

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HORACE M. ALBRIGHT TRAINING CENTER
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WILDLIFE MANAGEMENT IN THE NATIONAL PARK SYSTEM

A General Review

During the course of your studies you have or soon will become familiar with many legislative landmarks, which have established a philosophical climate for the conservation of natural and manmade resources within parklands administered by the National Park Service. The Congressional Act of August 25, 1916, creating the National Park Service is one of particular importance. Its referral to the conservation of native animal life and its provision for the "... enjoyment of the same in such manner and by such means as will leave them unimpaired for future generations" form the primary foundations for wildlife management.

Two significant considerations of this act became quite apparent. The first can be considered as inferring that management or manipulation rather than passive protection will be necessary to achieve the stated goal. The second point involving wildlife and in effect, overall park management, deals entirely with the matter of blending the so-called noncomplementary functions of conservation and use into a cohesive unit. In considering this second point, the logical question can be asked as to whether these two functions or responsibilities are truly inconsistent with one another?

In America, a common attitude until 1905 was to perpetuate or string out all wildlife resources rather than to improve enjoyable and usable population (Leopold, 1933). In spite of the admirable quality of this theory, which may or may not be appropriate when applied to all forms of wildlife, the continuing decline of certain wildlife populations resulted in dogmatic thought and public law aimed solely at a passive protection of natural resources. This was a commendable cause. However, an accelerated overuse of certain species prompted the birth of Theodore Roosevelt's concept of "conservation through wise use." Gifford Pinchot's (1910) later formula of "the greatest good for the greatest numbers for the longest time," expanded the basic foundation for conserving natural resources.

While Pinchot's formula may be the foundation of conservation thinking and serves a useful purpose in guiding man toward programs of wise use of all resources, the very simplicity of his statement

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as well as language of the Service's Organic Act subject both to diverse interpretations. What, for instance, is the greatest good of a resource? How should a coyote be used for continuing enjoyment? The forester, game manager, farmer, stockman, miner, and recreationist will continue to develop different answers and each in his own right will be valid. It is therefore understandable that concepts involving management of wildlife resources within natural parks administered by the National Park Service largely reflects a position not generally ascribed to by other natural resource management agencies.

Past Philosophies and Practices

Predating all of these considerations, we cannot afford to overlook the 1894 Lacey Act landmark for conservation activities at Yellowstone National Park. For it was in this specific legislation that Congress developed a definite philosophy of passive protection of wildlife, which in spite of its timeliness during the early 20th century, was to be perpetuated for too many years. In short, the birds and mammals of Yellowstone National Park were fully protected by this Act from any activity which would result in the loss of individual animals. On the other hand, it provided for the use of game fish within the limitation that their harvest was to be accomplished solely by use of hook and line. Wildlife populations were therefore protected from hunting and loss of habitat due to fire and other decimating land use practices. For many years even predatory animals were controlled in an effort to protect the "good" from the "bad." As a result of this and similar legislation, many of the Federal parks played significant roles as refuges for wildlife. Appendix A is one example of the valuable protective role played by national parks as elk transplanted from Yellowstone are known to have formed the nucleus of most current day herds, including those at Rocky Mountain, Blue Ridge, Carlsbad Caverns, Mount Rainier, Glacier, and Wind Cave.

Few major changes occurred in the Service's philosophy of managing wildlife solely through protection during the first 40 years of its existence; although sporadic ungulate control programs were, for example, carried out at Zion, Yellowstone, and other parks. The delay was undoubtedly due to the fact that land uses adjoining many national parks were relatively unaltered from a longstanding primitive condition. During this same period, the science of wildlife management evolved rapidly within other conservation agencies as a discipline aimed primarily at the production of huntable populations.

Certain management principles are, however, now finding greater acceptance among park advocates. Recognition that all natural resources form an integral whole, or ecosystem, and that protection, rather than conservation, is not in itself a substitute for

maintenance of adequate habitat, are two examples. This is as it should be.

Ira N. Gabrielson (1951) recognized and stated that "Few people realize that man by his mere presence and by the changes in the landscape resulting from his activities are the more important factors affecting wildlife populations." Dr. Gabrielson calls our attention to a most important park management consideration. Our concern, efforts, and planning as resource managers should be directed toward moderating and eliminating adversities affecting park environments and re-creating and maintaining ecological integrities to the maximum degree possible. Public use and enjoyment are, however, as much a part of the Service's conservation scene as is protection, and their variable effects upon the various forms of wildlife must be appreciated in overall park planning.

The recognition of man's influence upon park ecosystems can perhaps best be related through a brief review of developments leading to the appointment of Secretary of the Interior Stewart L. Udall's Special Advisory Board on Wildlife Management, or as more commonly known, the Leopold Committee. It had long been recognized, as far back as the early 1900's that ungulate populations in some national parks were increasing to levels where they were causing or threatening serious damage to their habitat, themselves, and other forms of wildlife.

Recommendations for reducing herd impacts on park habitats had been made many times. The traditional "protection only" policy was, however, difficult to modify due in some measure to public opinion and the position of many of our friends who were most effective preservationist spokesmen and supporters of park programs. Failure to implement adequate programs to remove surplus animals resulted in a buildup of abnormal population levels and accelerated damages to both wildlife and their habitat. As a result, entire ecosystems were seriously and adversely affected. When corrective action was eventually taken it necessarily involved large numbers of animals and attracted considerable public attention. The public, particularly special interest groups, protested and denounced the Service's action and its techniques of managing wildlife resources.

The Leopold Report and Updating of Service Thinking

On December 7, 1961, near the height of the Yellowstone elk reduction controversy, the Executive Committee of the International Association of Game and Fish Commissioners met with the Secretary and members of his staff to protect the Service's long overdue reduction. During this meeting they made three demands upon the Secretary.

1. Surplus wildlife in existing parks should be cropped by hunters.

2. Hunting would be allowed in all new parks and other areas taken into the System.

3. Hereafter, when an area is added to the System in any category, wildlife management would be under state controls.

It was soon after this meeting that the Secretary announced the appointment of five outstanding scientists and conservationists to his Advisory Board on Wildlife Management.

The Board's first report entitled "Wildlife Management in the National Parks" (Leopold et al, 1963) was submitted to the Secretary on March 4, 1963. While the primary object of this study was wildlife management, of which the eight primary report recommendations are briefed below, it was recognized that this consideration could not be separated from the full spectrum of park management. It was also noted that management of habitats is the key to proper management of the wildlife resources.

Recommendations of the Leopold Committee

1. The management goal for natural parks should be to preserve or re-create the ecological scene as viewed by first visitors.

2. New skills and knowledge are demanded and they should be developed through expanded management oriented research.

3. Use of artificial population control measures for the larger hoofed mammals may sometimes be necessary when natural predation is inadequate.

4. When excess ungulates migrate to lands where public hunting can be used as a population level control, close cooperation in both study and management should be achieved between the National Park Service, state fish and game departments, and other interested agencies.

5. If normal game movements do not occur, excess animals must be removed, yet it is recognized that live trapping and transplanting is often not a practical control method.

6. Direct reduction is the most economical and effective population control technique and should be under complete jurisdiction of the National Park Service. Recreational hunting is inappropriate and a nonconforming use of the natural parks.

7. Although most direct reduction can best be accomplished by the National Park Service, the need may arise where use of public shooters is advantageous under Service controlled selection, training, and supervision.

8. Full development of public hunting opportunities within recreation category areas is a valid and potentially important resources use.

Any action we take or do not take with respect to the management of one resource will have some effect upon another. We must know or find out what this effect will be. The Assistant Secretary for Fish and Wildlife and Parks (Cain, 1966) recently made this point very clear in a talk to a group of Department of the Interior scientists, and it has particular significance to planners and resource managers of the National Park Service.

"Until recently, our thinking has not been ecological. It has dealt with individual resources, not the whole natural resource complexes. Development and utilization have been piecemeal. We have held back from viewing the environment as a whole composed of indivisible parts.

All of us must try to see the world about us as a whole working mechanism. We must understand the species of primary interest, and we need to understand the ecosystems of which they are a part. We need to take a long, hard look at any program element and any way of doing things that we have become accustomed to.

It is not enough to be able to build a road, a dam, a bomb, a rocket, or to make a new pesticide or drug. If it accomplished one purpose, we must ask ourselves what other consequences there may be. What are the side effects? What disservices occur that may diminish or counterbalance the benefits? How can adverse results be minimized? And if they cannot, then should we embark on a project at all?"

Future Planning Development for Improving the Management of Wildlife and Related Resources

The 18th century literary giant Samuel T. Coleridge reportedly wrote the immortal poem "Kubla Khan" after awaking from an unusually deep sleep induced through sedation. He obviously had a fantastic inspiration which resulted in brilliant thoughts. The significance of the incident to management of wildlife resources is not based upon these considerations. Rather, it illustrates the fact that his inspiration was not an end in itself and that a final product was reached through positive action, the writing of the poem. The analogy to park wildlife and park ecosystems is quite apparent. The need for action through active management programs rather than a passive protection of oftentimes deteriorated resources must be achieved if park visitors are to effectively enjoy and be inspired by representative samples of primitive America.

The resources management plan requested in the Service's FO 22-65 (Baker, 1965) is designed to guide area implementation of the 1965 Leopold Report. Edward C. Stone (1965) and M. L. Heisselman (1965) have applicable comments on this subject which should be of value to Service natural resource managers in their development of park resources management plans. The preparation of these plans will require a good deal of evaluation of the relative merits of management actions we have been accustomed to and ingenuity to find improved methods. We will need to re-evaluate among other things, the location of roads, trails, other physical facilities, insect and tree disease control programs, soil and moisture activities, fire control activities, and the management of campgrounds and picnic areas. We will need to consider what constitutes an acceptable level of visitor use consistent with standards for conserving the national parks. Our present management of visitor use impacts may, in time, accelerate an improved climate for implementing a visitor carrying capacity concept comparable to the utilization of habitats by native park wildlife populations.

In addition, implementation of the Leopold Report will require the establishment of present and past ecological conditions for given areas. We must find out what we want to manage, then determine how we shall manage it. Certainly it must be apparent to all of us that we do not have all of the answers to these questions and that a good deal of management oriented research will be a prerequisite to many management activities. The development of resources management plans as well as the subordinate wildlife managements plans are, however, a means to our overall objectives and will afford us the opportunity to review all considerations and needs.

Service Policies for Management and Use of Wildlife Resources (NPS, 1965)

Natural Category Parks

Resources Management

Plant and Animal Resources: Natural areas shall be managed so as to convey and portray as a composite whole the indigenous fauna, flora, and scenic landscape. Management will minimize, give direction to, or control those changes in the native environment and scenic landscape resulting from human influences or natural processes of ecological succession. Missing native life forms may be reestablished, where practicable. Native environmental complexes will be restored, protected, and maintained, where practicable, at levels determined through historical and ecological research of plant-animal relationships. Nonnative species may not be introduced into natural areas. Where they have become established or threaten invasion of a natural area, an appropriate management plan should be developed to control them.

Resource Use

Disposal of Resources: Natural products obtained as a result of resource management activities, physical development projects, or the adverse effects of natural phenomena that are excess to the management needs of a natural area shall be disposed of in accordance with Federal laws and procedures.

Fishing: Fishing may be permitted in a natural area when consistent with the perpetuation, and where necessary, the restoration, of the natural aquatic environments and the natural aquatic life.

Public Hunting: Public hunting shall not be permitted in natural areas except as may be specifically authorized by law.

Historical Category Parks
Resources Management

Plant and Animal Resources: When indigenous plant and animal resources are a significant element of a historical area and are so recognized in the Master Plan for the area, they shall be managed in a manner similar to those of natural areas to the extent such management is consistent with the preservation and presentation of the prime historic resources of the area. Non-native plants and animals may be introduced into historical areas when their presence contributes to the recreation of the historic scene.

Resources Use

Disposal of Resources: Natural products obtained as a result of resource management activities, physical development projects or the adverse effects of natural phenomena that are excess to the management needs of a historical area shall be disposed of in accordance with Federal laws and established procedures.

Fishing: Fishing may be permitted.

Public Hunting: Public hunting shall not be permitted in historical areas, except as may be specifically authorized by law.

Recreational Category Parks
Resources Management

Plant and Animal Resources: Management of the plant and animal resources of a recreational area shall be consistent with the achievement of the primary purpose of the area. Nonnative plants and animals may be introduced into a recreational area when they contribute to fulfilling the intended use of the area.

Resources Use

Public Hunting and Fishing: Public hunting and fishing are resource uses which are desirable and compatible with fulfilling the mission of the National Recreation Areas administered by the National Park Service. This policy has its foundation not alone in the legislation affecting specific areas but also in the report of the Secretary of the Interior's Special Advisory Board on Wildlife Management in the National Parks, approved by the Secretary on May 2, 1963. It is the responsibility of the National Park Service to implement this policy through sound administration, management, and use of the wildlife and fisheries resources in these recreation areas.

Fish and wildlife management involves two principal management functions, i.e. (1) the management of the habitat--soils, water, and vegetation; and (2) the management of harvesting fish and wildlife populations by the public.

In National Recreation Areas administered by the National Park Service this latter function is recognized as being within the regulatory authority of the individual states. The states should regulate the taking of fish and wildlife by the public, including such matters as seasons, bag limits, and licensing, and provide for the joint cooperative enforcement of such regulations.

The first management function is recognized as the responsibility of the National Park Service. In carrying out this function, as well as its responsibility for the overall recreation program of the area, the Service may designate zones where, and establish periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, or other public use and enjoyment of the area. Regulations prescribing such restrictions shall be issued after consultation with the states.

The management of fish and wildlife in recreation areas must be a cooperative endeavor with the states. These cooperative endeavors will be affected through Memorandums of Understanding with the respective states.

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Appendix A

LIVE ELK SHIPMENTS
FROM NORTHERN RANGE OF YELLOWSTONE NATIONAL PARK

1892 - 1965

Alabama	50	New Mexico	1,290
Arizona	308	New York	132
California	97	North Carolina	40
Colorado	268	North Dakota	73
District of Columbia	32	Ohio	25
Florida	3	Oklahoma	24
Georgia	4	Oregon	83
Idaho	810	Pennsylvania	181
Illinois	17	South Carolina	2
Indiana	35	South Dakota	276
Iowa	3	Tennessee	2
Kansas	15	Texas	334
Louisiana	40	Utah	179
Massachusetts	4	Virginia	258
Michigan	171	Washington	412
Minnesota	45	West Virginia	25
Mississippi	6	Wisconsin	101
Missouri	85	Wyoming	1,019
Montana	5,479		
Nebraska	8	Argentina	6
Nevada	32	Canada	363
		Mexico	145
		Total	12,482

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