating in Wheeler Peak (13,063 feet in altitude), and portions of the adjacent lowland desert, are typical of the geologic structures generally signified by the term Great Basin. . . . All natural phenomena associated with life in the Great Basin are exemplified within the study area. Due to its greater height and central location within the Great Basin, the study area interprets exceptionally well the ecological conception described by the term sky island. . . ."

Noted ecologist Adolph Murie, after

exploring the range in 1958, declared it is not only "a fine representation" of the Great Basin but has additional features of national park quality. "If the bristlecones were the only feature," he wrote, "we would be fully justified, in my opinion, in setting aside a large area surrounding them for their protection and as an esthetic setting for them and designating the area a national park." Among other features he listed Lehman Caves (a national monument since 1922) and other caves little known as yet, zonation of plant life, Wheeler Glacier (only active glacier in the Great Basin region), and many spectacular rock formations, including Lexington Arch.

The range has representative wild-

life—mule deer, elk (perhaps transient now), cougar, bobcat, possibly big-horn sheep, and many smaller species. It has deciduous as well as coniferous forests, including quaking aspens three feet in trunk diameter. The world's record mountain mahogany tree is in Lehman Canyon. Ponderosa pine and Douglas fir cast shadows on cacti, so marked is the zonation. Many square miles are covered by Engelmann spruce which, in combination with glacial lakes, cliffs and crags, add traditional wilderness scenery to the unique values.

Park naturalists have found excellent "interpretive possibilities," seeing the primary story as response of plants and animals to the environments of the

Below the high summits of the Snake Range there are hidden meadows with clear streams. The little meadow below had once been covered by a shallow beaver lake, although the author could find no recent signs of the busy mammals.



five life zones "from desert lowlands upward through a unique assortment of plant and animal communities to the crests of the higher mountains where life forms resemble those found in the Far North. . . . Geological processes such as mountain uplift, faulting, folding and overthrusts, rock metamorphosis and the work of glaciers and streams would constitute chapters . . ."

Some of the delay in establishing maximum protection under existing law has resulted from a belief by Forest Service officials that Congress would make its decision at any moment. Conservationists outside government, meanwhile, have been complacent, believing that since most of the area is in national forest it is automatically safe from major damage. The tragedy of the oldest tree, amputation of bristlecone limbs and carrying away of nature sculptures to decorate private homes and even to be sold

in the market place, together with hurried development and scarring by prospectors' bulldozers, may now sufficiently highlight the danger.

Presidents Eisenhower, Kennedy and Johnson have favored establishment of Great Basin National Park. In 1965, the Nevada Legislature unanimously adopted a resolution asking park establishment. Nevada's Governor now heads the Nevada Foundation for a National Park which was organized in 1959 by the two men who preceded him as Governor. Nationwide conservation organizations have been concerned since 1957. With so many favorable factors, the continued lack of firm protection for the entire study area is puzzling.

Opposition to tightened protection, whether under the Forest Service or the Park Service, has stemmed from present land uses, negligible nationally but not negligible to persons actually

involved. Uses that would be restricted by park-type regulation (according to the Forest Service) are summer grazing of 567 cattle and 2,522 sheep, hunting by an average of 546 hunters who have killed a yearly average of 328 deer, and small harvests of Christmas trees and pine nuts. There is also the mine-claim staking privilege. Prospecting was stimulated by a beryllium "strike" in the late 1950s but has since died down. Beryllium Resources, Inc., took an option on the discovery claims in 1959 and dropped it in 1960. Anaconda Company then took an option but has since abandoned the project.

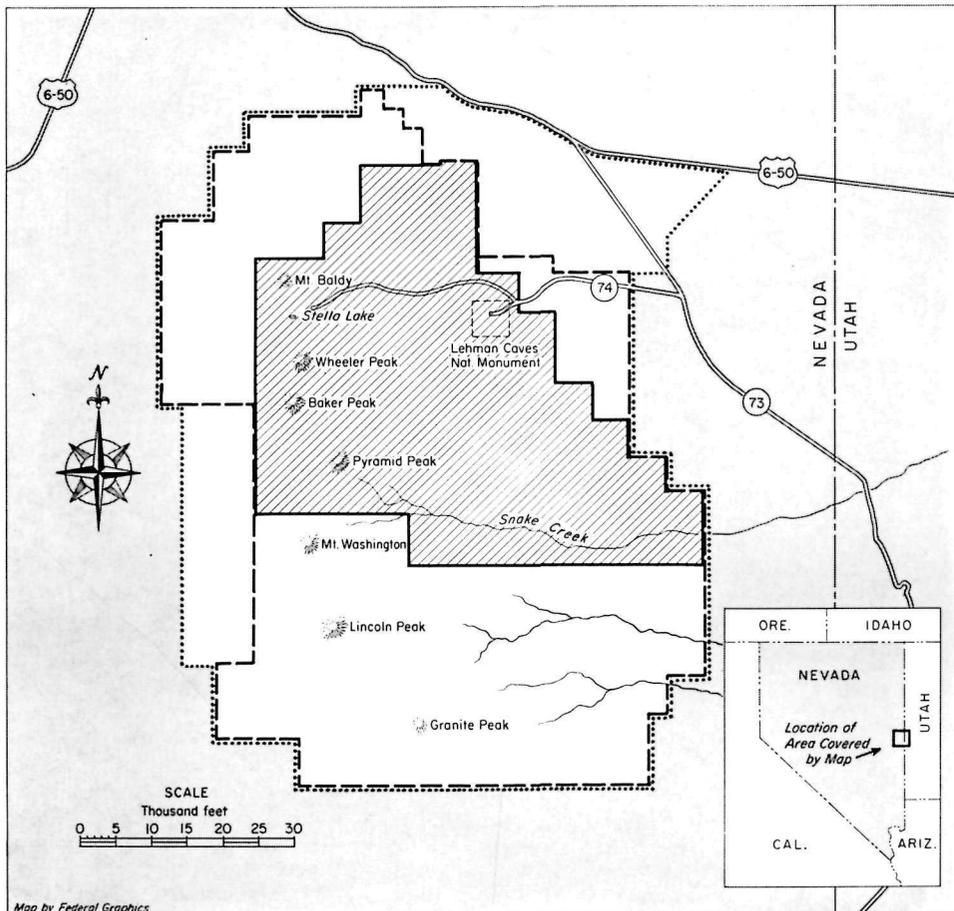
Question of Greatest Good

Fewer than a thousand people are involved in uses that might be eliminated, compared with hundreds of thousands who would be served annually through concentration on inspirational and recreational values. Opposition tactics, including sweet talk for unrealistic compromises, warnings of fantastic losses, and shrill accusations of "land grab," have nevertheless foiled efforts to halt the whittling.

The problem is now recognizably acute, and in March of this year the University of Nevada requested a one-year moratorium on "irrevocable developments or alterations in the land" to allow a study team of biologists, geologists, ecologists, atmospheric physicists and others "one summer in the field to reach a realistic conclusion. . . . If preliminary indications are borne out," the university president stated, "this may well be a crucial study area both to understand the climatological and biological history of the state and the basin-and-range province and also to evaluate weather modification efforts of great current interest. It can also establish significant evidence regarding the causes of past glacial epochs." The statement emphasized the need for "true ecological standard areas to evaluate man's growing impact on the land . . ."

Increasing numbers of scientists are seeing danger to irreplaceable natural features, including records of climatic cycles in tree rings of the ancient wood, and are joining other conservationists in efforts to protect this remarkable sky island from continued attrition, recognizing its importance to the future of mankind. ■

Map below shows how proposed Great Basin National Park has shrunk over the years. Dotted line encompasses Park Service original study boundary of 1959, on which Parks Advisory Board based its 147,000-acre park recommendation of that year. In 1961 size of proposed park was reduced to about 125,000 acres, shown on map within dashed line. A 1966 proposal would cut size of park further to about 53,000 acres, indicated on the map by diagonal shading.



Pesticide Program in Grand Teton National Park

By Adolph Murie

IN A RECENT REPORT, THE ADVISORY Committee of the National Park Service on Research, under the sponsorship of the National Academy of Sciences, defined the purpose of the national parks in part as follows: "The Committee recognizes that national parks are not pictures on the wall; they are not museum exhibits in glass cases; they are dynamic biological complexes with self-generating changes. To attempt to maintain them in any fixed condition, past, present, or future, would not only be futile but contrary to nature. . . . Naturalness, the avoidance of artificiality, should be the rule."

The report made a special effort to point out that nature is an ever-changing complex of plants and animals; that there is an ebb and flow in nature, that nature is not static but replete with biological cycles of abundance and scarcity. Species or communities may for a time multiply and flourish and then decline, either gradually or suddenly. Drastic habitat changes may take place—what was once a pond may become a meadow, which in turn may be invaded by a forest. The Committee stressed the dynamics of nature as compared with tendency in some preservation quarters to try to "freeze" natural processes; that is, to manage parks so as to keep them from changing. For example, the National Park Service is today poisoning beetles in Grand Teton National Park in an attempt to keep lodgepole pine forests from being replaced by spruce and fir forests, an age-old natural sequence.

In our parks there have been, and there still are, management activities

which, although seemingly contrary to fundamental park policy, have been passed off as "common sense policy." One such unwarranted activity—which has been discontinued—was coyote control in Yellowstone Park where, between 1904 and 1935, 4,352 coyotes were officially trapped, shot, or poisoned. During the same period 121 cougars were eliminated and the species practically exterminated, 132 wolves destroyed, and wolverines shot on sight. These animals were being killed in the park before 1904, but figures are not at hand. Coyote control was finally stopped in 1935 (other controlled species had practically disappeared) in spite of strenuous objections by the local administration. It was predicted by Yellowstone officials that without coyote control the deer, antelope and bighorn sheep would be exterminated. But coyote control was not resumed, and the ungulates prospered.

The Bark Beetle Campaign

Another activity in the same category as coyote control has for years been promoted by official park foresters. It involves the bark beetle, *Dendroctonus ponderosae*, a species that is part of the native fauna. Because this beetle preys on lodgepole pine and has a cycle, official foresters in our parks have for many years promoted beetle control, even though the beetle is native and an important part of the fauna. Park administrators have become conditioned to think that control of this beetle is desirable and necessary. As was the case with coyote control in former days, bug control is

now considered "common sense policy" by official foresters and some administrators and is taken for granted as the thing to do. Those opposing bug control are considered "far out" and "impractical idealists," as were those in former days who opposed coyote control.

In Yellowstone Park in the early thirties "bug people" predicted that the lodgepole pine forests would be lost unless \$3 to \$5 millions were spent on a bug control program. The sums were not forthcoming, yet the forests are still in Yellowstone. I should add that one ecologically-minded economic entomologist remarked at the time of the predictions that even if the beetles could be controlled, which he doubted, control in a national park should not be attempted, and the beetles should be permitted to occupy their natural niche in the flora and fauna. If many trees had been killed there would have been no damage, no discord, only change; and a change favorable to many forms of wildlife.

Over a period of years bark beetle control has been practiced on a relatively small scale in Grand Teton National Park as funds have been available—a sort of token activity. The purpose of this article is to protest a million-dollar pesticide program that has been taking place in Teton Park during the past three years, and which it is planned to continue. But before discussing the poisoning of the forest I shall briefly outline the natural ecology that the program is damaging.

Lodgepole pine, the tree most directly involved in the program, generally comes in after fire, frequently in

dense stands. In time the trees mature, become infirm because of crowding or old age, or both, and present a favorable environment for the native bark beetles, which bore tunnels in the tree for egg-laying. This activity of the beetle and that of a fungus that often inhabits the tunnels kills the old sap-poor pines a few years before they would succumb to other natural causes related to old age or crowding. When a number of lodgepoles become old at the same time they furnish a favorable habitat for a large population of beetles. When this occurs pesticide promoters refer to the situation as an "epidemic." Younger lodgepoles are generally not affected.

The "epidemic" stage is the high point in beetle population in the natural beetle-lodgepole cycle, which also involves a number of other species of plants and animals. The lodgepole forests are in time—whether or not beetles become abundant—replaced by

Lodgepole pines in Grand Teton National Park are sprayed to control the activities of the bark beetle Dendroctonus ponderosae.



climax forests of fir and spruce. Trees of these climax species are often intermingled when mature with the lodgepole pines and also are often present as an understory when young, preparing to replace the lodgepoles. The beetles serve as a thinning agent in the lodgepole forest to make room for firs and spruces.

There is a natural subsidence in the cycle because the beetles run out of old susceptible lodgepoles. Whether or not the forester has been able to get permission and funds for spraying, the "epidemic" subsides. If poisoning has taken place the forester takes credit for having controlled the beetles, just as in Yellowstone Park the administration through the years took credit for saving ungulates by "controlling" coyotes.

Needles on the dead old lodgepoles become brown and the dead trees become conspicuous, but in two or three years the needles fall and the bare trees are rather inconspicuous amidst the greenery, serving as favored perches for hawks and owls and as favorable habitat for such species as woodpeckers, nuthatches, and brown creepers. With the opening of the woods the flora takes on more variety. For the sensitive park visitor these dead trees are picturesque, adding variety and beauty to the landscape. Some visitors may derive esthetic satisfaction from the knowledge that they are seeing a genuine, natural landscape, not one that is "phony." This is the natural course of events in the cycle, which is now being upset in Grand Teton National Park. The beetle-lodgepole cycle has the same intrinsic interest as exists in the snowshoe hare cycle and in other natural phenomena which national parks are set aside to protect. The cycle is part of the grandeur and harmony of nature.

Mechanics of the Program

The mechanics of the "control" operation in Grand Teton National Park at the present time are somewhat as follows: Areas in which trees are to be sprayed are designated with string and the tagged trees are sprayed with a chemical, ethylene dibromide, mixed with fuel oil. The magnitude of the operation during the last three years is indicated by the following figures:

Total trees sprayed, 318,604; total acres sprayed 76,313; fuel oil sprayed in 1964 and 1965, 328,809 gallons; ethylene dibromide sprayed, 101,071 pounds; total cost, \$847,810. In 1965, 1700 miles of string were used to mark spray areas. Previous to 1963 beetle management on a smaller scale was engaged in from time to time, so it adds up thus far to about a million-dollar operation and all to a damaging purpose. More than \$200,000 will be spent on the pesticide program in 1966; and more than 70,000 lodgepole pines will be treated.

A large beetle-management program is also being carried out on the adjacent Teton National Forest. Even from the commercial standpoint some people well acquainted with bug control in the national forest believe the operation futile and a waste of funds. Some observers state that control operations tend only to prolong a high beetle population. But in the national park we are not primarily concerned with the futility of the operation, but rather with its impact on fundamental park objectives.

Effects of the Spraying

In the pesticide areas the ground vegetation surrounding sprayed trees is affected for a distance of several yards. There are miles of accumulated string hanging throughout the forest and countless tags nailed on trees. One visitor to Teton Park in 1965 protested to the Director of the National Park Service in part as follows: "Not only was the stench most unpleasant and most inappropriate, the many patches of browned vegetation, killed by the spray, were positively shocking, where there should have been low green plants and brilliant wildflowers. Not to mention such minor anomalies as yellow cord strung all over to mark spray areas, spray containers (bright yellow) left haphazard to clutter the landscape. . . . Heaven alone knows what the spray program has done to the ecology of the area." There have also been protests from scientists whose studies (current and future) have been disrupted and who have assumed that fundamental park policies would be maintained in the area.

My impression is that most of the personnel in Teton Park are strongly unsympathetic with the poisoning cam-

paign, not because of the futility of it (success is no point) but because of the physical damage to the area and the contravention of basic park policy. One high-ranking official remarked that "we will wring some poor woman visitor's neck for picking a flower and at the same time permit bug people to spray trees, kill large areas of vegetation and pollute the soil." Another official stated that the pesticide operation resulted in a great deal of destruction by vehicles and littering; yet the Service worries about some people tossing away cans or picking flowers.

I am confident that throughout the National Park Service there has been much strong disapproval of insect management. In 1960 the superintendent of Crater Lake National Park, in a letter to the Regional Director in which he questioned insect control in that park, stated: "I frankly see nothing unattractive or inconsistent in stark, silvery, weathered dead trees in a natural forest in natural proportions." The insect myth had persisted for over thirty years in that park until "Everywhere one goes trees felled in insect control work are obvious. In many spots there is a resemblance to old logged area." The irony of this situation is that insect control in the park, where conditions are supposed to be kept natural, was carried on as zealously as funds permitted, while in the adjacent national forest no insect control had been exercised, and the forests there were as well preserved. The reply to the superintendent from the Regional officials was to the effect that the specialists knew best!

Challenge of the Beetle

I asked officials at Teton Park why the Service wanted to "control" the bark beetle. The reply was virtually the same as given by the mountain climber: "because it is there."

One local official stated that the reason for the spray program was to save the natural scenery, which leads to the question of whether it is natural after being sprayed. The official went on to explain that the brown needles of dead trees on the landscape might cause visitors to think that the Park Service was negligent in its custodianship. To this justification I commented that the brown needles fall off in two or three years, and in any case the

For many years Dr. Murie has been engaged in biological and ecological field studies for the Fish and Wildlife and National Park Services; his distinguished career as mammalogist and ecologist is widely known both in America and foreign lands.

brown-needled trees might arouse visitor curiosity and give the park personnel an opportunity to teach the visitor a bit of nature lore; to inform him of the virtues and values of fundamental park policy. Apology hardly seems necessary.

Saving park scenery has been used as a justification for beetle management for many years, and this excuse is still on the books. In some management instructions from the Director's office, dated October 14, 1965, I note that "forest-insect infestations would be permitted to run their course but only when there is no likelihood of threatening resources outside a park. The obligation to protect public health and landscape values within a park also is a consideration." This statement gives foresters in the Park Service a wide-open season to continue with spraying programs.

I should like to emphasize that the visitor coming to a national park has a right to expect the scenery to be natural and not prettied-up, even if that were possible, by bug management. Pesticide scenery is bogus and lacks full natural significance. A gaudy artificial flower cannot compete with "A violet by a mossy stone/Half-hidden from the eye." A dead tree or ghost forest, when natural, has its own beauty and significance, and surely arouses deeper feelings and contemplation than a hillside of natural greenery, to say nothing of manicured greenery. Esthetics is complicated and perhaps impossible to define. But beauty in the deepest sense seems to require truth and significance. "Great art accepts Nature as she is, but directs the eyes and thoughts to what is most perfect in her; false art saves itself the trouble of direction by removing or altering whatever it thinks objectionable . . ." said Ruskin.

Spraying programs of the Grand Teton Park sort take place, in part, for the same reason that engineers wish to dam the Yukon River at Rampart, Alaska, and for the same reason that road builders wish to build more and

bigger roads in parks. They all wish to practice their professions. In the national parks foresters are frustrated because of the absence of logging and other commercial operations dealing with trees, and they search for an opportunity to use their schooling and techniques, looking for something they can do in the parks where there is little, if anything, for a forester to do.

Conditioned Thinking

Top administrators have been conditioned through the years to accept bug control as sacrosanct, normal park dogma; they accept the recommendations of the specialist, who may know how to do a job but may not have a broad enough viewpoint to know whether it ought to be done. The administrators tend to be reluctant to terminate a program of long standing such as the bug spraying. Many of them may make loyal, thoughtless adjustments to current policy, whatever it may be, as one would expect in a bureaucracy. Hence the legendary pattern which calls for poisoning the native insects goes on and on; an activity antagonistic to the basic purposes of the national parks. The large sums of money involved in recent years tend, unfortunately, to give prestige to the program.

In Grand Teton National Park at this time there is a \$1,000,000 program to disrupt natural relationships between beetles and lodgepole pine; \$1,000,000 to destroy natural conditions and fundamental ideals. It is a destructive operation, perpetrated at a time when Rachel Carson's *Silent Spring* has been published, is available, is highly readable; it goes on in one of the places where we should be able to escape poisoning operations.

When there is understanding and perspective it is recognized that the struggle and drama among plants and animals is the essence of nature; that some natural changes are slow and subtle, others sudden and spectacular. All this wildness has beauty and harmony for those who have a feeling for wildness. We have set aside national parks to protect this natural ecology with all its variety and change. National parks should not be tamed, subdued, and managed into units as prosaic as tree plantations. ■

News and Commentary

Leopold Committee Assignment

Secretary of the Interior Stewart L. Udall's able Advisory Board on Wildlife and Game Management, known to conservationists as the Leopold Committee after its chairman, Dr. A. Starker Leopold of the University of California at Berkeley, will soon be presented with another important and difficult chore. The Secretary has announced that the Board will, at his request, study the national wildlife refuge system to determine what it should be; whether "it could be rounded out, filled in or otherwise altered and completed to include all that our national wildlife lands and waters should include or, conversely, need not or should not include."

In his discussion of the need for a review of the refuge system the Secretary noted the widening of the old, narrow concept of refuges—the need for migratory waterfowl protection—into a larger idea which includes protection for native mammals and birds and the various species of endangered wildlife. The Secretary also made the point that the system has grown up on a rather unscientific basis; that better informed scientific judgments ought to be brought to bear in establishment of future refuges.

"You will want to weigh the role of

State and private refuges in relationship to the national system, the general problem of estuaries and associated marsh habitats . . .", Secretary Udall told the Committee in part. He posed a question to the Committee which seemingly bore indirectly on a refuge problem that has been of considerable concern to conservationists in late years—the increasing pressures on national wildlife refuge management for more public hunting in the refuges. "Is there a demand which must be met for establishing refuges to spread hunting opportunities among the States?" he asked, "Or should this demand be rejected?"

Mr. Udall indicated that he would soon fill the vacancy on the Committee which resulted when Dr. Stanley Cain, former chairman of the University of Michigan's Department of Conservation, resigned to become Assistant Secretary of the Interior for Fish and Wildlife and Parks. The Committee remains intact otherwise, with Dr. Leopold as chairman and Dr. Ira N. Gabrielson, Dr. Clarence Cottam and Thomas L. Kimball as other members.

Concerning C & O Hunting

As reported in the May issue of this Magazine (pp. 24-25), the National Parks Association recently lodged a strong protest with Secretary of the Interior Stewart L. Udall over any plans for opening lands of the C & O Canal National Monument to public hunting. It also inquired whether the remarks of the monument superintendent, W. Dean McClanahan, made at a workshop on the Potomac in Hagerstown, Maryland, represented official policy in the matter. The superintendent's remarks seemed to indicate that he favored opening certain portions of the monument to public hunting. In response to the inquiry, Secretary Udall has indicated that the superintendent's proposal does not reflect official policy. In a letter to Association President Anthony Wayne Smith, the Secretary said that "The proposal to permit hunting on portions of this national monument has not been approved by the Director of the National Park Service nor this Department."

New AT Map Published

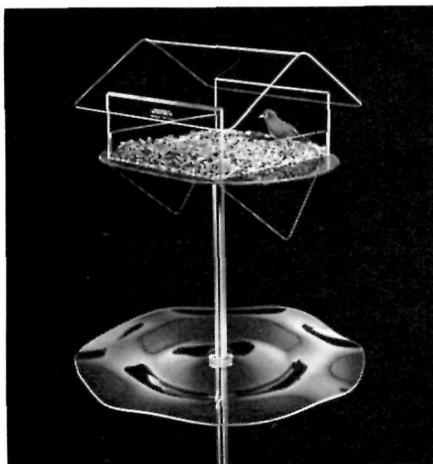
The Potomac Appalachian Trail Club, of Washington, D.C., has recently published a completely revised edition of its map of the Appalachian Trail in Maryland. The new map covers a 37-mile stretch of the famed trail from Pen-Mar on the north to the Potomac River on the

south. It shows all the data normally found on Geological Survey topographic maps plus the route of the Appalachian Trail, marked side-trails, trailside shelters, and locked cabins maintained by the Club. A copy of the map may be obtained for 50¢ from the Potomac Appalachian Trail Club, 1718 N Street N.W., Washington, D.C. 20036.

Forest Service Special Areas

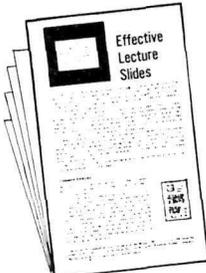
Conservationists will be pleased to learn that, under an amendment to Title 36 of the Code of Federal Regulations, the Chief of the Forest Service has been authorized to establish two new categories of special national forest land areas—the Experimental Area and the Research Natural Area. The Service already possesses three interesting and scientifically important specialized areas of a somewhat similar nature, which are classified as Botanical Areas. These have this much in common with the two newly authorized categories: that the only improvements permitted are those necessary in connection with experimental use or scientific study. The three existing Botanical Areas are Cranberry Glades in West Virginia, Ancient Bristle Cone Pine Forest in the White Mountains of California, and Quaking Aspen in Oregon.

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Within Experimental Areas, which may consist of either forest or range lands, research "necessary to serve as a basis for the management of forest and range land in each forest region" will go forward. Research Natural Areas will be set aside to adequately illustrate or typify "for research or educational purposes" the types of forest or range in each region, along with plant communities having special or unique characteristics. The amendment to the Code specifies that Research Natural Areas will be retained in virgin or unmodified condition except where measures are required to maintain a plant community within the area which it is intended to represent.

Fashion and the Leopard

Representative Henry S. Reuss of Wisconsin has charged that the current "leopard-skin coat fad" in this country is contributing to the possible extermination of the leopard. At a recent annual meeting of the National Wildlife Federation in Pittsburgh, Pennsylvania, Representative Reuss declared that "International trade in wildlife and its products must be controlled." Mr. Reuss said that he was hoping for a special United Nations conference which would call upon all nations to help preserve endangered wildlife. Numerous species of mammals, birds, and reptiles would benefit from such a conference, said Mr. Reuss.

Ecological Study Hearings

In response to an invitation by the Committee on Interior and Insular Affairs of the United States Senate, George H. Siehl, Assistant to Association President Anthony Wayne Smith, recently presented the Association's views on S. 2282, (Nelson) which would "authorize the Secretary of the Interior to conduct a program of research, study and surveys, documentation, and description of the natural environmental systems of the United States for the purpose of understanding and evaluating the condition of these systems and to provide information to those concerned with natural resources management. . . ."

Mr. Siehl noted that advanced technology has given man tools with which to overwhelm the natural world, but that the major environmental changes thus created are little understood. He indicated that "S. 2282 is a measure which would enable the ecologist to rest a bit easier when he contemplates the fate facing the natural world. . . . Acceptance of Senator Nelson's bill could result in a triumph for the public interest in the fields of conservation and natural beauty as well as ecology."

Game Range Study

A recent Department of the Interior study of the Nevada Desert Game Range has resulted in several recommendations which Interior Secretary Stewart L. Udall says will insure "the most economical and efficient use of the area." It is proposed that the northern portion of the range—containing over one and a half million acres—be assigned to the Bureau of Sport Fisheries and Wildlife, and that a large portion of the unit continue to be used as a gunnery range by the Air Force. The southern portion of the range would be turned over to the Bureau of Land Management, which would develop it for recreational use. This portion contains about 600,000 acres of land.

The range now primarily benefits the endangered bighorn sheep, but other wildlife making use of the area are mule deer, elk, antelope, Merriam's turkey, Gambel's quail, coyote, bobcat, badger, grey and kit foxes, cougar, and some

(continued on page 22)



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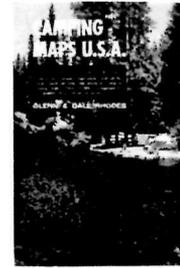


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Peninsula, California 90274, which publishes a series on up-to-date camping trips and campsite information.

In the Wildlife Refuges

The Migratory Bird Conservation Commission has recently authorized addition of 3031 acres for seven national wildlife refuges, and flowage easements of 78 acres at another refuge to permit raising water levels for waterfowl habitat improvement. The seven refuges to be enlarged and authorized additions are: Columbia Refuge in Washington State, 2044 acres; Clarence Cannon Refuge in Missouri, 446 acres; Tewaukon Refuge

in North Dakota, 39 acres, plus 78 acres of flowage easements; Tamarac Refuge in Minnesota, 410 acres; Wertheim Refuge in New York, 6 acres; Mark Twain Refuge in Illinois, Iowa and Missouri, 46 acres north of Burlington, Iowa; and Squaw Creek Refuge in Missouri, 40 acres. The Commission also authorized leasing of 945 acres of Indian lands for the Ouray Refuge in Utah.

Funds for such waterfowl refuge land purchases come from the sale of "duck stamps" to waterfowl hunters, conservationists and stamp collectors; chairman of the Commission is Stewart L. Udall, Secretary of the Interior.

Huston Thompson: A Memoir

This memoir of the late Huston Thompson, trustee of the National Parks Association, briefly covers his friendship with Stephen T. Mather, first director of the National Park Service; my own long association with Mr. Thompson, and his deep interest in the national parks.

Huston Thompson came to Washington from Denver in the summer of 1913 as Assistant Attorney General of the United States, bringing with him a young lawyer, Marvin Farrington, who lived in a YMCA room next to mine. I had arrived at about the same time for an assignment in the office of Franklin K. Lane, Secretary of

the Interior. Mr. Farrington introduced me to Mr. Thompson, and we found that we were mutually interested in the national parks.

When Stephen T. Mather arrived in Washington in January, 1915, to become Assistant to the Secretary of the Interior, I had the pleasure of bringing him and Huston Thompson together, and they became intimate friends. They had many common characteristics; both were tall, exceeding six feet in height, with fine features and heavy hair turning prematurely gray. Both were friendly, jovial, thoughtful, kindly and generous.

By Horace M. Albright

Mr. Mather's principal objective was to secure authorization of Congress for the establishment of a bureau of national parks, and as his assistant I was engaged in this activity. The National Park Service proposal moved forward in 1915, and became law when the organic act establishing the Service was signed by President Woodrow Wilson on August 25, 1916. Huston Thompson did everything in his power to assist Mather, and his influence was substantial.

In July, 1916, Mr. Mather took a party to Yellowstone National Park; and in the party were Mr. and Mrs. Thompson. I was also a member of the group, which is shown atop Mt. Washburn in the accompanying photograph. Later, after the Park Service was organized, Mather and Thompson made a reconnaissance of the Kings River region in California, then under consideration by Congress for national park status, and long one of John Muir's most cherished preservation proposals. The Mather-Thompson review in the field was made by pack-train during the summer of 1918.

When I was appointed superintendent of Yellowstone National Park in 1919, Mr. and Mrs. Thompson visited Mrs. Albright and me, as they did on occasion thereafter; on one or two such trips they were accompanied by Mr. Mather. Until Stephen Mather died in 1930, Huston Thompson was his devoted friend, confidant and advisor, whose interest in the National Park Service never faltered. He was an inspiration to all the leaders of the Service and their associates; as a trustee and honored "elder statesman" of the National Parks Association he was a strong and influential supporter of sound conservation principles.

Mr. Thompson will long be remembered for his noble personality and unselfish civic service both in and out of Government. ♦

During a 1916 visit to Yellowstone National Park, Stephen T. Mather is photographed with his party atop Mt. Washburn. Party members were, from left to right: Mrs. Lloyd M. Brett; Mrs. George Purdy (seated); Mrs. Stephen T. Mather; Col. Lloyd M. Brett, superintendent of the park; Stephen T. Mather; George C. Purdy; Huston Thompson; Horace M. Albright; and Mrs. Huston Thompson.

Photograph courtesy Haynes Studios, Inc.



Ninth IUCN Meeting

Of prime importance to conservationists throughout the world is the upcoming Ninth General Assembly and Tenth Technical Meeting of the International Union For Conservation of Nature and Natural Resources, to be held June 25 to July 2 at Lucerne, Switzerland. Theme of the meeting will be "Toward A New Relationship of Man and Nature in Temperate Lands."

Why Not Plan Big?

(continued from page 2)

The statutory authority exists already to engage in this kind of comprehensive regional planning. The Land and Water Conservation Fund Act conferred it on the Bureau of Outdoor Recreation; the authority to recommend such plans cuts across departmental boundaries; the Secretary of the Interior has only to give the firm word to the Director of the BOR to embark on this course.

Many students of the problems of national park management have recognized that only some such policy as this can possibly save the natural country in the park system as the population explosion runs its fateful course.

The Wilderness Act was not intended as a means of dismembering the national park system, but as a way to preserve the wild country in that system; it should not be used to carve up the parks into trivial bits of wilderness and open the balance to heavy-duty occupation.

In times like this, only heroic vision can save any portion of the originally majestic scenery of America for even the present generation, let alone future generations. Only in some such way as here suggested can we lay a cornerstone for the protection and restoration of a beautiful natural environment throughout America. Where are the imagination and the leadership which this situation requires?
—A.W.S.

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THE CONSERVATION DOCKET

ESTABLISHMENT OF AN OREGON DUNES National Seashore, Oregon, took a step forward recently with approval of H.R. 7524 by the House Committee on Interior and Insular Affairs. The bill, which was reported upon favorably with an amendment, now goes to the Parks and Recreation Subcommittee of the Senate Committee on Interior and Insular Affairs for further action.

The House Committee on Interior and Insular Affairs also reported favorably on H.R. 3606, a bill intended to promote a more adequate national program of water research. The bill, as amended, was sent to the Senate in the form of S. 22 (Anderson and others) and was passed and cleared for Presidential action on April 5.

Another bill dealing with the nation's water resources, H.R. 14456, has been introduced by Mr. Dingell; the bill would amend the Federal Water Pollution Control Act to strengthen and improve authority to enforce abatement of pollution and to regulate discharge of pollution into navigable waters. H.R. 14456 has been referred to the Committee on Public Works.

Mr. Tydings has introduced S. 3240 to amend the Federal Water Pollution Control Act which would provide for a study and investigation of estuaries and estuarine zones of the United States. The bill was referred to the Committee on Public Works.

To direct the Secretary of the Interior to cooperate with the States of New York and New Jersey on a program of development, protection, and restoration of the Hudson River and the shores of the Hudson River, H.R. 14390 has been introduced (Conyers) and referred to the Committee on Interior and Insular Affairs. The bill would also authorize "certain necessary steps to be taken to protect these resources from adverse Federal actions until the States and Congress shall have had an opportunity to act on that program."

H.R. 14375 (Zablocki) has been introduced to provide for the establishment of the Saint Croix National Scenic Riverway in the States of Minnesota and Wisconsin. Main purpose of the bill is to preserve the portion of the river beginning at the dam near Taylors Falls, Minnesota, and extending upstream to the dam near Gordon, Wisconsin, and its Namekagon tributary in Wisconsin, as a "wild river in a primitive condition, or restoring it as nearly as possible to such condition" for scenic and other natural values. The bill is before the Committee on Interior and Insular Affairs.

Early in April two bills were introduced which deal with the management and use of hiking trails in the United States. S. 3171 (Nelson) would establish a nationwide system of trails to provide, among other things, "access to, travel within, and enjoyment of, the national and State parks, forests, recreation areas, historic sites, and other areas." H.R. 14327 (O'Brien) would facilitate the management and use of the Appalachian Trail, which runs from Maine to Georgia,

and would facilitate and promote Federal, State, local, and individual cooperation to protect and promote the trail. S. 3171 was referred to the Senate Committee on Interior and Insular Affairs; H.R. 14327 to the House Committee on Interior and Insular Affairs.

Sen. Anderson has introduced S. 3172 to provide for establishment of the Trinity National Historic Site in the State of New Mexico. The bill was referred to the Committee on Interior and Insular Affairs.

A contract for construction of Rodman Dam on the Oklawaha River in Florida has been awarded by the Army Corps of Engineers. The dam is one of the key units in the Cross-Florida Barge Canal. According to a release by the Office of the Chief of Engineers, award of the contract had been postponed "pending consideration . . . of a proposal sponsored by certain groups and individuals in Florida for rerouting the easterly section of the Canal to bypass the river."

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Fish and Wildlife Service

The black-footed ferret is listed by the Bureau of Sport Fisheries and Wildlife as one of America's rare and endangered mammal species.

“**E**NDANGERED AND ON THE VERGE OF EXTINCTION” is the gloomy forecast for the little American mammal pictured above—the black-footed ferret. Less than twenty of these black-masked weasels have been observed since 1955; scientists hesitate to estimate total remaining numbers. Little is known about the animal, and the reasons for its decline are still uncertain; probable causes include reduction in numbers of the prairie dog, its principal prey, and substantial elimination of natural grassland habitat. In an effort to learn more about the needs of the black-footed ferret before it is too late, South Dakota’s Cooperative Wildlife Research Unit is conducting an intensive field study of the animal.

THE NATIONAL PARKS ASSOCIATION takes a deep interest in the protection of native wildlife species, particularly those classified as rare or endangered. You can assist the Association in its protective work in any of several ways: by helping secure new members; by contribution to the general funds of the Association over and above regular dues; by renewing membership promptly, or perhaps by remembering the Association in your will. All dues over and above basic annual dues, and all contributions, are deductible for Federal income taxation; gifts and bequests are deductible for Federal gift and estate tax purposes.

National Parks Association

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