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THE SHORTAGE OF FEED FOR MOOSE
FOR THE WINTER 1923-24

on the

KENAI ALASKA WINTERING GROUNDS

by
Ernest P. Walker

MISCELLANEOUS OBSERVATIONS
KENAI PENINSULA AND VICINITY

February 22 - March 15, 1923

by
Walter G. Culver

REPORT OF MOOSE ON KENAI PENINSULA

February and March 1923

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Persistent reports that moose were threatened with starvation on the west side of Kenai Peninsula the winter of 1922-23 called for an inquiry into the subject. Warden Culver was accordingly sent into the region for a visit in late February and early March 1923. His report on the subject largely confirmed the previous statements and indicated need of further attention to the subject.

Carrying on the inquiry the writer visited Seward, Anchorage, and Kenai and vicinity for a brief trip in August, 1923. The statements and conclusions given herein are based on information obtained from all sources.

As stated by Culver most of the moose of the Kenai Peninsula winter on the low level lands adjacent to Cook Inlet from about Point Possession to Katchemak Bay. This results in a concentration of moose population on this area for the period December to March. Under normal conditions the natural growth of vegetation is ample to feed a large population of moose but the present time is near the peak of the cycle of rabbit abundance and the rabbits are competitors of the moose for the winter feed.

The winter of 1922-23 was one of exceptionally heavy snowfall over the moose wintering grounds. The moose and the rabbits together consumed practically all food above the snow to as high as the moose could reach, and numbers of moose calves starved late in the winter of 1922-23. The greater strength of the adult animals enabled them to forage widely enough to survive as a whole.

The snow level of last winter is plainly shown to have been about three feet, as indicated by the uniform height of the willow and other shrubbery where it was eaten down to the snow level. Above the height at which the rabbits ceased work the moose took all twigs and brush of less than half an inch, as high as they could reach. This leaves the woods barren of underbrush above a height of 3 or 4 feet. In addition the rabbits girdled many trees less than three inches in diameter, which still further reduces the food supply, and the frequent occurrence of trees from which the moose have stripped bark testifies to their need for food.

In going through the woods in August in the vicinity of Kenai one was impressed by the absence of underbrush over three feet high, which is ordinarily so common in our woods. This gives an unusually open vista through the woods, intercepted only by tree trunks. Flats on which the large willows of 8 to 10 feet in height are the dominant

vegetation present the appearance of having suffered from fire or winter killing, as the tall stalks are dead and the only live ones are below a level of 3---4 feet. Examination shows that the tips of the dead branches remaining are broken and ragged, showing that the stalks have been "ridden down" and browsed off so severely as to kill them.

The 1923 growth of willows and birch which constitute the main food for the moose does not average more than one foot. This provides but scant food for the coming winter for both the moose and rabbits. Obviously the food supply for the winter of 1923-24 is much less than normal, due to the heavy inroads made on it last winter. On August 9th, the last day of the writer's visit, vegetation was nearly mature and little additional growth could be expected for the season.

Prior to going onto the grounds in person inquiries were made regarding the numbers of rabbits. Several persons stated that they were beginning to die in numbers but personal examination did not confirm this. In the immediate vicinities of the settlements a few rabbit remains were found, but away from the settlements none were observed. No doubt the remains near the settlements were due to dogs, cats, and persons killing the rabbits. Throughout the woods rabbit signs were abundant. In the absence of evidence of the rabbits having begun to die off there is good reason to believe that they will be in much greater numbers the winter of 1923-24 than last winter.

With even a moderate snowfall there will be keen competition between the rabbits and the moose for the food. Snowfall of average depth will leave but little feed available even were the rabbits not abundant. Unless some aid is given the moose there will certainly be a heavy mortality among them this winter due to lack of feed. Not only will the calves suffer heavily but the greater scarcity of food will certainly cause a heavy mortality among the adults. The effects of such a food shortage cannot be other than injurious to the forthcoming crop of 1924 calves. Only an exceptional winter of almost no snowfall over the moose wintering grounds can wholly prevent great losses among the animals, but man can do something to lessen the losses.

Feeding the moose sufficiently during the period of greatest need to tide numbers of them over the winter is practicable. Many settlers in the region have at times cut birch trees near their cabins for moose to feed upon. The animals immediately take advantage of food so provided and this has demonstrated the practicability of feeding the animals sufficiently to enable them to survive the winter.

Almost the entire area frequented by moose in winter has birch and aspen forests and groves composed of trees as large as 8 inches in diameter. These trees are worthless as timber and are used only locally in a small way for wood and poles. The twigs and bark of the smaller limbs of these trees, particularly the birch, are readily eaten by the moose.

Such trees could easily be felled for the moose to feed upon and in this way numbers of moose enabled to survive the winter period of greatest food scarcity.

Attention was given to ascertaining the area over which the animals range in winter, the number of men needed for cutting trees, the price it would be necessary to pay to get men, and the period of such need.

The attached map is annotated to show the approximate winter range of the moose on the west side of Kenai Peninsula. This is an area approximately twenty by sixty miles. A. H. Hardy of Anchorage states that there should be at least six men in this area to cut trees for the moose. The period for which the men would be needed would depend entirely on the weather conditions. Reports agree that the snow is usually light until the middle of January. After that date heavier snowfalls may be expected until the middle of March. It might therefore be desirable to have men employed from the middle of January to the end of March. If the snowfall should be light or of short duration the men might not be needed so long, or if the heavy snowfall came unusually early and continued late the period of need might be longer. Inquiry was made as to what wages it would be necessary to pay men who would furnish their own outfits and cut trees for moose feed. Several about Kenai said they would be willing to work for \$4.00 per day and one man said he would go for \$3.50. There are a number of Finns on the peninsula as well as natives who might be obtained but it would be necessary to choose men who could be depended upon to work faithfully when alone. There might be some difficulty in obtaining reliable men for \$3.50 or \$4.00. To provide a safe margin we should calculate on a basis of \$5.00 per day per man, for six men, for a maximum period of 75 days, giving a total of \$2250.00. An additional margin should be provided for a warden's expenses in connection with supervising the work, and for unforeseen contingencies. A sum of \$3,000.00 would therefore be necessary. It is not anticipated that six men could adequately feed all the moose but they could greatly reduce the loss which will be inevitable unless the snowfall on the west side of Kenai Peninsula is unusually light the coming winter.

The rabbits will of course share in the food cut for the moose unless some steps are taken to reduce them. After the earlier falls of snow no doubt poisoning the rabbits could be carried on fairly successfully and probably with sufficient results to materially reduce their competition with the moose.

The need for thus feeding the moose will not occur every winter, for the real cause of the problem is the unusual number of rabbits which are now about at the height of their periodic abundance. No doubt they will be much reduced by another winter so that they will no longer be in active competition with moose for the feed.

The supply of trees for cutting is adequate for such purposes at intervals of years, there is no other use for them, the cutting will not conflict with any other industry, and the fire hazard will not be materially increased. The cutting of trees in the more dense groves will probably facilitate new growth coming up to be more feed for the moose.

If anything is to be done towards saving the moose the coming winter the field force should be advised not later than December 1st as

to funds available, in order that proper arrangements may be made in advance.

The officer on the ground in charge of the work should be provided with cash to enable him to pay the workmen cash and thereby obtain men more easily and probably at less cost.

If Federal funds are not available for the work it would seem that certain of the sportsmen or wild life protective organizations or even individuals might be interested sufficiently to contribute towards such a cause. Possibly the Moose Lodge might be interested.

The area visited in person by the writer was small but all reports agreed that the conditions were essentially similar throughout the wintering grounds of the moose outlined on the map.