

ABUNDANCE AND FALL DISTRIBUTION OF CARIBOU IN WELLS GRAY PARK

Interim Report, March 1955

Wildlife Project W.G 7.

Introduction

This report summarizes data on caribou abundance, productivity and fall distribution gathered in Wells Gray Park in this past year. Sources of information for the report is not documented to ensure brevity. Data has been compiled largely from summer reconnaissance by wildlife workers with contribution by Mr. Miller at Murtle Lake. Opinions given on whether caribou should be hunted are purely those of the writer.

Known maximum abundance

This is derived from sight or track records of caribou in different regions over time periods so closely spaced that any possibility of intermingling of different groups is eliminated. Only reports of reliable informants are used to augment the writer's observations.

The years 1952 and 1954 were periods when most information was gathered on summer numbers. In 1952 nine caribou were seen with tracks of nine others definitely recorded of 27 different animals.

True abundance

A calculation of true abundance is a difficult matter and with the scanty data available must entail some pure guessing as well as estimates based on tangible evidence. The following table shows estimated minimum, maximum, and probable abundance of caribou in different park regions. An indication of reliability of the estimates is given after each. Good reliability is indicated when a region has had several reconnaissances and probability of intermingling of the population with that of other regions is not great. Fair reliability is also indicted only for estimates backed by extensive reconnaissance by park personnel out in regions where populations fluctuate greatly through migration to other areas. Poor reliability indicates that the estimate has been made from some reconnaissance by park personnel and from reports by other observers.

Productivity

Mountain caribou breed as yearlings giving birth to a single calf. Theoretically it is an animal of high productivity. This is an essential quality of an animal if is to sustain a large annual kill from a rather small population.

Data on productivity of the park caribou has been obtained chiefly from age classification of animals seen the summer and fall.

ESTIMATES OF CARIBOU ABUNDANCE IN WELLS GRAY PARK BY REGIONS

| Region | Population Estimate | | | Reliability |
|-----------------------------|---------------------|-----------|-----------|-------------|
| | Minimum | Maximum | Probable | |
| Battle-Table mtn. | 20 | 50 | 35 | Good |
| Mica-Little Baldy Mtn | 5 | 45 | 25 | Poor |
| Mobley mtn. | 10 | 40 | 25 | Fair |
| Murtle to Azure Lake except | | | | |
| Mobely mtn | 20 | 100 | 60 | Fair |
| East of Murtle Lake | 10 | 40 | 25 | Fair |
| Other parts of the lake | <u>20</u> | <u>80</u> | <u>50</u> | Fair |
| Totals | 85 | 355 | 220 | |

In table II the results are given of four summer's age classification.

Table II AGE CLASSIFICATIONS OF PARK CARIBOU 1951 – 1954

| Year | Total age classified caribou | Number of calves | Percentage of calves |
|-----------|------------------------------|------------------|----------------------|
| 1951 | 24 | 3 | 12.5 % |
| 1952 | 9 | 3 | 33 % |
| 1953 | 15 | 2 | 13 % |
| 1954 | <u>13</u> | <u>2</u> | <u>17 %</u> |
| All years | 61 | 10 | 16 % |

Fall Distribution

In early fall caribou range over high open ridges above timberline and open glades of the sub alpine forest above 5,000'. Their tracks mingle with those of moose and deer in lower parts of their fall habitat and with those of mountain goats at higher elevations. An abundance of food is present through

the *Alglands* (???? Check with Trevor) and sub-alpine forests at this time. Early fall concentrations of caribou are known to occur in the following areas: Battle, Table, Mica, Mobely and Mcrae.

When snows blanket the high country caribou are gradually forced into forest openings below the region of deep snow where they may forage more readily.

The pattern of fall distribution is entirely dependent on snow and may be summarized as follows: September early October: snow pack in the high country 0 to 15", caribou near or above timber line. Late October-November: snow pack in the high country 15 – 30", caribou in opening in mature sub alpine forest, 3,000 – 5,000'.

Caribou apparently follow traditional routes when leaving their summering grounds. All mountains are not equally attractive as summering areas so distribution is by no means uniform throughout the elevations mentioned above. Late fall concentrations of caribou occur at various points near Murtle Lake at elevations from 3,000' to 5,000'. No other part of the park is known to have similar concentrations.

Almost two thousand hunters have visited the park in the past three hunting seasons. None has reported seeing a caribou in his hunting although a few have been sighted from the air by hunters. This is good evidence that caribou are very rare over areas frequented by moose hunters.

General considerations involved in hunting park caribou

When deciding whether or not an animal should be hunted, the first concern should be for the animal rather than for the hunter. If hunting will not harm the species concerned or interfere too greatly with other uses of the animal then, and only then, should it be hunted.

All evidence at hand suggests that park caribou have reached the carrying capacity of their range. There has been a slight increase in the past few years but it appears to be merely the response of a stable population to favourable winters. The protection of a ten years closed season has not enabled caribou to return to their former abundance. Edwards (1954) has pointed out that only one third of the caribou winter range has survived recent fires. There is little hope that caribou will be abundant until the winter range has been restored. The present herd surplus is being destroyed by factors other than hunting. If hunters can take the place of the environmental factors in removing the surplus without dangerously reducing the herd they should be allowed to do so.

As pointed out previously, there is little likelihood of moose hunters killing caribou incidental to their moose hunt. Caribou hunts require special efforts usually including the use of horses and guides. Due to lack of horse access, the probable kill would be less than 20 caribou for the first year. This would no danger the park population. There is however, a possibility of overshooting local herds in readily accessible areas. The Battle-Table mountain hunting ground is the best example of this.

Hunting may also have the effect of making caribou wary and thus less available for photography and observation. This also would have to be determined by experiment. At present, there

is little interest in park caribou other than by hunters. It is not logical to prohibit hunting, which will probably not harm the species, to preserve it for possible future uses when there ????? (missing)

Benefits from hunting park caribou

Data on caribou productivity and life history may be gathered more rapidly through the hunt than by other means. This is further discussed under regulations of hunting.

An opportunity will be afforded to park users to hunt a scarce and highly prized animal. It is readily apparent that a population of 200 animals cannot furnish a large kill but it may provide considerable hunting. Being a rare animal it can be considered to furnish a higher quality of recreation than hunting the more common game species of the park.

People will be attracted to more scenic parts of the park in the course of caribou hunting. The scenic values of the park will thus be more widely appreciated.

There will be a better distribution of moose hunting effort. Guides will probably take their early fall parties on combined caribou-moose hunts in the high country rather than hunting low altitude burns as in recent years. This should result in a slight increase in the moose kill.

Details of regulations of the hunt.

Regulations should allow killing of either sex of caribou and of any age. It is difficult to distinguish young male from young female caribou. Reliable reports indicate that cows were frequently taken by accident when a bull only law was in effect. While the majority of hunters will be seeking a trophy, it is possible that excessive illegal killing may occur when hunters have to restrict their kills to one sex. Data obtained on productivity and age distribution will be more valuable if both sexes are harvested.

Hunting should be allowed under permit only to insure that all possible data is gathered from the hunt. These permits could be issued free at the Ranger Station. The permittee would be required to report at the end of the hunt to supply information for a questionnaire. If successful he would supply the jawbone and the reproductive tract from his caribou in return for a park tag which would be required on each caribou killed in the park.

The number of permits would not be limited in the first year. In succeeding years it may be advisable to set limits on the number of animals to be killed in each hunt area. The issuance of permits for an area would be stopped when the desired kill had been accomplished.

The season should be concurrent with the moose season. An earlier opening could result in wasted meat and would add to the task of administration. Presence of deep snows in caribou range is sufficient protection of the animals against hunters in the latter part of the season.

Summary:

A review of caribou data gathered in the past four years suggests a population of between 75 and 355 animals, the probable population being about 200. The herd appears to be relatively stable and the annual surplus should be harvested.

Fall distribution precludes the possibility of overshooting except on the most accessible areas.

An "any caribou" season with a bag limit of one is recommended. The season should be concurrent with the moose season. Hunting should be under permit with regulations requiring jawbones and reproductive tracts in return for a park tag legalizing the kill.

R.W. Ritcey