

Activities of the National Park Service  
in Wildlife Conservation

Wildlife in the National Parks and Monuments is the special charge of the Wildlife Division, Branch of Research and Education, of the National Park Service. That Division conducts the scientific investigations necessary to evolve a well-defined wildlife policy, to assist park superintendents in dealing with urgent animal problems, to determine the status of wildlife in the parks, and to analyse unsatisfactory conditions and to prepare management plans for administering the animal life. Technical local supervision and advice are afforded through the naturalist staff in each park. With the assistance of the ranger patrol, the wildlife regulations are enforced, censuses taken, food and cover maintained, and the safety of the public assured.

The permanent Wildlife Division staff is composed of a Chief, Assistant Chief (also Supervisor of BGN wildlife work), a field naturalist, and a Supervisor of Fish Resources. There is given below summary of activities, other than BGN activities, supervised by that Division:

Areas proposed to be taken into the national park system, or added to existing national parks or monuments, are examined for their fitness as biological units or for superlative characteristics as preserves for species of wildlife not adequately represented in the rest of the system.

Activities affecting wildlife in the various national parks and monuments are checked and general supervision exercised. This includes

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mosquito control insofar as the methods used affect fish, water birds, etc.; control of predators or forms doing damage in campgrounds or headquarters, or when the existence of a prey-species is threatened; insect control; and road or trail building into wildlife habitats.

Research areas are designated. Such areas are portions of parks set aside for research in the wilderness into which no mechanized travel is allowed.

The Field Naturalist is engaged on general supervision of Emergency Conservation Work activities affecting wildlife in the national parks of California and in a study of the fauna of that region. His study of the mule deer of California was published recently, and his survey of the animals of Mount McKinley National Park is in manuscript which is expected will be published as the third volume in the National Park Fauna series.

The duties of the Supervisor of Fish Resources do not coincide with those of employees of the U. S. Bureau of Fisheries. Fish work and stream development improvement, as ordinarily carried on, do not fulfil the requirements of national park principles for restoration and preservation of the areas in their primeval condition. This calls for a special technique and knowledge. Close cooperation, however, is maintained with the Bureau of Fisheries and with comparable agencies in the various states, as fishing, unlike hunting, is allowed in the national parks, and restocking of streams outside these areas is often accomplished from within. Policies and management plans for stream management have been developed, and park administrative officers have been advised on fish cultural

activities in their respective parks.

The results of the work in the general wildlife field are published from time to time and Fauna Number Two, "Wildlife Management in the National Parks", which has just been issued, is the latest publication of the Division.

The addition to the national park system of the Dry Tortugas islands, off the southwestern coast of Florida, which was effected in the late winter of 1935, was important in the conservation of bird life, especially of the sooty and noddy terns. These species are known to nest only on these islands and nowhere else in the world. The area has been designated the Fort Jefferson National Monument, and the further extension of the boundaries to include the present Key West Bird Reservation is now contemplated. Administrative protection can thus be given to a group of ornithologically important islands or keys without additions to the staff necessary for patrolling the Dry Tortugas, and will give protection to a number of species of birds now scarce or vanishing.

One of the most important forward steps in wildlife management of the last year was the accomplishment of elk reduction program at Yellowstone National Park. The history of the large elk herd and its effect on the restricted range is well known. It was determined that the numbers of the animals must be immediately reduced from 13,000 to 10,000 to prevent immediate serious losses and the completion of destruction of the range. After an extension of the hunting season by the State of Montana in country surrounding the Park had, by reason of adverse weather condition, failed to accomplish the purpose, the elk were trapped, transferred to

corrals, and selected animals were shipped to other regions for restocking or were butchered for meat, which was given to public welfare agencies or to Indian reservations.

A statement of the present plans for wildlife conservation under the Emergency Conservation Work program can best be made by describing the present set-up and the work being carried on in the various national parks and monuments.

The wildlife work is under the direction of an Emergency Conservation Work Wildlife Supervisor whose office is in Washington. The country is divided by the west boundaries of Minnesota, Iowa, Missouri, Arkansas, and Louisiana into two regions, each under the supervision of an Assistant Supervisor--one located in Washington and the other in Berkeley, California.

The Western region is divided into three sub-regions: (1) Pacific Northwest, in charge of the Assistant Supervisor; (2) The Pacific Coast area whose Wildlife Technician is located at Berkeley; (3) The Southwest, with the Wildlife Technician in charge located at Grand Canyon.

In addition to three Assistant Wildlife Technicians located at Washington, Great Smoky Mountains National Park, and Grand Canyon National Park, respectively, the actual field force is composed of ten Resident Wildlife Technicians assigned to various parks. Appointment of another Assistant Technician for Yellowstone National Park is pending. The general plan of work being accomplished by these technicians is as follows:

Zion and Bryce Canyon National Parks, Cedar Breaks National Monument:

A study is being made of the bighorn or mountain sheep which are much

reduced in number in this territory. Other studies are a reconnaissance of the range which, being overgrazed, is in very poor condition, and considerably eroded; the relationships of the porcupine to ponderosa pine; and a survey of the birds of the region.

#### Yellowstone National Park:

The resident technician assigned to Yellowstone National Park has obtained splendid results in making a census of the mountain sheep, an accurate account of which had never before been made, as well as an account of the pathology and parasitology of the species. He also has gathered extremely useful and badly needed data on the life story of the wapiti or elk, and during the recent elk reduction program, with the cooperation of the Montana Veterinary Laboratory, made an exhaustive study of animals slaughtered to obtain information on parasites and pathologic conditions. Parasitic studies have also been made of a number of species of birds and of small mammals. A very thorough set of notes has been made on the overgrazed sheep range on Mount Evans and on the food habits of that species. A number of specimens of mammals and birds have been prepared for the scientific collection and for the museums in Yellowstone.

#### Wind Cave National Park:

A Resident Wildlife Technician was on duty in Wind Cave National Park from August 1 to February 15. He made studies of the wapiti and bison as well as a survey of the bird life of the park and surrounding southern portion of the Black Hills. Definite plans were made for a forthcoming revision of the game fences for the better enjoyment of the big game herds by the public.

Many diverse matters have been handled in the Southwestern National Monuments, including measures which should be taken for the better protection of antelope at Wupatki, Petrified Forest and Bandelier National Monuments; the life history and factors affecting the abundance and welfare of Merriam turkeys in Bandelier, and the possible reestablishment of turkeys at Chiricahua National Monument.

In Death Valley National Monument a survey has been made of the springs and water holes for factors affecting the mountain sheep, which in this area have been steadily decreasing in numbers.

In Shenandoah National Park a survey was made of the winter birds, of the condition of quail and ruffed grouse and of white-tailed deer, a planting of which was made about a year ago. The Assistant Wildlife Technician working out of the Washington Office, besides these studies, has attended to wildlife affairs on the national monuments from Virginia north and has included work on such problems as unduly high casualties among fish at George Washington's Birthplace, muskrat poaching on Jamestown Island and abnormal conditions caused by especially severe winter at the Gettysburg and Fredericksburg and Spotsylvania Battlefield areas.

In Rocky Mountain National Park adverse factors affecting the grazing mammals, especially the bighorn, received the bulk of the time of the Resident Wildlife Technician assigned to this area. Range quadrates were established and checks of these and previously made quadrates were made. A start was made on a study of the food habits, relative abundance, and ecological importance of the porcupine.

The Resident Wildlife Technician in Mount Rainier National Park spent most of his time during the summer on the study of the birds of the region. The winter months have been devoted to a study of the unsatisfactory status of deer, food available at that season, and to factors, such as, poaching and predatory animals in their effect on the deer herd wintering a few miles to the south of the park boundary.

The Mount Olympus National Monument, because of its growing importance in view of a projected extension, has received special attention from the Assistant Supervisor in whose region it lies. His work included a survey of additional areas needed for proper maintenance of the wildlife within the present Monument boundary, an area entirely inadequate from the standpoint of biological year-round conditions. He also has made a study of the Roosevelt elk.

At Mammoth Cave National Park, Proposed, the Resident Technician has studied the various proposed extensions of the boundaries, had made a general survey of the birds and small mammals, and studies of the distribution and population of white-tailed deer and of such adverse conditions as periodic burning from which the country has suffered, and poaching and over-hunting. A biotic succession research area has been recommended.

Due to the fact that Great Smoky Mountains National Park is in the formative period, two Resident Wildlife Technicians and a supervisory Assistant Wildlife Technician have been assigned to work on proposed boundaries as affecting wildlife, to see that wildlife habitats are preserved during the extraordinary heavy road and trail building period, and to make preliminary studies of the plant and animal life of the park

for future educational work.

At Grand Canyon National Park work has been concentrated on the study of mountain sheep and a count of deer in cooperation with the U. S. Forest Service and the Bureau of Biological Survey on the Kaibab Plateau. Research areas set up in the past have been examined and a new one proposed.

The status of bighorn is receiving study in Glacier National Park. A survey has been made of the winter food and range of deer and, in portions of the park where it is over-populated, attention has been paid to the problem of reduction of artificial feeding.

During the short period that a Resident Wildlife Technician was assigned to Crater Lake National Park and Lava Beds National Monument in the summer of 1934, a wildlife reconnaissance has been made.

In Grand Teton National Park a Resident Wildlife Technician was on duty during the summer of 1934. General studies were made of the birds and small mammals and of the summer movements of mountain sheep.

Detailed observations on food habits, behavior and enemies of such mammals as fisher, pine marten, California mule deer and cougar have been made in Sequoia National Park by Mr. Joseph E. Dixon, Field Naturalist of the Wildlife Division, who has also inspected CCC projects. These projects in other parks and monuments where a Wildlife Technician is working have been under their supervision for details of the work likely to affect wildlife and the work done by these men on the ground has been invaluable in the attempt to preserve wildlife habitats and, insofar as possible, wilderness conditions.



A special study of the southern elk herd and its relation to agriculture and grazing interests in Jackson Hole was made by the Regional Assistant Supervisor assigned to the Berkeley office.

Recommendations for Future Activities. With the continuance and extension of the Emergency Conservation Work program in the national parks and monuments, it became even more imperative that continual and careful supervision of the work be exercised by competent men trained and experienced in wildlife work. The future of wildlife will for many years be affected either favorably or unfavorably, by the character of work done in roadside clean-up and fire hazard reduction, for too thorough extensions of these activities will result in animals and birds being pushed back from the highways to the depth covered by the clean-up operations.

Most of the above-mentioned activities of scientific research should be carried on, as well, for this work is continually accumulating data of great importance in determining the proper methods of management of our wildlife. Range reconnaissances should be instituted for several areas, such as that covered by the bighorn and wapiti of Yellowstone, the wapiti and deer of Rocky Mountain, the big game mammals of Wind Cave, and the antelope of a number of areas in the Southwest. Those areas will require expert attention if they are not to be permanently impaired. Such management can be followed only if there is at hand information on the actual state of the range, the forage plants used by the animals, and the probable results of our interference with the natural course of events.

The wildlife work should determine generally the original status of the fauna in each park region with the hope of defining the goal of wildlife management and establishing the comparative basis for analysing subsequent faunal changes. Eventually it is hoped to determine the history of the fauna under the influence of white man in order to trace the cause of present conditions and to learn what unfavorable influences may be averted in new projects. An intensive survey of the present vertebrate life of each park should be made to learn as much as possible about all forms and their economy. That information should result in the development of a management plan which should be an important element in the present picture that still approximates the primitive state. It should devise ways of restoring species which have departed from their original status. It should also make adjustments for species which can only be saved under extremely artificial conditions.

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