NATIONAL PARKS *Magazine*

Winter patrol: park dog team at Stony Lake,
Mount McKinley National Park, Alaska

February 1968

Riding the Storms

INTERIOR SECRETARY STEWART L. UDALL IS TO BE COMMENDED for lifting at least an admonitory finger against the Sonic Boom. His appointment of a distinguished scientific committee to advise him in the matter is one practical preliminary step toward the protection of the American people against this growing monstrosity.

There will be many who think that the supersonic transport plane (SST) is completely unnecessary; that no man has business of such importance as to require him to cross the continent in a matter of an hour and a half; nor which cannot be done as well by telephone.

The public is acquainted by now with the rationalizations for this enterprise: that if we don't do it the Russians will; or the French and British, bringing on a new dollar drain; just as if there were no other ways of solving problems of international exchange.

Nor is the public so unsophisticated as to miss the basic motivations here: perhaps $4.5 billion, to be paid out to aircraft and other manufacturing companies to set up this addition to the national galaxy of mechanical idols.

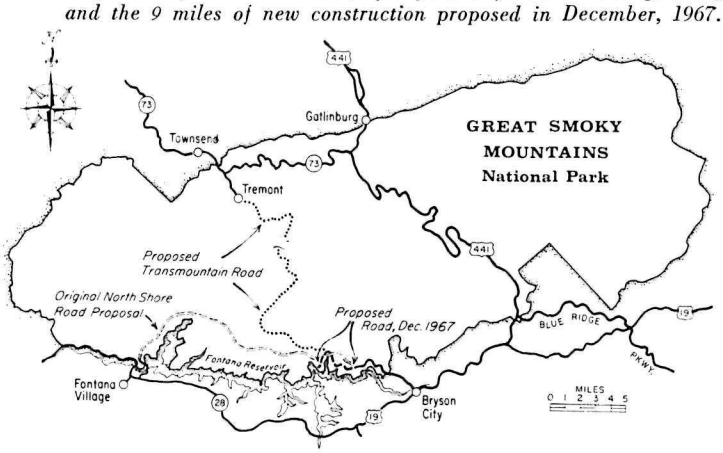
The various palliatives proposed are not impressive: buying up the land ruined by sonic booms; zoning housing developments away from airports; moving the airports away from the cities; slowing the planes down while they pass over land, or at least over populated areas (pity the national parks and archeological monuments!) until that happy future day when the regulations can be slyly changed and the precautions eliminated; and devising slightly quieter engines.

The blame lies very heavily on the bureaucrats, both in government and in business, who pass off the destructive effects of the boom physically and psychologically as unimportant; also on public servants who lend their policy approval to such ridiculous development plans, with or without precautions for the mitigation of damages; but in the last analysis the blame lies with us, the American people, who have a means of redress against such disorder through our democratic governmental structure.

WHILE WE AGREE WITH THE SECRETARY ABOUT THE SONIC boom, we have mixed feelings about his solution for the transmountain road problem in Great Smoky Mountains Park, also a matter of basic importance to all the American people. Very commendably, the Secretary has vetoed the plan to build a second transmountain road as a substitute for the old proposal for a highway between Bryson City and Fontana Village around the north shore of Fontana Reservoir.

The north shore road has been promoted by crowd recreation interests in Bryson City for many years on the pretext that an old agreement between TVA and Swain County requires it. The Park Service has yielded step by step over the years until about 7¼ miles of this road have been built, some of it the most destructive ever constructed in any national park. Now, along with the decision against the transmountain road, comes another 9 miles of the north shore road; this gets closer and closer to Fontana Village, and it is predictable that the entire distance will be covered within a few more years; say, by one or two more weak-kneed compromises.

Map shows finished 7.27 miles of Bryson City-Fontana Village road, and the 9 miles of new construction proposed in December, 1967.



THE DEFEAT OF THE SECRETARY OF THE INTERIOR AT THE hands of the Secretary of Agriculture in the Mineral King dispute is an event we are obliged to note, if only as an obituary for Mineral King.

Considering the massed power of the political and economic interests bent on destroying the trail and wildlife-management country of Mineral King for the benefit of mechanical crowd recreation, the surrender was not surprising.

Mineral King has been a sizable roadless area located in the heart of Sequoia National Park, but within the technical jurisdiction of the U. S. Forest Service. It should have been incorporated long ago into the park and preserved for the benefit of the growing numbers of people from the crowded California coastal cities who wish to escape from urban conditions and to travel the High Sierra on foot or horse, and for those who wish to observe and enjoy the wildlife of the Sierra in its natural condition.

Now the same urban pressures from which people all over America are fleeing by countless thousands every year are to be admitted to these remote areas, aided and abetted by heavy Federal, State, and private investment.

A good index of what the Mineral King project means can be found in the statement that the new access road (through Sequoia National Park) to which the Secretary of the Interior has assented will be designed with a capacity for 700 cars per hour. This means one car passing any given point every five seconds.

The public is being handed a lot of bureaucratic mumbo-jumbo about making every effort to prevent damage to the natural area, concern with esthetic considerations and the impact on the park, careful scrutiny in the establishment of the highest standards concerning the over-all development, and such bunk.

The truth is that the U. S. Forest Service and the Department of Agriculture have unilaterally handed over to private interests for highly profitable exploitation a spectacularly beautiful and spacious mountain region belonging to the American people as a whole which lies in the very heart of a vital national park and should have been preserved forever in its natural condition. —*A. W. S.*

NATIONAL PARKS *Magazine*

OFFICIAL PUBLICATION OF THE NATIONAL PARKS ASSOCIATION

VOLUME 42 FEBRUARY 1968 NUMBER 245

Front cover photograph by Charles J. Ott

The 3000 square miles of Mount McKinley National Park, lying athwart the towering Alaska Range of south-central Alaska, also cover a splendid portion of the headwaters of the many streams which drain north from the range to eventually reach the Yukon River. "Winter in this park," says the National Park Service, "has a unique charm, which appeals to the hardy adventurer." But the unbroken snow in the vicinity of McKinley's Stony Lake seems to say that on this day, at least, photographer Charles Ott and his companions of the park's winter patrol may have been the only hardy adventurers in that bit of Alaskan terrain.

NOTICE

All communications sent to the National Parks Association after February 1, 1968, should be addressed to the Association's new headquarters at 1701 18th Street, N.W., Washington, D.C. 20009.

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 37,000 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.

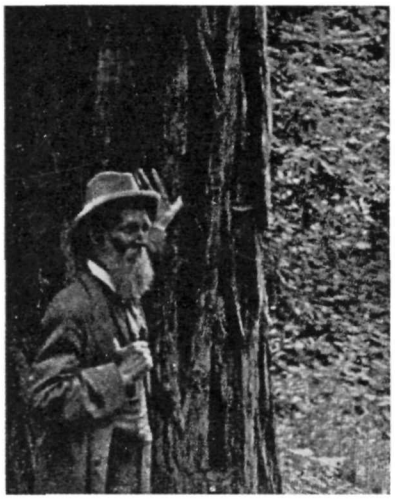
The responsibilities of the Association relate primarily to the protection of the great national parks and monuments of America, in which it endeavors to cooperate with the Service, while functioning also as a constructive critic; and secondarily to the protection and restoration of the natural environment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

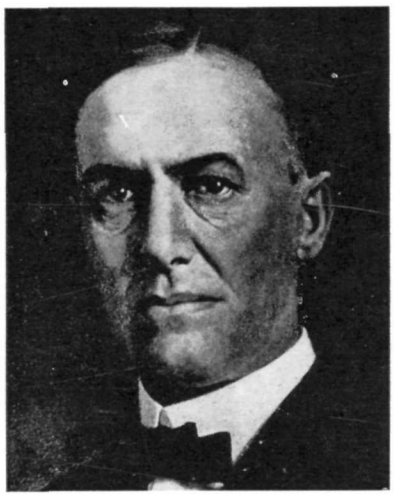
Membership in the Association carries with it subscription to *National Parks Magazine*. School and library subscriptions are $5 a year; individual copies 50 cents. Letters and contributed manuscripts and photographs should be addressed to the Editor at Association headquarters. The Association is not responsible for loss or injury to manuscripts and photographs in transit. Return postage should accompany contributions.

Title Registered U.S. Patent Office. Indexed in the *Reader's Guide to Periodical Literature*. Printed in the U.S.A. Second-class postage paid at Washington, D. C.

NATIONAL PARKS ASSOCIATION
1701 18th STREET, N.W. WASHINGTON, D.C. 20009



John Muir in Muir Woods National Monument about 1910.
National Park Service photograph



Congressman William Kent, from a portrait by Herbert A. Collins
National Park Service photograph

"THE BEST TREE LOVER'S MONUMENT"

By D. W. Reeser

THIS IS THE BEST TREE LOVER'S monument that could be found in all the world. You have done me great honor and I am proud of it." So wrote John Muir in a letter to William Kent, following President Theodore Roosevelt's 1908 proclamation establishing Muir Woods National Monument on the coast of California just north of San Francisco.

William Kent had recognized the area's magnificence when he purchased it in 1905 to prevent its destruction as feed for the sawmills supplying a growing San Francisco. This single act of mercy, however, did not insure the preservation of its majestic redwood trees, for once again they were imperilled, this time by drowning. The dam-builders had looked upon this idyllic redwood canyon only as a cistern; but Kent well knew that if the scheme for a dam were to prevail, Americans would suffer an immeasurable and irrevocable loss. This man knew, with remarkable prescience, that the canyon, studded with its superlative redwoods in the very backyard of a large and growing center of population, was of national significance. And to this end he importuned the head of the U.S. Forest Service, Gifford Pinchot, President Roosevelt's ablest conservation lieutenant, to let the Federal Government accept the area as a gift and then give it national monument status under the 1906 Antiquities Act. Little effort was required to convince Pinchot and Roosevelt that Federal protection was warranted.

The only request that Kent attached to his gift was that it be named in honor of the era's foremost champion of the national park movement, John Muir. In gratitude and admiration Muir wrote: "Saving these woods from axe and saw, from the money changers and water changers is in many ways the most notable service to God and man I have heard of since my forest wanderings began, a much needed lesson to saint and sinner alike, and a credit and encouragement to God."

Muir Woods' virgin stand of coast redwoods, *Sequoia sempervirens*—only a half-hour's ride from San Francisco—is certainly the best known stand of these lofty monarchs in the world. Visitation continues to soar annually; 700,000 people—representing every State and practically every foreign country—walked its needle-carpeted, creekside trails in 1967. In 1908, who would have guessed that these seemingly ageless trees would attract such multitudes in future days? Even far-sighted men such as Muir, Kent and Roosevelt could not have grasped the full significance of this act of preservation.

Muir Woods is only a taste, though, of that magnificent stretch of forest that once stood solidly along the north coast of California. The monument does not have the tallest tree in the world, nor the oldest redwood; it is simply a typical redwood community that took millions of years to evolve. Clover-like oxalis carpets the forest floor. Ferns of ten different species

«

National Park Service photograph

"Sometimes in cathedrals one feels the awe and the majesty of columns. These columns were more impressive than anything of stone; these columns were alive. They were more like gods than anything I have ever seen."—John Masefield.

National Park Service photograph

Muir Woods' canyon from above: the dam-builders saw it as a cistern.

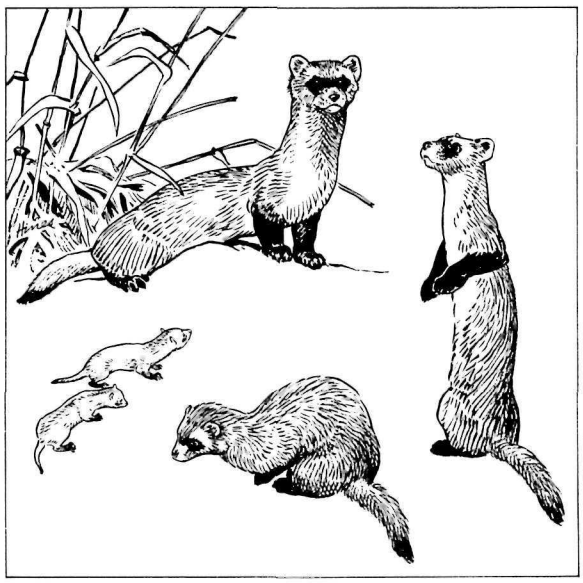
thrive in the humid atmosphere. California laurels, reaching for light, overextend themselves and fall, only to have their branches grow vertically like the trunks of trees. Shade-tolerant wildflowers bloom and add color to the deep-green environment. During the winter colorful mushrooms pop from rotting logs, while silver salmon make their way up swollen Redwood Creek to spawn and die at their place of birth. Amidst all of this natural pageant are columns of gravity-defying redwoods. Hardly a sturdier tree could nature devise. Its wood is practically impervious to insects; diseases are of little consequence; and even that most formidable of all natural enemies, fire, cannot penetrate the tree's asbestos-like bark. Nature has seemingly fortified the tree beyond the measure accorded to most living things. It would stand invincible if it were not for that strangely contradictory newcomer to the redwood scene—modern man.

William Kent's conservation efforts were not to end with Muir Woods. He had long proposed that one Federal agency be responsible for the effective management of the nation's areas of natural and cultural significance. And it was he—then a U.S. Congressman from California—who fought for and eventually sponsored the measure which succeeded in establishing the National Park Service.

Kent's conservation triumphs were not to terminate with the establishment of the Park Service. When more redwoods needed saving, he was there, lending his talents and financial support to help found the highly successful Save The Redwoods League which has, over the years, so well justified its name. It is difficult to assess the entire impact of this man on the conservation movement, especially as it touched on national parks. Truly remarkable were his accomplishments. Certainly John Muir must have exercised a profound influence towards Kent's farsightedness. Muir's writings had awakened the consciousness of a blooming young nation to the urgent need for saving some of America's natural beauty. One can well imagine that Muir's eloquent words were flashing through Kent's mind as the Congressman absorbed, for the very first time, the magnificence of the redwood-clothed canyon which would eventually bear the former's name.

In reality, Muir Woods stands today as a monument to both John Muir and William Kent, and to all men whose vision induced them to privately wage war against the unnecessary despoliation of America's natural wonders. For Muir woods was the very first area to be donated to the Federal Government for the purpose of preserving scenic and esthetic values. Kent forsook a fortune in giving it. Even when his wife questioned the sagacity of going into debt to make the purchase, he reassured her by saying, "If we lost all the money we have and saved those trees, it would be worthwhile, wouldn't it?"

Nearly sixty years have passed since Kent made his original gift. In that period Muir Woods has gained a worldwide reputation as one of the jewels of America's system of parks. Just a few short miles across the Golden Gate Bridge from the international port of San Francisco, the monument is a testimony to the concern and consciences of two great American conservationists, and a challenge to the imagination of visitors from other lands. ■



The black-footed ferret, once widely distributed over the Great Plains of America, is today near the brink of extinction. Its fortunes have ebbed with those of the prairie dog upon which it feeds; the prairie dog has for years been the target of eradication efforts, politely called "rodent control programs."

Sketch courtesy Fish & Wildlife Service

THE BLACK-FOOTED FERRET

By Ruby Lee Corder

THE BLACK-FOOTED FERRET, A LARGE native weasel, is currently considered one of the three rarest wild animals in America, the other two being the whooping crane and the California condor. Much more knowledge and much more public sympathy will be needed if this interesting mammal is to be kept from the long list of creatures totally exterminated by man.

The mammal has a low, slender body of some 23 to 27 inches length, weighs two to three pounds as an adult, and has short legs and a long, bushy, black-tipped tail. When running it "loops" along like an otter or mink. The body is yellowish-brown—about the color of the prairie dogs in whose burrows it lives—and the animal barks like a prairie dog. Its paws are black, and a black band runs across the eyes like a mask. It feeds upon prairie dogs, rats, mice, birds and eggs.

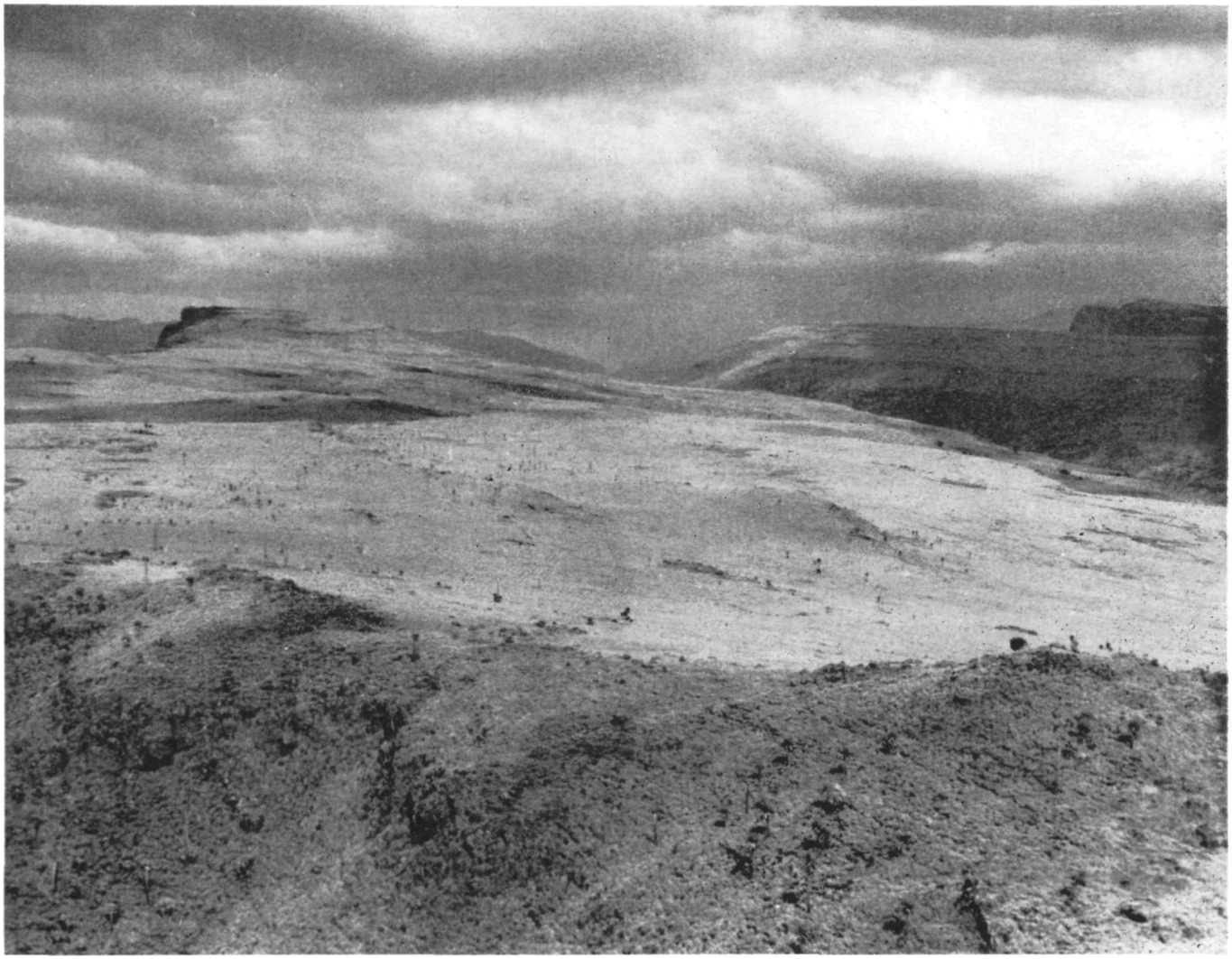
The black-footed ferret commenced to decrease in numbers and range with the thinning of the prairie dog population of the Great Plains of Canada and the United States; the prairie dogs began diminishing with the lessened numbers of buffalo, which historically had grazed and trampled the tall prairie grasses to allow growth of shorter grasses on which the prairie dog fed. In later years the American farmer and rancher assisted the ferret decline by wholesale poisoning of the prairie dog on the grounds that its burrow was a menace to livestock. In modern years the combination of hunting, cultivation, grazing, highway mortality and further elimination of the prairie dog by poison has reduced the black-footed ferret population to near the vanishing point. From its original range over the Great Plains from Canada to Texas, the big weasel is now reported sparingly only in South Dakota, with a few individual sightings reported now and then from North Dakota, Nebraska, Texas, Wyoming and Colorado.

The ferrets normally travel in pairs. They mate probably in late winter, and young are born in early summer; young are grown by September, when they travel in search of mates and new hunting grounds. Winter is the proper time to inspect prairie-dog towns for ferrets, especially during periods when the animals leave their mink-like tracks in fresh falls of snow.

The mammal was first reported in 1851. By 1954 a study reported 90-odd of the mammals in 10 Midwestern States; and since 1965 there has been an active study of the ferret by both state and federal biologists, with many farmers and ranchers cooperating. Proposed steps to help the animal to survive include the protection of prairie-dog towns where the ferrets are known to be present; setting up ferret sanctuaries, and increasing the number of ferrets by captive propagation.

Americans may help save the black-footed ferret from extermination by using caution in poisoning prairie dogs—a practice that is not applauded by many conservationists—and by using a poison that has no secondary effect on other animals. It should be borne in mind that this ferret eats both live and dead prairie dogs.

The public may also be helpful in the campaign by supplying information about the black-footed ferret to the District Game Manager, Department of Game, Fish and Parks, Box 271, Kadoka, South Dakota. The animal's location, date and time of day when seen, and name and address of the person making the sighting should be furnished. ■



Photograph by the author

View of Semien landscape showing the relatively level top of the Semien Massife. Mountain grasslands predominate at elevations of 12,000 to 13,000 feet.

THE SEMIEN MASSIFE, A GIANT VOLCANIC DOME THAT thrusts itself 3000 to 5000 feet above the northern Ethiopian Plateau, is popularly known as the Roof of Africa. The name is appropriate, for this roughly 2000 square miles of highland is the largest contiguous sub-alpine and afro-alpine region in all Africa. Elevations in excess of 13,000 feet are common, with Mt. Ras Dashan, at 15,158 feet, forming the summit.

Faulting and tilting have fractured the volcanic dome, creating an escarpment of 3000 to 4000 feet in height along its western and northern edges. The highland itself slopes in a southeasterly direction. Erosion from the heavy summer monsoon rains has cut valleys of great depth into its gently sloping surface. Parallel ridges or "hogbacks," 12 to 15 miles long and several miles wide, divide these water courses.

The most westerly of the ridges, along with the bordering escarpment, has been incorporated into a new national park, located 13° north of the equator, 350 air miles north of the capital city of Addis Ababa, and 100 air miles northeast of Lake Tana, the source of the Blue Nile. Semien Mountains National Park (also listed by the International Union for the Conservation of Nature as the Menagasha Park) encompasses approximately 30,000 acres of ridge and valley land, plus 20 miles of near-vertical escarpment.

A single stock trail (mule or horse) and two hazardous foot passages are the only routes visitors and natives can follow to reach the high Semien. The distance involved from the nearest roadhead is 20 miles, and the terrain traversed is rugged. Depending on a variety of circumstances —the travelers' physical condition, amount of baggage, and weather conditions—a minimum of two days is required to reach the park area after leaving one's vehicle at the trail-roadway junction.

Why did the Imperial Ethiopian Government decide to establish a national park in this relatively inaccessible part of the country? National pride and world influence each had their role in creating the Semien Park.

Ethiopia has long been aware of the monetary value of the game parks of East Africa. Exchange amounting

Ethiopia's First National Park

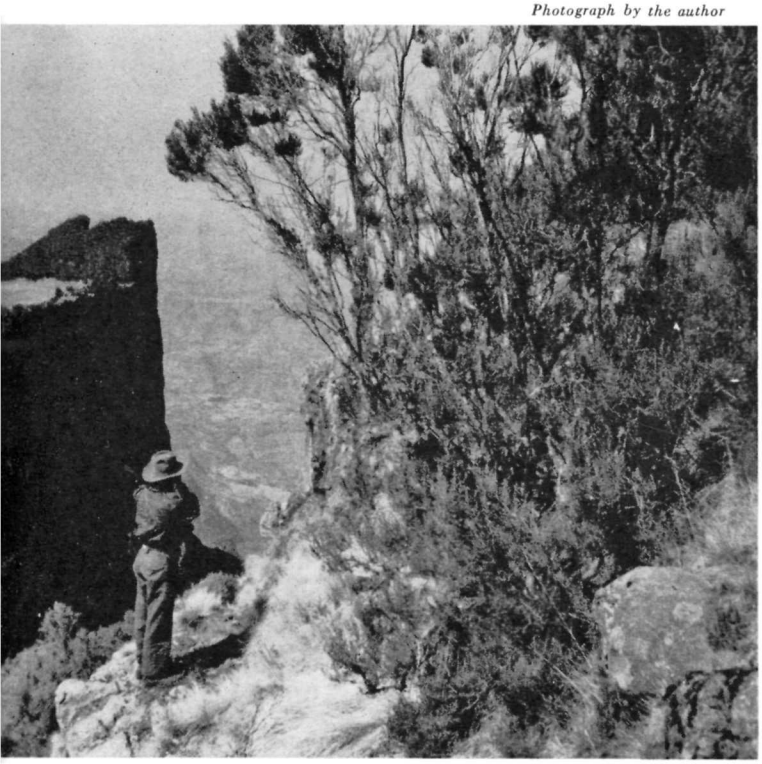
By Laurence R. Guth

to a goodly percentage of the total monetary earnings of Uganda, Kenya, and Tanzania are derived from tourists from all over the world who visit their famous wildlife sanctuaries. Since Ethiopians felt that they, too, had sections of country that warranted development for wildlife viewing, efforts were instigated to survey and develop suitable game parks.

Because of the relatively poor economic condition of the country and its lack of trained personnel in game management and park development fields, the United Nations Educational, Scientific and Cultural Organization and several private wildlife organizations were approached concerning a possible survey of Ethiopia's wildlife wealth. Trained conservationists could then advise the Government on the feasibility of establishing a few high-quality parks. Several professional wildlife study teams and individuals were dispatched to this ancient and colorful land during the early 1960's. From their observations and research almost a dozen areas were recommended for park consideration, and the Semien District was given high priority. The recommendation was based primarily on the need to create a reserve with strict conservation of habitat for the rare Walia ibex. This animal, the most southerly of all the wild goats, is found only in the Semien Massife, and its numbers have been reduced in recent years by native hunters.

Game guard at Semien National Park looks out from the upper portion of 4000-foot Semien escarpment. The large plant at right of game guard is giant heather.

Photograph by the author



Other values were also considered in the Semien recommendation. These included spectacular scenery, mainly associated with that sheer wall of homogenous rock that rises thousands of feet above the lesser foothills and valleys of the Ethiopian Plateau; and the unusual and attractive highland plant life, plus two rare indigenous animals in addition to the Walia ibex—the Gelada baboon and Semien fox. One other consideration was, that this area was one of the few locations in Ethiopia where that sub-alpine and alpine environment could be protected and preserved in its natural condition from the encroachment of the pastoral native.

A new agency, the Imperial Ethiopian Wildlife Conservation Department, was established in 1965 by the Imperial Government; and the officer in charge of this department, with the concurrence of the department's Board of Directors, accepted the recommendations advanced for a Semien Park. Actual field development work commenced with the appointment of a Game Warden in November, 1966.

Because of the park's isolated location, rugged terrain and adverse climatological conditions—torrential rains, freezing temperatures and severe hail storms—physical development will not involve elaborate or costly projects. Trail improvement, a headquarters complex (warden's house, storage buildings, stable and protection personnel's huts) patrol outpost shelters, and a limited number of visitor cabins are the priority construction projects for the immediate future. Building materials such as stone, binding mud, thatching grass and poles can be obtained from the rock outcrops, grasslands and small-tree forest of the Semien. All finished materials must be laboriously packed into the area.

An Industrious People

Labor of an unskilled sort can be hired in the many small villages of the highland. The people of the Semien are a hard-working, industrious group who appear to thrive on adversity. The smallest wage is a fortune, and every job is readily accepted. These people belong to the Amharic tribe, an Afro-Semitic race that represents the ruling order in Ethiopia. Agriculture, in the form of grain crops and pastoral grazing of cattle, sheep and goats, are their only forms of economic endeavor. Because of ancient and basically inefficient methods of farming, the Semien landscape has suffered the destruction that improper plowing, overgrazing and hoof erosion have created over so much of Africa.

Almost all of the arable highland is under cultivation, no matter how precipitous the slope or how isolated the

Photograph by the author

A view down one of the deep, narrow defiles that have been incised into Semien escarpment by waters of its heavy summer rains.

location. Water erosion has destroyed vast acreages of rich and productive topsoil, leaving in its wake barren badlands. This was a land that, until contemporary times, was protectively covered with the native small-forest trees. The desire for more land to cultivate has resulted in deforestation over almost the entire Semien area, a condition also true over most of Ethiopia.

Cultivation occurs within the lower portions of the park (under 10,000 feet) but no new land will be allowed to be brought under the plow. Grazing is prevalent on all the mountain grassland sections of Semien Park, and there is direct competition with the indigenous herbivores. Plans to control the number of grazing animals are presently under consideration.

The protection and management of indigenous animal and plant life has been initiated in the proverbial "nick of time," as human encroachment on this near-virgin Afro-alpine environment was proceeding at a rapid pace. As it is, almost half the present park has already been irretrievably altered by intense agricultural activity.

The plant life found within the park boundaries ranges from the sub-tropical vegetation growing at the base of the escarpment (at an elevation of 7000-8000 feet), through transitional growth clinging to the escarpment walls, and climaxing with alpine mosses adhering to rocky outcrops at the 13,000-foot level.

A short distance below the high, almost barren pinnacles of rock that mark the termination of the upthrusting Semien Massife, the mountain grasslands begin. Growing amidst these short, seared grasses is the silver-gray helichrysum bush and the yellow-blossomed giant lobelia, with its agave-like stalks. Giant heather, 15 to 20 feet high, and giant St. John's-wort are found in sheltered valleys, where they form extensive woodlands. These small trees also grow on shelves and ledges on the escarpment face, where tussock-grass and small ferns form the ground cover. Juniper and podocarpus trees are found in isolated groves at lower elevations. These trees were numerous before wanton felling and extensive agriculture decimated their numbers. Many of the tropical vines, flowers and shrubs at the escarpment base await identification by a trained botanist.

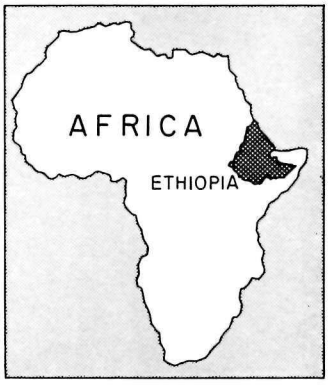
Animal Population Decimated

With the advent of agricultural development, the larger carnivores and the more easily hunted ungulates were eradicated by native hunters. Leopard and mountain reedbuck are no longer a part of the Semien animal community, while the spotted hyena is seen in fewer and fewer numbers. Herbivores such as klipspringer, duiker, and bushbuck are relatively common in the lower elevations. The Walia ibex, with its excellent dark-brown protective coloration, avoidance of mid-day appearances, and primary habitat on the escarpment face, is less frequently seen. But for the patient observer this large wild goat, with its massive scimitar-shaped horns and remarkable agility, will offer a rewarding sighting experience.

The Gelada baboon is the most common of the larger mammals. A large male will stand three and a half feet tall and weight close to 70 pounds. He will wear a cape of luxuriant brown fur on his shoulders, sport a tufted tail, and present a vivid red patch of bare skin at the center of his chest. The animals are found in large bands, often of a hundred or more individuals. They canvass the countryside grubbing for roots and bulbs, barking when alarmed, and scurrying back to caves in the cliff face when danger threatens.

A rare carnivore that has managed to survive in the highlands is the Semien fox. Its high-pitched screaming bark, long legs, and rangy appearance bear a marked resemblance to the American coyote. This fox feeds primarily on two species of grass rats that frequent its upland range—it does not feed on lambs and kids, as claimed by herdsmen. Rabies is apparently decimating the numbers of this yellowish-red-coated animal, and its survival is seriously in doubt. Other animals indigenous to the Semien highlands include the honey badger, jackal, serval cat and an occasional Hamadryas baboon. Wildlife at the base of the escarpment includes Colobus and Varvet monkeys, bushhog and lesser kudu. Avians are not well represented in the park. Birds of prey dominate, with eagles, buzzards, and falcons vying with one another in consuming the plentiful supply of small rodents. The most spectacular bird is the

Mr. Guth recently returned to this country after having served for a number of months as first Game Warden (Superintendent) of the Semien Mountains National Park. Prior to this work he had been a park ranger with the U.S. National Park Service, and he is now with the Service again at Haleakala National Park.



lammergeyer, or "bearded vulture," with a wing span of seven feet. This scavenger, with light brown underside, black back and tufted chin, may often be seen gliding parallel to the escarpment face in search of carrion. The whine of the wind through the vulture's outer wing-feathers as it soars aloft is often the first indication one has of its near presence. Other observable birds include the wattled ibis, hill chat and wheatear, which are fairly common in the grasslands, while the kite and thickbilled raven are familiar visitors to campground and native village.

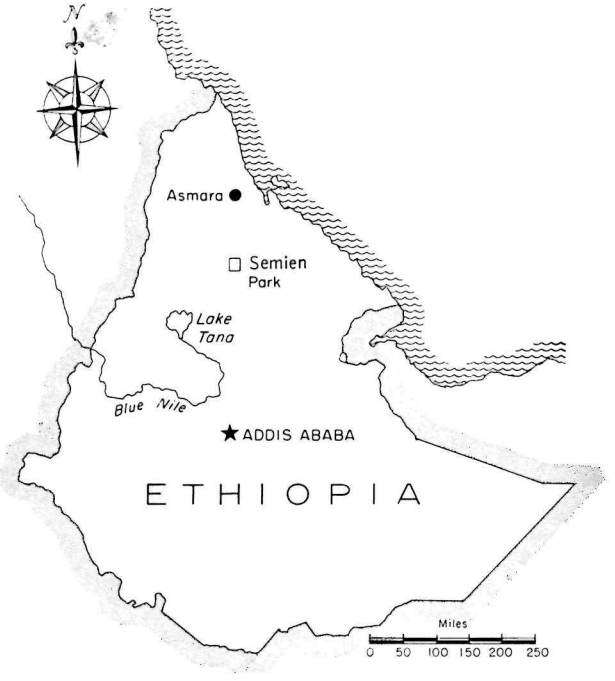
The primary need at the present time in both park planning and operations is formulation and initiation of a meaningful program of animal and habitat protection. The continued pressures and actual encroachment by the agrarian Semien natives on this small island of grass, trees and wildlife should be controlled and redirected if a meaningful game reserve is to be created.

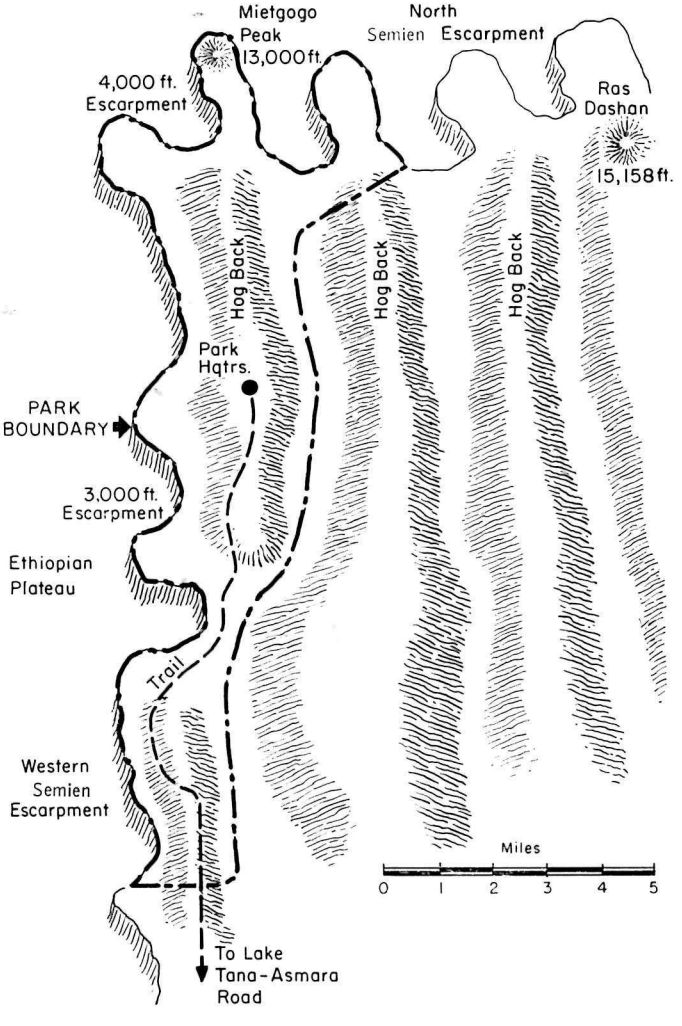
Education directed toward the local population will receive the same high priority and emphasis as that given to establishment of an efficient game-guard force. This program of public information on the value of the park is based primarily on economic consultations. For, with a successful park, jobs can be created, foodstuffs sold, and animals rented. Local pride is also accentuated, for most of these people feel that their land is the most favored location in all of Ethiopia, and that the creation of a park merely substantiates such an opinion.

The game-guard force recruited from local manpower sources is an armed constabulary unit whose main function is the protection and preservation of the area's wildlife. Its men are also the main disseminators of the favorable propaganda that the park is attempting to instill in the minds of the local people. The guards are generally respected and envied; and since their positions carry much local weight, their suggestions are normally followed.

The main hope of the Imperial Ethiopian Wildlife Conservation Department is that strict conservation and protection of a large portion of the Walia ibex, Semien fox and Gelada baboon habitat will eventually result in a reserve favorable for the development of wildlife tourism. How long it will take to restore the total ecology of this area to a level allowing for a marked increase in wildlife is a matter for conjecture.

Scenery, limited wildlife, and interesting native culture can be offered the tourist today. But the rugged trek and lack of creature comforts will probably limit the parks' appeal for most visitors to the region. Establishment of a valuable natural area in a seldom-frequented part of the land must be Ethiopia's reward for the foreseeable future. ■





Photographs on this and next page by Bill Gabriel

A male ruffed grouse rests on fallen log after a drumming performance announcing his territorial claim and perhaps attracting a mate, above. The hen grouse below is feeding on a wind-felled lodgepole pine. Photograph above taken in Grand Teton National Park, May, 1966; photograph below in the Teton National Forest, January, 1966.

In drumming, the male grouse braces its tail against the drumming log and snaps its wings forward to make sound. Photo taken in Grand Teton National Park, May, 1966.

THE RUFFED GROUSE

By Bill Gabriel

ONE OF THE MOST STARTLING EXperiences still available to the wilderness hiker is that of flushing a ruffed grouse unexpectedly. The ruffed grouse is a feathered bombshell that characteristically flushes noisily and flies quickly out of sight into a thick patch of brush. The flight is so noisy and so rapid that the trembling hiker gets only a brief glimpse of the grouse. These birds rarely land in a tree where they can be easily seen.

The drumming of a ruffed grouse is one of the most fascinating courtship displays among the birds. During the spring mating season the males are often heard drumming, but they are rarely seen. This is partly because the direction and distance of the source of the sound is difficult to determine, and partly because the grouse will quietly leave his drumming log and fade into the brush when an intruder appears.

The largest prostrate logs are preferred for drumming logs, and where the supply is plentiful each male grouse may lay claim to two or three logs. A single spot on the log is used for drumming year after year, and it becomes well-worn. Since grouse frequently sleep on their favorite log, it is easily identified by the piles of droppings as well as by the worn spot.

The bird stands crossways on the log with its tail acting as a brace. The wings are moved forward and upward in quick strokes against the air. The tempo of the strokes gradually increases to a blur of sound. The whole performance lasts only about ten seconds, and it leaves the bird panting for breath through its open bill.

Noise of the Model A

The drumming sound of a ruffed grouse has been described as similar to the "Model A," or a one-cylinder gasoline engine starting. I cannot describe it any better. However, a person must be within 70 or 80 feet to hear the whole performance. The first few slow wing-beats do not carry much farther than that.

The drumming sound is made by the wings striking the air in front of the bird. The wings do not touch each other or the log. The purpose of drumming is both to announce the male's territorial claim and to attract a female.

When another grouse, male or female, is attracted to the log, and the drummer is not in breeding condition, he will drive off the other bird. The male struts very slowly down the log toward the intruder, with his tail spread wide and the ruffs on his neck erect. He shakes his head from side to side and hisses at the intruder to drive him off. A similar strut is used to welcome a female when the male is ready for her.

Usually a hen will mate two or three times before she finishes laying her clutch of 11 or 12 eggs. Red squirrels, chipmunks, skunks, and coyotes all raid the nests for eggs, and sometimes the whole clutch will fail to hatch because a hawk killed the hen.

The weather during the first week of a young ruffed grouse's life is more critical than are predators, and cold, wet, rainy or snowy weather during the first week or two of June will wipe out most of the chicks. Grouse that live to be a year old are usually only about 30 percent of the number of eggs laid the previous spring. ■

New Approaches to National Park

The national park system has become so large and of such diverse nature that a new National Park Service organizational plan should be devised, the author believes.

Introduction

RECENT REVIEWERS AND CRITICS FROM WITHIN AND without the National Park Service have suggested development goals for the National Park System during the remaining years of the Twentieth Century. Prompted in part by the 50th anniversary of the National Park Service in 1966, these recommendations reflect a growing realization that the nature of the park system itself is changing rapidly because of the impact of increasing population. Park management cannot be as autonomous as it was when the Service was established. The character of park lands as nature preserves is not as apparent now as it was in the days of John Muir.

Almost all facets of current park administration and management have been considered except one fundamental question:

Is the present organizational structure the one that will be most effective in the future?

In some quarters it is argued that this is not a matter for public discussion, but one for the Service's own internal decision-making hierarchy. Historically, however, the success of the National Park System has been aided greatly by a creative relationship between the Service and the public, especially with those private citizens who have been instrumental in the acquisition and development of the Park System. If this creative relationship between the agency and the public is extended to a discussion of the Service's organizational structure, such a discussion will contribute to more effective administration and management in the years ahead. It is toward this goal that this analysis is presented. Because of the vast holdings within the National Park System and the increasingly diverse categories of lands that are included, and because of new external pressures such as a greatly increased number of visitors on all units within the park system, an examination of the basic administrative and managerial organization of the Service seems timely. A basic realignment of the organizational structure of the National Park Service is, in the opinion of the writer, necessary if the Service is to continue to meet its growing land-management responsibilities.

Historical Background

When the National Park System was established in 1916 the primary objective was to preserve and manage outstanding natural areas and features for the public good. Some were already owned by the Federal Government and others were to be procured. The National Park Service was chartered as the administrative agency for these natural areas. Over the years four other types of public land have been assigned to Service management: historical areas and cemeteries, city parks, national recreation areas, and motor parkways.

At the time the National Park System was established, the nation was beginning to emerge from an agrarian tradition that had dominated life, thought, and government action for 125 years. National character and the governmental process have changed radically in the intervening years. A complex industrial network now expands across once rural landscapes. Highly mechanized farming has become a part of the industrial complex. National transportation and communication systems today are vastly improved over the systems in operation in 1916.

The National Park Service is certainly aware of these national developments. Administrative adjustments have been introduced periodically to meet some of them. Regional divisions were established in the 1940's. Offices for planners and designers were added to those for engineers, rangers, and naturalists. Rehabilitation and expansion of visitor facilities to meet increasing park attendance occupied the "Mission 66" years.

Most important to this discussion are the National Park Service studies of specific problems in park management. For the greater part of five decades, these studies have tended to be surveys of potential federal, state, and local recreation acquisitions. Recently, however, new problems that have developed in park management have led to three notable studies on natural science research, predator control, and the ecology of wilderness restoration and management in parks. Recognition of the need for explicit study and control of natural features and areas places stress on problems different from those which faced Service founders. Despite these studies and despite the use of *ad hoc* and standing advisory boards, Service management has not kept pace. For example, the Service has implemented very few of the recommendations of the National Academy of Sciences Advisory Committee on Research in Parks. And there have been no important innovations in organizational structure since the 1940's. New land acquisition under the Kennedy and Johnson administrations, and

Service Administration and Management

By Philip M. Smith

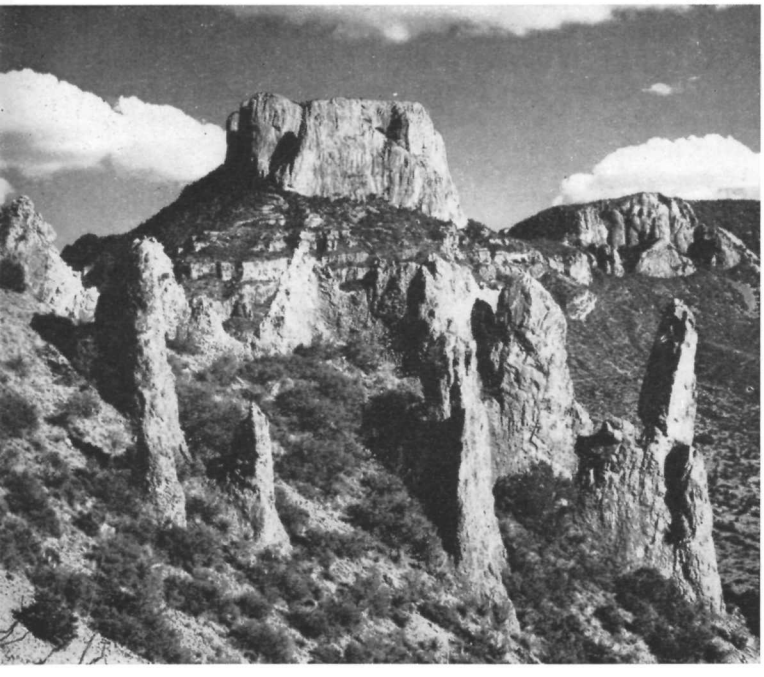
the passage of the Wilderness Act of 1964, have necessitated more developmental planning than was required during Mission 66; yet the administrative machinery for responding to these new responsibilities shows signs of malfunction as the second period of wilderness review begins.

In evaluating the Service's ability to solve the present problems, and to implement the new management techniques recommended by the recent studies, it is important to remember that the basic organizational structure introduced when the Service was established is fundamentally unchanged. This traditional administrative and management system is discussed at some length here, for the present system must be understood to see why it is necessary to implement needed changes.

The present Service management structure is based on the military system of "line" and "staff." In the Navy, for example, operational command of vessels rests with line officers who have advanced up through the ranks gaining "on the line" decision-making experience. Staff officers advise in their specialties such as engineering, supply, and communications. In the National Park Service, responsibility for administration is vested with rangers who advance up a "line of command," whereas staff functions are filled by the naturalists, engineers, and other specialists who make recommendations concerning management. The "ships" in the National Park System are the parks themselves, "commanded" by rangers promoted to the position of superintendent after sufficient career experience.

Big Bend National Park in Texas: a natural wilderness park.

National Park Service photograph



Service administrative control at regional and national levels also centers in the ranger or "line" corps. With the advent of regional offices in the National Park Service, the parallel to the military structure became more nearly complete. In the military, the divisional, fleet, and similar mediating organizational levels serve as processing centers for the dissemination of the line commands from above, for the evaluation and processing of staff advice from below, and for the endorsement of information that proceeds upward. In the National Park Service, a similar function is served by the five geographically dispersed regional offices which manage the National Park System proper; that is, all of the areas except the National Capital Parks, which are a "region" in themselves. This basic structure has remained throughout all past Service reorganizations.

The Army and the Parks

There are four reasons for the initial adoption of such a line and staff system of administrative management and control. The original park units *were* under the control of the military in the years prior to the establishment of the Service. Some of the park personnel then in the military transferred to the National Park Service. Second, when Mather and Albright organized the Service they found veterans of the Spanish-American and First World Wars among those who were most qualified for the administration of what were then remote areas.[1] Third, protection by a quasi-military ranger force was a major responsibility in the earliest days of the Service because of the remoteness and difficulty of access. Fourth, the National Park Service was established in an era when the regulatory

[1] See Robert Shankland, *Steve Mather of the National Parks*, Alfred A. Knopf, New York, 1951; and John Ise, *Our National Park Policy*, Johns Hopkins University Press, Baltimore, 1961.

function of the federal government was in new vogue. "Rangers" in newly formed regulatory and "trustbusting" agencies were protecting the government and public interest in many diverse fields.

The line-staff organizational structure of the military services and the U.S. Forest Service has been studied in detail.[2] By comparison, the results can be extended to a review of the National Park Service's own structure. It is not the purpose of this article to analyze the line and staff systems employed by these agencies and the National Park Service. Whatever its merits elsewhere, the management structure must be greatly altered to meet the changing responsibilities of the National Park Service.

Proposals for Change

If the National Park System today still administered only one type of land as it did in the beginning, a less cogent argument could be made for changing the original line-staff management system. For their career development, Service personnel, both line and staff, are transferred from one park area to another. Each transfer ideally leads to promotion and assumption of greater responsibility. As the park system has grown, the rotation system has moved Service employees through an increasingly diverse number of park types. This leads to anomalies. For example, a ranger whose experience is primarily in natural scenic areas may find himself promoted to the superintendency of an historical site. With several types of land management responsibility it is no longer possible to cover them all under a single-line management system of operations. Different administrative, interpretative, and land management problems exist in wilderness and metropolitan areas just as the units themselves are far apart in location. Rangers may be best fitted to superintend city parks, but naturalists, for example, should be "on the line" in parks where natural features are to be preserved.

The internal land management problems arising from the rapid growth and diversification of lands within the National Park System have been heightened by a subtle and specialized influence from outside the System. The steadily increasing visitor pressure on the parks is without question the greatest of these external influences. By comparison with visitor control, the problems of poaching, grazing, private inholdings, timber control, and predators are small. Providing water for the Everglades and preserving the Grand Canyon will seem minor problems in the future as population pressure slowly but steadily erodes away the quality of all parks. Solutions to the problems of visitor onslaught can come only from very specialized management techniques which cut across current line and staff functions within the Service. The time has come, therefore, for a fundamental reorganization of the Service's administrative structure.

Service master plans, slogans, and multi-year plans all deal with secondary, not fundamental management problems. To treat these, we must draw on recent experience in business, industry, and government where similar problems have been solved with some success. The aerospace and defense industries, and the governmental organizations responsible for the administration of these federal programs have been particularly successful in evolving and adopting changing management structures. The growth in size and in technical complexity of the park system is not unlike that of these organizations. On this basis, I propose four primary changes in the present structure of Service management. Underlying these proposals is the conclusion that the present line-staff command system is not the most effective operational structure for a diversified Park Service. The basic internal personnel structure realignments proposed here can be implemented without serious disruption, even though there are always problems accompanying fundamental change within a well-established agency.

1. *Park administration and management must be realigned into subsystems based on types of park units.*

The arguments for this proposal are based on the new management techniques deriving from systems analysis and planning, programming, and budgeting. Rather than lump park units of all kinds together into a consolidated management with a line of pyramidal command through regional offices as is presently the case, the several major segments of the system must be identified and subdivided by park types. The natural wilderness parks, the recreational areas, the historical parks, the parkways, and urban parks all differ from one another in character and purpose. They should have separate administrative and management structures. While the Service is not hostile to this concept in planning, field operations continue as in the past. In the proposed realignment, natural areas would form one

[2] See for example Morris Janowitz and Roger Little, *Sociology and the Military Establishment*, Russell Sage Foundation, N.Y., 1965, and Herbert Kaufman, *The Forest Ranger*, Johns Hopkins University Press, Baltimore, 1960.

The Blue Ridge Parkway: should it be lumped together with parks?

National Park Concessions, Inc.

***National Parks Magazine* is always pleased to print thought-provoking articles of the kind presented on these pages by Mr. Smith. Publication does not, however, necessarily reflect concurrence of the National Parks Association with views expressed by the authors.**

administrative unit, historical areas another, urban park areas a third, and so on. Policy making, planning, and development could then be coordinated in subsystems whose internal interrelationships are greater than are the relationships between such unlike areas as battlefields and wilderness parks. There will be some overlapping since some parks include diverse types of land. Classification problems created by overlap or conflict will be more than compensated for by the value of being administratively required to recognize the diversity.

2. *Administrative control must be along subsystem lines, and directed by a single national central office.*

New management tools such as the computer, data storage and retrieval systems, and electronic communications systems, plus the present ease of nationwide travel, make multiple regional administrative offices obsolete. There is still reason to organize supply functions geographically, but not administrative functions. With the management tools now available, regional offices administering geographically contiguous park units are not even necessarily effective. Much of the regional division of the federal governmental offices began in the 1930's and early 1940's when transportation and communication systems were primitive compared to today's. Now subsystems in the total park system can be centrally administered regardless of their geographical location. For administrative efficiency, it is certainly better to group parks according to type than according to geographical contiguity, as is now done.

Regional offices do have functions, especially in supply and similar elements of management. These are not administrative nor policy matters, however, but logistical. Regional offices would continue to be maintained in the present proposal, but they would function to service park needs, and would not be in the main line of administrative control. It must be recognized that the proposal is not to do away with needed administrators, but to move them to central offices organized on the principle of park function rather than on the now inefficient principle of geographical region. The lesson of industry is that managements from company to company do not differ in their abilities. What sets them apart is the quality and quantity of information they have available for basing decisions. With parks grouped into similar units and information systems organized around their own special needs, good park management will make better decisions.

3. *Park personnel must be trained as specialists, and promoted as specialists.*

Specialized park problems make the old plan of generalized training obsolete. Specialists in the several fields required to administer and manage the existing and planned National Park System have their greatest value in their areas of special training. The Service career structure must reflect the subsystem land-management structure, and not follow a military line-staff system in which employees regardless of specialization are placed in a common manpower pool. In an earlier era when the parks were primarily nature parks, and when their administration did not require the complicated knowledge and technology necessary today, a single-line career-management structure may have been effective. Now, however, it is impossible for anyone to become so effective a generalist that he can work throughout the National Park System. The knowledge and skills necessary for effective administration and management require the recruitment of specialists whose educational background leads them to jobs where their technical training can be employed. If the Service career-development plan demands naturalists who will be shifted from historical areas to seashores to mountain or glacier parks and then to urban areas, very few if any of the more intelligent, better trained, and highly motivated specialists will join the Service. They will instead take jobs offering a greater challenge to their own personal and professional competencies.

Service planning for personnel employment, promotion, rotation, and training must lead to the introduction of specialists at several grade and pay levels, and the increasing acceptance of trained specialists in operational and decision-making positions. In this regard it is significant that the President's Commission on Crime in the Cities proposed that the police force career pattern should permit lateral entry of specialists at various grade levels. Lateral entry must be encouraged within the National Park Service as well.

It is also important that the line of administrative advancement be open to all personnel. Superintendents best qualified for future management will not necessarily be those rangers who have reached the higher rungs on their individual promotion ladders. The lock-step differentiation of line and staff responsibility must be broken. Specialists must be selected for various administrative assignments because of ability, interest, and policy needs. When special problems such as the ecological restoration of a plant or animal community becomes a dominant consideration within a park, the superintendent might well be selected from the naturalist staff. In a newly acquired national seashore, the superintendent could well be an engineer whose training in beach erosion would be valuable at a policy and operational level.

The career-development pattern must not penalize the employee for specialization as it now does. The present Service structure encourages and even requires periodic rotation for promotion. In the proposed system, specialization would be encouraged and a promotion would be related to competency and excellence within the special area of knowledge. The individual's career would not be placed in jeopardy because he stayed in one park for a long period of time.

The reshaping of Service organization will not contribute to a loss of *esprit de corps* nor to a decline in morale. Instead, such reorganization will lead to opportunities for career development heretofore not possible.

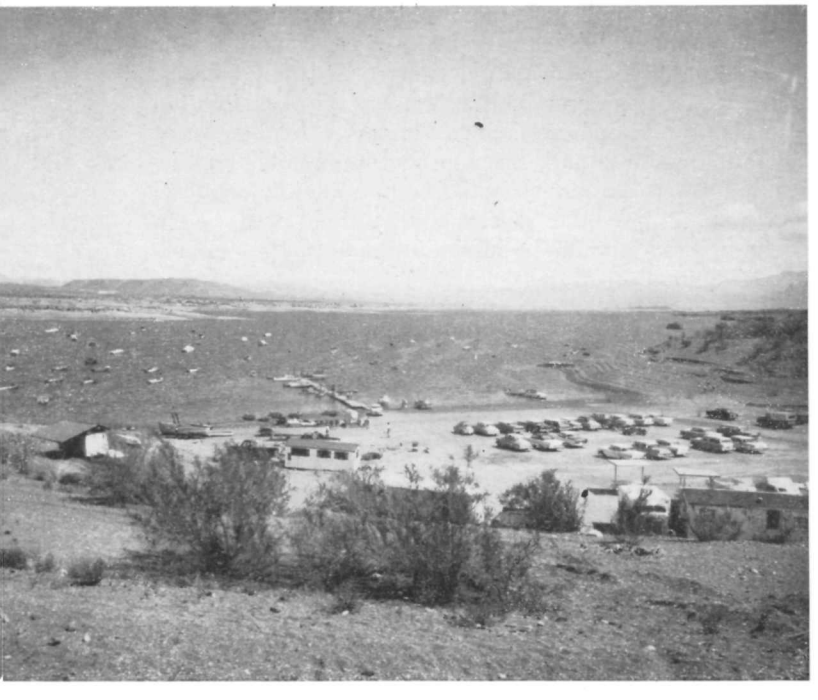
4. *Outside specialists must be regularly consulted in park administration and management.*

The special problems of the extended park system often exceed the competence of Service personnel. The widest possible base of knowledge must be used to provide administrators with a proper range of management options. The new management techniques implied in the reorganization of park units and staff make possible the greater use of outside specialists. With the new skills and technologies available for the assembly and manipulation of plans, budgets, costs, and policies it is possible to rely on a variety of consulting organizations and individual experts for advice and assistance without relinquishing decision-making duties. Before these new consulting possibilities came into existence and were appreciated, there was a tendency in industry and government alike to depend strictly on "in-house" staff for advice and operational support in order to insure control. In the new management, outside agencies are available to identify alternate solutions and options, without committing the executive to a decision as may occur in the pyramidal lock-step system of "line and staff" control.

New attention could be given to the use of outside advisory services at all levels and in all elements of the National Park Service planning, including the architectural and engineering studies, and the ecosystem management problems that are increasingly important as the environmental changes of man's industrial and agricultural complexes make themselves felt in the parks. Economists, who have long advised industrial and commercial organizations, might be consulted regularly to coordinate park policy and planning with local private development around parks. Within the parks there is no place where the inadequacy of the present organization is more visibly demonstrated than in the visitor centers. There, conglomerations of people create sufficiently unnatural situations to negate any value of individualized (or natural) experience. Mass-media technologies must be exploited to the fullest in the presentation of information, not only to inform the visitor, but also to eliminate much of the confusion created by crowds.

National Recreational Area scene: Las Vegas Bay, on Lake Mead.

National Park Service photograph



The use of data and recommendations from outside consultants in no way lessens the administrative control of the parks. Consultant advice is evaluated by specialists within the Service itself. Park administrators can act on consultant advice or not, as they coordinate it with all park needs. The external advisory services available through the consultants and committees provide obvious management benefits. The political advantages of an external consulting system employed at all levels of decision-making should also be considered. When a private individual gives advice under contract or through the appointment to an advisory committee, he is under an obligation to provide his best unprejudiced opinion. But even if this person is not a partisan, such indirect representation, especially in the case of the advisory panel, provides a contact for the private community as a whole with the internal structure of the Service, a situation that does not exist when all designers, architects, landscape specialists, and other experts are employed within the Park Service itself.

Conclusion

I have sketched in only a general way four basic proposals for change in the organizational structure of the National Park Service. Past emphasis on the "natural" in parks may have had a tendency to lead to the techniques now utilized by the Service. The present proliferation of visitors to all areas of the National Park System regardless of category necessitates fullest attention to effective administration and management. The organization of the aerospace, defense, and automotive industries, however distasteful it may seem to the ardent conservationist and nature lover, is the best model for an improved Park Service. Parks are also big business. The time is long past when the park system could be managed with a combination of general knowledge and mystique. The management of natural, historical, and recreational lands today requires a systems-approach technology.

Commerce and industry continue to imprint changes on man's environment, on park lands, and park visitors. The challenge to develop necessary organizational improvements to meet these changes must be made explicit. The proposals in this article are for the purpose of opening serious discussion.

In the end it comes to this: National Park Service administrative and management techniques are outmoded and inefficient. The National Park System is now so large and diverse that a new organizational plan must be devised. The necessity for Service reorganization must be the subject of continuing constructive discussion. And there is no area, I firmly believe, in which individuals with executive experience in the private sector can be of more help. Implementation of their advice would be of benefit to the parks and their visitors. ■

NIGHT VISIT TO AN ENCHANTED SWAMP

By Tom Browne

MY UNCLE FRED HAD NEVER SET A trap or fired a gun during his sixty-odd years. He loved everything in nature, particularly animals. Every living thing was an enjoyment to him. He believed in conservation, never destruction of wild things, floral or faunal. He was a big man of giant strength, but gentle as a soft breeze on a hot day.

So when I visited his home in Oregon's Willamette Valley one summer and canoed to a swamp off the river where muskrats abounded, it was a thrilling experience. We paddled in at dusk, the hushed waterways shining under a full moon, save where tangles of willow, young alders and salmonberry cast black, liquid shadows.

Uncle Fred had great respect for Indians and their ways. He said Indians always related the muskrat to the beaver, deeming them brothers—one big and one small. And that is why Uncle always called muskrats "little beavers." So will I, for it is a more appropriate and better-sounding name for these remarkable non-carnivorous animals.

It was an indelible experience for a 15-year-old boy to visit the stillness and enchantment of little beaver haunts. The velvet robe of night enhanced the beauty of the trip into the swamp, and it seemed an entirely different world to me—a lovely, muted place with cool, energizing, moisture-laden air.

We glided along the swamp's winding channels under strong thrusts of Uncle's paddle. I was riding the prow in regal style. The dipping of our blades (mine, I confess, being of insignificant assistance for propulsion purposes, for I was a novice) made a sibilant gurgling cadence as we floated into the heart of the little beavers' territory.

Uncle stopped paddling suddenly, instructing me to do the same. I laid my paddle across the gunwales gently, but not as noiselessly as he. Gradually the canoe coasted to a stop, little ripples from its prow ironing out the water as smooth as Mother's newly laundered sheets. While my thoughts were busy attempting to unravel the intricate fabric of nature that surrounded me, Uncle whispered: "Look, Tom! See that ripple ahead?" I could see something swimming swiftly, throwing a wake behind like a "V."

"That's a little beaver," Uncle said softly. "And see—his mate behind?"

The two small swimmers breasting the lonely night waters were a sight I have always remembered.

Uncle picked up his paddle and shot the canoe ahead. "We'll see more," he said. "They and their families will be getting up for breakfast."

"Breakfast?" I asked incredulously, although I know he was always truthful.

"Yes; the two we saw were headed for their feeding beds on the high dry spots of the swamp. They dig the sweet roots of bulrushes and other plants and take them to their feeding mounds. And they wash every single piece and sit there eating with their two front paws."

He told me that little beavers' mealtimes were exactly opposite to ours because they were nocturnal and went to bed in the morning, awakening in the evening for breakfast.

I tensed when I observed a ripple breaking the water's smoothness some distance ahead. It was a diminutive swimmer approaching our canoe. Uncle saw it at the same instant, for he stopped paddling, letting the craft drift gently to a stop.

The swimming animal kept coming, and when it glided past our canoe I could have reached out with my hand and touched it. The shine from the moon revealed the glittering black jewels of its eyes. The water breaking under its chin swirled back to form an attenuating ripple. Its body was outstretched, its partially-webbed hind feet propelling and its long, semi-flat tail ruddering its progress.

After the little beaver passed, I felt Uncle straightening his cramped legs for, Indian-like, he always paddled on his knees. "I think we'd better not stay too long," he said. "But before we leave I would like to show you something that should astonish you."

I told him that indeed the evening had been full of surprises for me. He chuckled, saying, "Now, just let's remain as motionless as we can, and watch."

Before long, other little beavers left their burrows and were swimming the waterways, cutting furrows on the moon-drenched surface on their way to forage for their breakfasts.

One little swimmer was close beside our canoe when I shifted my weight awkwardly. It stopped swimming in instant alarm, flattened out poker-stiff on the surface with its tail straight out for a second, then dived with a thunderous whacking sound made by its tail cracking the water.

Immediately we heard other tails whacking all over the swamp, telegraphing danger, that strangers were present. Then all became muted again, the waterways deserted, the little beavers having all immersed for safety.

Off in the thickets somewhere a heron cried raucously. Soon after it came flapping through the sky on slow clumsy wings, its shadow silhouetted against the sky's pale backdrop. It, too, resented our intrusion.

Uncle dipped his paddle and made the canoe come alive with strong pulls on the blade. I thrust mine in and kept in rhythm as we skimmed out of the marsh. Uncle explained the residents had only been alarmed temporarily, that they would soon be breakfasting again on succulent bits of roots and grass, and that we shouldn't be there to disturb them.

I agreed most heartily. ■

News and Commentary

Latin American Natural Resource Conference

For several years many conservation organizations and conservation-oriented individuals in the Latin American nations have felt that the growing interest in conservation and national park matters on the part of Latin Americans ought to merit greater local, national, regional and international cooperation. This feeling has found expression in a number of recent recommendations by Latin American conservationists. For example, a recommendation for a regional conservation conference by the Latin American Committee on National Parks of the International Union for the Conservation of Nature and Natural Resources was placed before the IUCN's executive committee in 1966, and was approved by that body. Similar recommendations have been made since at other IUCN symposia and conferences, and have likewise been approved.

Against such a background of conservation interest, a Latin American Conference on the Conservation of Renewable Natural Resources has been announced for March 27 to April 2 this spring at Bariloche, within Argentina's beautiful Nahuel Huapi National Park—an Andean preserve that was called by one North American writer "one of the superbly picturesque areas of the world," with its setting of snow-capped peaks, blue lakes, cascading streams and forest cover of broad-leaved evergreens. The Conference is being sponsored by the IUCN, and cosponsored by the United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization, and other organizations, under auspices of the Argentine Government. It will consider four main topics: (1) the role of conservation principles and agrarian development; (2) bilateral and multilateral agreements for furthering conservation programs; (3) the need for ecological surveys prior to planning; and (4) the role of private organizations in the development of conservation programs. Field trips of special interest are being planned by the organizing committee, of which Mr. I. N. Constantino of Argentina is chairman. Dr. Harold J. Coolidge of the United States will be honorary chairman of the Conference, while honorary vice-chairmen will be leaders of the various government delegations.

Yosemite Transportation Experiment

An experiment in public transportation, which began late last summer in Yosemite National Park, is being continued this winter and will be repeated next summer. At the request of the National Park Service, the Yosemite Park and Curry Company, concessioner, offered 15 shuttle trips per day, making nine stops within Yosemite Valley over a figure-8 route taking a little over half an hour. Stretch-out vehicles with a roll-back top and seating nine passengers comfortably were used. A fare of 25 cents was charged for the ride between any two points in the hope that the operation might be self-supporting.

The winter route is shorter, with the shuttle making its circuit in 20 minutes.

The Service reports that summer usage averaged only about 4.7 passengers per trip, resulting in a loss to the concessioner, and that patronage this winter is still lower, even though taxi service has been discontinued for the season. So far, the availability of the shuttle service has been publicized only in the local press and in the park itself, and it is pointed out that its purpose is not sightseeing but to provide movement between specific points in the Valley such as the Village Store, the campgrounds, visitor center, etc. Officials feel that the vehicles used were not entirely satisfactory, and the meeting of concessioners scheduled for late January was expected to consider the possibility of using minibuses next summer similar to those employed recently around the Mall in Washington, D.C.

While no analysis has been made of the passenger groupings, it is very possible that employees of the park who had no cars of their own made up the bulk of the users.

The Association congratulates the Park Service and the Curry Company upon taking this first step in a direction it has long felt was essential. The first tentative results, though, would appear to lend weight to the suspicion that public transportation will not be well patronized as long as park visitors are allowed to use their personal automobiles freely.

Piscataway Park Progresses

The way has been cleared to establish Piscataway Park on the Potomac River across from Mount Vernon. Secretary of the Interior Stewart L. Udall has announced a purchase agreement to acquire fee title to 22 acres, including offshore islands, and a five-acre scenic easement in the balance of 96 acres, with the owners of a farm which lies in the Prince Georges County, Maryland portion of the acquisition area. The Secretary said this purchase will enable the Department to initiate action to establish the 1000-acre park, since the United States has now acquired a fee simple or lesser interest in substantially all of the property in the area designated for acquisition. He added that official announcement of the establishment of the park will be made by early February. Thus, the primary purpose of Public Law 87-362, which was the protection of the overview from Mount Vernon, will be fulfilled. It is in all probability the practical use of the scenic-easement device which has made this accomplishment possible. (A discussion of acquisition in less than fee, by Arthur A. Davis of the Department of Housing and Urban Development, appeared in the January Magazine.)

The Human Future

Dr. Barry Commoner, distinguished biologist of Washington University in St. Louis, will speak at the March 8 program of this Association's Conservation Education Center, to be presented in the Auditorium of the Museum of Natural History of the Smithsonian Institution at 10th and Constitution Avenue, N. W., Washington, D. C., at 8 p.m.

Dr. Commoner, who directs the university's Center for the Biology of Natural Systems and heads its botany department, has been much in the news. In a recent address he traced the successive stages of the nitrogen cycle in the natural environment, then examined in detail the ways in which the widespread use of nitrogen fertilizer has upset the balance of processes governing the movement of nitrogen, a crucial constituent of both life and the environment. At the human end of the chain, the dangers extend to the potential harmful effects on the hemoglobin function.

In both this address on the contribution of nitrogen fertilizer to our environmental pollution problems, and in his book *Science and Survival* (Viking Press, 1966), Dr. Commoner has argued that heedless applications of technology are placing the environment under stress "to the point of collapse," and that we "run the risk of destroying this planet as a suitable place for human habitation."

The January 1968 issue of *The Population Bulletin* is devoted to excerpts from *Science and Survival* dealing with some effects of a wide range of such scientific and technological activities. Copies of the bulletin are available from the Population Reference Bureau, 1775 Massachusetts Avenue, N. W., Washington, D. C. 20036.

The Bureau also invites interested readers to send for a copy of its Report for the years 1964-66. The report summarizes the current situation regarding the development of population policies, relates progress that has been made, and also offers a listing of the Bureau's and other selected publications on the population problem.

Parks for New York

News from New York tells of the establishment of several new state parks, six of which will be located within New York City. Another will preserve a vital scenic area of the Hudson Highlands.

The role of the State Government in locating state parks within the City of New York for the first time deserves special commendation, for such parks will bring grace and beauty to the urban community even as they provide citizens with badly needed opportunities for park recreation. The heavy volume of traffic on all roads leading out of the city has made the trip to existing state parks onerous even for those who own cars; for the 38 percent of the city's population without automobiles, such trips can be long and without pleasure.

The 67-acre Harlem River Park on two and one-half miles of shorefront will include a skating rink, playgrounds, sitting areas and facilities for court games. A marina will be located opposite these on the Manhattan side of the Harlem River. Planned state parks at Fort Totten in Queens and Tottenville on Staten Island will also have marinas. The other three city sites will be in Manhattan's East Harlem, on Welfare Island in the East River, and on a portion of the former Brooklyn Navy Yard.

Establishment of the Hudson Highlands State Park has been sought since 1964 and was made possible through cooperation of the state government, business and private philanthropy. The heavily forested 3000-acre tract between Cold Spring and Beacon includes virtually all of the area on the east shore of the Hudson River visible from the river when entering the Highlands either from the north or the south as well as one of the two highest mountain peaks south of the Adirondacks. Most of the area is in its natural state, but it has been open to any kind of adverse development. Preliminary plans envisage limited recreation facilities including a marina, swimming pool, hiking trails and picnic areas.

When the plans of the Georgia-Pacific Corporation to construct a wallboard factory on Little Stony Point came to attention last spring, Governor Rockefeller se-

(*continued on page 22*)

cured an agreement from the company to give up the site. With the help of the State Department of Commerce and the Hudson River Valley Commission another site was selected by the Company and the Little Stony Point site purchased with the assistance of Jackson Hole Preserve, Inc. Later, the agreement of the Central Hudson Gas and Electric Corporation to relinquish at cost 670 acres of scenic land known as Breakneck Ridge was the key to the acquisition of the rest of the land in the proposed park area.

Aransas Refuge Addition

The generosity of Mr. and Mrs. J. Meredith Tatton has recently added 7162 acres to the Aransas National Wildlife Refuge in Texas. The land, an important tract of the Salt Creek Ranch owned by Mr. and Mrs. Tatton adjoining the famed winter home of the whooping cranes, contains excellent habitat for Attwater's prairie chicken, another species of bird hovering on the brink of extinction. It will be managed for many wildlife species by the Bureau of Sport Fisheries and Wildlife. It lies in Refugio and Aransas Counties, with the major portion falling between the north end of St. Charles Bay and State Highway 35.

The whoopers have also benefited from a commendable action of the Sunray DX Oil Company, which brought in a gas well with a rig three miles offshore from the Aransas refuge. To avoid disturbance to the wintering birds, Sunray closed down the rig and posted a sign: "Closed until May 15. This place is for the birds."

Reviews

DESERT SOLITAIRE: A Season in the Wilderness. By Edward Abbey. McGraw-Hill Book Company, 330 West 42nd Street, New York City 10036. 1968. xiv + 269 pages, with drawings. $5.95.

This book begins with an author's introduction that is, to say the least, a bit unusual. It might be called a Pugnacious Preface, in which he remarks that "serious critics, serious librarians, serious associate professors of English will dislike the book intensely; at least I hope so." These are the words of a disillusioned idealist. One may expect something shrill. One is not disappointed. There are no undertones in the manifestos of Angry Young Men with Beards. (See portrait on book jacket.)

This present serious critic is surprised, but undeterred. Let us view the work. The challenge is accepted.

Mr. Abbey was on several occasions a "seasonal" ranger in Arches National Monument, in the southwestern desert not far from Moab, Utah. His connection with the National Park Service gave him an unflattering opinion of the Washington administrators. To him they "are distinguished chiefly by their ineffable mediocrity." *Ineffable* is harsh. The word expresses the inexpressible. But the actual working rangers in the field, he adds, are "capable, honest, dedicated men." That will please the rangers until they get over to page 55, when Mr. Abbey gives them a playful touch with his pinchbar. Now they learn that they are "lazy, scheming loafers. . . Put them to work. . .

It won't hurt them to work off a little office fat; it'll do them good, help take their minds off each other's wives . . ." When the rangers pick themselves up and recover from that love-tap they will realize that as long as friend Abbey is around, enemies are superfluous.

Well, Thoreau was an Angry Young Man, in his day. Incidentally, Abbey has at least one thing in common with Thoreau. The Concord naturalist played on the flute: which may have been one reason his neighbors applauded his removal to Walden Pond. Abbey plays the harmonica. We learn, page 162, that when the author was going down the Colorado River with a companion named Newcomb, "I draw the rusty harmonica from my shirt pocket and play . . . thin, sweet music . . ." *Sweet?* Who says so? The witness is prejudiced. What did Newcomb think? We should like to hear from Newcomb.

So far, this review sounds disparaging. But wait. This serious critic, for one, is actually recommending Mr. Abbey's book, vehemence, egotism, bad taste and all. Partly because we need angry young men to remind us that there is plenty we should be angry about, and scattered all through this volume are just, biting statements we shall do well to heed. Partly because Abbey is an artist with words. There are pages and pages of delicious prose, sometimes almost magical in their evocation of the desert scene. There is, among other gems, a description of the gathering and the explosion of a midsummer thunderstorm in the high desert that is so true to the actuality that you not only experience it with the eye, you smell it, you feel it in your bones. How this man can write! But he can do more than write. His prehension of the natural environment—of raw nature—is so ingenuous, so implicit, that we wonder if the pre-Columbian aborigines didn't see their environment just that way. He says he is a desert rat. He is. Compared with Abbey most of the Arizona School of writers are mice.

So, forget Abbey's bad manners and a certain pose of the roughneck that pleases him to display, and delight in his facility of communication. He has the yowl of a coyote: but be patient. He has the grace of that animal, too. —*Freeman Tilden*

THE LIFE OF THE MARSH. By William A. Niering. McGraw-Hill Book Company, 330 West 42nd Street, New York City 10036. 1966. 199 pages + 32 pages of appendix, glossary, bibliography and index. With photographs and line drawings. $4.95.

Wetlands are not wastelands, but rather the most productive areas of the earth (with the exception of certain sugar-cane fields of Hawaii). In this connection, they not only exceed the best agricultural lands, but they do this without the assistance of fertilizers. Because their productivity is directed into the food chain and cannot be seen or gathered, it is for the most part unrecognized by the public. While there is a popular protest against destruction of a great forest or fine croplands, the dredging and filling of wetlands is for the most part still considered economically proper.

One of the pictures in this book that could have been taken in almost any of our States, showing the use of a marshland as a garbage dump, is explained thus: "This garbage dump has displaced the fish and waterfowl that lived in the productive marsh once located here. The destruction of this wetland reflects what is happening throughout the United States: 127 million acres of marshes, bogs, and swamps have been reduced to about 74 million acres, and these disappear at a rate of one percent a year."

Richest of all the wetlands are the tidal estuaries, where the fresh water flows over the salt water and produces nutrient traps of fantastic food-production value. In selfish ignorance man is steadily destroying these precious watery factories to create marinas, car-parking lots, and waste disposal yards.

For those interested in environmental relationships there is a discussion in detail of the food webs that bind together all living things, and a description of the almost magical effects of water's physical properties on the entire wetland complex. As these areas hold the greatest concentration and variety of plant and animal life, they provide interesting opportunities for the photographer, also. The book combines the attractiveness of the modern picture-book with the text material of a scientific study, which is presented in a most readable way.

This volume on the North American wetlands is one of the "Our Living World of Nature" series, developed jointly by the publisher with the World Book Encyclopedia. Thus it has had the benefit of the creative genius of the author and also the critical eye of a distinguished board of consultants.

For those who may want to follow their reading with actual seeing, or perhaps studying, there is an appendix listing and describing the wetlands of the national parks, wildlife refuges and other public lands. —*Walter S. Boardman*

CLASSIFIED ADVERTISING

20¢ per word—minimum $3. Payment must be enclosed with all orders.

Now!
our 32 National Parks come alive in one great book

The National Parks of America, published by the Country Beautiful Foundation and written by Stewart L. Udall, Secretary of Interior, is a large, colorful volume that will bring the beauty and grandeur of America's 32 National Parks to your living room. Your whole family will enjoy:

• Separate chapters and full color photographs on each of the 32 National Parks. • More than 200 large (9-1/4"x12-1/4") pages. • 80 full color photographs. • More than 200 photographs in all.

The fascinating history of each park, from Acadia in Maine to Zion in Utah, has been described and pictured in detail. The descriptive text evokes the unique atmosphere of each of the 32 parks, and is accompanied by breathtaking full-color photographs. Here is the complete story of America's great living monuments and a long overdue tribute to the National Park System, complete with detailed maps and vital facts on each park.

A perfect guide for vacation planning, you may also want to purchase this book for a friend, school or library. But, no matter how you use it, The National Parks of America will rapidly become the most treasured volume in every collection.

GET YOUR COPY OF THE NATIONAL PARKS OF AMERICA. MAIL COUPON TODAY.

COUNTRY BEAUTIFUL FOUNDATION
24198 West Bluemound Road, Waukesha, Wis.

Gentlemen:
Please send me.....of The National
(No. of copies)
Parks of America: I understand the price for each book is $15.95. If I am not completely satisfied, I understand I may return the book(s) within 30 days and my money will be completely refunded.

Name .....

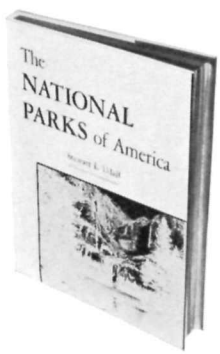
Address .....

City .....

State .....Zip Code .....

☐ Check for $.....enclosed.

☐ Please bill me.



"Here is a book on the National Parks that deserves commendation."
— Devereux Butcher