

## THE IMPACT OF TREATY INDIAN HARVEST ON A MANITOBA MOOSE HERD

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Abstract: Hunting of big game by Treaty Indians in Manitoba is governed by paragraph 13 of the Natural Resources transfer agreement. Presently, these people are permitted to hunt on unoccupied Crown land and other lands to which they have right of access for purposes of securing game for food. In some Game Hunting Areas of the Province, hunting by Treaty Indians appears to be one of the primary factors responsible for reduced moose populations. This paper discusses population trends, reproductive parameters, mortality factors and the suspected influence of Treaty Indians on the moose herd in Game Hunting Area 20.

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Hunting of big game in Manitoba by Treaty Indians is governed by paragraph 13 of the memorandum of agreement found in The Manitoba Natural Resources Act which was enacted on December 14, 1929. Prior to this date, jurisdiction over resource use by Treaty Indians rested with Canada. This Act respects the transfer of the natural resources of Manitoba from federal to provincial jurisdiction and reads as follows:

"In order to secure to the Indians of the Province the continuance of the supply of game and fish for their support and subsistence, Canada agrees that the laws respecting in force in the Province from time to time shall apply to the Indians within the boundaries thereof, provided, however, that the said Indians shall have the right, which the Province hereby assures to them, of hunting, trapping and fishing game and fish for food at all seasons of the

year on all unoccupied Crown lands and on any other lands to which the said Indians may have a right of access."

The current situation is such that Treaty Indians are permitted to hunt big game for food on any land to which they have right of access at any time of the year. As a result of a supreme court decision in June of 1980 access for hunting purposes is now permitted in any area where non-Indians are authorized to hunt no matter how restrictive the season is. This includes access to Wildlife Management Areas and Provincial Parks in Manitoba (Her Majesty The Queen and Sutherland, Wilson and Wilson and The Attorney General of Canada).

Treaty Indian-hunting of big game in Manitoba has been on the increase since the mid 70's with one of the more popular techniques being nighthunting from vehicles with the aid of spotlights. The supreme court has ruled that the province cannot control hunting methodology. In some areas of the province, the kill of moose by Treaty Indians is the biggest mortality factor experienced by these herds and is to a large extent responsible for some of the reduced populations seen today in the Eastern, Interlake and Northwest Regions of the province.

This paper reports on some aspects of the population dynamics of the moose herd in Game Hunting Area 20, the harvest by hunters and the prognosis for the herd.

## STUDY AREA

The study area known as Game Hunting Area 20 encompasses 1536 sq. km. and is located about 280 km. north of Winnipeg within the Interlake Region. Provincial trunk highway 6 borders the area on the east, Provincial Road 328 on the south, Lake Waterhen on the west and Game Hunting Area 15 on the north. The area is predominately ridge and

swale with a general predominantly deciduous tree cover. Toward the northern limits of the area, conifers begin to appear resulting in more mixed-wood stands. The majority of the area was burned over in 1961.

Access is restricted to old trails, a hydro line right-of-way and a few old roads along the southern and eastern boundaries. The extensive long open meadows generally orientated in a northwest-southeast direction permit excellent access by snow vehicles.

#### MATERIALS AND METHODS

Moose surveys have been conducted in this area from 1972 - 1981 inclusive using a STOL cessna 180 aircraft with the same pilot and observer during the 10 years. Conservation Officers working in the area have been used as the second observer.

Those surveys done in early January from 1972 - 1975 inclusive were designed to measure age-sex ratios. Since then, while doing age/sex surveys, the area was covered with north/south overlapping transects in attempt to obtain a total count. This resulted in a 100% coverage of the area.

The location of all moose sighted was recorded on topographic maps (scale 1 : 250,000). The sex of each adult moose was determined using antlers, vulva patch and the shape of the bell. The number of calves and the number of yearling (1 1/2 years old) bulls were documented. The latter were identified using antler development.

Data respecting numbers of licensed hunters and their harvest of moose has been gathered from questionnaires and conservation officers working in the area. The known moose kill by Treaty Indians has been

tabulated by local field staff using information gathered during routine patrols, other departmental staff and reliable informers. It is speculated that these data represent about 50% of the actual kill.

#### RESULTS

Moose survey data and estimated moose populations for the years 1976 to 1981 inclusive are presented in Table 1. The average ratio of calves/100 cows from 1976/77 to 1980/81 inclusive was 66.6, however, if data from 1973/74 and 1975/76 are included also (the 1974/75 data are not useable), the average is 71.6.

Table 1. Moose survey data from Game Hunting Area 20 during the years 1976 to 1981 inclusive.

Year	# bulls (%)	# cows (%)	# calves (%)	Total moose observed	Twins	Estimated population	Calves/100 cows
1976/77	15(25.4)	44(74.6)	36(37.8)	95	12	118	81.8
1977/78	20(35.7)	36(64.3)	20(26.3)	76	3	95	55.6
1978/79	25(47.2)	28(52.8)	20(27.4)	73	3	91	71.4
1979/80	24(46.2)	28(53.8)	15(22.4)	67	3	84	53.6
1980/81	17(41.5)	24(58.5)	17(29.3)	58	4	73	70.8

% bulls and % cows is the percentage in adult moose observed.

% calves is percent in total number of moose observed.

Hunting seasons from 1973-1979 have commenced about mid-September and closed in late October for bulls-only. There was no season in 1980. Over this period, about 50 licensed hunters used the

area each year with an average harvest of 10 bull moose per year. The kill of moose by Treaty Indians has been estimated to vary between 30 and 50 per year. This is based on animals checked by field officers, counting of kill sites and reports received from other reliable sources. It is recognized that known kill figures arrived at are minimal, therefore, officers are asked annually, based on their knowledge of the area and the hunting activities of Treaty Indians, to estimate the total number of moose harvested by Indians from each Game Hunting Area.

There are few timber wolves in the area and these few probably use deer more frequently than moose. From 1972-1981 inclusive, neither wolves nor tracks suggesting their presence have ever been observed during aerial surveys. Due to the proximity of cattle ranches, field officers are instructed to document and report the presence of wolves. When present, most wolves are taken by standard control measures, either by trappers or by farmers. Poaching does not appear to be a problem as only two or three reports of such activity are recorded annually. No reports of moose-vehicle collisions have been documented.

It is not known whether moose move in and out of the study area from adjacent habitats. However, it can be assumed that based on an estimated 50 moose (survey conducted during the 1981/82 winter) in the Game Hunting Area to the east, there are too few to be involved in any significant movements to and from this area and any movement must be associated with Game Hunting Area 15 to the north.

## DISCUSSION

Productivity of the moose herd in Game Hunting Area 20 has been the highest in the province and has been enhanced by comparatively mild winters since 1973/74. With such a high reproductive rate, minimal predation and few licensed hunters, the population should be rapidly expanding. With no calf mortality and using 1976 as the first year, the population ideally should be about 210 animals. As some mortality is inevitable, the logical expectation is for a population less than 210 but greater than the current 73 animals. The timing and conditions under which surveys have been flown have been consistent from year to year as suggested by Lynch (1975).

Closure of the 1980 hunting season should have resulted in a population increase in light of high calf survival. If all of the 84 moose from 1979/80 had survived, the 17 calves produced in 1980/81 would have given a population of 101. However, there are only 73, which is 28 less than expected. The kill of moose by Treaty Indians in 1980/81 was estimated to be about 30 animals for the study area; this could account for the differences observed.

Presently, the only limitations restricting the kill of moose by Treaty Indians are accessibility and the number of moose. As the population continues to decline, this kill will follow accordingly; however, it will continue to be of sufficient magnitude to limit the ability of the herd to increase. The outlook for this moose herd is not good if the kill of moose remains uncontrolled. Low moose populations have affected the traditional use

of moose by all hunters including Treaty Indians; as a result, complaints about the lack of moose are increasing from all sectors.

I was approached in January, 1981 by the Chief from the Skownan Indian Reserve located adjacent to the area. He expressed concern for the well-being of the moose herd and the kill of moose by his band members. The Chief invited me to present a seminar on the subject to the reserve council. The population dynamics of the moose herd were discussed along with data respecting the history of licensed hunting and harvest and the take by Treaty Indians. A proposal was put forward to form a local moose management group comprised of the reserve council along with designated individuals from the Manitoba Department of Natural Resources. This would be an 'ad-hoc' working group with the objective of attempting to manage the moose herd in the area in such a way as to allow the herd to recover. The proposal was well received by the Chief and council and it was decided that I should return to the reserve at a later date to explain the problems to the community at large and seek their co-operation. To show support for the project, the Department of Natural Resources has again closed the moose season for 1981 in this area and, hopefully, the proposed management group can eliminate or control the kill of moose by Treaty Indians so that recovery of the herd is possible.

Should the above proposal fail, one solution would be to change Paragraph 13 of the Manitoba Natural Resources Act. This could be done if the two signatories, namely, Canada and the Province of Manitoba agree that changes are needed. A reluctance by one or both parties to act on the matter may be overcome by public pressure. A second

possible alternative being examined is to classify the herd as 'endangered' which would then prohibit anyone, including Treaty Indians, from hunting. A third option is to close the area to all types of hunting and trapping, following which Treaty Indians would not be able to hunt.

The future of the moose resource in this area and other areas of Manitoba is being severely jeopardized by the unregulated Treaty Indian kill of moose to the point that it is affecting traditional use patterns by all Manitobans including Treaty Indians. Changes must be made to reflect contemporary times and values.

#### REFERENCE

- Lynch, G.M. 1975. Best timing of moose surveys in Alberta, 11th North American moose conference and workshop, p. 143-153.