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Elk and bighorn sheep, Waterton  
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3 p.

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Park.
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455 Post Office Bldg.,  
Edmonton, Alta.,  
August 9, 1956.

MEMORANDUM FOR: CHIEF, CANADIAN WILDLIFE SERVICE, OTTAWA.

Elk and Bighorn Sheep, Waterton Lakes Park

This memorandum concerns range management and wildlife investigations carried out in Waterton Lakes Park this summer, and suggested management and research projects for this park.

Itinerary:

I arrived in Waterton on the afternoon of July 17, and remained in the park until July 25 when I drove to Field, B. C.

July 18, 20, 21, and 22, sites were selected and pegged out, for three game range enclosures, on Lookout Butte, Stony Flats, and the foot slope of the mountain south of the Horseshoe Basin. These sites were selected as being typical winter elk range and represent neither the most favorable, nor the least favorable range condition. The dimensions of the enclosures will be 30' x 35'. Adjacent to each enclosure site, a plot of the same size and as nearly as possible, the same plant composition and density was selected. These will be exposed to grazing, two provide a comparison. In each enclosure plot, and in each grazed plot, four 25' transects were set out, marked with angle iron stakes, and data in plant composition and density were collected by the Parker-3-step technique. Photographs were also taken at permanent points. These data and photos will be kept on file for comparison to future measurements and photos taken at three to five year intervals to study range trends.

The condition of the elk winter range did not appear to have changed appreciably since last autumn, being generally good, with indications of over use locally in areas of elk concentration and on travel routes.

Elk Management:

Chief Warden R. Hand provided the following counts of the park elk made last winter by the Warden Service.

Belly River	-	247
Stony	-	386
Pass Creek	-	126
Horseshoe	-	379
Miscellaneous	-	67

Total 1,205

This is the highest elk count obtained in the past three years, the 1954 count being 830 and the 1955 count 1032. It was not until this year that the Pass Creek herd was recognized as being separate from the Stony Herd. It is apparent that there has been a substantial increase in elk in the park during the past two years.

Through enquiry among sportsmen along the park boundary, the Warden Service obtained an estimate of 60 park elk harvested by Alberta sportsmen, about 40 from the Horseshoe Herd and 20 from the other herds. The open season lasted until December 31 giving sportsmen an opportunity to hunt after the elk had reached the low elevations.

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Mr. G. Mitchell, Game biologist with the Province of Alberta advised me in conversation that it is planned to hold only a short early season for elk this year in the part of Alberta bordering Waterton Lakes Park. The reason for this is that the elk in the forest reserve north of the park have been reduced an estimated 70% by hunting in the last two seasons. Due to the shortening of the season, and holding it earlier, the effect of hunting by Alberta sportsmen in the Waterton elk can be expected to be negligible this fall.

Chief Warden Hand advises that the Blood Indians harvested a fair number of elk from the Belly River herd in their fall and spring hunting activities in the timber reserve. He believed their winter hunting was negligible however, due to deep snow conditions in the field, even though they had access to the timber reserve by road all winter.

Chief Warden Hand received reports of an increase in resident elk in the Belly River valley north of the park as far as the Blood Indian Reservation. Mr. M. Bradshaw, owner of the Birdseye ranch reported elk summering on his land. He reported seeing 20 cow elk with calves on the ranch in the spring. These reports would indicate that the increment of the Belly River herd is being absorbed in part by hunting and permanent dispersal out of the park.

The Stony Herd shows the greatest increase of all herds, the count having jumped from 227 in 1955 to 386 in 1956. Observations by Warden Gladstone and I, showed a high calf crop in the herd last autumn. However, the apparent increase is so great as to suggest a discrepancy in the 1955 count or else a movement of elk into the Stony Range. Chief Warden Hand suggests a movement of some elk from the Pass Creek Herd to the Stony Range.

I would recommend a reduction slaughter this winter, directed mainly at the Stony Herd. It would be desirable to remove as many elk as can be handled up to a maximum of 100 head. I would suggest that a corral be erected in the winter range of the Stony herd, and the elk baited into it with salt or hay. I would also recommend that efforts be made to ear tag as many elk as can be trapped in excess to the number which can be handled by the butchering facilities. Calves and yearlings would be most easily tagged and the information obtained from recoveries would be most valuable since their ages would be known. The most important type of information which we might gain from tagging elk would be the degree of dispersal of park elk into ranges outside the park, and the proportion of park elk harvested outside the park. If this recommendation meets with approval please advise me and I shall forward ear tags and pliers to superintendent Atkinson. I shall not probably be available myself this winter as I hope to attend university.

*Slaughter 1956-57*

#### Bighorn Sheep:

July 20, a trip was made on foot from Cameron Lake to Waterton Lake via Carthel Lakes and Alderson Lake. A total of 32 sheep were observed on this trip. Nineteen were in Carthel Mountain, including: 13 ewes and yearlings, 1 two-year-old ram, and 5 lambs. Thirteen were on the south end of Cameron Mountain including 9 ewes and yearlings, and 4 lambs.

Recent estimates by the Warden Service of the band of sheep which winters in Pass Creek place it at about 100 animals. This is believed to be the largest band of sheep in the park. Its seasonal ranges and movements are not fully known. It is the opinion of some of the members of the Warden Service that some of these sheep move outside the park into British Columbia and Alberta territory and are subject to hunting by sportsmen. It would be desirable to have accurate information in this regard, and the only way that it can be obtained is through a marking project. Last May a small trap was built in Pass Creek and two rams were

baited into it with salt. This was done to obtain blood samples. The success of this operation would indicate that trapping could be done in a larger scale in Pass Creek. If a second, larger trap were built farther up Pass Creek from the present trap, a large sample of sheep from the land could be trapped, ear tagged, and released, using both traps. I would suggest that this be undertaken.

I could visit Waterton next May to participate in the trapping and tagging. A visible colored disk type ear tag could be used which could be seen and identified by means of binoculars.

With Warden W. Berstrom I recently examined a sheep trap made of logs, located at Windy Point in Jasper Park. This trap is 18 x 24 feet, and 8 feet high. Warden Berstrom has found that occasionally a trapped sheep will make a run the length of the trap and half jump and half climb over the fence to escape. He suggests that if the walls were sloped inward this could be eliminated. Would you please advise me whether this suggestion of marking sheep is approved.

Donald R. Flook,  
Mammalogist.

