

August 18, 1944.

SPECIAL REPORT

Wildlife Conservation in Yellowstone
National Park

The purpose of this report is to briefly set forth the accomplishments in the field of wildlife conservation in Yellowstone National Park for the period August 31, 1943, to August 18, 1944, and the status of the principal species of larger animals, as requested in Region Two Office Memorandum No. 44-35, dated July 27, 1944.

BISON: An important step, in a program designed to place the bison on a self-sustaining basis in the park, was taken during January and February 1944, when 400 bison were eliminated. Three animals were shipped alive for restocking purposes and 397 were slaughtered. The hides and all meat, amounting to approximately 164,725 pounds, were shipped to seventeen Indian agencies and Indian schools.

Investigations of the extent of brucellosis infection in bison in the Lamar area yielded the following results: Total reactors, 82 or 20.7%; Total suspects, 63 or 15.9%; Nonreactors, 252 or 63.4%.

The above results show a lesser degree of infection than in 1942 when similar investigations were made.

A census of the bison in the park made during February and March of 1944, when conditions for counting were good, yielded the following: Lamar area, 352; Pelican area, 222; Hayden Valley area, 135; Fountain Flats area, 38; Total, 747.

During the month of May 1944 a total of 59 bison calves were counted in the Lamar area but conditions were not favorable to determine the annual increase in other areas.

Due to the unusually mild character of the winter, bison in the Lamar area were fed only 13 tons of hay over a period of 14 days in March when weather and snow conditions were most unfavorable. This represents the shortest feeding period on record.

An outline of proposed investigations and studies of the bison in Yellowstone National Park was prepared and submitted for consideration. It is recommended that future bison management plans be based on the results of the investigations which should be carried on when sufficient personnel and funds are available for the work.

ELK: The northern Yellowstone elk herd was reduced by 8,102 animals during the winter of 1942-43. Accurate census figures secured by intensive and complete field counts revealed that this herd totalled approximately 7,363 elk in the spring of 1943, and it was estimated that the calf crop increased this total to 8,651 by that fall. Weather conditions during the fall of 1943 were mild and the winter which followed was a period of unusually light snowfall. Elk remained in the park and hunters in adjacent areas of Montana took only 125 elk while 9 were shipped alive for restocking purposes and an estimated 100 died of natural causes. With the addition of the annual increase, it is estimated that the northern Yellowstone elk herd will contain approximately 10,000 animals at the beginning of the 1944 hunting season.

It is recommended that 3,000 elk be removed from this herd by hunting outside the park boundaries in Montana. This will reduce the herd to about 7,000 animals, which is a conservative estimate of carrying capacity of the winter ranges.

The Gallatin elk herd is expected to contain about 2,700 animals by fall of 1944 and plans have been made to effect a hunting kill of 500 elk from this herd which will reduce its size to the approximate carrying capacity of the winter range. Hunters harvested 305 elk from this herd during the hunting season of 1943 or about 100 less than necessary to maintain the herd at the desired size.

PRONGHORN: Eight hundred or more pronghorns range over the northern part of the park during the spring, summer and fall, but spend the winter on a relatively small part of the northern winter range in the vicinity of Mammoth, Mt. Everts, and the northern boundary of the park. Field observations have produced conclusive evidence of over use of certain forage plants on the lower winter range by pronghorns. It is suggested that an open season on this species in southern Park County, Montana, adjacent to the Yellowstone River, with limited licenses, would relieve the pressure on the winter range by removing surplus animals and stabilizing the herd at optimum size.

MULE DEER: It is estimated that mule deer on the northern range this winter will total about 700. Hunting in adjacent areas of Montana removes a part of the annual increase and the herd size is not considered excessive at this time. A marked decline of deer in some other areas, such as the Firehole River area and the intermediate and upper sections of the winter range lying along the Yellowstone and Lamar Rivers, is the subject of some concern.

BIGHORN: The most recent bighorn census was conducted during March 1943 when 138 animals were counted. It is estimated that 300 bighorn inhabit the park. This species has not shown a satisfactory rate of increase and their winter status is not encouraging. Improvement of the winter range and reduced competition with elk and other large animals for winter forage may eventually benefit the bighorn in the park.

Winter Ranges: The northern and Gallatin winter ranges which support most of the large grazing animals which winter in the park have shown remarkable improvement since the drought period ended in 1937. Conditions for the growth of range vegetation were very favorable during June and July 1944 resulting in

the production of the best range conditions since 1930. Continued favorable spring and summer precipitation combined with the control of the numbers of grazing animals, particularly elk, will result in still further range improvement. It is recommended that a complete reconnaissance be made of the winter ranges in the park as soon after the war as funds and the availability of trained personnel permit the undertaking of such a project.

BEARS: The Yellowstone National Park annual wildlife census report for 1941 contains an estimate of 550 black bears and 300 grizzly bears for the park.

Greatly reduced visitor attendance has been accompanied by a marked drop in reports of property damages and personal injuries due to bears. Roadside feeding is discouraged and is not a matter of serious concern at this time. Some undesirable situations exist in the utility areas where bears secure garbage since adequate and satisfactory containers are not available. It is occasionally necessary to dispose of some of the more troublesome or dangerous individual bears. During June and July 1944 it was necessary to destroy six black bears and two grizzly bears. Since July 1943, a competent Fish and Wildlife Service biologist has been making intensive studies of the bear problems and the ecology of the bears in the park. It is hoped that the results of this research will be of assistance in formulating a program which will discourage bears from frequenting the areas of human habitation and thereby reduce the friction between the visitors and the bears.

COYOTES: These prolific predatory animals are particularly abundant in the park since no control measures are taken to restrict their numbers. During the winter months many of them concentrate on the northern winter game range and exercise a direct influence on the deer, pronghorn and smaller animal populations.

TRUMPETER SWAN: On August 15 and 16, 1944, a census was taken of the trumpeter swans in Yellowstone National Park and waters adjacent to the south boundary of the park. All possible swan waters were visited and 44 adults and 11 cygnets counted making a total of 55 birds actually seen. The last previous census was made on August 15 and 16, 1941, when 44 adults and 15 cygnets were counted. There appears to have been little change in the trumpeter swan population of the park although the number of cygnets raised this year is not large.

FISH Culture and Restocking of Park Waters: Following are summaries of the fish planted in Yellowstone waters in 1943 and the proposed plants for the 1944 season:

<u>Species</u>	1943	1944
	<u>Total Plants</u>	<u>Proposed Plants</u>
Blackspotted Trout	9,109,519	7,515,000
Rainbow Trout	169,400	165,000
Loch Leven Trout	59,000	215,000
Eastern Brook Trout	44,468	35,000
Montana Grayling	1,940,153	0
Total	11,322,540	8,030,000

The principal Montana grayling waters in the park are stocked to capacity and it is not considered advisable to add new stock for two years. The number of blackspotted trout to be planted has been reduced for waters which have

yielded poor results or which are subjected to much lighter fishing intensity. The proposed plants are considered adequate to keep park waters well stocked during the present period of light travel. As the number of park visitors increases it will be necessary to increase the planting of fish to keep the waters properly stocked.

Fishing Conditions: Park Visitors are pleased and frequently surprised to find good to excellent fishing in park waters, which are near the roads and easily accessible. Few places in the United States offer such varied opportunities for recreation seekers to enjoy splendid sport fishing without long and expensive trips to remote waters. Visitor interest and participation in trout fishing is increasing and more people are availing themselves of the opportunity to fish in Yellowstone National Park where no license is required. It is interesting to note the fact that visitors reported taking a total of 45,112 fish during July 1944 as compared with 36,503 during July 1943.

The outlook for angling in the park after the war is very good. Streams and lakes near roads may require stocking with fingerlings of larger sizes and park regulations must be strictly enforced in order to protect the fish resources. It may be found necessary to reduce the legal daily limit of catch for some waters which are subjected to heavy fishing intensity.

Prepared by
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In triplicate, Region Two.

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