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DOMINION WILDLIFE SERVICE
Banff National Park

Elk Reduction, Banff National Park 1949

During the course of investigations into moose-elk relations in Banff National Park, all the ranges covered in the report of Special Warden H.U. Green on the a/m subject have been inspected at least once and in some instances several times. It is very difficult for an investigator, in one season, to interpret the condition of any range which is foreign to him--at least without drawing upon the knowledge and experience of those persons familiar with the range. Thus the following comments are, of necessity, based upon not only previous experience of the investigator with cattle ranges, but upon information gained from the various Park Wardens concerned, and in particular from Special Warden Green. The various areas have been discussed in the same order as found in Green's report.

Area #1 East Gate to Banff

This area was inspected generally on the 3rd Aug. 49, and again in some detail on the 10th Aug. 49, when a trip was made up Carrot creek. The range was observed to be in poor condition, and appeared to have received little benefit from the rains which fell in July. Some erosion was apparent on the steeper slopes. By the 10th the range generally was turning brown.

Inspection of some of the open glades within the Lodgepole pine-aspen groves adjacent to Carrot creek indicated considerable summer usage of the better species of grass, already resulting in over-use in a few instances. The less desirable pine grass (Calamagrostis rubescens?) appeared to have attained a fair growth, but this species goes down with the early frosts and is of little value for early winter grazing - the period when the range is utilized, according to Green's report.

Aspen reproduction is practically nil in most of the heavily grazed areas, and the willows are mostly heavily browsed or dead. It is difficult to assess fairly the responsibility in this instance, but the fact of the condition still remains.

The carrying capacity of this range for the coming winter is estimated to be very low.

Areas #2 and #3 Banff - Hillsdale - Eisenhower

In May, 1949, it was estimated, without previous knowledge of the range, that this area had a grass carryover of approximately 25% on the valley floor. It appears that this estimation agrees with that of Green. This was cut considerably before new grass was readily available - resulting in many places in a carryover below the 20% level. The adjacent slopes were heavily grazed in early spring due to easier access through the snow, and showed some erosion.

Due to the very dry spring, growth was poor in the area and it appeared that the range would be very poor this fall. However, recovery after the July rains has been remarkable. It is believed, though, that the growth is considerably below that of last year.

Aspen reproduction through much of the area is negligible, a condition common to all the heavily populated elk areas of the Bow Valley. The willows appear to have recovered approximately the growth of last year in most areas, though some killing is evident. The dwarf birch (Betula glandulosa) has not made 100% recovery, it is estimated. It must be remembered that this recovery is based upon the total growth of last year, and not on the maximum growth attainable by the species in question under ideal conditions.

A new factor appears to have entered into the situation. According to Green (Green, 1946:5), the winter ranges are deserted shortly after the elk have calved, the exception being perhaps a very few stragglers. This season the situation has been altered, and a goodly number of females and calves, plus a few males, have remained on the winter range all summer. A few bulls have been recorded in the area during

July and August, and cows in groups up to 15 and 20 have been seen. It is not known if this has been caused by poor summer range, the better spring carryover, predator activity in some valleys leading to the summer ranges, or to a combination of all these factors. But, while the elk have ranged in the valley for the most part in the more secluded sections, nevertheless they must be considered as an important factor in the winter carrying capacity of area for the forthcoming winter and in the future. At the time of writing a herd of 20 cows, calves and yearling males have been seen to be browsing the willows in the vicinity of Hillsdale.

In view of the conditions outlined above, it would seem very desirable to reduce the elk population in this area to maintain the 25% carryover of graze, this figure being the minimum desirable.

Area #6 Spray Valley Range

Since not too much is known of the movements of the elk in this region, it is not possible to comment very fully upon the situation. The area was first inspected on the 22nd June 49., at which time the upper ranges appeared to be in excellent condition. This was probably due to a combination of relatively low elk pressure and more rain than most areas due to certain currents peculiar to the valley. During subsequent trips to the area it was noted that there was some deterioration of the steeper slopes, and of the extreme south-east range, but the small runs and gentler slopes continued in excellent condition. There appears to be no cause for any concern with the present elk population in the area.

The females and calves have been noted, during these inspections, to have remained on the valley floor as in Areas 2 and 3. It is not known if this condition is normal for the area, but the grass conditions on the floor of the valley are poor as a result. The willows and other browse in the area are heavily browsed in many instances, and are considerably shorter than the considered optimum. Since this is a moose area it is not possible to fairly apportion the blame for this condition, but it seems likely that the elk must assume some part of it.

It would seem, thus, that there is presently no need for a reduction in the elk population of this area. But there is need for an early study of the situation to determine the winter habits of the elk and their effect on the browse of the valley floor.

Area #7 Cascade Range

This area was first inspected on the 21st June 49., when it was noted that the upper ranges (normally both summer and winterrange for the elk) appeared to be in poor condition. There was considerable evidence of incipient erosion, but since these ranges are on the steep westerly slopes of the Palliser range erosion is bound to occur quite readily after moderately heavy over-grazing. With the drought conditions that have obtained this season, there is a grave danger that winter grazing on an already over-grazed hillside range will result in very heavy damage to the sod.

From the viewpoint of the study being made this summer, the alarming feature is the evidence of fairly heavy browsing of the willows on the valley floor. When this feature was pointed out to Special Warden Green, he remarked, as he has stated in his report, that for the first time in his experience here the elk were found down at the lower levels of the valley during the elk slaughter last fall (1948). Since the graze available on the valley floor is very limited, it seems certain that the elk must have browsed to some extent. As yet no harm has been done, but should this behaviour continue for a second or third year it may be anticipated that very considerable damage to the moose browse will result.

Already this late summer elk have been reliably reported as present on the valley floor. On the 13th Aug. 49 twenty-five cows and calves were counted in one group not far from the entrance gate. On the 15th of Aug. one hundred and eight elk, of both sexes, were seen on the willow flats south of Cuthead, and it is probable that not all were seen. Thus it may be seen that the present situation may become worsened this winter.

It would seem imperative, then, that a considerable reduction of the elk

population in this area be undertaken, and at as early a date as possible as suggested in Green's report.

No mention is made in Green's report of the area from Eisenhower to Louise. While no reduction of elk is contemplated or required here, still it is perhaps apt to note that this area has suffered from the lack of rain in the early part of the season. The range is poor, and there can be no outlet in this direction for surplus elk.

No mention has been made of suggested numbers, either to be slaughtered or retained. Special Warden Green, by virtue of his longer period of residence in the area, and his intensive study of the situation, is far better qualified to discuss this point. However, it is noted that he quotes estimated carrying capacity. It is believed that the elk populations within the Park must be cut to well below carrying capacity before the ranges can be expected to reach that point in recovery (from the depleted state suffered prior to 1949 (Green, 1946:21)) where any eventuality in weather or growing conditions may be faced with confidence. When such a position has been reached, then the elk population may well be permitted to increase to an observed carrying capacity - always under observation and control.

It seems that the elk of Banff National Park may present a problem in competition with the bighorn sheep, and possible may be a factor to be considered in relation to the herbivores generally. It is intended to outline some of these points in a later report devoted to wildlife problems in the Park. It will suffice to say that any worsening of the elk ranges in the immediate future will almost certainly result in aggravation of any inter-related problems with the other herbivores, since the elk have shown themselves to be remarkably adaptable to any and all types of range. Thus a reduction of the elk below the carrying capacity of their ranges should lessen their impact upon these other species, at least until studies can be made to determine exactly what the complex inter-relationships may be.

Ref:

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