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ABSTRACT

This study examined the actions of the scientific community in their role as advisors to the state on caribou conservation policy initiatives, and the reaction of the Aboriginal people to the restrictions imposed on their basic resource. The study is an interpretation of evidence found in the files of the National Archives of Canada.

A case study of the Chipewyan caribou user group and another case study of the Beverly and Kaminuriak Barren-ground Caribou herds were done. Second, an examination of the relevant records from a variety of government departments in the National Archives of Canada was pursued. Special emphasis was placed on an analysis of the records of the Canadian Wildlife Service during the period 1940 to 1970.

The study found that biologists of the Canadian Wildlife Service recommended hunting restrictions based on flawed evidence. Policy makers used that evidence to further their long-term goal of assimilating Aboriginal people into the larger southern oriented wage economy. Aboriginal people resisted hunting restrictions by non-compliance, and by protest. The study concludes that to the dominant special interest groups conservation of the caribou was more important than the preservation of the Chipewyan traditional culture.
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<td>Advisory Board on Wildlife Protection</td>
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<tr>
<td>ACCP</td>
<td>Administrative Committee on Caribou Protection</td>
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<tr>
<td>CCCM</td>
<td>Canadian Committee for Caribou Management</td>
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<td>CWS</td>
<td>Canadian Wildlife Services</td>
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<tr>
<td>DIA</td>
<td>Department of Indian Affairs</td>
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<td>HBC</td>
<td>Hudson’s Bay Company</td>
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<tr>
<td>MP</td>
<td>Member of Parliament</td>
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<td>NA&amp;NR</td>
<td>Northern Affairs and National Resources</td>
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<td>NRTA</td>
<td>Natural Resources Transfer Agreement</td>
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<td>Northwest Territories</td>
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<td>RCMP</td>
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1.1 Introduction

Caribou, a wildlife renewable resource central to northern Aboriginal peoples' survival since time immemorial, has always been considered a basic food by Aboriginal user groups and has been harvested using traditional knowledge and practice (Jenness 1977: 386). Caribou, exploited freely, was indispensible to the success of the early fur trade both as a domestic meat supply for Indian trappers and as a trade commodity to provision fur trading posts. No government caribou conservation policies were attempted before 1914 (NAC RG 85, Vol 665, File 3914, Stefansson to Sifton, 8 Feb. 1914).

Between 1763 and 1930 the Canadian state entered into treaties with Indian peoples. Indians were concerned with the resources of their territories. They sought and obtained the state's assurance that their rights to hunt, trap, and fish over their territories be continued in perpetuity. These treaties guaranteed Indians the right to continue hunting and fishing on their own reserves and on unoccupied portions of Crown land. With the Natural Resources Transfer Agreements (NRTA 1930), the federal government released control of resources to the Prairie provinces. The NRTA circumscribed Indian hunting rights within the provinces.
Original treaty hunting rights had been general but were restricted to the areas surrendered by the treaties. Under the NRTA, hunting rights were restricted to food, but extended over the whole area of the province, not restricted to a particular treaty area (Notzke 1994: 114). The NRTA would later prove to be an insurmountable impediment for state-employed resource managers. Wildlife managers, in the interest of caribou conservation, sought to change the NRTA to allow the restriction of hunting caribou for food, in direct contradiction to treaty rights guaranteed under the NRTA.

Aboriginal wildlife users and state wildlife managers, each enculturated in their own traditions, viewed wildlife resources differently. A concept of wildlife as 'game,' a view foreign to Aboriginal people, guided the thinking of state officials who were responsible for the development and institution of early conservation programs in the Canadian north. Non-Aboriginal people's romantic view of wildlife as game had superceded Aboriginal people's view of wildlife as food (McCandless 1985: xiii). The history and development of early conservation policy revealed that pressure from special interest groups, who viewed wildlife as game, guided actions of wildlife conservation policy makers to the detriment of Aboriginal peoples' interests (Gottesman 1983: 67). In recent times, the state has based its wildlife policy initiatives on advice from a non-Aboriginal 'scientific' community, which has viewed caribou in terms of population dynamics, i.e., maximum sustained yield (the maximum number of animals that can be harvested without endangering the reproductive capacity of a population) (McDonald 1988: 65). The basic dichotomy inherent in
the two perceptions of wildlife has resulted in advice to policy
makers which, because of its insensitivity to Aboriginal needs, has
caused extreme hardship for Aboriginal user groups in the
Northwest Territories (NWT), and generated conflict between users
and managers, and between departmental agents.

Conflict between Aboriginal wildlife user groups and state-
employed wildlife managers, particularly during the period from
1940 to 1970, has been endemic. Political boundaries, resource
jurisdictions, Indian treaties, international treaties and conventions
have resulted in management coordination problems and conflicts.
Vocal officials from departments of federal, provincial and
territorial governments, as well as politicians, were involved in the
solution to wildlife resource depletion. Often their agendas were at
odds with each other. Significantly, the owners and traditional
resource users, the Aboriginal people, were not privy to discussions
which generated policy advice. Their first knowledge of
conservation initiatives came as new regulations for the harvesting
of their resources were imposed by the state. Generally, new
regulations, enforced by agents of the state, were restrictive. These
restrictions caused unnecessary suffering and hardship for members
of the Aboriginal communities.

During the 1950s the biologists of the scientific community
announced that caribou had declined in number to what A.W.F.
Banfield called "the caribou crisis" (Kelsall 1968: 200). At the time
of the first range-wide census in 1948 it was believed that caribou
numbers had decreased drastically from pre-contact times. And
during the period from 1948 to 1955 biologists reported that
caribou had further diminished by half. J. Kelsall, using Banfield’s 1954 estimates for comparison, suggested a natural mortality rate among barren-ground caribou of only five percent due to natural causes and animal predation. Kelsall blamed the remainder of the drastic population decrease on the killing practices of Aboriginal user groups (Kelsall 1968: 216). The disturbing results of the 1955 surveys and the consequent sounding of alarm generated immediate administrative and enforcement action by provincial and territorial warden services, the Royal Canadian Mounted Police (RCMP), and Department of Indian Affairs (DIA) personnel who took an active part in caribou conservation and enforcement of existing and newly tightened game regulations in the Northwest Territories. The succeeding hunts were supervised by an officer from one of these agencies. Hunting parties used aircraft to reduce the use of caribou meat as dogfood. Over the next few years hunts diminished in size, in part because the herds bypassed some of the user communities. Distant travel made hunts difficult and unrewarding. In addition, Aboriginal people were moved off the land into communities in preparation for wage employment or government services. According to Kelsall, this decrease in human predation in conjunction with intensive animal predator control (i.e., wolf bounty) accounted for the reduction in decline of the herds after action was taken in response to the population “crisis” of the 1950s (Kelsall 1968: 202-203).

These conservation initiatives, instituted by the state on the advice of state-employed scientists, ostensibly ‘for Indians’ own good,’ were not readily accepted by Aboriginal people because
frequently such policies and practices were ill-advised, unenforceable, sometimes illegal, and detrimental to the user groups. Aboriginal people reacted by non-compliance to regulations, protest, and finally by political action.

1.2 Thesis Statement

There is a large body of ethnographic literature on the Aboriginal peoples of the Subarctic. Some major studies which focus on the Chipewyan study group include the work of ethnologists Kaj Birket-Smith 1923 (Churchill), James VanStone 1960 (Snowdrift), James G.E. Smith 1967 (Brochet), and David M. Smith 1968 (Fort Resolution). While these studies are interesting, they do not focus on the interaction between the Chipewyan and the state-employed scientific community in the area of resource policy development.

This study will focus on the Chipewyan people who hunt on both sides of the NWT border, but live within the northern extremes of what are now the provinces of Manitoba, Saskatchewan, and Alberta and the southern extremes of the Keewatin district of the NWT. Geographically, these people live within the migration routes of the Beverly and Kaminuriak herds of barren-land caribou and depend on this wildlife resource for their meat. During the 20th century, this resource has come under the conservation regulations of three jurisdictional authorities: federal, provincial, and territorial. Based on aggregate herd numbers, blanket conservation policies were promulgated by the scientific community. The application of hunting regulations restricted harvesting in the NWT, which was under federal legislation, but the NRTA prohibited restriction of
Indian food hunting in the provinces. As a result of determined efforts of the government agencies to conserve the caribou, the Chipewyan people have suffered hardship, dislocation, and abrogation of their Aboriginal and treaty rights. Covering the time period between 1940 and 1970, and largely archivally-based, my research has examined, generally, the interaction between Aboriginal peoples, the scientific community, government agencies involved in the area of resource policy development, and non-Aboriginal user groups such as sportsmen and outfitters, to analyze the changing nature of the relationship which has resulted in present conservation and management programs.

The 'north' which covers a vast geographical area, supports a variety of wildlife resources sustaining various Aboriginal peoples. But one resource exploited by one cultural group may be used to illustrate the general experience of northern Aboriginal people. Accordingly, this analysis is limited to the Chipewyan and their use of the barren-ground caribou as a case study to illustrate the phenomenon of non-Aboriginal peoples’ power in the control of Aboriginal people’s wildlife resource. Significant emphasis is placed on the rise to influence of the scientific community through their role as advisors to the state about the formation of conservation and management programs.

This work proposes to answer a variety of questions: Were Aboriginal peoples’ interests and rights given a high priority or summarily dismissed when in conflict with non-Aboriginal objectives? Was Aboriginal traditional ecological knowledge of the barren-ground caribou ever integrated into the decision making
processes which led to formulation of broad-based conservation schemes? Was scientific advice to policy makers based on valid and reliable scientific information? Was scientific advice used to justify evolving and increasingly restrictive conservation policies? Did all government officials hold the view that the fate of the caribou resource was more important than the fate of the owners of the resource, the Aboriginal people?

1.3 A Review of the Literature

The north has increasingly become the subject of academic interest, particularly northern development with emphasis on non-renewable resource exploitation. An examination of the literature reveals that various approaches have been taken to examine historical and contemporary periods. P. McCormack, in discussing the northern expansion of the Canadian state, has noted that many analyses are founded on a broad historical perspective that characterized the North as a frontier where 'primitivism' gave way to 'civilization.' She castigated M. Zaslow, whom K. Coates and W.R. Morrison (1989: 1) have credited with establishing northern history as a field of study, saying Zaslow epitomized the traditional mainstream historian because "he document[ed] and celebrate[d] the establishment of British and then Canadian hegemony over subarctic and arctic Canada" (McCormack 1993: 89).

Zaslow seemed to view the expansion of the Canadian state, first west (The Opening of the Canadian North, 1870-1914), then north (The Northward Expansion of Canada, 1914-1967), as non-Aboriginal Canadians' manifest destiny. He described the
subordination of Aboriginal people by the treaties, reserves, scrip in the case of the Métis "through the magnanimity of their conquerors," (Zaslow 1971: 20) and the dislocation of Aboriginal people (Zaslow 1971: 22). Zaslow then went on to trivialize their misfortune. He noted that "stabilizing the native population was the negative side of the Canadian program for the development of the west" (Zaslow 1971: 23), (emphasis added). He continued: "On the positive side, it was essential to prepare the land for settlement" and to "establish a governmental framework to provide for the needs of the resulting [immigrant] community" (Zaslow 1971: 23). Zaslow missed an important point in his reporting of state imposed conservation policies based on the advice of the scientific community. He noted the "improving ability of governments to implement their management programs" while he ignored the issue that caribou conservation programs caused hardship for Aboriginal people (Zaslow 1988: 139-141). Zaslow followed a modernist paradigm which legitimized the actions of governments and industries in Canada’s north (McCormack 1993: 89). Establishment of Canadian hegemony over northern Aboriginal peoples and their resources, as related by Zaslow, reflected his own ethnocentric opinion that held inherent notions of progress as positive for all including Aboriginal people. Aboriginal people, on the other hand, have expressed a different view of the north. Aboriginal peoples’ evidence to the Mackenzie Valley Pipeline Inquiry (1977) belied Zaslow’s northern frontier perspective in favour of the north as a homeland of and for Aboriginal people (Berger 1977: vii).
Mackenzie Valley Pipeline Inquiry Commissioner T. Berger, informed by Aboriginal evidence and social science, analyzed how development policies based on exploitation of non-renewable resources had devalued and even destroyed Aboriginal economic systems. Industry had failed to provide the expected jobs for Aboriginal people alienated from the land. Development had distorted employment data because traditional occupations (hunting and trapping) were deemed to constitute unemployment. Berger asserted that policy makers had failed to “look at forms of economic development that really did accord with native values and preferences” (Berger 1988: 163-66), that is, to strengthen the land-based economy as an economic fall-back position or as an alternative choice of lifestyle. While both Zaslow’s and Berger’s diametrically opposed perspectives are informative, their perspectives are general to the economy of all Aboriginal people of the north and thus do not focus narrowly on the caribou as a resource.

An anthropological perspective, used by M. Asch and S. Smith, defended hunting and trapping as a viable economy for northern Aboriginal peoples. They suggested that the ‘Doctrine of Inevitability’ was applied to Aboriginal economies. That doctrine was based on an evolutionary model which had an underlying racist assumption that technological and economic evolution was inevitable. They explained: “The basic story line is that the human race has progressed by stages from hunting-gathering, to nomadic pastoralism, and then to horticulture and agriculture, and finally to industrial society” (Asch and Smith 1993: 150). Asch and Smith
noted that anthropologists have been criticized for their application of the notion of progress in their discipline. That paradigm was subsequently replaced with a theory of relativism. Anthropologists have been enlightened, but government and industrialists, encumbered with anthropologists' outmoded views, have not. The government was influenced by that view of progress when formulating northern development policy which did not support the hunting and trapping economic sector of the northern economy (Asch and Smith 1993: 151). Other researchers have supported the view that hunting and trapping was a viable and satisfying way of life (Brody 1981; Feit 1982; Tanner 1979; Salisbury 1986; Usher 1987, 1993).

J.C. Stabler, an economist, used a dual economy paradigm as a framework for a socioeconomic analysis of Aboriginal participation in the economy in the Northwest Territories (Stabler 1989: 808). Stabler explained that duality is predicated on two distinct modes of production. One sector is modern, adopts new technology, typically shows growth in production, and a rise in per capita output. The other, the traditional sector, is labour intensive, uses inferior technology, slowly adopts new technology, shows little or no productivity growth, and requires little formal education (Stabler 1989: 808). Using statistical analysis of the labour market, Stabler determined that development programs of the 1950s had reached their objectives of engaging Aboriginal people into a modern economy. He noted that newly educated Aboriginal people engaged in a traditional economy while waiting for jobs in a modern economy, and that discrimination against employment of Aboriginal
people diminished with their increased education (Stabler 1989: 830-31). His findings supported the perspective of the state and industrial developers that engagement in an industrial economy must replace hunting and trapping as a lifestyle for Aboriginal people.

In contrast, resource geographer P.J. Usher used a paradigm of internal colonialism, to explain the northern economy as two modes of production, i.e., the capitalist and the domestic. He noted that the "capitalist mode has been superimposed on the existing domestic mode, but the latter survives in modified form" (Usher 1987: 491). The capitalist economy was represented by government, corporate, and small business sectors which exploited staple resource exports for metropolitan interests. The domestic mode exemplified the Native economy which had two sectors: a commodity and a domestic sector. Unlike the capitalist sector, the domestic sector engaged in the sale of commodities rather than the sale of labour. But, "although the relations of exchange were determined by European capitalism, the ownership of the means of production thus remained in the hands of Native people" (Usher 1987: 495). Additionally, the domestic sector exploited wildlife for its own domestic use. The notion of a dual economy arose from the perception of separation between the two economies. But both sectors were linked to metropolitan economies because of their exchange components. The perception of the government has been that the Aboriginal population should be removed from a declining domestic economy into an emerging industrial one. As Usher has described, Aboriginal people still engaged in a domestic economy: they lived on the land;
they still engaged in hunting and fishing, using modern technology, to produce much of their own food. He stated that “recent calculations for many parts of the North showed that income from fur, fish, and game provided as much as 50 percent of Native income, with game generally being the most important source” (Usher 1987: 516-17). This argument is significant to my thesis framework because it corroborates my contention that caribou is still important to Aboriginal people.

Historical geographer A. J. Ray, developed an interesting theory to conceptualize the economic history of Aboriginal peoples. He argued that present economic problems were not generated during the period of recent state intervention in the Aboriginal economy. Rather, economic problems started slowly and accelerated circa 1945. He postulated that dependency was deliberately introduced by the Hudson’s Bay Company (HBC) as a strategy for keeping its commodity producers tied to the fur trade. Aboriginal hunters who exploited their territories seasonally in an ecologically sound manner, went from reciprocally sharing their territories with other groups to an individual reciprocal relationship with the HBC trader. As reliance on new technology and supplies developed, Aboriginal people were caught in a trap of having to specialize as trappers to satisfy their desires. Debt, extended by the HBC to keep their workers in the forested areas, gradually forced Indians to trap more than to hunt for food and thus to rely on the HBC for food and clothing needs (Ray 1984: 1-6). Ray stated: “In essence, they discontinued the aboriginal practice of moving through their hunting range to seasonal surpluses, and instead developed a symbiotic
relationship with the HBC post where regional surpluses were stockpiled” (Ray 1984: 7). Relief from starvation, initially provided to the Indians by the HBC as a cost of operation, became onerous when profits from the trade were low. By the turn of the century the HBC was eager to have the government take responsibility for the welfare of Indians. By the 1940s, when the state was heavily involved in welfare programs, Aboriginal people had been “accustomed to various forms of relief for over two centuries” (Ray 1984: 17). On the grounds that relief created dependency, the federal government was reluctant to provide welfare for Indians when it was needed most. After the First World War Indians no longer could depend on the high prices to offset the scarcity of fur. In addition employment for Aboriginal people had declined. When the state finally supplied relief to Aboriginal people, the government used missionaries as well as HBC rivals to distribute aid, and this contributed to the breakdown of the reciprocal relationship between Aboriginal trappers and HBC traders. As Ray has noted, the Aboriginal relationships with remote bureaucrats were inferior to their personal relationships with the HBC traders because often the “various government ministries (federal and provincial) worked at cross-purposes with one another in respect to welfare of the native people” (Ray 1990: 227-8).

Another historian, Janet Foster, in her reconstruction of wildlife conservation, noted that before the 20th century “the Canadian government had been slow to realize the importance of wildlife conservation” (Foster 1978: 3) because wildlife was not considered to be an important natural resource. There was no
public movement to support a conservation effort of what the public believed to be an inexhaustible supply in an "uninhabited frontier" (Foster 1978: 12). She noted that after the turn of the century "a few far-sighted ... civil servants ... turned their own goals of wildlife preservation into government policy" (Foster 1978: 13) despite the fact that all but one (Hewitt) had no experience or training in biological sciences. Their common ground was "membership in international game protective associations" (Foster 1978: 12) and similar personal convictions. Foster extolled the virtues of 'a few good men' but neglected to portray the impact of their actions on the Aboriginal people involved.

Political scientist P. Clancy, in an interesting study of state intervention in wildlife economy, informed us that hitherto the role of the state has been addressed in relation to regulation of the fur trade. Since scant attention had been given to the impact of conservation policy in the management of barren-ground caribou in the NWT after 1945, he reconstructed the history of the formation of caribou conservation policies to determine their impact on the subsistence economy of Native people. Clancy's analysis explained how restricted access to caribou figured prominently in undermining the traditional land-based harvesting economy of Native people. Restrictions to caribou harvesting, particularly at a time when fur prices were low, helped shape the broader "trajectory of state policy in the north" (Clancy 1987: 31) because restrictions supported the notion that hunting and trapping as a way of life was obsolete. The state policy was to support non-renewable resource industries where Aboriginal people were to be absorbed into the
labour force. Clancy’s investigation covered the time period examined in this study. His restructuring of the history of state policy is useful. However, his analysis of how these policies affected social, economic, and political relations does not adequately address an issue which interests me: he does not explain how Aboriginal peoples’ staple food came to be considered game and was subsumed by a southern conservation ethic which permitted the propagation and imposition of non-Aboriginal values and restrictive harvesting policies on Aboriginal peoples’ food source.

In summary, many studies have been done on northern development and northern Aboriginal peoples: Zaslow has focussed on the northward expansion of the Canadian state using the concept of progress; the Berger commission has expounded on the right of Aboriginal people to choose their own lifestyles in their own homeland; Asch and Smith supported the view of Aboriginal people that harvesting natural resources is a viable way of life; Stabler argued for a dual economy in the NWT; Usher used an internal colonialism paradigm to show the importance of renewable resources to Aboriginal people; Ray used dependency as a central concept in his economic history; Foster reconstructed the history of wildlife conservation; and Clancy discussed the social, economic, and political implications of conservation policies. These works generally have focussed on the geographical areas of the Yukon and the McKenzie District of the NWT which historically have been important to the fur trade and extractive resource industries. None of these studies has been focussed on the interaction between the
Aboriginal people and state-employed resource advisors and managers in other northern areas. All the concepts discussed previously apply in some respect, yet more can be added to illuminate the effect on Aboriginal peoples' social and economic lifestyles, and to their reaction to the restriction of their traditional domestic economy.

1.4 Summary of Archival Records

Records in the National Archives of Canada are arranged into record groups (RG), and within those groups into sub-series of records. When organizing records, the principle of provenance is followed which means that records must not be intermingled. Records are also arranged in the original order in which they are received by the Archives. The archival record group (RG) is the records of a government department, agency, or branch that held administrative authority over a period of time.

Record groups examined in this study were selected from: RG 10, the records relating to Indian Affairs from 1677-1987; RG 13, the records relating to the Department of Justice from 1597-1976; RG 18, the records relating to the Royal Canadian Mounted Police from 1863-1982; RG 22, the records relating to the Department of Indian and Northern Affairs from 1867-1988; RG 85, the records relating to the Northern Affairs Program from 1867-1974; RG 108, records relating to the Department of the Environment; RG 109, records relating to the Canadian Wildlife Services. These record groups were chosen for their content relating to Indians, caribou, and wildlife conservation.
1.5 Organization of Study

This study is organized into seven chapters. Chapter One contains the introduction, a thesis statement, a review of the literature, a summary of the archival records, and an outline of the study chapters. Chapter Two describes the region. It identifies the study area, describes the regional environment, describes the other fauna of the region, delineates the barren-ground caribou migration routes, identifies the human occupants of the region, and describes the political boundaries of the region. Chapter Three is a biological study of the barren-ground caribou. Chapter Four is an ethno-historical study of the Chipewyan people. Chapter Five outlines the history and development of a conservation policy. Chapter Six describes the conflict among wildlife managers and policy makers. Chapter Seven is a discussion of the findings and conclusions of this study.
CHAPTER TWO
CENTRAL CANADIAN SUBARCTIC REGION

2.1 Identification of the Study Area

The study area is a rectangular space lying between western Hudson Bay and the eastern edge of Great Slave Lake. In geographical terms the area can be described as lying between 55 degrees and 65 degrees north latitude and 90 degrees and 120 degrees west longitude. The region is divided from the northwest corner to the southeast corner by two natural biomes. The northern one is Arctic and the southern is Subarctic. The treeline is a transition zone or boundary between the two ecological and cultural zones; the Inuit occupy the Arctic portion (the tundra) while the Chipewyan and other Indian groups occupy the Subarctic (the taiga) (Bone 1992: 19). The study region is the central Canadian Subarctic (See Figure 1). These two culturally and linguistically distinct Aboriginal groups share the predominant resource of the region—the migratory barren-ground caribou. Each group exploits the caribou as the herds pass through the respective areas on their migratory route. A description of the region's characteristics emphasizes the area as range for this staple economic resource.

The Beverly and Kaminuriak herds of barren-ground caribou range over the entire region wintering in the taiga and summering in the tundra (Fleck and Gunn 1982: 31). Taiga includes the
Figure 1

Treeline △△△△△
Caribou User Communities ●
1 Yellowknife 9 Fond du Lac 17 Churchill
2 Reliance 10 Stony Rapids 18 Baker Lake
3 Snowdrift 11 Black Lake 19 Chesterfield Inlet
4 Fort Resolution 12 Wollaston Lake 20 Rankin Inlet
5 Fort Smith 13 Lac Brochet 21 Whale Cove
6 Fort Chipewyan 14 Tadoule Lake 22 Eskimo Point
7 Campsell Portage 15 Brochet
8 Uranium City 16 Kinoosao

Source: G. Osherenko
transition sections of the tundra and the boreal forest. Tundra is the treeless area where the subsoil is permanently frozen (See Figure 1). Approximately half of the total range area, which extends over hundreds of thousands of square miles, is boreal forest, and the other half is tundra (Kelsall 1968: 47).

2.1 Environment of the Region

The climate of the region varies with the seasons. Summers are "moderately warm, sunny, and dry. The winters are long and cold, with little precipitation" (Kelsall 1968: 47). The tundra "is characterized by a very cold climate where the warmest month has a mean monthly temperature of less than 10°C" (Bone 1992: 19) and during the coldest months the temperature can drop to -40°C or lower (Bone 1992: 22). The taiga also experiences extreme cold temperature during the winter, but its short summers are warm which allows for more and diverse growth of forest cover (Bone 1992: 21).

Although annual precipitation on the tundra is only from 8 to 10 inches and 10 to 14 inches on the taiga, thousands of lakes and ponds remain within the region because there is little evaporation during the short summer, and permafrost inhibits drainage. In winter hard packed snow on the windswept tundra fills the valleys where caribou food is most abundant, but which makes grazing difficult. Therefore, caribou prefer to winter in the taiga where, even though the snow is deeper, digging for food is easier. They avoid areas where the snow is more than two feet deep (Kelsall 1968: 48-49). Though regional precipitation is low, the
hydrological cycle is active. The rivers systems of the region drain into the Arctic Ocean or into Hudson Bay (Bone 1992: 35).

The geology and soils of the region are typical of the Precambrian shield, i.e., rock overlain with till or glacial debris where soils are poorly formed. The growing season is short and the nutrient supply of plants is limited, therefore, the productivity of the areas is low (Fleck and Gun 1982: 33). Fortunately, lichens, the most important plant food caribou require, are ubiquitous to the area. These plants require only a stable surface on which to grow, such as rock or trees, and take their food and moisture from the air (Kelsall 1968: 50).

Tundra, occupied by the Inuit, is the caribou choice for summer range and calving ground. Characteristic tundra plants are mosses, lichens, sedges, grasses, and some woody shrubs. Glaciation has created some unusual features in this area. Permanently frozen ground called permafrost is a dominant physical feature of the tundra. Periglacial action (freezing and thawing) causes landscape features such as pingos (ice core hills found in permafrost areas), and polygon formations (polygon shaped patterned ground) in the tundra zone (Bone 1992: 31-32). Tundra looks like a gently rolling plain in which all depressions are filled with water. Caribou travel on the tundra is relatively easy. They swim the lakes and rivers and cross over the ice when the water is frozen. Eskers, (long, narrow ridges of sorted sand and gravel) “sometimes over 100 kilometers in length” (Bone 1993: 31-32), left by the retreating glaciers, are used by the caribou as windswept areas to avoid flies in summer, and as easy grazing areas when the lower areas are filled
with deep snow. Higher areas support scanty vegetation, but lower areas exhibit lush vegetation. The entire range is snow and ice-free in summer much like a wet prairie (Kelsall 1968: 58).

Taiga or boreal forest is the winter range of the caribou and the home of the Chipewyan. Taiga is primarily a coniferous forest, featuring small and scattered growth at the treeline and progressively taller and denser growth in the southerly area. Dominant species of the boreal forest are white and black spruce, others are tamarack and jackpine. Deciduous trees in the area are birch and poplar, and various species of lichens, mosses, and other plants abound. The taiga has many lakes which caribou use as easy travel routes, resting places, and escape areas. Taiga is generally rougher and rockier than tundra: “the scraping of the Canadian Shield in northern Saskatchewan has created a northeast-southwest alignment of the Precambrian rock outcrops” (Bone 1992: 31). The area features poor soil development, but will support rich lichen-growth areas and provide shelter from wind. Barren-ground caribou usually remain in the taiga until spring when they withdraw beyond the treeline to the tundra (Kelsall 1968: 59-63).

2.3 Other Fauna of the Region

The habitat is shared by other fauna, a variety of competitors, predators, and scavengers. In the avian category, golden eagles which are common predators of young calves in Alaska are uncommon, but not unknown, in the Beverly and Kaminuriak range. Many species of birds scavenge on caribou remains, including chickadees, crows, bald eagles, Canada jays, and gulls, but the most
common is the raven. Flocks of ravens, capable of killing calves, accompany the caribou herds at all times.

Large ungulates such as muskox, moose, and woodland caribou share range with barrenland caribou quite frequently. And although they are food competitors there appears to be no animosity between the groups.

Smaller mammal food competitors are the snowshoe hare, arctic ground squirrel, rodents, and lemmings, but they are not important competition. Black and grizzly bears, lynx, and wolverine are capable of killing caribou, but they are largely scavengers on the herds. Other common scavengers are foxes, mink, fisher, and weasels. The wolf is undoubtedly the greatest predator of caribou (Kelsall 1968: 51-54).

Although human kill has been considered the primary limiting factor of caribou population, wolves have also been blamed. Biologists divide the wolves of the barren-ground caribou range into two groups: ‘timber’ and ‘tundra’ animals. The smaller species of the two groups, timber wolves, remain within the taiga area while the larger tundra wolves are nomadic and follow the caribou for hundreds of miles except when wolves are denning. They prefer dry, sandy areas for digging dens in which they raise approximately four pups. Usually born in early June, wolf pups develop rapidly and join their pack by late August (Fleck and Gunn 1982: 105). Except for the time when wolves are sedentary in denning, they migrate with their prey, and “throughout most of their respective life cycles, caribou and their principle predator, the wolf, are in continual contact with each other” (Fleck and Gunn 1982: 96).
Calves are more vulnerable to wolf predation than adults. In fact, “25 wolves on the calving grounds could kill 20 to 25 percent of the calf crop in two month” (Fleck and Gunn 1982: 106). Adult caribou can outrun wolves because of their longer legs, particularly in deep snow, so wolves select weaker or vulnerable animals. Ambush and stealth is the wolf’s most successful method of kill. A lone wolf will drive a caribou into an encirclement of waiting wolves who then attack in force. Another technique favoured by wolves is to chase a large herd on ice until one animal, hindered by the group’s size, trips, is injured, and thus becomes easy prey. Canadian wildlife scientists calculate that five percent of the total caribou population was killed annually before wolf control was initiated. Bounties and killing of wolves by the use of poison bait was initiated as part of a conservation program. The program was considered successful although accurate censuses of wolves were never taken (Kelsall 1968: 245-256).

2.4 Caribou Migration Routes

Barren-ground caribou herds are truly migratory. For example, the Beverly and Kaminuriak herds move twice annually purposefully and directly between their summer and winter ranges covering distances of 100 to 700 miles. The rest of the year they are nomadic, moving constantly in reaction to changing environmental conditions. From their forested winter range in the taiga, caribou migrate in late winter-early spring to their tundra calving grounds. The cows, with some young (yearlings) in tow, lead the way in a direct and rapid line toward the the calving grounds.
Bulls and the remainder of the young caribou follow at a slower pace, and if grazing along the way is good, will fall well behind. The majority of the calves are born in the higher, rougher country during the month of June (See Figure 2). After calving the cows and calves move down to better pastures on the plains and lake and river valleys where they may share the pastures with the rest of the herds.

The aggregated caribou are nomadic during July and early August when their unpredictable movements are determined both by the winds, which alleviate the severe harassment of flies, and the search for better pastures. By late July or early August, the herd turns southward toward winter pasture. Huge aggregations occur at water barriers where crossings are habitual, but after crossing the herd spreads over a wide area and drifts individually or in small groups toward the treeline. Although the herds generally follow regular preferred migration paths, often individual animals or groups may make lateral movements and join other groups following their continuous migration. Caribou tend to travel in a straight line in long columns following the topographical lines of least resistance, so frozen lakes are favoured. Migration orientation of the Beverly herd is from south to 20 degrees east of north toward Beverly Lake in spring, but the Kaminuriak herd’s route is from south to 28 degrees east of north toward Kaminuriak Lake (See Figure 2). In autumn the migration reverses (Kelsall 1968: 106-118) (See Figure 3).
Figure 2

Direction of Spring Migration to Calving Grounds (shaded areas).

Source: G. Osherenko
Figure 3

Reverse Direction of Fall Migration to Winter Range.

Source: G. Osherenko
Caribou are unpredictable to the extent that they only occupy a part of their vast range at any given time. Though they generally follow the historical migration routes, not infrequently there are variations in the migration routes due to groups following abundant forage areas and thus causing population shifts between the two herds, and sometimes between other western herds whose migration pattern they will follow for a season or two before returning to their own calving range and migration pattern (Kelsall 1968: 118-142). Sometimes shifts in routes are initiated when a group reaches a large body of open water too vast to swim easily. Few caribou are killed by accident, but crippling injuries make the animals more vulnerable to predation and drowning. Death by drowning is possible when large numbers attempt to cross ice during unsafe conditions. Sometimes caribou will skirt the perimeter of unsafe ice causing the herd to veer off a regular route. Caribou do not avoid settlement areas on their routes, in fact, they continue their migration despite depletion of their numbers by hunters. Skirting of settlements is more likely to be caused by depletion of lichen-rich forest in the vicinity rather than by hunting. Range destruction by fire is important as a limiting factor affecting barren-ground caribou migrations. Widespread fires occur only in the taiga as the tundra is mixed with water and sandy areas which do not support the spread of fire (Kelsall 1968: 118-142).
2.5 Human Occupants of the Region

The Chipewyan, the largest Dené group in northern Canada, occupied the largest territory during the early 1700s. Their territory was described as a triangle, one side of which was a line from “Churchill to the height of land separating the headwaters of the Thelon and Back rivers” (Jenness 1977: 385). This line was approximately along the treeline. The western boundary ran “south past the eastern ends of Great Slave and Athabasca lakes to the Churchill river” and the southern boundary ran “east to the coast a little south of Churchill” (Jenness 1977: 385). Equipped with firearms, acquired through trade with the Hudson’s Bay Company post established at Churchill in 1717, the Chipewyan enlarged their territory to include the area north and south of Lake Athabasca at the expense of their neighbours to the west, the Yellowknife and Dogrib (Jenness 1977: 385). The Keewatin District of the region is still shared by the Inuit who inhabit the northeastern section. These two Aboriginal groups also share the predominant resource of the region. They hunt the caribou herds as they migrate through their respective territories.

Current Inuit user communities within the range of the overlapping boundaries of the Beverly and Kaminuriak herds’ range are Baker Lake, Chesterfield Inlet, Rankin Inlet, Whale Cove, and Eskimo Point. The Chipewyan--the study group--occupy communities at Churchill, Tadoule Lake, Brochet, Lac Brochet, Wollaston Lake, Black Lake, Stony Rapids, Fond du Lac, Uranium City, Camsell Portage, Snowdrift, and Reliance. In addition users from Kinoosao, Fort Resolution, and Fort Smith sometimes harvest
the herds (See Figure 4). (Ethnography of the Chipewyan is covered in Chapter Four).

2.6 Political Boundaries of the Region

Chipewyan territory overlaps the arbitrary political boundaries of the provinces of Manitoba, Saskatchewan, Alberta, and the Northwest Territories. As well their area is divided into treaty areas: Treaty 8 signed in 1899 extends over the northern part of Alberta, the northwestern part of Saskatchewan, and an area south of Great Slave Lake in the NWT; Treaty 10 signed in 1906 covers the remainder of northern Saskatchewan; and Adhesions to Treaty 5 signed in 1908, 1909, and 1910 cover the northern portion of Manitoba. With the transfer of natural resources to the provinces by the Natural Resources Transfer Agreement (NRTA 1930) the Chipewyan (or 'Caribou Eaters') have been subjected to various administrative authorities: provincial, territorial, and federal (Usher 1990: 1) (See Figure 4). These artificial administrative boundaries have been the source of major conflict in the establishment and application of caribou conservation regulations. Under Treaty 8 game laws are applicable to Indians. The treaty stipulates that Indians have the right to "pursue their vocation of hunting, trapping and fishing throughout the tract surrendered subject to such regulations as may from time to time be made by the Government of the country" (Article of Treaty 8, 1899). In comparison, under Treaty 10 and Treaty 5, Indian hunting, fishing, and trapping for food are guaranteed by the NRTA. There is a great difference in the agreements: the first states that the Indians may hunt
Figure 4

Beverly and Kaminuriak Caribou Ranges

Chipewyan Territory

Source: A. J. Ray
subject to legislation; the second recognizes that the Indians may hunt for food regardless of provincial legislation. This political division of the Chipewyan territories has been problematic for the Chipewyan. Their reserves and villages are located within the provinces where they are free to hunt for food, but they pursue the caribou into their traditional hunting territories in the NWT where they are subject to hunting regulations (Usher 1990: 1).

In summary, the Chipewyan territory is large. It covers 500,000 square kilometres which extend from East of Great Slave Lake and Lake Athabasca across the taiga to the mouth of the Churchill River on Hudson Bay and covers part of the Northwest Territories and parts of Manitoba, Saskatchewan, and Alberta. The Beverly and Kaminuriak herds of barren-ground caribou range over Chipewyan territory, wintering in the taiga and summering on the tundra. The Chipewyan pursue the caribou across the artificial treaty, political, and administrative boundaries. These boundaries have complicated the regulation of Chipewyan caribou hunting, for both managers and users, because treaty rights within the provinces allow Indians to hunt for food at all times while in the NWT Indian hunting is regulated.
CHAPTER THREE
BARREN-GROUND CARIBOU

3.1 Introduction

Caribou (*Rangifer tarandus*), the deer of the north, have ranged over northern Canada since time immemorial. Paleontology records show the species is of Eurasian origin. Caribou reached Alaska before the penultimate glaciation (about 100,000 years ago) and have been present in North America since then. Caribou followed the retreating ice to their present locations (Kelsall 1968: 25). It was estimated that in pre-contact times the population was approximately 3 million (this estimate has been much disputed). But the introduction of firearms, the mid-19th century arrival of the whalers, and the 20th century demand for northern furs caused an increase in the kill of caribou which reduced their numbers to the present level (Parker 1972: 9).

While caribou range across the North American continent, there are currently eight major herds of barren-ground caribou (*Rangifer tarandus groenlandicus*) which range within the Northwest Territories and the northern parts of the provinces of Saskatchewan and Manitoba. These barren-ground herds total approximately 600,000. This case study focusses on the Beverly and Kaminuriak herds which are estimated to number 124,000 and 63,000 respectively. The Beverly herd is stable in numbers while the
Kaminuriak herd “is being hunted in excess of its recruitment rate and is declining” (Calef 1979: 12-13).

A caribou herd is defined as a group of animals which calves in a specific location remote from calving grounds used by other herds (Calef 1979: 6). The Beverly and Kaminuriak herds are the only two herds which currently range into northern parts of the provinces of Saskatchewan and Manitoba where they are an important economic resource for Aboriginal user groups who live within their range.

Barren-ground caribou are mammals of the order of **Artiodactyla** which are ungulate quadrupeds with two or four digits to each foot. They belong to the family of **Cervidae** or deer, and are of the genus **Rangifer** meaning rovers or roamers. The name **Rangifer tarandus groenlandicus** is used in the biological literature, but vernacular names have ranged from reindeer to deer (Kelsall 1968: 24). However, the species is commonly known by the vernacular name of caribou among English speakers, and in the interest of clarity and brevity, caribou will be the preferred term used in this work.

3.2 Caribou Biological Characteristics

Kelsall argued that the dental formation of caribou is typical of deer and is particularly adapted to grazing, not browsing on woody vegetation, as the incisors are relatively weak (Kelsall 1968: 25). Miller disagreed. He stated that incisors are strong enough for both grazing and browsing because “readily broken or malformed incisors would be detrimental to the species” (Miller 1972: 14). Young
Caribou are precocious: they are equipped to graze at birth because their incisors and premolars are partially erupted. By the second week of life calves are fully grazing although dentition continues to develop (Miller 1972: 15).

Male caribou at birth measure approximately 2 feet 3 inches in length and 1 foot 9 inches in height while female caribou at birth measure approximately 2 feet 3 inches in length and 1 foot 9 inches in height. Caribou are considered adults at two years and over. Males measure approximately 5 feet 8 inches in length and 3 feet 5 inches in height while females measure approximately 5 feet 5 inches in length and 3 feet 3 inches in height. Both males and females weigh approximately 11 pounds at birth, but at two years of age males weigh approximately 237 pounds while females weigh approximately 171 pounds. Male caribou continue to grow into their fourth year, but females reach their full growth early in the their third year (Kelsall 1968: 26-32).

Compared with other caribou and with other members of the deer family barren-ground caribou are medium sized animals with moderately long legs. The exceptionally large hoof of the caribou distinguishes the caribou from other deer. The elongated head has a straight forehead to nose line, a muzzle which is broad and blunt, a slightly protruding thick upper lip, ears smaller than other deer, and large ‘soft’ looking eyes. The short tail is equal in length to the ear. The overall appearance of the caribou can be described as awkward in comparison with other deer especially when short spring and summer pelage (coat) emphasizes the large head on a long neck (Kelsall 1968: 32-33).
The caribou hoof illustrates an adaptation to environment. It is large and wider than it is long, the outer edges curve to the tip of both separated digits. Large dew claws on either side of the leg provide support for walking on soft surfaces such as muskeg or snow and also aid in swimming at which caribou excel. Seasonal adaptation to winter environment is shown by the shrinking of the pad which allows the sharp edge of the hoof to grip icy surfaces. In addition, in winter the long hair between the digits grows to cover the pads and thus aids in supporting the caribou on both ice and snow (Kelsall 1968: 33-34).

Coat colour changes seasonally due to molting characteristics. As spring molting progresses the darkly pigmented skin gives the caribou a dark and ragged appearance, but later short brown summer hair covers the body. As the short brown hair is overgrown by longer white winter guard hairs the caribou coat takes on a lighter appearance in general. Males grow longer white guard hairs on the neck and throat which gives them the appearance of wearing a white mane in contrast to the otherwise lightened brown-beige of the overall pelage. Winter coat is normally 4-5 cm long and is coarse and brittle (Kelsall 1968: 35).

A distinguishing characteristic of caribou hair is its hollow structure. Each hollow hair is filled with air which gives the coat insulating and buoyancy properties. The insulating properties allow caribou to survive under severe winter conditions, while buoyancy properties help the caribou to swim lakes and rivers on their migration routes (Kelsall 1968: 36).
Both male and female caribou grow antlers. Male antlers often grow to impressive sizes and are always larger than female antlers. Cow and young animal antlers are not only smaller, but also they are simpler in development than bulls’ antlers. Kelsall explained that “complete antler development consists of anteriorly extended brow and bez tines on each antler and a large, posteriorly ascending main beam which is distally semi-palmate and which may have subsidiary posterior tines” (Kelsall 1968: 36).

Caribou shed their antlers annually. Bulls shed their antlers in early November after the rut which takes place in October. They begin to grow new antlers in March and by the end of September have fully grown antlers in preparation for the competition of the coming rut. Cows retain their antlers until after the calving period in June. After the calving period cows also shed their antlers (Kelsall 1968: 40).

In November, after the rut, adult males have little fat, but later will accumulate 60 to 80 lbs of fat that is deposited over the rump, saddle, along the neck, and among the internal organs. The stored fat is totally burned up during the rut at which time the bulls cease to eat. Cows, young, and non-breeding animals accumulate less fat than bulls and are fattest when bulls are leanest. If winter feeding conditions are good, they will continue to fatten until the spring migration during which they use up all their stored fat.

Caribou are generally silent even under stress of pursuit by predators or when wounded. They are very vocal after calving. Cows and calves communicate with short grunts to maintain contact
in moving herds. Rutting bulls grunt or snort, but at other times remain silent (Kelsall 1968: 42).

On land caribou use four gaits: leisurely walk, pace, trot, and gallop. The head is extended forward and downward when walking at a leisurely gait which allows a caribou to cover four and a half miles per hour for extended periods. The gallop, in which the hind legs swing in front of the forelegs, is resorted to only when caribou are alarmed or pursued by predators. Caribou are sure-footed on all surfaces and cautious on new ice. They are not silent in movement, but are accompanied by a "characteristic clicking noise which emanates from the hoof" (Kelsall 1968: 43).

In the water caribou move easily because of their buoyant coat and their wide hoofs and dew claws which propel them through the water at an easy rate of two miles per hour over distances of two to four miles or more. If necessary, they can swim at speeds of six to eight miles an hour over shorter distances. Head, back, and tail clear the water according to the condition of the coat (Kelsall 1968: 43).

Caribou's strongest sense is smell. They are warned of the approach of humans at a distance of one mile when humans are upwind and are alerted to the presence of food beneath the deepest snow. Caribou sense of hearing seems quite inefficient by comparison. Loud noises are often ignored and do not seem to trigger a flight reflex. Discharging of rifles, howling of wolves, and often noise of aircraft are ignored by caribou. Similarly, the eyesight of caribou is remarkably poor. They do not react to colour or form, and thus will walk within a few feet of hunters who stand
still and are down wind, but they react to movement at a distance of up to one mile (Kelsall 1968: 44).

Caribou feed by grazing over large areas only stopping momentarily in their migration to crop some choice bits of forage. Only low ground vegetation is eaten. When feeding on woody shrubs such as birch and willow, only the tender leaves and stems are chosen from plants less than one foot in height. They do sometimes eat solid material such as bone, antler, or woody stems of plants using a sideways grinding motion, but this food damages the gums and mouth so is not preferred (Kelsall 1968: 68).

Caribou are adapted to the food their environment offers. Their keen sense of smell allows them to locate food which is covered by deep snow (Miller 1976: 28). The food is uncovered by pawing with their concave hoofs until a feeding crater emerges. Feeding craters are usually two and a half to four feet wide. Strangely, these craters are often side by side but do not overlap. Once an area is fed on it is rarely used again in the same season. In forested areas caribou stay on the lakes where they bed down in the snow, leaving only to feed in the morning and late afternoon (Kelsall 1968: 68).

Contrary to popular belief, caribou eat a variety of plants, not just lichens (caribou moss). Even in winter while 30 to 50 percent of their food is from lichens they eat a variety of perennial plants and shrubs. In spring when fresh green vegetation occurs caribou seek out cottongrasses and sedges. When these diminish, they feed on lichens and fungi, and in autumn on berries (Kelsall 1968: 76). In addition to their regular diet, caribou eat shed antlers.
do not drink water, according to Kelsall, who believed that the moisture content of fresh vegetation in summer and snow ingested with food in winter satisfied their thirst (Kelsall 1968: 83).

3.3 Caribou Population Dynamics

The size of caribou populations in pre-contact times, because of the vast range size, is purely a matter of speculation. For example, naturalist E.T. Seton’s 1927 estimate was 30,000,000 and biologist G.H.D. Clarke’s 1940 estimate was 3,000,000. Kelsall estimated, based on a carrying capacity of five caribou per square mile, that the total population could have been 2,395,000 animals (Kelsall 1968: 146). Similarly, G.R. Parker’s (1972: 9) estimate was three million overall. The first quantitative record of the decline in numbers was based on an aerial count along transects done in 1949 (Banfield 1954: 59). Because there is no confirmation of pre-contact numbers, and since historical records of population diminishment were anecdotal or impressionistic, any serious decline in herd numbers had to be measured against the 1949 aerial count. There are problems in estimating current caribou populations. The most accurate method is to photograph the herd after calving and count the age and sex classes. Although this method has been successful in counting the Alaskan herds, it has not been useful for counting other barren-ground caribou because the herds do not form compact groups. Rather, the herds form scattered small groups which can only be photographed by “aerial surveys using transects or random blocks on the calving grounds” (Calef 1979: 16). But unmeasured observer sampling bias has rendered surveys which are neither
accurate nor "precise enough to detect anything but large changes in population (Calef 1979: 16). G.W. Calef, in considering population dynamics, noted that herds tended to maintain a constant population density which holds over ranges varied in productivity. The evidence that ranges contract and decline in proportion to population figures suggested to Calef that caribou may have their own intrinsic form of population regulation. He argued that populations may be cyclic. If that were true, he postulated, then a simplistic approach to sustained yield management such as "you may harvest 10 percent of the population each year is inadequate" (Calef 1979: 22).

Attempts to measure the population structure of caribou are also problematic. The sex ratio of caribou is difficult to determine since both sexes carry antlers, segregate by sex at calving time, segregate again after the rut, and the herds overlap in range which causes intermingling of animals. Censuses indicate male to female ratios anywhere from 34:100 to 64:100, but since censuses are done from the air no definite figure can be cited with confidence (Kelsall 1968: 165). Miller's population analysis of 58:100 would seem to corroborate this census (Miller 1972: 63). But Gagnon and Barrette noted that determining sexes from aerial photographs can be problematic since there is much deviation in the dates of female antler casting. Non-pregnant females cast their antlers a few weeks before the calving season, whereas pregnant females retain their antlers until well after the season is over (Gagnon and Barrette 1992: 440). Since there are times when both sexes have antlers, sexing by antler count is not reliable.
Adult females lead the spring migration to the calving grounds with haste while the bulls follow at a leisurely pace; before long they are segregated, with some bulls not even reaching the calving grounds because they find good grazing along the way. In the return migration these bulls precede the cows to the forested winter grounds because the cows are accompanied by slower moving calves. Segregation lasts until the October rutting season. The rut takes places in the treeline area, and after the rut little segregation occurs (Kelsall 1968: 162). Miller suggested that caribou post-calving aggregation functioned as social cohesion which assured a self-sustaining supply of breeders in the rutting area (Miller 1972: 77).

Recruitment is the most important statistic in caribou populations studies. Annual calf crops are calculated by aerial survey in late winter and early spring when it is possible to segregate calves from the rest of the herd. At these times they have survived the heavy mortality rate of the first year of life. Increment rates of recruitment (animals over 1 year) are approximately 14.5 to 26 percent of total numbers (Thomas 1969: 37).

There is a sex differential in mortality rates of calves. At birth, sex ratios favour males slightly with 106 males to 100 females; by adulthood, sex ratios favour females. The differential in mortality rate appears to occur because males have a greater growth rate, more curiosity, and more independence than females, therefore, males are more vulnerable to predation. They are also
more active and far ranging; consequently they suffer more from accidents, disease, predation, and starvation (Kelsall 1968: 166).

3.4 Reproduction and Factors Limiting Reproduction

The rut, which occurs in late October, is accompanied by aggression among males. The aggregated herds remain in motion during the rut which occurs in the vicinity of the treeline and spreads over thousands of square miles. Shedding the velvet from the antlers, by rubbing them on trees, is a prelude to the rut. Battles between bulls are of a non-violent nature: often a threat posture is sufficient to deter an adversary. Even when antlers are locked, a little pushing and shoving is the maximum of aggression. Caribou do not form harems. Males up to four years are subordinate to older males, and so the older and stronger males service all the cows. The rut is accompanied by snorting and bellowing by the bulls—the only time they are at all vocal. The extent of the rut is approximately one month (Kelsall 1968: 173-176).

The majority of calves are born during the second week in June on the regular calving ground of each herd. Beverly herd members calve north and south of Beverly Lake, whereas Kaminuriak herd members calve east of Kaminuriak Lake (Fleck and Gunn 1982: 13, 22). The cows calve over a range of several thousand square miles, but only portions of this extensive range is utilized at any given time. Cows drop their calves on the highest elevations possible, where the terrain in poorly vegetated, rugged, windswept, and snow covered. Cold conditions undoubtedly contribute to calf mortality, but offer relief from flies and from
predators that would be readily visible against the snow (Kelsall 1968: 177-180).

Female ovulation and conception begin at one and a half years of age and continues annually for 19-20 years with enduring vigor. Twinning rarely occurs. Duration of labour ranges from 15-65 minutes during which time a cow gives birth, expels and eats the placenta, licks the calf clean and begins to nurse it. Birth is given both standing and lying down. From the age of less than one day calves can walk, run, and even swim. These precocious calves begin to graze immediately after birth and weaning takes place early. They are born during the month of June and are weaned before the end of July. It has been suggested that as the herds descend from the higher pastures to lower elevations the harassment by biting flies generates changes in behaviour and increased activity to avoid the insects. Leisurely suckling would be impossible under harassment conditions and would result in heavy calf mortality, therefore, grazing precocity and early weaning would have survival value (Kelsall 1968: 189).

Growth rate is rapid during the first five months of life. Both males and females gain approximately 85 pounds between June and November and double their birth length. Growth rate subsides during the winter and spring when all nutrient intake is required for body maintenance during migrations. Growth rate resumes at a reduced rate from June to November, but males show an increase in size over females. Growth ceases again during the second winter and resumes again in summer for males, but females who participate in the rut show little gain in size. All animals gain
weight once they arrive on the summer ranges, but their weight declines with harassment by flies. After the fly season, they all gain weight in preparation for the migration to the winter range. Males in particular gain substantial amounts of weight which is largely in fat accumulation used up during the rut when they do not feed at all. During the rut males drop in weight radically due to the loss of burned off fat and the shedding of the antlers while females retain their weight. Beverly and Kaminuriak caribou, typical of most northern ungulates, show periodic growth, fluctuating energy reserves, gradual attainment of puberty, and weight declines during senescence--9 to 12 years (Dauphine 1976: 7).

Diseases of virus or bacterial origin are uncommon in barren-ground caribou, but parasites are widespread. Warbles and nostril flies are the two most prevalent parasites afflicting caribou. The warble fly is far more prevalent than the nostril fly. Adult warbles lay their eggs on the caribou underhair between June and September. The eggs hatch in less than a week, the larvae penetrate the skin, migrate to the back and cut breathing holes. They mature in their fibrous sac and leave the skin through the breathing hole in the following May and June. As a result the hides of animals taken during the fly's gestation period are full of holes and thus less desirable or even useless for clothing. Nostril flies have a similar cycle of development, but they lay their eggs in the nostrils of the animals. The larvae then migrate to the front of the throat where they mature. Flies irritate and alarm caribou en masse, to the extent that they run, leap, and splash into shallow water in a berserk manner in an effort to avoid harassment. This action is
termed 'gadding' by biologists. Caribou are often injured or killed by their stampeding behavior. In addition, their grazing is interrupted and this can have a limiting effect on milk production and fattening of the herds (Kelsall 1968: 269-275).

3.5 Traditional Knowledge of Barren-ground Caribou

A lengthy discussion of traditional knowledge of northern resources and of their management is beyond the scope of this study. But in this thesis it is important to note that Aboriginal hunters possess traditional ecological knowledge of the animals they hunt. This empirical knowledge gathered over thousands of years of adaptation to their environment has been passed on through oral tradition. Based on oral tradition hunters believe that caribou have an extremely long population cycle and after a period of scarcity "would eventually come back" (Berkes 1988: 18). Aboriginal hunters have a detailed knowledge of caribou anatomy gained from the butchering of animals and often biologists and hunters make similar observations about biology and physiology. In addition, hunters who travel on the ground during the winter gain a more extensive knowledge of animal behaviour than biologists do. Unfortunately, hunter's contributions to ecological knowledge are sometimes ignored because they are qualitative while scientific knowledge is generally based on quantitative observations (Gunn et al 1988: 24).

In summary, caribou is a self-generating renewable resource, adapted over time to a harsh environment. Caribou's place in the
food chain is one of turning vegetation inedible by humans into meat which has been the staple food upon which populations of humans have existed. The cultures of these human populations have evolved around the hunting of caribou.
CHAPTER FOUR
THE CHIPEWYAN CARIBOU HUNTERS

4.1 Introduction

The western Subarctic, a region most southerners would consider inhospitable, has been successfully occupied by Aboriginal people longer than any other area of Canada. Archaeologists have established human occupation of the region for 25,000 years or more. However inconclusive the dates are, it is clear that the transitional taiga-tundra area of what are now known as the northern areas of Alberta, Saskatchewan, Manitoba, and the southern Keewatin District of the Northwest Territories have been considered home to the Chipewyan since time immemorial (Smith 1976: 74).

Caribou was the primary resource base around which the Chipewyan economy and culture evolved, thus caribou has always been central to the economic, social, spiritual, and political dynamic of the Chipewyan people. The Beverly and Kaminuriak herds which migrated in a cyclical pattern between the taiga and tundra were exploited by nomadic hunters using simple but effective technology during pre-contact times. The fact that the Chipewyan endured until modern times indicates that their domestic hunting technology was adequate to provide for all their needs.
The Chipewyan's acquisition of introduced technology (guns), and their involvement in the provisioning of the fur trade posts, resulted in over exploitation of the caribou herds and a decline in Chipewyan independence with dire results for their economy and culture: they became dependent on southern resources for their welfare. A case in point is the Duck Lake or Churchill Band which experienced severe social breakdown when they were relocated from their traditional area to the outskirts of Fort Churchill by the Department of Indian Affairs (DIA) following the closure of the Duck Lake HBC trading post on which they had depended for supplies. This involuntary move, made in 1957-58, was the first of an overall plan to prepare the Chipewyan for introduction into a wage economy. Justification for the move was that the band was starving and that they were 'wantonly' destroying the caribou herds. This ill-prepared and ill-timed relocation program victimized the band: their spiral into social pathology and dependency is poignantly told by Robert Bone and Ravindra Lal (Bone 1969: 1; Lal 1969: 5-31).

The Chipewyan, by the 1970s, were sedentary people living in small communities, largely supported by transfer payments and/or welfare, or engaged in low level employment in industry. They were still reliant on caribou for much of their dietary intake, but dependent on imported foods in times of caribou scarcity (Bone 1973: 1).

A study on the Cree of northern Manitoba by James Walderam, the results of which can be extrapolated to cover the Chipewyan, showed that changes in diet and food utilization has had negative health implications for the users. Health problems, the most
significant of which have been obesity, gall bladder disease, diabetes, atherosclerosis, and hypertension, have been related to dietary change. Waldram cited evidence that "wild game is generally higher in protein, ascorbic acid, and iron, and lower in fat content" (Waldram 1985: 45) than store-bought food which is high in fat and carbohydrates. 'Dietary delocalization' a term coined by P. Pelto, has been associated with the processes of 'modernization,' 'development,' or 'acculturation' and stems from "the tendency for any territorially-defined population to become increasingly dependent on resources, information flow, and socio-economic linkages with the systems of energy and resources outside their particular area" (Pelto 1978: 31, quoted in Waldram 1985: 46).

Sedentarization and urbanization, plus decreasing physical activity and a rapid change in diet, characterize the recent change process for the Chipewyan. They no longer follow the herds' migratory pattern, but engage in village-based, controlled hunts to procure their meat. To illustrate this brief history of change from single-sector economy, independent, nomadic hunters to an introduced dependent village-based mixed economy community, this study proposes to take an historical approach. I will examine both the pre-contact and post-contact records to describe how the Chipewyan culture and the caribou remain inseparable, although the exploitation of this valuable resource has been altered by southern non-Aboriginal influences.
4.2 Identification of the Chipewyan-Denesolíné

The Chipewyan, according to Jenness, “was the most numerous Athapaskan tribe in northern Canada in the first half of the eighteenth century, and controlled the largest area” (Jenness 1977: 385). They occupied the south and central Barren Grounds and the area south of Lake Athabasca to the Lakes of the Churchill River drainage and from Hudson Bay to Great Slave Lake and Lake Athabasca (Smith 1981: 271). The “part of the Chipewyan nation known as the Edthen-Eldeli Dene, or “caribou eaters” ... consist of five bands whose reserves are located in Saskatchewan and Manitoba” (Usher 1990: 1). Those Chipewyan who have reserves in Saskatchewan are called the Chipewyan-Denesolíné or Athabasca Bands. Their reserves are located at Fond du Lac, Black Lake, and Hatchet Lake, but these Chipewyan continue to hunt and trap north of the sixtieth parallel within the Northwest Territories.

The term ‘Athapaskan’ (or ‘Athabaskan’) is a linguistic one, applied to all culturally and linguistically related Indians from western Hudson Bay to Alaska (McMillan 1988: 217). Linguists explain that since “the entire western subarctic culture area is inhabited by Indians speaking a series of closely related Athapaskan languages” (Wilson 1988: 237), it can be implied that they maintained systems of communication during the pre-contact past just as they developed similar strategies for exploiting their environments, and similar social arrangements marked by great flexibility. The Cree term ‘Athapaskan’ is rejected by the people to whom it has been applied. They prefer to refer to themselves as
'Dené' which in their own language means 'man' or 'person' (McMillan 1988: 217).

As a way of distinguishing themselves from the southern Chipewyan, the people from the five northern communities of Fond du Lac, Black Lake, Stoney Rapids, Lac Brochet, and Wollaston Lake refer to themselves as 'northerners' (Jarvenpa and Brumback 1984: 152). R. Jarvenpa noted that the southern groups of Chipewyan differentiate themselves from the northern groups by referring to the northern groups as 'caribou eaters.' This term relates to their total dependence on the barren-ground caribou for their subsistence (Jarvenpa 1974: 49; Jarvenpa and Brumback 1984: 152). L.E. Brandson, citing various sources, previously noted the usage of the name 'caribou eaters' for the Saskatchewan groups and added the two groups from the transitional forest zone of northern Manitoba which are the Duck Lake or Churchill Band and the Barren Lands band. She noted that "the territory exploited by the Caribou Eaters was roughly the same as the area utilized by two caribou herds, the Kaminuriak and the Beverly" (Brandson 1981: 3). Despite that the name 'Caribou Eaters' seems to describe the groups effectively, the name is seldom used anymore. For convenience, this work will refer to the five northern groups as the 'Chipewyan,' a name derived from the language spoken by the group.

These nomadic Chipewyan have traditionally shared the range of the Beverly and Kaminuriak herds of caribou. The Fond du Lac and Black Lake bands are associated with the Beverly herd and the Hatchet Lake, Barren Lands, and Duck Lake bands with the Kaminuriak herd (Smith 1981: 275).
4.3 Pre-contact History

Pre-contact interactions of nomadic hunting bands and caribou are difficult to determine. However, archaeological investigations have established a relationship between the hunting culture Chipewyan and the barren-ground caribou during the Arctic Small Tool tradition after 1500 B.C. (Gordon 1975: 2). B.H.C. Gordon's Keewatin District work reveals that "the barren lands have been home to a number of Indian ... cultures ... spanning seven thousand years. During this period they have also been the territory of the barren-ground caribou." (Gordon 1975: 2). He continued: "Stone tools plus butchered caribou bone indicate in the types, number and distribution that the barren lands have been a fertile ground for caribou hunting bands since their earliest human occupation" (Gordon 1981: 3). He explained that the ancestors of the present Chipewyan, Dogrib, Slave, and Yellowknife occupied the area after the time of Christ. Fishing was a secondary food source for the Chipewyan but its importance "never approached that of caribou" (Gordon 1981: 2). Gordon explained that Chipewyan culture "evolved and revolved around caribou." In fact, he said "caribou was the staff of life" (Gordon 1981: 18).

The Chipewyan migrated with the caribou. From archaeological evidence found in the transitional forest zone of northern Manitoba, R. Nash has established that pre-contact caribou ranges and migrations were predictable, and therefore, pre-contact hunting bands tended to locate "within and not between migration corridors," (Nash 1975: 1) which demonstrates the persistent
association of Chipewyan and caribou. He concluded, that as migratory people, the Chipewyan in their pursuit of caribou, moved like the caribou from the forested lands to the barren lands in the spring and returned with the caribou to the forest in the fall. Similarly, evidence from an archaeological study of the Black Lake area of northern Saskatchewan indicated that the importance of the caribou to the Chipewyan “cannot be overestimated” (Minni 1976: 65). S.J. Minni noted that the Chipewyan recognized a special relationship with the caribou. The Chipewyan say that in the recent past “they lived like the caribou” (Smith 1971: 2).

Before contact the Chipewyan economy was characterized by exploitation of the caribou by self-sufficient bands of twenty to thirty bilaterally related persons camped in winter near the shores of lakes where caribou crossed or, in the event that they did not, fish and small animals were available (Smith 1976: 74). Labour was organized by age and sex; men hunted caribou, sometimes with the help of children and women when cooperation was necessary to guide animals into impoundments or defiles where they could be killed with bows and arrows or clubs. Men also set fish nets while women and children collected small animals. Women cooperatively made clothing from animal hides.

Winter transportation was by foot, primarily because without dogs it was easier for people to follow game than to bring game to the fish lake base camp. In summer the small family bands traveled by canoe to major encampments of about 200 people forming regional bands at fish lakes and in the fall they dispersed to their smaller extended family bands in pursuit of caribou. This type
of social organization is categorized as a ‘restricted wandering’ community pattern (VanStone, 1974: 38-39). Bush resources were shared on the basis of reciprocity which ensured the survival of the group rather than the individual. Asch noted that “it was the whole membership of the local group and not each family or each individual that defined the self-sufficient unit” (Asch 1977: 48). In the pre-contact period the regional economy was typified by self-reliance. Asch said: “They achieved this end by organizing themselves into self-sufficient local groups within which production and distribution were collective activities.” Overall, “the principal of co-operation and mutual sharing ... was extended to all the people of the region” (Asch 1977: 49).

4.4 Post-Contact-Traditional Chipewyan Culture

Chipewyan culture was an adaptation to their environment. It was based on following the caribou in their seasonal migrations. Winters were spent in the forest where shelter was available for both humans and animals. The hunters ambushed the caribou along their spring routes to the barren lands and followed them far out into the barren lands in summer. The caribou were taken in great numbers during their fall migration south (McMillan 1988: 218).

Hunting technology was simple but effective. In the summer the hunters speared caribou in lakes and rivers, and in the winter snared them in pounds where they shot them with bows and arrows (Jenness 1932: 386). This technique was sometimes so successful that the hunters and their families could remain in that spot and subsist on the spoils of the hunt for long periods of time, sometimes
for an entire winter (Hearne 1895: 122). Alternatively, caribou could be driven into defiles where they were killed, or speared from canoes while crossing water (Helm and Leacock 1971: 346).

The Chipewyan had a well developed fishing technology. Fish, caught with hooks, and in gill nets, through holes in ice during winter, supplied a major portion of the dietary protein when caribou was scarce. Hares, other small fur bearers, and berries were sometimes added to the diet. But these foods were not preferred. They were emergency food items (Helm and Leacock 1971: 346).

Preservation of food was simple: meat was either dried, pounded and made into pemmican or frozen; similarly fish was also dried or frozen. Storage was usually accommodated by platform caches or caches in trees. Preparation was by open-fire roasting or “stone boiling in bark or leather containers (Helm and Leacock 1971: 346).

Caribou not only provided food, but shelter as well. The tanned hides provided tents, warm and durable clothing, snowshoe lacing, and parts of hunting equipment. K. Abel noted that “caribou killed in August or September were preferred because the winter skins were too thin and full of warbles to be used for clothing” (Abel 1993: 25). Even the bones and antlers were made into “tools and utensils, such as needles, awls, chisels, ladles, and skin scrapers” (Helm and Leacock 1971: 346).

The annual consumption of caribou was approximately 150 animals per each 8.5 person tent which made up the basic unit. A tent was occupied by a man, his wife (or wives) and their children, and their siblings and offspring, “or with hunting partners and their
families" (Raby 1973: 13). Camps were usually a few of these eight-person tents except when "cooperation was needed in exploiting the migrating caribou" (Raby 1973: 13). Otherwise, "wider social organization was [not] developed ... the self-sufficiency of individual households being underpinned by an ethic of strong individualism" (Raby 1973: 13).

Other social arrangements also revolved around the hunt. Though Chipewyan developed "social strategies characterized by great flexibility and informal institutional arrangements" (Wilson 1986: 239) leadership was defined by the task at hand. Leaders were people who were listened to or followed "not because they had the power to make people obey but because they had demonstrated an ability to lead in the that particular activity" (Wilson 1986: 239). Despite that "an outstanding hunter might attract a considerable following ... he had no permanent power" (Wilson 1986: 239). The social situation "was of individuals, family groups, and even larger groupings making short term decisions about where and how they would live" (Wilson 1986).

Egalitarianism, self-reliance, and autonomy, were keys to Chipewyan society because the staple food, caribou, was widely available and all possessed the skills necessary to procure and process the food source. It has been noted that men of wisdom, supernatural power, and hunting ability attracted followers, but only as the "first among equals" (Helm and Leacock 1971: 347). Chipewyan world view was not displaced by missionization. The belief in inkonze (the spiritual power of individuals to know the
habits of animals) was still widely prevalent in 1972 (Smith 1973: 20).

4.5 Early History of Contact

Chipewyan direct involvement with the fur trade began in the 1780s. The English traders were aware that the Chipewyan existed because Kelsey was sent to contact them in 1689 (Abel 1993: 46). The first Chipewyan to come into contact with Europeans were slaves of the Cree brought to York Fort, during its occupation by the French sometime between 1694 and 1714 (Smith 1976: 74). The fort at York, established on southwestern Hudson Bay in 1682, was dominated by trade with the Cree. The Cree used their newly acquired firearms to plunder the Chipewyan, who suffered severe losses in warfare (Ray 1974: 19). Shortly thereafter, the Chipewyan were drawn into the trade.

The English traders were eager to bring the Chipewyan into direct trade. But, except for powder, shot, and guns, the Chipewyan saw no real need for trade goods because they had “what seemed to them a comfortable satisfactory life among the caribou and woodland resources” (Abel 1993: 61). Governor Knight of the HBC organized an expedition to Chipewyan lands and negotiated a peace between the Cree and the Chipewyan during the winter of 1715-16. This was followed in 1717 by the construction of Fort Churchill, at the mouth of the Churchill River, specifically for the Chipewyan trade. Once armed, the Chipewyan’s military disadvantage diminished (Ray 1974: 23).
The search for the Chipewyan was led by the escaped Cree slave woman Thanadeltur, a Chipewyan, in company with a peace delegation of Home Guard Cree and a company servant, William Stewart. The two groups met at 67 degrees north latitude and 1000 miles from York as Stewart measured it or 67 degrees north latitude and 600 miles from York as Knight estimated (Smith 1976: 74). The group's journey was "slowed by sickness and threatened by starvation on their long trek across the Barren Ground" (Van Kirk 1980: 68). Since they started the journey in the June, they obviously missed the caribou migration and found little else to kill for food (Abel 1993: 49). This is the first written historical evidence for the necessary exploitation of caribou by people wishing to survive in the barren lands.

Although Chipewyan came to trade at Fort Churchill, no further expeditions to Chipewyan territory were made until S. Hearne's journeys on foot in search of the Coppermine River in 1769 and 1772. His first attempt failed because his Chipewyan guides abandoned him and he was forced to travel the couple of hundred miles back to Churchill alone. His second attempt lasted eight months, but terminated when his party ran out of food. Hearne's own record of the journey reveals the decline in food:

deer were so plentiful ... the Indians killed as many as was necessary; but we were all so heavy laden that we could not possibly take much of the meat with us. This I soon perceived to be a great evil which exposed us to such frequent inconveniences, that in case of not killing anything for three or four days together, we were in great want of provisions (Hearne 1715: 71).
Matonabbee, a famous Chipewyan chief, happened upon Hearne and his group at this point and took charge of them on their return to the fort. Hearne noted that Matonabbee was respected by both Chipewyan and Cree because of his ability to provide food. Hearne explained that the Home Guard Cree accompanying him were unfamiliar with barren land hunting and therefore were shown disrespect by the Chipewyan: “among the other Northern Indians ... they were held in no estimation ... the value of a man among those people, is always proportioned to his abilities in hunting” (Hearne 1715: 101-102).

Subsequently, Hearne reached the Coppermine River under the guidance of Matonabbee who, in the now famous passage of Hearne's diaries, convinced Hearne that women were indispensable to any successful journey. Matonabbee explained that sharing labour was the key to success: “When all the men are heavy laden, they can neither hunt nor travel to any considerable distance; and in case they meet with success in hunting, who is to carry the fruits of their labour? (Hearne 1715: 102). Matonabbee’s argument was that success came from working as a family unit.

Sahlins, much later, expressed the same view as Matonabbee, when he said: ”of the hunter it is truly said that his wealth is his burden ... the more so the longer [it is] carried around” (Sahlins 1972: 11). After noting that some food collectors do have technology such as canoes or dog sleds, Sahlins explained that hunters must carry with them all their comforts and so keep only what they can “comfortably carry themselves ... or what the women
can carry ... the men are left free to react” (Sahlins 1972: 11) to hunting opportunities or defense.

From ethnohistorical literature we learn that the Chipewyan inhabited a life sustaining environment. Hearne noted that they “live generally in a state of plenty, without trouble of risk; and consequently must be the most happy, and in truth, the most independent also” because the “deer they kill, furnished them with food, and a variety of warm and comfortable clothing” (Hearne 1715: 123). The Chipewyans’ use of Aboriginal hunting technology was so successful that “families subsist by it without having occasion to move their tents above once or twice during ... a whole winter; and in Spring ... both the deer and Indians draw out to the barren[ground]” (Hearne 1715: 122). Hearne explained that as “their whole aim is to procure a comfortable subsistence, they take the most prudent methods to accomplish it” (Hearne 1715: 124). And “by always following the lead of the deer, [they] are seldom exposed to the griping hand of famine” (Hearne 1715: 124).

Entry into the fur trade forced the Chipewyan to abandon their subsistence pattern at the caribou crossings and to move south into the boreal forest to better exploit furbearing animals. This change brought a growing dependence on the fur traders for technology such as metal tools, and food supplies of flour, tea and sugar. And, as they trapped rather than pursued the caribou herds, the change brought periodic starvation to the Chipewyan although starvation was not unknown in pre-contact times. Desperate need was experienced when the caribou migration paths deviated from the norm (Yerbury 1976: 248-249).
Eventually, there was a shift in the seasonal round which included trips to the posts for supplies rather than the fishing lakes. The post at Fort Resolution was established in 1786 and Fort Chipewyan was built in 1788. By that time many Chipewyan had moved into the region and so preferred those western posts to the Churchill one which required a long and arduous journey. The Chipewyan who continued to trade at Churchill suffered a 90 percent depopulation from the smallpox epidemic of 1781, but those who had moved south survived to exploit the area left vacant by the Cree who had also suffered depopulation from smallpox epidemics (Yerbury 1976: 250-251).

Not only had territorial boundaries and population movements occurred between 1778 and 1879, but the Chipewyan economy and hunting technology changed as well. Guns became commonplace and made the procurement of meat easier. More dogs were utilized as the fur trade progressed because travel increased with trapping and dogs were necessary for hauling over longer distances. (Raby 1973: 12). The use of caribou as dog food increased pressure on the caribou herds. However, hunting was still done by the primary economic unit and the division of labour had not altered since pre-contact times. For example, men hunted and trapped while women collected small game (Asch 1977: 51).

Missionary work began in the area about 1847 (Raby 1973: 14). By 1892 the Nativity mission at Fort Chipewyan was well established, but food supplies were tenuous. The Catholic missionaries existed on berries, barley, fish, potatoes, and geese or dried meat from the Indians of Fond du Lac (Breynat 1953: 117).
The mission “gardens frequently failed, and they relied heavily on fish for food, like the people to whom they were ministering” (Abel 1993: 118). When the word came that the caribou were on their way south all the Chipewyan hunters rushed to meet them. G. Breynat described the caribou as the “life of the Indians of Fond du Lac (Breynat 1953: 48). He explained that as well as being a tasty food, caribou supplied the Indians with housing, clothes, and even tools (Breynat 1953: 49). Missionaries depended on Indians to provide them with fresh meat, dry meat, fat, and pemmican in trade for powder, ball, shot, files, knives, axes, thread, needles, calico and flannel (Breynat 1953: 22). In the early fur trade days, it was common for the Chipewyan hunters to provision the trading posts with fish and meat in exchange for the supplies they needed (Usher 1986: 35). Chipewyan procurement of meat for the fur traders maintained a mutual relationship between the traders and the Indians.

Changes in the fur trade occurred during the last decades of the nineteenth century and the first decades of the twentieth century. Improvements in transportation and communication and the cash payments of treaty money were incentives to new trade to enter the business. The effects of competition for furs, a new transportation system, and a rise in fur prices during the First World War prompted a change in the old order. The mutual dependency between the Indians and the Hudson’s Bay Company diminished (Ray 1990: 222-23). As a result of cheaper transportation, an influx of new traders and white trappers who demanded a wider variety of trade goods, new technology and
products became available. Significantly, the repeating rifle was introduced along with the steel trap, western clothing, and the use of dog teams increased dramatically (Asch 1977: 50) But more significantly, the traders were no longer reliant on the Indians for food and could therefore restrict the trade of furs to suit their own ends, that is, to barter for trade items. But the Caribou-Eater Chipewyan remained hunters for their own food rather than full-time trappers of furs for exchange. They restricted their visits to the posts to treaty time when they traded for ammunition, tea, and tobacco and then returned to their bush camps (Abel 1993: 203-4).

The lifestyle of the Chipewyan deteriorated rapidly between the First and Second World Wars. Low fur prices caused by the Depression reduced Indian trappers’ buying power at a time when game cycles were at a low point. Tuberculosis and pneumonia were rampant during this period when the government decreased its spending on Indian health services in an effort to deal with the “crisis of the Depression” (Abel 1993: 208).

After the Second World War experience, government programs were instituted to overcome the lack of knowledge of the north and its resources. Game management policy was developed by southerners who were unsympathetic to Aboriginal resource use and rights. The mandate of the Dominion Wildlife Service, which was created in 1947, was to “manage wildlife resources according to “scientific” principles for the benefit of national economic development” (Abel 1993: 204-14). The policies recommended by this government agency generated conflict for the following twenty years.
4.6 Recent Developments in Chipewyan Culture

About 1930 there was a sudden influx of white trappers and independent traders into the Chipewyan area when fur prices were high (Jarvenpa and Brumback: 150), however, when fur prices fell most left the area in search of more lucrative employment (Bone 1973: 23). Both white and Indian trappers spent most of their time in the bush and visited settlements only once or twice a year to trade. They largely lived on wild meat, either caribou, moose, or small fur bearing animals, fish, supplemented by food from the traders. The traditional system of family mobility began to break down in the 1940s as families began to move into more centralized settlements in “response to the diminished role of the fur-trapping economy and to a simultaneous extension of federal and provincial government control of Indian and Metis life” (Jarvenpa and Brumback 1984: 150; Bone 1973: 26).

Incursions into Chipewyan territory have been in the form of trade, missions, law, and welfare, in that order. New forms of economic development (commercial fishing and gold mining on Lake Athabasca) occurred in northern Saskatchewan about the same time as float planes began a new era in hunting and trapping transportation. For example, before 1945 the “permanent residents living in Stoney Rapids were the HBC manager and his assistants, an RCMP officer and his interpreter, an itinerant missionary, and a few white men and Métis trappers” (Shannon 1973: 16). But, since then, the population has grown with the addition of government agents and employees, health, welfare, and educational services employees.
Renewed mining activity, air transportation, radio communication and a tourist fishing industry have also added to the total non-Aboriginal population (Shannon 1973: 16).

In short, the regional economy had been transformed. After the Second World War fur prices dropped and trade goods increased in price. The introduction of family allowance and old age pension payments made it possible for the Chipewyan to continue trapping. But, by the 1950s, it being deemed by the state that the fur trade would not recover, the territorial government appealed to the federal government to intervene in the economy either by supporting the fur trade or by stimulation of industrial development to provide employment to the Chipewyan. The federal government reacted by an aggressive program of universal compulsory education at newly constructed schools to prepare the Chipewyan for future employment in industry. People were encouraged to move into towns where they would be supported by transfer payments, and where they could be near their children (Asch 1977: 53). Direct payments to nuclear families meant, for the Chipewyan, a departure from dependence on the group to dependence on outside forces. Despite the individuality fostered by transfer payments, bush resources were still shared reciprocally by members of former hunting groups, and in some cases within the entire community "despite official counter-pressures against the ideology of reciprocity--for example, through government supervision of the distribution of meat kept in community freezers" (Asch 1977: 54).
In terms of mobility and travel, women and children now remained in towns while men traveled to pursue the caribou, more often than not, in chartered aircraft supplied by government funds, either directly or in the form of pooled transfer payments (Bone 1973:1; Shannon 1973: 45).

In summary, by the 1970s, the Chipewyan were engaged in a wage-welfare economy imposed by outside forces. Introduced as programs which would benefit them, Indians were small players in industries which did not employ their knowledge, inherent independence or self-reliance, but rather they were controlled by outside forces. Notwithstanding that the caribou no longer dictated Chipewyan lifestyles, the pursuit of the caribou for their meat remained the Chipewyans' sustaining link with their past (Bone 1973: 63).
CHAPTER FIVE
HISTORY AND DEVELOPMENT OF A CONSERVATION POLICY

5.1 Introduction

Wildlife, a renewable resource, has been a mainstay of Aboriginal livelihood since time immemorial. But, in the eyes of most non-Aboriginal people, living on wild animals has become an anachronism except in the far north (McCandless 1985: xv). As a result of this non-Aboriginal ideology, what to Aboriginal peoples has always been food is now considered as game. And game is controlled by non-Aboriginal people and foreign laws. The Canadian government has shown great concern for wildlife conservation, but has shown little respect for Aboriginal peoples' treaty rights, nor the "preservation of their persons from physical and cultural debilitation" (Gottesman 1983: 68) in the application of game regulations.

The word 'game' as applied to animals is a concept foreign to Aboriginal peoples. Game implies sport or pleasure derived from play of some sort. This concept of using animals for sport is anathema to the Aboriginal peoples whose belief system regards trivializing animals as disrespectful. Making sport of animals is a breach of Aboriginal peoples' belief that a mutual respect between animals and men is necessary to successful hunting. According to Aboriginal belief, animals respect men by giving themselves to men
for food, but only as long as men respect animals by not dishonouring them (VanStone 1974: 65; Breynat 1953: 54-55). Therefore, there is a basic dichotomy inherent in the Aboriginal and non-Aboriginal perceptions of wildlife. And accordingly, the origin of the alien concept of ‘game’ is explored in this chapter as that concept is integral to the development of conservation policy.

5.2 Origin of Game Laws (1066)

Robert McCandless explained that laws about wildlife are ancient, and based on Common Law: “at least nine hundred years of evolution lie behind the game laws of North American jurisdictions” (McCandless 1985: 1). In Europe, since the time of William the Conqueror in the eleventh century, the use of wildlife as meat was secondary to the use of wildlife as game. The decline in numbers of animals was concomitant with the rise of a privileged class that was influential in drafting and enforcing laws restricting the hunting of a depleting number of animals to themselves for sport. At the time of the Norman conquest of Britain in 1066, the Roman idea that wild animals belonged to no one until killed, was accepted. The only exception applied to animals caught in the King’s forests; they belonged to the King. Forests were owned by regional Anglo-Saxon kings and administered by them as their right (McCandless 1985: 3).

The value of forests to these minor monarchs was in granting franchises for grazing, timber cutting, and hunting. Then, as now, franchises represented a source of revenue for the rulers, and thus those in power developed forest laws to protect their monopolies. After the conquest, William, Duke of Normandy, claimed title to the
whole of England; however, as King William I, he honoured prior customs of forest management (McCandless 1985: 1).

In his own interest, the administration and protection of animals within the King's forests was not based on conservation of the species. Forests were protected to maintain enough animals for the sport of hunting by the King and his favourites. As a result of husbanding animals for frivolous entertainment a "rich social tradition centered on hunting" (McCandless 1985: 4) arose in medieval society. When, by the time of the Renaissance, all the wild forests were gone, the rituals and pleasures attending the medieval hunts remained because "through the centuries hunting had become an exercise in privilege with a life of its own" (McCandless 1985: 5). Hunting game remained ceremonial in Europeans' lives and was connected with the exercise of authority over an area. Customs of hunting game have a long tradition in British culture.

When the settlers assumed jurisdiction over North America they carried these traditions with them and applied them to the animals of the land, and equated the ownership of game to those in authority, themselves. Thus the game laws in force today grew out of the early application of old principles of English law to North American wildlife. These attitudes of privilege allied with authority are notions which the British brought to this country as part of their cultural baggage (McCandless 1985: 8).

As westward expansion progressed, animals became the objects of unrestricted economic exploitation by both newcomers and Aboriginal people who believed in a myth of abundance. This policy of unrestricted exploitation led some species to the point of
extinction, for example the buffalo (McCandless 1985: 15). As soon as the buffalo were gone, North America’s felt guilty for their participation in destroying them. Thus a preservation ethic, developed too late for the buffalo, has been the “underlying philosophy or moral purpose behind the game laws of most jurisdictions since that time” (McCandless 1985: 18). In Canada the state has the authority to impose and enforce game laws. This it does in an impartial manner through the sale of licenses to hunt game for recreation. Treaty and Aboriginal hunting rights exempt some Aboriginal people from abiding by game laws unless a species is considered in danger of extinction. However, when a species is considered threatened, Aboriginal people also are subject to the game laws despite not being ‘sportsmen’. Animals, to the Aboriginal people represent not sport, but their meat (McCandless 1985: 18). Animals represent, not game, but Aboriginal survival.

5.3 Early Conservation Impetus

With westward expansion of a European style capitalistic economy, animals became the objects of unrestricted economic exploitation which soon led some species to the point of extinction. George P. Marsh, an early pioneer in conservation work, noted in 1882 the destructiveness of man:

Man has too long forgotten that the earth was given to him for usufruct alone, not for consumption, still less for profligate waste. Man pursues his victims with reckless destructiveness; and, while the sacrifice of life by the lower animals is limited by the cravings of appetite, he unsparingly persecutes, even to extirpation, thousands of organic forms which he cannot consume (Marsh 1882: 172).
Marsh was referring to “civilized” or European immigrant man, it can be assumed, since he later explained that in contrast “untutored humanity ... interfered comparatively little with the arrangements of nature” (Marsh 1882: 173). Marsh, who obviously had a primitivist bent, continued:

The wandering savage grows no cultivated vegetable, fells no forest, and extirpates no useful plant, no noxious weed. But with stationary life, man at once commences an almost indiscriminate warfare upon all the forms of animal and vegetable existence around him, and as he advances in civilization, he gradually eradicates or transforms every spontaneous product of the soil he occupies (Marsh 1882: 173).

Marsh, of course, was making a very general philosophical argument for conservation at a time when North American wilderness was rapidly disappearing, but wildlife, at that time, was not yet a specific issue. His intent, it would seem, was to alert the general population to the dangers of over-exploitation of resources, especially forests, water, and land. His perception was informed by evidence of ecological devastation wrought by man in the ‘old’ world. But Marsh’s general observation about nomadic man was valid. In northern Canada for example, the Chipewyan lived in harmony and balance with nature before contact, although ecological modification of territories was not unknown in pre-contact times. For example, fire was used extensively to open habitat for game (Lewis and Ferguson 1988: 57-77). But, in terms of animals, just as
the non-Aboriginal perspective of wildlife as game had evolved over thousands of years of diverse cultural evolution, so had the Aboriginal perspective of wildlife as food evolved over the same time period. However, the Aboriginal development resulted in a different world view. One Aboriginal author related that: “Indigenous people have always been intimately aware of their symbiotic relationship with the earth based upon a delicate balance between all living things” (Clarkson 1992: 3). L. Clarkson explained that: “understanding did not arise from a romanticized version of our relationship to the earth. It developed before contact with other societies and was based upon the basic law, life and death” (Clarkson 1992: 3).

Early historical evidence reveals that at contact the Chipewyan of the boreal forest were reluctant to trap animals for fur because they were self-sufficient and contented as they were (Abel 1993: 60). They took only what was needed for survival. In contrast, sport hunters of the late 1800s saw no contradiction in being ideologically either conservationists or preservationists while at the same time being trophy hunters. They revered wild animals by killing them so that they could cut off their heads and hang them on their walls as symbols of their manliness (McCandless 1985: 19).

Dan Gottesman explained the psychological value of hunting: “in a “new world,” free of the traditional restraints of European society, “new men” secretly indulged their own “primitive” violent longings” (Gottesman 1983) by killing animals. He said:

Hunting, of course, was dependent on the continued existence of wilderness regions and on a plentiful supply of wild game. By
the turn of the century, the extensive losses in land and wildlife (which resulted from the "inevitable progress" of liberal-capitalist society) clearly threatened the "manly" identity of the white hunter and his society's ability to revitalize itself with Nature's spiritual salves (Gottesman 1983: 82).

The realization that natural resources were diminishing called for conservation on a national scale.

It was not until 1908 under the leadership of sport-hunter Theodore Roosevelt that the first meeting of the National Conservation Commission of the United States was held. The commission's first step was to make an inventory of their own natural resources. Principles of the new movement were threefold: first, development of the natural resources for the benefit of contemporary residents; second, prevention of waste; third, preservation for the benefit of the many (McConnell 1962: 191). The early conservation movement was much like a religious crusade, i.e., good conservationists (wise use for all) against evil exploiters (all for themselves) (Hayes 1959: 202). At the same time, conservation had a scientific slant which reflected the turn-of-the-century belief in science and technology as a panacea. Therefore, "since resources were basically technical in nature, conservationists argued, technicians rather than legislators, should deal with them" (Hayes 1959: 3). But these views on conservation were not backed by the public rather, they were the views of a "limited group of people, with a particular set of goals" (Hayes 1959: 3) and the ability to achieve them. In the pursuit of their goals they proselytized their neighbours to the north and south.

Thus, the Americans' second step was to invite Canada and Mexico to join them in the first North American Conservation
Conference the following year (Van Hise 1921: 2-14). Canadian officials readily accepted because the loss of natural resources in Canada was a cause of growing concern. A list of priorities had been drawn up at the 1908 National Conservation Conference in Chicago as a Declaration of Principles, in which, for the first time, wildlife was mentioned. One of the priorities generated by the conference was that each country establish a Commission of Conservation. Following the lead of the Americans, three months later, the Canadian Parliament established its own commission with Clifford Sifton, Interior Minister, as chairman (Foster 1978: 36-39).

5.4 Caribou Conservation Policy (1910-1920)

The Commission for Conservation of Natural Resources was established in 1910 by federal statute (Tough 1992: 61). The Commission membership was made up of federal and provincial politicians, civil servants, and academics responsible only to parliament. In addition, representatives from game protection associations, the lumber industry, and influential American wildlife experts also attended the early annual meetings (Tough 1992: 61). The mandate of the Commission was to formulate recommendations for conservation and wise use of natural resources much along the same lines as the American commissions. The Commission meetings were notable for their anti-Indian bias. Complaints against Indian hunting were couched in emotive terms such as ‘wanton slaughter’ and ‘destruction’ of ‘game’ which sportsmen, at considerable trouble and expense, wished to pursue as trophies (Tough 1992: 66). F. Tough notes that “at a very early date of government intervention,
the Native economy became of interest to planners ... but the
demands of other groups such as tourists and sportsmen were
advanced on rational economic lines” (Tough 1992: 65) while,
significantly, Indian treaty rights were downplayed. The Indian
economy was not well understood by the policy makers who sought
to control Indian hunting (Tough 1992: 70). The early meetings of
the Commission set the stage for future conflict in the regulation of
caribou hunting because few members understood the importance
of the fur trade to the development of Canada, nor the importance of
hunting to Indians who collected the furs. C.G. Hewitt, Dominion
Entomologist and Consulting Zoologist, was the exception. He argued
for the maintenance of the fur trade because it provided a livelihood
for Indians and formed the economic base for the development of
Canada (Tough 1992: 62). Wildlife investigations during the first
few years involved economic studies of fish and fur bearers which
were commercially valuable so efficient use was promoted (Foster
1978: 42). To this end, submissions were accepted from various
knowledgeable persons.

Vilhjalmur Stefansson, Arctic explorer in the Canadian Naval
Service, was the first to plead the case for caribou conservation in
the Arctic. In his submission to the Commission of Conservation, he
related that in the Western Canadian Arctic whalers trading
firearms to the Inuit for meat provisions and skins for export had
resulted in slaughter of the caribou reminiscent of slaughter of the
buffalo: “the caribou were killed for their hides, for their tongues,
and “sport.” Eskimos [sic], and even white men, would frequently in
traveling shoot a whole band when they knew that they would have
to abandon everything" (NAC RG 85, Vol 665, File 3914, Stefansson to Sifton, 8 Feb. 1914). The result was the extinction of the caribou in Arctic Alaska and western Arctic Canada. As a consequence, many Inuit starved and the rest were forced to abandon the area for lack of food and clothing. In comparison, Stefansson noted that in Arctic areas where there was no whaling trade, Inuit hunted caribou during summer months for skins for tents and clothing, and in the winter they hunted seals for food which they used frugally.

Stefansson suggested that a season, April to September, be placed on caribou to prevent the Inuit from over-exploiting the still unthreatened herds by changing their subsistence pattern to facilitate trade in skins. He also suggested that pelts be sold only in districts where they were procured, and that killing for non-use be penalized. He argued that with regulation caribou could continue to provide food to the 3,000 Inuit, scientific explorers, prospectors, white trappers, traders and missionaries in the north. In addition, caribou protection would generate revenue from sportsmen in license fees and the licensing of guides. Finally, he pleaded for the conservation of the Inuit, also on an economic basis:

conservation of the Eskimo is also a conservation of natural resources, for it is his presence alone that renders this section a source of possible profit to traders. Dead Eskimos trap no fur, and ill-clothed Eskimo, like those of the Mackenzie today, trap far less than they otherwise would, for their cotton garments do not allow them to tend traps except in good weather (NAC RG 85, Vol 665, File 3914, Stefansson to Sifton, 8 Feb. 1914).
As a clincher to his argument, he suggested that laws would be "easily enforced from Mounted Police posts already established" (NAC RG 85, Vol 665, File 3914, Stefannson to Sifton, 8 Feb. 1914). Significantly, Stefansson's recommendation was the first 'scientific' input, to the federal government, that related to conservation and management of the caribou. Obviously, from an early date, economics and not the stated welfare of the Aboriginal people was at the heart of conservation. Aboriginal rights to hunt and dispose of their wildlife resources were not considered by Stefansson when he framed his recommendations. Curtailing the selling of pelts in districts other than those in which they were procured caused a problem of ill-clad hunters who could not exploit the caribou for subsistence nor for commercial use.

Sifton's response was to recommend some amendments to the *North West Game Act* of 1906: (a) prohibition of killing of female and yearling caribou, (b) prohibition of the export of caribou skins except under license, and (c) the appointment of game guardians to carry out provisions of the Act. He rejected the suggestion of a season on caribou as Aboriginal inhabitants of the country were exempt under the law (*North West Game Act* of 1906) from restrictions on hunting. Sifton stated that it "was unnecessary to formally declare by statute or regulation an open season for the Eskimo" (NAC RG 85, Vol 665, File 3914, Sifton to Cory, Deputy Minister, Department of Interior, 8 August 1914). Nothing further was done about caribou protection for the next few years.

During the same time period North West Mounted Police patrol reports reveal that Chipewyan Indians in northern Saskatchewan
and northern Manitoba were experiencing hardships caused by the First World War (1914-1919). For example, the 600 Chipewyan who took treaty and traded at Fond du Lac were unable to buy the bare necessities of life; because of the low price of fur, credit had been entirely cut off by traders. In other areas, in an effort to retain Indian loyalty, many Hudson’s Bay Company (HBC) traders risked dismissal, in not following company directives to discontinue credit (Ray 1990: 105). Extending credit was a long-standing practice of the fur trade and Indians’ response to its curtailment could have negative effects in the long run: in times of improved market prices they could retaliate by withholding their furs from the HBC (Tough 1990: 386). But in 1915 at Fond du Lac, even though caribou, their staple food was available, they were unable to hunt until the patrol officer issued ammunition on behalf of the Department of Indian Affairs (NAC RG 18, Vol 1817, File 130 (1) Patrol Report, Chipewyan Detachment, January 6, 1915). Similar conditions were found at camps around Lac Du Brochet that year. But there, the patrolman was less sensitive to Indian needs, saying: “I considered it bad policy to help them, as it would only have encouraged them to be a little lazier than they are” (NAC RG 18, Vol 1817, File 130 (1), Patrol Report, Cumberland House Detachment, 15 March 1915).

Conditions were serious in other Chipewyan communities. Similar reports came from Wollaston and Reindeer Lake patrolmen. Police reported that at Churchill, 150 Chipewyan women and children had returned from winter quarters to apply for rations from the DIA, but rations were exhausted because lack of game had
increased demand on supplies when the HBC had stopped credit. The police reported that the Chipewyans' dogs were dead of starvation and rabies, and that some Indians had died of tuberculosis. Rations were given to women only as men were considered able to hunt but too lazy to do so (NAC RG 18, Vol 2159, 16-17, Churchill Detachment, 1 February 1915). But the word from the HBC Churchill Post manager in June 1915 was that no food was available because Indians were too weak to hunt and so were starving. In July the police reported that in the Port Nelson area Indians were very short of food and were suffering from tuberculosis. Indians at Churchill asked for medical help, but the camp (Department of Public Works, Port Nelson) doctor only ministered to their own personnel and was not available to Indians or Police beyond the camp. The author of the patrol report insisted that "for the Police and Indian work, it is necessary for us to have our own doctor (NAC RG 18, Vol 2164, File 40-42, Port Nelson Royal North-West Mounted Police report, 1 July 1915). Indians' lives were endangered, but little was done to assure their preservation.

5.5 The Advisory Board on Wild Life Protection (1916)

A five member Advisory Board on Wild Life Protection, an interdepartmental committee, was established by Order in Council, (P.C. 3231) December 28, 1916. The purpose of the Board was to formulate a definite policy regarding the protection and use of wildlife, advise in the administration of the Northwest Game Act, and advise on the legislation necessary under the International Treaty for the Protection of Migratory Birds (NAC RG 22, Vol 95, File
Members of the Board were bureaucrats. These five top administrators were influential because of their individual stature and also because they could collaborate with other "governmental and extra-governmental conservation groups" (Gottesman 1983: 72). Gottesman pointed out that these members were engaged in a rather incestuous relationship with policy makers, lobbyists, and administrators because while they served on the Advisory Board, four of the five members also served as advisors to Sifton's Commission of Conservation (concerned with natural resource development) and the North American Fish and Game Protective Association (a powerful special interest group concerned with sports hunting and fishing). Not surprisingly, they were unopposed in creating and implementing wildlife conservation laws (Gottesman 1983: 72).

The *Migratory Birds Treaty Convention Act* of 1918 was the result of 15 years of lobbying by various special interest groups in the United States. The American Game Protective and Propagation Association sponsored by arms and ammunition manufacturers was most influential in bringing the treaty to fruition. The treaty was proposed to Canada's Commission of Conservation and to provincial conservation associations in 1914 where it met with support and was negotiated by C.G. Hewitt (secretary of Canada's Advisory Board on Wild Life Protection), and J. White (chairman of the Advisory Board) (Gottesman 1983: 71-72). Hewitt was directly responsible for the *Migratory Bird Treaty*, the *Migratory Birds Convention Act*, and the revised *Northwest Territories Game Act* of 1917 (Gottesman 1983: 74). He argued that Aboriginal hunting rights were only
academic without game to hunt, thus conservation was necessary. Hewitt failed to recognize that the Acts would "cost many native hunters their rights, livelihood, and means of self-preservation" (Gottesman 1983: 75). Hewitt did not stop with the protection of birds, but went on to protect animals.

Hewitt, informed by Stefansson's reports of wildlife slaughter, authored revisions to the *Northwest Game Act* of 1906. These revisions, in recognition that caribou were central to Aboriginal peoples' economic system, were an effort to save them from extinction. The revisions included: licenses to traffic or trade, regulation of firearms (only RCMP officers were allowed to use repeating rifles), yearly quotas, and control of the possession and transportation of game. Aboriginal people ("native-born Indian, Eskimo or halfbreed" [sic]) were exempted from licensing, but not from hunting restrictions (NAC RG 22, Vol 7, File 33, *Northwest Game Act* 1917.

In another area, caribou was seen as a potentially important resource. With the advent of the Hudson Bay Railway in 1917, a railroad from Winnipeg to Churchill, sportsmen were encouraged to hunt caribou in northern Manitoba. They were informed that the traders, game guardians, and police would accommodate them with information. As well, they were also assured that Indian guides with dog teams would be available and should not be offered trinkets as payment, but that they would expect money for services (NAC RG 85, Vol 665, File 3914, Circular No. W-1959, Canadian Northern Railway). The archival resources do not indicate how many sport hunters took advantage of the opportunity to hunt
caribou in northern Manitoba, but the circular does reveal that Indians in the area were open to cash employment.

Further south, caribou were seen as a valuable food resource for non-Aboriginals. Despite reports that the Chipewyan were starving as a result of the wartime fur prices and credit restrictions (NAC RG 18, Vol 2164, File 40-42, Port Nelson Royal North-west Police Patrol Report, 1 July, 1915), by the end of 1917, the fourth year of the First World War, a scheme to exploit their basic food supply for export to southern Canada was entertained and explored, overriding clauses in the newly revised *Northwest Territories Game Act*. A scheme to use caribou on a massive scale to supplement dwindling wartime meat supplies was investigated in depth by the Advisory Board of Wild Life Protection in the interest of National Service. Plans to export caribou meat continued well into the spring of 1918. Only the difficult logistics of storing and shipping the meat delayed putting the project into operation before the war ended on November 11, 1918 (NAC RG 85, Vol 665, File 3914, correspondence between Dominion Parks Branch, Royal North West Mounted Police, Department of Agriculture, Department of Mines, and Office of the Deputy Minister of the Interior). The authorities were well aware of the economic and health problems of the Aboriginal people, but, barring logistical problems, were quite willing to re-allocate their resource on a massive scale.

After the war the provisions of the amended *Northwest Territories Game Act* satisfied the Advisory Board's concern for conservation because they deemed that "in the absence of a strong commercial market, the key species were in roughly stable supply"
in relation to human needs” (Clancy 1987: 4). In addition, a letter in English and Inuktitut, dated 1 April 1924, from O. S. Finnie, Department of the Interior, Northwest Territories and Yukon Branch, had been distributed to the Inuit in an effort to persuade them that caribou conservation was in their own interest (See Figure 5 and 5a). The gist of the text was that ‘Eskimos’ should kill caribou, preferably bulls, only as needed for food and clothing. (NAC RG 109, Vol 375, WLU 180). In addition, in 1935, changes to the Northwest Game Regulations outlawed excessive killing of caribou, use of caribou where fish was available, and the use of caribou as trapping bait (NAC RG 109, Vol 373, File WLU 180, Public Notice) (See Figure 6). These regulations were difficult to enforce because of the large area covered by the regulations, so were ineffective (Clancy 1987: 4).

Responses to a caribou questionnaire, circulated annually to traders, trappers, travellers and police since 1934 by the Advisory Board on Wildlife Protection, reported that harvesting pressure on the caribou herds had increased because of the use of modern rifles and unlimited ammunition, Inuit entry into the trapping industry, the sale of skins, and the increased use of dogs. But the Advisory Board only recommended to the NWT Administration that they “continue efforts to educate the eskimo [sic] in conservation” (Clancy 1987: 6). Accurate numbers of caribou were unknown at the time, only crude estimates based on the carrying capacity of the area were a basis from which to judge overall herd sizes.
A Letter From the Government to the Eskimo People

The Caribou are very valuable to the Eskimos. They give them skins for clothing and bedkins to keep their children warm and enable the men to hunt and trap without freezing.

If the Eskimo kills many more caribou each year than he needs for clothing and bedkins, after a while there will be only a few left, and the Eskimos will be cold and their children will be cold also.

A good hunter will not kill more caribou than he needs but only enough for food and clothing and bedkins for himself and family.

A good hunter will not kill female caribou when they are with young, or when the young are suckling them.

A good hunter will always try to kill bulls and not cows. If he does this every year there will be plenty of young ones.

Far away to the East live a tribe of Eskimos who once had plenty of caribou in their land. By and by the hunters get good rifles, then they said “now we will kill all the caribou we want” but they were stupid people because they killed and killed until there were only a few caribou left far away from their hunting place, and now they have no deer skins for winter clothes and their children cry because they are cold in winter.

The Eskimo must not forget that without deer skins they cannot travel in winter and will have to stay in one place and be hungry and listen to his children crying because they are cold and hungry too.

If the Eskimo thinks of this he will not kill all the caribou he sees, he will say, “It will be bad for our people if all the caribou are killed, so I will just kill what I need for food and clothing when the skins are good.”

In summer the Eskimo will never kill caribou in the months of April, May, June, and July (except when he is very hungry and then he will only kill bulls) because in those months the skins are no good.

Eskimos! You should know that the wolf is a very great enemy of yours, and you should kill him winter and summer because he kills a great many caribou. The police and the traders will give you a very good price for all the skins, large or small, because they want the wolves killed to save the caribou for the Eskimos. Let every Eskimo tell his friends this news.

The Government and the Police say that the people must not kill musk oxen. If any more are killed the Government will be very angry. Traders will not buy musk ox skins.

The Government and the police are the true friends of the Eskimo. They know how to say things in the right way. The Government wishes the Eskimos to be well and happy.

Ottawa, 1st April, 1924

O. S. Finnie

Director.
Inuit, połoktailugo tuktu ammiangigami atigisakmuni inuit sodialaitoat sillamf okiyumi, ingitoat iglumil kissimi, tuktu taqatsiaqtaot, nutagait keiyuniaktoat okoyungigama pikliktugamalo.

Inuit isumagama taimatun, tuktu tamaita taotuktoat, isumaniaktoat taimatun "nagongitoak, inuitnun tuktu tamaita tokogama", "tokoniakttugut ekitumik kissimi ammian nagogami."

Inuk nagoyuk tuktu tokolaitoat, Apriltime, Maytime, Junetime, Julytime, Unatime ammian tuktu nagongitoat. Opingami inuit kaktogama pannirn kissimi tokolus, kulavuk tokotailulo.


Government Policelo ilatiaktoat inuitnun okaatotun shavuklutik, isuakgama.

Inuit iluakpatigik aliasukpatigiklo, una uwagut Government Pisuktugut Inuitnun.

O. S. FINNIE, Director.

OTTAWA, 1st April, 1924.

N.W.T. 31.

Figure 5a  Reverse Side of Pamphlet (Figure 6) (Inuktitut version)
IT is unlawful to hunt, kill or molest caribou during the close season.

All persons (including Indians, Eskimos and half-breeds) resident in the Northwest Territories are hereby warned of the consequences of excessive killing of caribou. The use of the meat of caribou, moose or deer for dog feed in districts where fish or other kinds of food for dogs are available is not permissible.

The use of the meat of big game animals as bait for fur bearers is prohibited under Section 31 of the Northwest Game Regulations.

OTTAWA, T. G. MURPHY,
20th June, 1935 Minister of the Interior

Figure 6
Public Notice
Very few advances in caribou conservation were made during the years of World War Two (1939-45) (Clancy 1987: 6), but after the war interest in caribou increased.

The confidential minutes of the tenth annual meeting of the Provincial-Dominion Wildlife Conference 1945 augured some serious implication for wildlife after the war regarding the use of aircraft in the pursuit of wildlife in general. Federal and provincial officials were keen on commercial benefits from fish and wildlife. Freemont, the Quebec provincial representative, announced that an estimated 22,000,000 people from the United States alone were expected to be looking for outdoor sport. He said “we expect to get quite a few of them and they are welcome” (NAC RG 22, Vol 4, File 13, Confidential Minutes of the Dominion-Provincial Wildlife Conference, 22-24 Feb. 1945). However, he urged cooperation with the Department of Transport to regulate the use of aircraft in the hunting of wildlife. He cited incidents of caribou being machine-gunned from a transport plane, moose being chased and shot from aircraft, and the use of aircraft to transport sport hunters into remote and uncontrolled areas to hunt. Later, at the same meeting, discussion centered on the need for accurate methods of estimating numbers so that wildlife could be managed to best economic advantage.

Caribou, after the transfer of natural resources to the provinces of Alberta, Saskatchewan, and Manitoba (NRTA 1930) became a complex jurisdictional concern. Non-uniformity of conservation regulations between the provinces and the territories, covering herds which migrated across arbitrary boundaries, was problematic.
Discussion centered on the need of a well co-ordinated national wildlife policy with joint action and unification of effort. These needs were promoted through conferences of the provincial and dominion officials (NAC RG 22, Vol 4, File 14, Confidential Minutes of the Dominion-Provincial Wildlife Conference, 22-24 Feb. 1945). G.H.D. Clark, a biologist with the National Museum of Canada, had informed the members in 1940, that “unlike aborigines in other areas of North America northern natives were not a vanishing race” thus, “where there were not enough resources for both native and white, natives had to be given first consideration” (NAC RG 22, Vol 4, File 14, Confidential Minutes of the Dominion-Provincial Wildlife Conference, 22-24 Feb. 1945). Therefore, conservation of the caribou was of primary importance, and since the caribou moved between the Thelon sanctuary and the provincial forest area measures designed for the conservation of caribou had to be effective over the entire range. However, regulations affecting both territories and provinces proved difficult to implement because Treaty rights were addressed differently in separate jurisdictions. In the provinces, under the NRTA, Indians were guaranteed their treaty rights to hunt for food in all seasons, while in the territories, under the *Northwest Territories Game Act*, they were subject to regulations promulgated by federal authorities.

5.6 Early Scientific Caribou Studies (Circa 1950)

Since caribou was of great importance as a food source to Aboriginal people in the NWT and the northern areas of Manitoba,
Saskatchewan, and Alberta, and as there was a basic lack of accurate population numbers, a resolution was passed at the 1947 Federal-Provincial Wildlife Conference that there be a co-operative comprehensive study of the caribou herds to establish baseline data for future conservation policy (NAC RG 22, Vol 4, File 14, Minutes ABWP, 10 Oct. 1947). The study was carried out by biologist, A.W.F. Banfield, employed by the newly-formed (1947) Canadian Wildlife Service. The research was done between 1948 and 1950 with the “full co-operation of the Game Departments of the provinces of Alberta, Manitoba, and Saskatchewan” (Banfield 1954: 2).

Banfield conducted an aerial survey of the calving grounds to count the overall herd populations while his assistants did ground counts in the Keewatin District. These data, together with statistical data on human use collected by the game authorities, made up the first aggregate data on population numbers and distribution, provided information on seasonal movement, and suggested the impact on the herds by predators and hunters (Clancy 1987: 8). Banfield’s study area was “limited to the mainland of Canada west of Hudson Bay as far as the Athabasca, Slave, and MacKenzie Rivers, and from the Arctic Ocean south to the northern portions of the three Prairie Provinces (Banfield 1954: 2). He estimated that the overall population of the 1954 aggregated herds totalled 670,000 animals. This estimate was alarmingly low in comparison with previously held beliefs of inexhaustible numbers.

A naturalist, E.T. Seton, had visited the area in 1907 specifically to “see the Caribou [sic], and prove their continued abundance” (Seton 1911: 3). When Seton encountered the caribou
he estimated, based on the grazing density of Iowa cattle, their numbers to be over 30,000,000 (Seton 1911: 220). Unfortunately, Seton's anecdotal and impressionistic "guesstimate" was to become much quoted and later used as the baseline population number against which many others measured the depletion of the caribou herds. Clarke, did a biological investigation of the Thelon Game Sanctuary in 1936-1937. Based on the carrying capacity of the land Clarke estimated the caribou population to be up to 3,000,000 (Parker 1971: 5).

Banfield compared his estimate with another of 1,750,000 animals in the year 1900 (Banfield 1954: 10). A comparison between the 1900 and 1949 figures indicated a reduction of 62 percent overall. Banfield concluded that reductions in the northwestern herds had been caused by Inuit trade with whalers between 1890 and 1910; the reduction in northeastern arctic areas by introduction into the fur industry which supplied the Inuit with firearms and ammunition; and the reduction in the tundra area adjacent to Hudson Bay between York Factory and the Severn River, by an increase in human population in northern Manitoba, and an access to firearms due to the development of the fur trade (Banfield 1954: 38).

Banfield's research figures suggested a five percent net reduction per year which boded ill for future caribou supplies. But compared with Clarke's earlier 3,000,000 population estimate, calculated from carrying capacity of the range, the figures were even more ominous (Clancy 1987: 8) (See Figure 7).
Figure 7

Aggregate Numbers in Caribou Herds. Clarke, 1940; Banfield, 1949.
Although the Advisory Board on Wildlife Protection, at a special meeting of members and outside scientists, agreed that Banfield had produced the most reliable estimate to that time, his report generated controversy. A.E. Porsild (CWS) questioned the advisability of using the unsubstantiated population estimates generated by earlier investigators. H. Conn, (DIA) argued that the losses could not all be blamed on Aboriginal hunters because non-Aboriginal hunters in Manitoba and Saskatchewan killed just as many as Indians. Porsild argued that there were no human hunters resident on the coast of Greenland when the caribou disappeared from that region so other causes could be present. In addition, in a letter to H.F. Lewis, Chief, CWS, consultant I. McTaggart Cowan (Professor of Zoology, UBC) also questioned Banfield’s use of early estimates which he referred to as “guess estimates.” As well, he disputed the reliability of Banfield’s methodology, i.e., strip counts on unevenly distributed populations. He suggested that the proper approach would be regional, and that regulations applied uniformly would be ineffective unless so severe as to produce local hardships in areas where regulations were unnecessary. McTaggart Cowan cautioned that unenforceable regulation would breed disrespect for authority (NAC RG 22, Vol 16, File 69, Minutes ABWP, Appendix III 6 Nov. 1950). His criticisms later proved to be prescient because regulations could not be enforced in remote areas. Conflict of opinion, from the beginning of scientific involvement in caribou conservation in the north, would be characteristic of management meetings.
In recognition that caribou herds had declined, despite vagaries in Banfield's estimates, the Advisory Board gave serious consideration to his suggestions for conservation policy. Because recommendations made by Banfield to the ABWP were not included in the published version of his report they are quoted here in full:

1. Special personnel should be employed by the appropriate agencies to instruct natives, in their camps, in the conservation and proper utilization of their natural resources, including the caribou, and to persuade them to adopt conservation practices.

2. In the Northwest Territories, there should be a definite allotment of responsibility in regard to the issue of licences, kill returns, supervision and enforcement of game regulations to cover the entire region.

3. Young natives of superior quality should receive special training in conservation of natural resources and be employed as assistant game officers to make contact with the native groups and assist departmental wildlife technicians in their investigations.

4. The Provincial Game Authority of each province concerned should require that every hunter under its jurisdiction should report the number of caribou taken on his licence.

5. The Indian Affairs Branch should insist that their field officers obtain a record, as complete as possible, of the caribou utilization by Indians. The present "Record of Production" cards should be changed to correct the present confusion between caribou and other deer.

6. All agencies should undertake increased fire prevention measures in the winter range of the caribou.

7. The number of skins required in those areas where caribou are scarce should be investigated annually by Government employees and reported to the Department. An export permit should then be issued to the traders, to allow export of the desired number of skins from areas of local abundance.
8. No caribou garments or furred hides should be exported from the range of barren-ground caribou.

9. No further introduction of reindeer herds into areas where these herds might come in contact with native caribou herds should be contemplated.

10. Every opportunity should be taken to use auxiliary supplies of reindeer and buffalo meat to supply minimum meat requirements of local hospitals and missions.

11. The sale of caribou meat in the settlements of Yellowknife, Fort Smith, Hay River, Fort Resolution and Norman Wells should be prohibited.

12. The open season for all classes of barren-ground caribou in the Northwest Territories should be from the 15th day of August to the last day of February. For males alone there should be a further open season for natives alone, without special licence, from the first day of March to the 15th day of May.

13. The number of caribou which a Government employee is permitted to kill annually under licence in the Northwest Territories should be reduced to one.

14. The warden staff of the Northwest Territories Administration should undertake, under the direction of the Mammalogists, the local control of wolves on an experimental basis, on the caribou winter range. The methods used should be similar to those developed in Wood Buffalo Park. The experiments should include the use of aircraft to distribute the strychnine baits. Economy should be the essence of the experiments.

Recommendations 1, 3, 4, 5, 6, 10, 11, 13, and 14 were endorsed by the board. The rest were held in abeyance pending further investigation (NAC RG 22, Vol 16, File 69, Minutes ABWP, 6 Nov. 1950). An important point to be made here is that Banfield did a scientific study of the caribou and then embarked on a wide range
of recommendations beyond the realm of science. He did not confine his recommendations to management of the resource. Banfield set the precedent that other CWS biologists would follow.

After 1949 the NWT Council had assumed responsibility for wildlife regulation in the NWT area, accordingly they responded with an amended ordinance to control use of caribou meat as dog food when alternative dog food was available and with a prohibition against the sale of meat to whites in settlements. These amendments were impossible to enforce because the feeding of dogs could not be monitored by field staff. Aboriginal people and long-term resident Whites held General Hunting Licenses (GHL) which permitted unlimited hunting for their own needs in season while new residents could, by special license, take up to five animals. The sale of meat to Whites was more problematic to caribou managers because officials in the provinces argued that the commercial use of caribou was not in the spirit of conservation (NAC RG 85, Vol 148, File 400-11-12 pt 3, Confidential Minutes, Provincial-Dominion Wildlife Conference, 16-17 June 1950).

At the same conference the chairman (not named) expressed the view that hunting provisions of the original Indian treaties were outmoded and detrimental if applied fully under 1950 conditions. He argued that protection of wildlife demanded certain safeguards which could not “be applied if Indians are accorded full enjoyment of their privileges under the treaties” (NAC RG 85, Vol 148, File 400-11-12 pt 3, Confidential Minutes Provincial-Dominion Wildlife Conference, 16-17 June 1950). Thus the notion of altering the treaties was introduced which generated controversy. Conn (DIA)
stated that the opinion of his branch was that the Dominion Government had accorded privileges to Indians in the provinces that it had not accorded to Indians in the NWT. Under the Northwest Territories Game Ordinance Indian hunting was regulated in the NWT, but under the NRTA Indians in the provinces had the right to unlimited food hunting. The Northwest Territories representative replied that his administration was sensitive to Indian needs, but if wildlife became unavailable to them through scarcity, the Federal Government had to supply relief and that was expensive (NAC RG 85, Vol 148, File 400-11-12 pt 3, Confidential Minutes Provincial-Dominion Wildlife Conference, 16-17 June 1950).

The same argument was carried forward without resolution throughout the 1950 meeting of the ABWP. There, Conn again argued that treaties allowed Indians in the provinces to hunt at all seasons, but when Indians crossed the NWT border they were subject to season closure from March 30 to September 15. He added that treaty promises should be honoured in the NWT, if Indians were expected to honour game regulations. Lewis (CWS) gave the standard reply: “how [can] the game supply ... be maintained without effective conservation efforts” (NAC RG 22, Vol 16, File 69, Minutes ABWP, 17 March 1950). So Conn’s suggestion that Treaty Indians be allowed to take caribou without restriction in the NWT was not endorsed by the Board.

The prophecies of McTaggart Cowan were quickly realized. Indians were suffering hardships because blanket policies were applied in areas where there was no scarcity of game. Indians appealed to their agents. Kirkby, the Indian Agent at Fort
Resolution, reported in 1950 that the Game Ordinance had restricted or curtailed the taking of every fur bearer and game animal in the country and that Indians' standard of living had fallen accordingly. Subsistence and commercial activities are linked in the Aboriginal economy because subsistence hunting requires money. Kirkby explained that Indians had, in the past, killed large numbers of animals and sold them to the traders who had stored them and sold them back to the Indians after the migrations passed. Prohibiting the sale of caribou had destroyed this form of basic paternalism which had served the Indians in the past. Indians were suspicious of all regulations and complained to him about restrictions which applied in areas where restriction was unnecessary because caribou were plentiful. He reported that the Indians had reacted by being uncooperative in conforming to laws formulated 'for their own good' (NAC RG 22, Vol 96, File 3-2-5 (3), Fort Resolution Indian Agency Report, 17 Feb. 1950).

During the same time (1950), at a confidential meeting to discuss wildlife conditions in the NWT, the RCMP reported that Inuit were not provided with suitable clothing due to restriction on the HBC's purchase of caribou skins for resale to Inuit in other areas (NAC RG 22, Vol 96, 3-2-5, Wildlife Conditions-NWT, 2 Feb. 1950). In answer to accusations that Inuit wounded, without killing, animals because they hunted with .22 caliber rifles, the RCMP member defended the Inuit hunting practices. He argued that Inuit generally used high-powered rifles for caribou and used .22 caliber rifles only if they had no ammunition for larger rifles. He maintained that the Inuit used .22 caliber rifles for small animals
and birds, therefore outlawing the use of .22 rifles would work extra hardships on Aboriginal people. The members agreed to defer a decision on the banning of .22 rifles (NAC RG 22, Vol 96, 3-2-5, Wildlife Conditions-NWT, 2 Feb. 1950).

The problem of providing caribou meat for patients in mission hospitals generated lively correspondence between government officials and Catholic missionaries. In 1950, on the advice of wildlife biologists, the Northwest Territories Council had ruled that missions and hospitals must cease using caribou and import other kinds of meat for patients. A small quota allowed for the year 1951 was to be the last allowed to them (NAC RG 22, Vol 248, File 40-6-3, Young to Trocellier, 28 June 1950). The quota was 155 caribou for five hospitals with the stipulation that entire carcasses be used, not just choice parts. (A problem overlooked by policy makers was that Aboriginal hunters were unable to deliver whole carcasses because delivery was limited by their style of transportation.) The animals were to be killed, under contract to the missions, by Indians under supervision of their local game warden. Bishop Trocellier responded angrily that limiting the use of caribou for long-term tuberulosis patients, who enjoyed no other meat, was a matter of human injustice. He argued that at home there was no regulation to stop them eating caribou so why should they be deprived in hospitals. He went on to say that “in the natural order of things, to say the least, human justice certainly [had] priority over the much-publicized “justice” to caribou” (NAC RG 22, Vol 148, File 40-6-3, Trocellier to Young, 28 Feb. 1951). The Deputy Minister of Northern Affairs responded by reminding the Bishop that the government
paid per diem rates for Indian patients so that the missions could afford to bring in necessary food (NAC RG 22, Vol 248, 40-6-3, Young to Trocellier, 12 Mar. 1951). When word was received that Indians had supplied the Fort Rae hospital with 383 quarters of caribou the Department of Northern Affairs reacted with a threat of prosecution under the Northwest Territories Game Ordinance. Under threat of prosecution the missionaries acquiesced to the law, but the real losers were the Aboriginal patients. But they had not given up.

Chief Beaulieu, on behalf of the patients at Saint Joseph’s Mission hospital, Fort Resolution, sent these words to the Commissioner, Department of Resources and Development:

It will soon be open season for caribou, and we are asking ourselves, why we are forbidden caribou meat in a sanitarium. We have been reared by caribou meat and can’t understand the reason why we are not allowed to do so after we are placed in a hospital. On the contrary, we should be favored and encouraged by continuing to eat the meat we like. After all, we ate caribou meat before being hospitalized and shall continue to do so after discharge. We are tired of buffalo meat and can [sic] stuff, as we didn’t live on these foods before, so it has become quite a change for us all, leaving a poor appetite which is bad for tuberculosis people. To help us, it would be sensible to give us the meat we want and lived on all our life. We certainly hope you can grant us this petition (NAC RG 22, Vol 270, File 40-6-3 (2), Beaulieu to Young, 15 Nov. 1953).

The petition was answered in the negative: “Patients in the Charles Camsell Hospital in Edmonton ... have to do without caribou meat also ... I am sure that you people in the Fort Resolution Mission Hospital will obey [the law]” (NAC RG 22, Vol 270, File 40-6-3 (2), Robertson to Beaulieu, 30 Nov. 1953). This was not a good argument
because it pointed out that Aboriginal people who were free to hunt caribou for their food were penalized when they were hospitalized.

It was acknowledged that Aboriginal hunters were co-operative when treated with respect. At a meeting of dominion and provincial wildlife officers held in June, 1953, Conn (DIA) suggested that "greater advantage might be taken of the ability of the Indians to supply information on wildlife," and that "more determined efforts be made to gain the confidence and goodwill of the Indians and a definite program of conservation education be introduced for their benefit" (NAC RG 109, Vol 401, WLU 228-8 (1), Minutes Caribou Meeting, 18 June 1953). G.W. Malaher (Manitoba Director of Fish and Game) agreed with this proposal and added that "where there are good field supervisors the response of the Indians is remarkable" (NAC RG 109, Vol 401, WLU 228-8 (1), Minutes Caribou Meeting, 18 June 1953). All representatives then agreed that "greater efforts be taken to encourage Indians to take an active part in conservation work" (NAC RG 109, Vol 401, WLU 228-8 (1), Minutes Caribou Meeting, 18 June 1953).

Conservation information was meant to flow only one way. The following month F. Fraser, Chief, Department of Resources and Development, in response to suggestions generated at the conference, agreed that continuing studies be done on caribou as the responsibility of the Federal Government with the CWS acting as co-ordinator. Concerning the use of Aboriginal people to supply migration and utilization data, he agreed that in the interest of better public relations, co-operation with Aboriginal hunters would encourage them to supply valuable information. However, in
contradiction to cooperation, Conn (DIA) advised that their Indian Agency Superintendents would gather information from the Indians if that information was treated as confidential, and if Indians were not told that agents were working with the game organizations (NAC RG 109, Vol 401, WLU 228-8 (1), Fraser to Chief, CWS, 18 Aug. 1953). Obviously Indians did not trust game officials or game wardens, and would not knowingly supply information which could be used to justify further restriction on their food source. That deceptive use of Indian ecological knowledge would explain why Indians were justifiably suspicious of external authorities.

Enforcement of game regulations by game wardens escalated contention in the NWT. Aboriginal hunters appealed to the local member of parliament (MP) for relief from harassment. In 1954, MP for the NWT, Merve Hardie, requested that responsibility for enforcement of Game Regulations be returned to the RCMP. The police officers had long established relationships with Indians in remote areas and in some cases issued rations and ammunition on behalf of the DIA and so had a first hand understanding of local economy. Hardie expressed his concern that, since 1946 when the Department of Northern Affairs and National Resources took over enforcement and administration of game regulations, game and forestry wardens had been placed in settlements. Hardie questioned the value of their work in relation to the high cost of houses, offices, maintenance, salaries, etc., necessary for their upkeep. Hardie reminded the Minister that these services provided by the state were initiated for the welfare of the Aboriginal people and the fur industry. But now there were Indian Agents,
mammalogists, game and forestry wardens, welfare officers, teachers, as well as RCMP officers duplicating each others work in the area. Hardie explained that the “Natives are bewildered by the fact that so many people are, in so many different ways endeavoring to look after their interests” and “there is a feeling amongst the natives that the agents of the government are sent into the country expressly to tell the people what they cannot do” (NAC RG 109, Vol 38, File WLU 1-1 (1), Hardie to Lesage, 18 Feb. 1954). Hardie had requested that copies of all correspondence between Northern Affairs and National Resources, the Canadian Wildlife Service and their respective field staffs, relating to game and fur in the NWT for 1953, be sent to him. He was interested in monitoring the accomplishments of the mammalogists and wardens to determine if the Aboriginal peoples’ economic life had improved, or if the animals had increased or not as a result of their work. He suggested that if there had been no improvement found that the RCMP be returned to their former jobs. The Minister of Northern Affairs refused on the grounds that privileged information such as Hardie requested would be prejudicial to the department if released (NAC RG 109, Vol 38, WLU 1-1 (1), Hardie to Deputy Minister, 16 March 1954). In relation to wildlife, secrecy was the watchword.

The complaint did generate some resolution. The director of Northern Affairs and National Resources explained to the Deputy Minister that he had instructed the Chief of CWS, that the work and responsibility of the CWS was to investigate problems, present findings, make recommendations, formulate solutions, etc., not to engage in administration and enforcement (NAC RG 22, Vol 213, File
40-6-6, Cunningham to Deputy Minister, 17 March 1954). The following year, Northern Affairs decided that separation of enforcement and administrative duties would enhance game wardens' ability to enlist cooperation and support for conservation by relieving the wardens of opprobrium attached to enforcement (NAC RG 213, Vol 213, File 40-6-6, Fraser to Deputy Minister, 15 Feb. 1955). Accordingly, administration and enforcement responsibilities were separated. Game wardens collected evidence of regulation infractions and the RCMP prosecuted violators (NAC RG 22, Vol 213, File 40-6-6, Fraser to Deputy Minister, 15 Feb. 1955). The mammalogists went on to more focussed studies of caribou.

In summary, the early decade of caribou hunting restrictions, recommended by wildlife scientists, exacerbated the hardships Aboriginal hunters were experiencing, especially in the NWT. The scientists and the policy makers failed to recognize the subsistence-commodity relationship in the Aboriginal economy. This economy did not rest on hunting alone. The sale of meat and hides was necessary to hunting because hunting required cash. During the next decade conflict between policy makers, resource managers, governments, and people managers (DIA) would escalate as the wildlife scientists recommended even more draconian restrictions on Aboriginal peoples' food source.
CHAPTER SIX
CONFLICT AMONG WILDLIFE MANAGERS AND POLICY ADVISORS

6.1 Introduction

Scientists who based their careers on caribou conservation viewed Aboriginal hunters as wanton destroyers and ignorant primitives who knew nothing about caribou and killed animals indiscriminately. Aboriginal hunters’ co-operation in complying with imposed restrictions on caribou use was expected to take place as a result of education promoted on the advice of scientists who admitted they could not explain perceived herd depletion. Restrictive regulation of Aboriginal hunting and assimilationist policies were recommended as the solution to the herd depletion problem conceived by the burgeoning scientific community. Scientists complained that few of their caribou conservation policy recommendation were acted on. In an effort to apply regulations to Indian hunting in the provinces, the CWS recommended that the NRTA be altered to apply regulations to treaty Indians. A public conflict of opinion over herd censuses discredited the CWS before treaty hunting rights were wiped out.

6.2 The 1950 to 1955 period of caribou conservation

In 1950, John Kelsall, a biologist whose early experience was under Banfield, was assigned by CWS to extend Banfield’s baseline
Based at Yellowknife, and assisted by A. G. Loughrey, he pursued with determination a counting of caribou population numbers. His overall population estimates exceeded Banfield’s by 65,000 (Clancy 1987: 13). Nevertheless, in 1953 Kelsall reported that caribou herds were in great danger of depletion.

In a letter to the Chief of CWS in 1953, Kelsall expressed a desire to extend the scope of the service beyond caribou censuses and biological studies. He said:

Wildlife Service men should be required to extend their interests, if not their work, to include native welfare, education, land use values and the like. They should have full interest and representation in any planning in regard to these allied subjects (NAC RG 109, Vol 38 File WLU 1-1 (1), Kelsall to Mair, 22 May 1053).

Kelsall, like Banfield before him, was prepared to give advice beyond the realm of science.

The following year, Chief Mair, CWS, solicited opinions from his biologists on the issue of treaty rights to hunt caribou. Discrimination between the treatment of Indians in the NWT and the provinces had been pointed out by DIA on many occasions before. DIA officials pressed for changes to the Northwest Territories Regulations to permit Indians their inherent hunting rights (NAC RG 109, Vol 440 (1), Mair to Kelsall, McEwan, Fuller, Flook, and Loughrey, 3 March, 1954). In reply, Kelsall gave his opinion on legal matters with respect to treaty rights to hunt caribou in areas covered by Treaties 8 and 11. He opined:
it does not appear that there is any legal basis for throwing everything open to the Indians in the Northwest Territories. I would not think there is a moral basis for such action either ... should moral considerations not include what is best for the Wildlife as well as what is best for the Indian? (NAC RG 109, Vol 440, (1), Kelsall to Mair, 12 Mar. 1954).

Kelsall went from a legal to a moral argument. To strengthen his case, he then added an economic argument:

The fact that educational recommendations are being repeated ... accents the difficulty in putting them over .... Numbers of groups of Indians apparently choose to live on family allowance all summer and on caribou all winter ... our moral obligation is not to facilitate that way of life but to push them forthrightly into the fishing business (NAC RG 109, Vol 440, (1), Kelsall to Mair, 12 Mar. 1954).

Kelsall recommended changes to the Aboriginal economy and lifestyle which was beyond his mandate as a scientist. He complained that Indians were not responding to conservation educational measures. He did not recommend leniency for slow learners, rather he suggested that harsh measures be taken saying: "adequate enforcement of wise game laws is an educational measure of considerable value in itself (NAC RG 109, Vol 440, (1), Kelsall to Mair, 12 Mar. 1954.)."

On the same issue, mammallogist W.A. Fuller expressed his views in relation to treaty rights and conservation policy rather differently. He focussed on Indians’ lack of game management Fuller wrote a confidential memo to the Chief, CWS in which he said:

I agree with your viewpoint that education should precede liberalization of the Game Act. I do not believe that the Indians have been a particularly destructive force, but they
are conservationists only by accident. Their natural indolence allows them to be content with whatever harvest can be easily obtained, therefore, they seldom penetrate to the inaccessible places and thus leave pockets of game for repopulation of denuded areas. This is quite a different thing from intelligent and deliberate attempts at game management (NAC RG 109, Vol 440 (1), Fuller to Mair, 30 Mar. 1954).

Aboriginal peoples’ harvesting strategy was, in fact, as Fuller explained. However Fuller was an employee of the the state and therefore well provided with food. If Fuller had been reliant on hunting for his food, he too might have hunted on the “least-effort principle, well documented among hunters, ... [which] may have conservation effects. Nomadic hunters will move to a new activity area when they perceive energy costs as disproportionate to returns” (Brightman 1987: 129). A prudent predator would exploit abundance and allow non-abundant areas to regenerate. Fuller, too, was prepared to flout treaty rights to hunt caribou on practical grounds. He said: “I would not recommend that everything be thrown open to them entirely ... there should always be a few regulations which can be enforced regardless of treaty status” (NAC RG 440, Vol 440 (1), Fuller to Mair, 30 Mar. 1954). He continued with a plea for liberalism in regard to hunting.

It is my opinion that we would do well to approach the problem of game management in a slightly different light. The tendency has been “when in doubt, restrict, and be on the safe side.” The regulations should be as liberal as can be consistent with maintaining breeding populations, and unnecessary restriction should be eliminated (NAC RG 109, Vol 440, (1), Fuller to Mair, 30 Mar, 1954).
Fuller’s suggestion that restrictions be relaxed did not negate his dismissal of treaty obligations as flexible when caribou conservation was considered.

Banfield, by then chief mammalogist with CWS, added a handwritten note to the same letter. He expressed his sentiments:

A lot has been said about our moral obligation to provide free hunting to the Indians. Of higher priority is our obligation to act as custodians of our natural resources for the benefit of our children—Indian, Chinese & European.

We would all like unbridled use of the earth’s bounty. We are restrained by moral obligation and a sure knowledge of the frailty of human nature—hence laws!

I doubt if Indians have any higher ecological morals than white men. They too need a controlling hand by a well informed government. Fuller’s and Kelsall’s remarks are very good (NAC RG 109, Vol 440, (1), Banfield to Mair, 30 Mar. 1954).

Banfield, too, was prepared to disregard treaty hunting rights in his emotional argument for the retention of regulations to Indians hunting in the NWT.

Mammalogist, Donald R. Flook, had a more practical answer for the Chief. He expressed an economic viewpoint:

It has seemed to me in the past that a problem deserving more attention is that of keeping the Indians in the bush. There are two reasons for this. First, hunting and trapping are the occupations to which most of the Indians are best adapted. Second, the Indian hunters are essential to assure continued economic utilization of the fur and game resources of the territories (NAC RG 109, Vol 440, (1), Flook to Mair, 25 March 1954).

These confidential memos to the Chief of the CWS revealed that there was no consensus among scientists on the strategies necessary to solve what they perceived as the problem of applying regulations
to Indians hunting in the NWT. Their views ranged from idealistic to practical and from applying the law harshly to ignoring the law.

Kelsall’s recommendation that Indians be made into fishers was deemed by his superiors to be impractical. A confidential memo from J. W. Burton, Chief, Forest and Game Section, Department of Northern Affairs and National Resources to F. Fraser, Chief, Territorial Division discussed Kelsall’s recommendations based on his work done that summer: “Mr. Kelsall tends to be an idealist, impatient with anything short of the ideal. This basis of approach tends somewhat to the neglect of considerations which determine what is practicable and workable” (NAC RG 85, Vol 360, File 3-1-6-7-1 A (4), Burton to Fraser, 1 Nov. 1954). Burton’s next remark revealed his own assimilationist view regarding Aboriginal people: “[Kelsall’s approach] ... also tends to disregard the natural development of primitive people into conformity with civilized pattern of behaviour represented in this case by game legislation and orderly managed use of wildlife” (NAC RG 85, Vol 360, File 3-1-6-7-1 A (4), Burton to Fraser, 1 Nov. 1954). In a more thoughtful tone, Burton recognized the failure of the programs the Department had implemented in the past. He wrote:

Probably one of the mistakes of the past has been over-strict legislation which was not practical because it did not have the support of the people and was not enforceable except at great cost ... our public relations fell down to the extent that the natives were not given reasons, understandable and acceptable to them, why such legislation was required (NAC RG 85, Vol 360, File 3-1-6-7-1 (A), Burton to Fraser, 1 Nov. 1954).
And he finished on a philosophical note, admitting that Aboriginal people and non-Aboriginal people were similar in their human failings. He said:

Improvidence and unwillingness to undertake fishing when they can feed their dogs caribou will be difficult to overcome in the natives as improvidence and the desire to take the easiest way out is difficult to overcome in the white man (NAC RG 85, Vol 360, File 3-1-6-7-1 (4), Burton to Fraser, 1 Nov. 1954).

Fraser’s response to Burton was to remark of Kelsall: “he has, I think, spoilt the overall effect by making recommendations which are quite beyond the scope of his knowledge” (NAC RG 85, Vol 360, File 3-1-6-7-1 (4), Fraser to Burton, 5 Nov. 1954). This correspondence reveals that wildlife scientists were unable to agree on basic issues of caribou management. In addition, there was no consensus on the right of Indians to hunt without regulation in the NWT.

6.3 The Caribou “Crisis” 1955

A mainland re-survey was called for by dominion and provincial officials to corroborate the estimates of Kelsall’s 1953 survey before any changes in legislation took place (NAC RG 22, Vol 270, 40-6-3 (2), Hutchison to Deputy Minister, Resources and Development, 21 July 1953). The results of the re-survey reported by Kelsall indicated that the number of caribou had declined from Banfield’s 1949 estimate of 668,000 to 300,000 (NAC RG 22, Vol 270, File 40-6-3 (1) Appreciation of the Mainland Caribou Situation, 5 July 1955) (See Figure 8). Reasons for the drastic decline were
Figure 8

Aggregate Numbers in Caribou Herds.
Clarke, 1940; Banfield, 1949; Kelsall, 1955.
unknown because of lack of data, but wastage by Aboriginal hunters, disease, drownings, severe weather during calving season, and wolf predators were pointed out as possible reasons. The report urged further studies in these areas, but stated that primarily the solution lay in the regulation of hunting "it is of vital importance that human utilization be brought to the minimum compatible with reasonable survival ... " (NAC RG 22, Vol 270, File 40-6-3 (1), Appreciation of the Mainland Caribou Situation, 5 July 1955). There was no consideration of historical migration shifts nor any mention of Aboriginal reasoning that the herds had often shifted paths before and always returned.

Scientists began to hedge. Banfield, then chief mammalogist, in a memo to Chief Mair of the CWS, made some comments regarding Kelsall’s report. He said that he did not doubt the accuracy of the report, but, since data on disease, mortality from drowning, range shifts, wolf predation, and calf production were lacking, "... we are not in a good position to explain the decline" (NAC RG 109, Vol 397, File WLU 228 (12), Banfield to Mair, 24 June 1955). Subsequently, in a letter to biological consultant McTaggart Cowan, Chief Mair, CWS, explained that the service was clear on the cause of the decline, but reluctant to state the cause since "utilization data [were] so lacking that outright statements regarding utilization could be embarrassing to say the least if we were challenged" (NAC RG 109, Vol 402, WLU 228.8 (2), Mair to McTaggart Cowan, 8 Feb. 1956). He stated that the problem of various administrations and lack of co-ordinated statistics, between the NWT and the provinces, meant that utilization numbers remained "largely a matter of

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speculation” (NAC RG 109, Vol 402, WLU 228.8 (2), Mair to McTaggart Cowan, 8 Feb. 1956). The CWS was nonplussed.

In fact, the CWS was embarrassed by the inability to explain discrepancies in the herd numbers. An Ottawa newspaper carried this headline: “Lost--150,000 Caribou” (Ottawa Journal, 4 June, 1955). Other papers picked up this story (NAC RG 109, Vol 397, WLU 228 (12). A particularly sarcastic piece was written by veteran northerner Father Brown, for the Aklavik Journal which was published by the R.C. Mission, November, 1955, and headlined “300,000 Caribou Missing!” The article read: “According to the latest census experts half of the world’s herd of wild caribou have disappeared since the last census in 1950” (NAC RG 109, Vol 397, WLU 228 (13), Copy sent by Post to Frank B., 9 Dec. 1955). Brown argued the view of those with northern experience, both Aboriginal and non-Aboriginal:

The count in 1950 was 680 thousand and they estimated themselves to be within 20% correct. The present count of 300 thousand makes no mention of a margin of error! It is evident to those who live in the north that 380,000 caribou were not killed during the last five years either by guns or wolves or disease (NAC RG 109, Vol 397, WLU 228 (13), Copy sent by Post to Frank B., 9 Dec. 1955).

The argument advanced by Brown was that a sedentary population could not have killed that many caribou, so he cast doubt on the accuracy of the census. He said:

The fact that so many of the natives who hunt caribou have been doing little traveling away from the Forts where they are able to live on Government rations (destitute family allowance, old age pensions etc.) especially during the last five years makes this latest report seem highly inaccurate (NAC RG 109,
After casting doubt on the accuracy of the census, he attacked the census methodology, stating:

Alaskan authorities, who count their caribou in a few days with a massed plane coverage, are amazed at Canadian methods of piecemeal counting by a few wardens over a much greater area while the animals are migrating (NAC RG 109, Vol 397, WLU 228 (13), Copy sent by Post to Frank B., 9 Dec. 1955).

Brown’s article ended on an accusatory note, he said: “Could it be that the Gov. is fostering a pessimistic report in order to foster legislation to prevent the people of the country from killing the animals?” (NAC RG 109, Vol 397, WLU 228 (12), Copy sent by Post to Frank B., 9 Dec., 1955). Brown had obviously touched on a sensitive issue, when he compared the methodology of census taking in the two countries, because his article was circulated and generated internal suggestions by CWS personnel. One suggestion was that he be informed of a 40,000 counting error made by their Alaskan counterparts. No other counter suggestion was advanced. No official public response was offered by the CWS (NAC RG 109, Vol 397, WLU 228 (13), F.B. [sic] to Chief, n.d.).

Banfield defended Kelsall’s census noting that the count was within the bounds of expected population decline which he, himself, had predicted. He also pointed out that low calf production, disease in the Keewatin area, and drowning mortality could have been more important than previously thought. Banfield urged that, “in any event, we [the CWS] must now make recommendations for the
restoration of the caribou ... the two main factors we can manipulate are human utilization and predators” and should be acted on immediately otherwise “caribou will be reduced to the verge of extinction ((NAC RG 109, Vol 397, WLU 228 (12), Banfield to Mair, 24 June 1955). Wildlife scientists were determined to carry on with recommendations to conservation policy makers despite the fact that they lacked an accurate count and that they were “no further ahead in gathering utilization data than they were in 1950” (NAC RG 109, WLU 228 (12), Banfield to Mair, 24 June 1955).

6.4 Territorial-Provincial Co-operative conservation efforts

The alarming results of Kelsall’s 1955 census reports generated a quick reaction. At a Federal-Provincial meeting on Barren-Ground Caribou it was recommended that a Caribou Committee be struck to co-ordinate federal and provincial conservation efforts. The committee was to have two branches: a Technical Committee on Caribou Protection (TCCP) to supervise research of biological factors involved in caribou decline, and to generate management proposals; and an Administrative Committee on Caribou Protection (ACCP) made up of more senior officials charged with executive control of the management program (NAC RG 22, Vol 270, 40-6-3-(2), Brown to Director, 24 October 1955). The provinces of Saskatchewan and Manitoba, the Department of Citizenship and Immigration (DIA), the NWT Council, the RCMP, and the CWS agreed to co-operate by providing funding and personnel to embark on a further 18-month study of the caribou, under the supervision of Kelsall.
The TCCP held their first meeting in October of 1955 and the ACCP met the following year (NAC RG 109, Vol 402, WLU 228.8 (2), Minutes ACCP, 4 June 1956, Minutes TCCP, 13 Oct. 1955). The TCCP quickly focused on human utilization. Mair, the Chief of CWS stated that human kill was the one factor that could be controlled if government agencies co-operated. The only problem to overcome was the legal and moral rights of the treaty Indians. Alternative sources of food and clothing, he argued, had to be found before the caribou disappeared, much as the buffalo on the prairies disappeared, and the Indians became a permanent burden on the state (NAC RG 109, Vol 405, WLU 228-10 (2), Mair to Director, 1 July 1957).

The June meeting of the ACCP was a fractious one. The committee secretary reported in the minutes that “Dr. Banfield and Mr. Conn (DIA) had a fairly heated set to on Indian utilization of caribou, this arising out of Mr. Conn’s restatement that Indians could not be deprived of their traditional hunting rights” (NAC RG 109, Vol 405, WLU 228-10 2, Mair to Stevens, 31 July 1957). But by September, Conn seems to have capitulated to pressure about Banfield’s suggestion of limiting Indians and Métis in the provinces to two caribou per person. Paynter wrote Banfield that Indian Affairs Branch had agreed to do all they could to see that Indians observed the new restriction of two caribou per person, notwithstanding that the Indian Affairs Branch acknowledged that they had no legal authority to do so (NAC RG 109, Vol 405, WLU 228-10 (2), Paynter to Banfield, 11 Sept. 1957). Thus the Indians lost their last defender of treaty hunting rights; Conn was a man
who had extensive northern experience with Aboriginal people and understood their economy.

There were several other measures adopted by the ACCP. Predator control was extended by increased contracts to wolf hunters. Wolf hunters used poisoned baits to kill wolves. Baits, which proved very effective, were dropped from the air and distributed on the ground by hunters. In addition, to limit user waste, the DIA placed freezers in communities for meat storage. By 1955, the Chipewyan communities of Chipewyan, Stony Rapids, Resolution, Yellowknife, Providence, and Fort Rae had freezers installed by the DIA. Nonetheless, Ernie Paynter, Director of Wildlife, Saskatchewan noted that Indians were reluctant to use them as they did not get their own meat back (NAC RG 109, Vol 405, WLU 228-10 (l) Paynter to Mair, 28 May 57). The distribution of caribou meat by non-Aboriginals was contrary to traditional reciprocal sharing practices. At the same time, as another measure to reduce user consumption, Indian Agents distributed fish nets and organized summer fisheries for dog food. Indian agents also distributed war surplus .303 rifles to Indians at Stony Rapids and refused to issue .22 shell rations during caribou migrations. One of the more bizarre suggestions for conservation was made at the Caribou Management Meeting of 24 April, 1957. Indian Agents, RCMP officers, and/or game wardens were to accompany the hunts to monitor utilization. Indians were not to be allowed to hunt themselves, they were to do the dressing and skinning while professional hunters, i.e., game officers, did the killing. This suggestion was unacceptable to Aboriginal hunters (NAC RG 109, Vol
405, WLU 228-10 (1), Minutes Caribou Management Meeting, 24 April 1957). Not surprisingly, this suggestion was not implemented because Indians were resistant to this control since their provider role was at stake.

The director of the CWS was in control of information to the media. A hand written notation on the letter from Paynter ordered that this “material should not be used outside the office unless further okay rec’d” [sic] (NAC RG 109, Vol 405, WLU 228-10 (1), Paynter to Mair, 28 May 1957). It was suggested at the April 1957 Caribou Management Meeting that conservation education be continued. In the words of Ernie Paynter: “Expanded programme of propaganda literature on caribou management for people of Canada and suitable literature for northern natives on proper utilization and hunting practices of caribou” [sic] (NAC RG 109, Vol 405, WLU 228-10 (1), Caribou Meeting, 24 April 1957). Paynter was referring to an article written by Banfield for the general public entitled “The Caribou Crisis” which was printed in the Beaver in the spring of 1956. Unlike the Chipewyan communities, the scientists had access to the media to popularize their cause. Aboriginal people had no public forum to argue theirs, and to make matters even more one-sided, the CWS controlled all statistical information.

More historical information on caribou scarcity was called for. It was suggested by the Chief, Fish and Wildlife Division, Ontario, Department of Lands and Forests that a researcher be hired in London to search the HBC archives in order to answer the question, “Have the caribou ever been scarce before?” (NAC RG 109, Vol 402, WLU 228.8 (2)). Conn’s suggestion that Aboriginal knowledge be
used apparently was ignored. Chipewyan hunters were not asked for their opinion, despite, based on long experience and oral tradition, having insisted that caribou were often scarce because they had changed their migration patterns.

A re-allocation of Aboriginal resources was suggested, anomalous as it was, while conservation of caribou was a concern. The Chief of the CWS sent a memo to the Director of Northern Affairs in which he suggested that a general brief on wildlife, as it related to economic development of the NWT, be submitted to the on-going Gordon Commission (1955) on Canada's economic development. He argued that with "modern methods of wildlife management now well understood" information on increasing the populations, where desirable, could be supplied by the CWS (NAC RG 109, Vol 436, File WLU 300-5 (1), Mair to Director, 28 November 1955). He expressed the opinion that with an increase in human population in both Canada and the U.S., and an increase in leisure time generally, there would be "an even greater need for wildlife to form the basis of expanded recreational opportunities" (NAC RG 109, Vol 436, File WLU 300-5 (1), Mair to Director, 28 November 1955). Both caribou as an economic resource, and an assimilationist policy had resurfaced. Mair said: "As you know the department plans eventually to integrate the Eskimos fully into the Canadian economy" (NAC RG 109, Vol 436, WLU 300-5 (1), Mair to Director, 28 Nov. 1955). He suggested that wildlife as a food source for Inuit would decline, however, wildlife would increase in value for tourist use. He continued, reminiscent of Stefansson's submission to Sifton's commission on conservation in 1914: "caribou herds of the
Northwest Territories may well have a much higher monetary value through hunting licenses, guiding and tourist trophy fees than they do in terms of meat and hides” (NAC RG 109, Vol 436, WLU 300-5 (1), Mair to Director, 28 Nov. 1955). Chief Mair offered the use of CWS personnel to bring together the necessary information for a presentation to the Gordon Commission. The negative answer was tersely worded by the Deputy Minister of Northern Affairs: “No departments of the federal government are making submissions to the commission on anything. The NWT & [sic] Yukon briefs were briefs strictly on their behalf as territories--the same as the provincial briefs. They were in no sense briefs of this department or of the federal government” (NAC RG 109, Vol 436, WLU 300-5 (1), Deputy Minister to Mair, 1 Dec. 1955). CWS officials had again over-stepped their authority in their suggestion to re-allocate caribou resources.

Before the planned eighteen month survey of the Beverly and Kaminuriak herds got underway by the CWS during 1957 and 1958, an hysterical communication from Kelsall alerted all agencies involved in caribou conservation that the very herd he proposed to study was endangered by the Chipewyan spring hunt. He explained that these two herds made up “at least one half of the total caribou remaining in the mainland barren-ground herds” (NAC RG 109, Vol 405, WLU 228-10 (1), Kelsall to Mair, 1 May 1957). He asserted that “human utilization which, as observed and investigated personally, appears to be about as uncontrolled, unnecessary and extravagant as anything seen or reported in the past seven years” and, he argued that calf crops being low “gives little or no margin
for human utilization of any sort” (NAC RG 109, Vol 405, WLU 228-10 (1)) Kelsall to Mair, 1 May 1957). He painted a picture of slaughter in vivid detail: “The situation ... was appaling [sic]. Caribou were being shot in numbers at every settlement from Black Lake to Camsell Portage ... hotly pursued ... animals were streaming blood from gunshot wounds” (NAC RG 109, Vol 405, WLU 228-10 (1), Kelsall to Mair 1 May 1957). He suggested that relentless enforcement of restrictive legislation, to encourage co-operation by hunters, be enacted immediately or there would be no use in carrying out the planned study. Kelsall’s assertions were circulated and generated questions from the Deputy Minister of Northern Affairs.

Kelsall’s claims were investigated. Hutchinson, Director of Northern Affairs explained to the Deputy Minister, Northern Affairs and National Resources, that Chief Mair, CWS, was on good terms with Saskatchewan wildlife officials and since the matter required careful approach, Mair should communicate with Paynter on a personal level. He also relayed Kelsall’s view that as it was known that heavy utilization was the important factor in herd depletion, the proposed extensive study was unnecessary. However, the director felt that if CWS could prove by the study that utilization was the most adverse factor in depletion, then other agencies would come on side and support restrictive legislation and regulation (NAC RG 109, Vol 405 WLU 228-10 (1), Hutchison to Deputy Minister, 22 May 1057).

Kelsall’s report generated concern among some government officials. Ben Sivertz was impressed by the report. As director of
Northern Affairs, he suggested a full report be sent to the NWT Council for discussion at the 1958 session (NAC RG 109, Vol 405, WLU 228-10 (1), Sivertz to Hutchison, 31 May 1957). But Paynter was “not nearly as disturbed about it as Kelsall was” as he explained to Mair in a personal and confidential letter (NAC RG 109, Vol 405, WLU 228-10 (1), Paynter to Mair, 28 May 1957). He stated that most of the people, who had been seen chasing caribou in vehicles on the lake at Uranium City, had never seen caribou before and were trying to photograph them. However, he reported, some .22 rifles had been confiscated by the game officer present, and the DIA had subsequently sent “ten big rifles up for the use of the Indians” (NAC RG 109, Vol 405, WLU 228-10 (1), Paynter to Mair, 28 May 1957). Paynter made an important point: “I don’t think there is anything in our Act (Saskatchewan) allowing us to seize a .22 from an Indian for shooting big game. I believe their Treaty Rights do not stipulate how they are to kill game.” (NAC RG 109, Vol 405, WLU 228-10 (1), Paynter to Mair, 28 May 1957). In conclusion, he stated that he was disturbed by Kelsall’s report because his officer on the scene “had not indicated such loss ... Mr. Kelsall’s impressions were rather exaggerated ... I am not sure that there was an unduly heavy kill ... and we did something very definite about it [seized rifles] even though we did not have the legislation to support our actions” (NAC RG 109, Vol 405, WLU 228-10 (1), Paynter to Mair, 28 May 1957). But the damage of Kelsall’s alarmist report had its effect. Government officials determined to use this incident to press for legislative action at the next NWT council meeting. One of the suggestions put forward by Brown of the CWS was that steps be
taken to “remove caribou from the list of animals which Indians, Eskimos and holders of general hunting licenses may hunt for food throughout the year” so that quotas could be set which would not interfere with management procedures (NAC RG 109, Vol 405, WLU 228-10 (1), Brown to Hutchison, 31 May 1957). Brown continued: “Natives who required caribou meat beyond the allowable supply would have to be moved elsewhere or have alternative rations brought in from other locations” (NAC RG 109, Vol 405, WLU 228-10 (1)). Kelsall’s hysterical and alarmist report, widely circulated among government agents, had serious implications for Aboriginal hunting.

The 18 month caribou study went ahead as planned in 1957-58 (results published in 1960), and focussed on the caribou wintering on the NWT-Saskatchewan border, i.e., the Beverly Herd. The study supervised by the CWS, and using the combined resources of both the territorial and provincial agencies, generated data on conservation measures as well as biological information on the caribou in general. Over the next two seasons, working from the ground, caribou mortality was studied. The result of the studies was alarming. The data showed a further drop of 75,000 - 100,000 caribou for a total count of 200,000 (NAC RG 109, Vol 398, WLU 228 (16), Kelsall to Chief, 23 July 1958) (See Figure 9). Although no other surveys were conducted until 1967, the “1955 and 1960 estimates were cited for over a decade in every published report on barren-ground caribou” (Parker 1971) like a mantra.

Despite the fact that human utilization data showed a substantial decline in caribou usage, Kelsall dogmatically continued
Figure 9

Aggregate Numbers in Caribou Herds.
to press for permanent restrictions on Aboriginal hunting through an attack on treaty hunting rights which he insisted stood in the way of a rational management program and even undermined the case for conservation. He suggested that caribou be placed on the endangered species list to supersede treaty rights (Clancy 1987: 21).

On October 4, 1957, the ACCP recommended that the NRTA and the Indian Act be amended to empower the provinces to control Indian hunting of caribou. Under the Indian Act only the federal government had jurisdiction over Indians and their treaty rights. When consulted, the Department of Citizenship and Immigration (Indian Affairs) replied that treaty rights could not be questioned, but after two years of pressure from the ACCP agreed that caribou could be declared in danger of extinction. Caribou were declared in danger of extinction in 1960 by Order in Council (P.C. 1960-1256). This regulation allowed the application of quotas and seasonal restrictions on caribou. These restrictions would be applicable to Indians in the NWT, but not to Indians in the provinces. In the provinces of Alberta, Saskatchewan and Manitoba, there was no legal right to control Indian hunting rights which were protected by the NRTA Section 1, Clause 12 and by the Indian Act. In 1962 the Department of Citizenship and Immigration (DIA) and the Department of Northern Affairs (CWS) appealed to the Cabinet to amend the NRTA in order to allow removal of impediments to Federal legislation within the provinces, and to amend the Indian Act to empower the Governor in Council to enact regulation over Indians' hunting within the provinces (NAC RG 13, Vol 2723, File 19000, D.H.C. [sic] to Thorson, 4 July 1960). The cabinet did not
immediately act on the recommendation of the ACCP. But the Department of Citizenship and Immigration, DIA, did not press the cabinet to act on the appeal because the Michael Sikyea case was being tried at Yellowknife and which might have to go to the Supreme Court of Canada. Although the charge against Sikyea was for contravention of the *Migratory Birds Convention Act*, the decision there “could set a precedent on which federal legislation relating to caribou could be based” (NAC RG 109, Vol 380, WLU 200 (20), Department of Citizenship and Immigration to Northern Affairs, 7 January 1963).

The following year, Northern Affairs requested that Citizenship and Immigration join them in another joint submission. Citizenship and Immigration were reluctant to do so. Their reply suggested that, rather than legislative action, alternative resources should be sought (NAC RG 109, Vol 440, WLU 228-10 (1) Tener to Munro, 9 Dec. 1964). The Federation of Saskatchewan Indians had pointed out to the Federal Government that the *Indian Act* could only be amended after consultation with representative Indians (NAC RG 109, Vol 403, WLU 228-8 (7), Minister Citizenship and Immigration to Minister Northern Affairs, 16 September 1963).

Although caribou reproduction rates had increased and utilization data showed a decline in usage, during the 1960s, the TCCP continued to pressure the ACCP for restriction of Aboriginal hunting. As a result of inability to control hunting by regulatory measures, and on the recommendations of the ACCP, Northern Affairs turned to substitute meats (imported pork or buffalo) as short-term measures, and introduced wage employment as a long-
term measure (NAC RG 109, Vol 403, WLU 228-8 (5), Northern Affairs to Deputy Minister, 31 Oct. 1960). By November 1964 the NWT Council had endorsed wage employment and expanded training opportunities for ‘unskilled northerners’ (Clancy 1987: 24). For example, Indian Affairs, Regional Supervisor’s reported May 20, 1965 that 12,000 pounds of meat had been shipped to the freezers of Fond du Lac and Stony Rapids, not only as a meat supply, but as an indication to the Indians of the importance of caribou conservation. That DIA report also explained that commercial fishing had been expanded, and that employment in fishing, fish plant filleting work, guiding, prospecting and mining had been encouraged. In addition, community programs of logging and lumbering, handicrafts (using caribou skin!), and classes in English for Indian guides had been sponsored by DIA to shift the economic focus off hunting caribou (NAC RG 10, Vol 8933, File 140/20-16 (2), Indian Affairs Regional Supervisor, Sk. to Indian Affairs Ottawa, 20 May 1965). The “Caribou crisis” had served the purpose of justifying the process of assimilation, the long term goal of the state.

6.5 Dissolution of CWS Control of Caribou

By 1963 some wildlife scientists recognized that caribou population numbers on which they had recommended policies could have been flawed. Biologist, George L Mitchell (Alberta) expressed his misgivings to J. S. Tener, CWS. He said: “many of us have felt for some time that the two major aerial surveys ... produced somewhat less than satisfactory results, in terms of confidence which we can place on these surveys” (NAC RG 109, Vol 380, WLU 200 (2),
Mitchell to Tener, 7 February 1963). Mitchell explained that he had argued with Kelsall about his biased technique, and that he had remonstrated with Kelsall that he could not "simply extrapolate his sample count into total population figures on some gestimate [sic] of actual range" (NAC RG 109, Vol 380, WLU 200 (2), Mair to Tenor, 7 February 1963). Mitchell was the first to point out the lack of validity and reliability of the herd estimates on which conservation policy was based.

The consensus among wildlife scientists further diminished in the late 1960s to early 1970s. Parker estimated, based on a 1966-68 survey of the Kaminuriak herd, the total population to be 63,000 caribou. The population was considered stable as the figures for predation and utilization matched the annual increment (Parker 1971: 5). D.R. Thomas in 1967 carried out a survey of the Bluenose, Bathurst and Beverly herds and estimated their numbers to 322,500. The total for the four herds was 385,500 animals. These figures raised the question of the accuracy of Kelsall and Loughrey's 1955 survey. Parker ventured the proposal that the correct number of caribou in 1955 should have been closer to 390,000 (Parker 1971: 6-7). However the results of both Parker and Thomas generated less controversy than the work of their contemporary Robert Ruttan, who eventually went public with his findings, thereby violating the CWS's control of information.

Ruttan, hired by the CWS in 1962 as a caribou management biologist, was also charged with the responsibility for public information as one of his duties. In that regard, W.E. Stevens, Chief, Western Region advised Chief Mair, CWS, that since Ruttan worked
in remote areas and could not refer everything to his office or Ottawa for decision, he was allowing him much freedom of action regarding information and publicity releases (NAC RG 109, Vol 378, WLU 200 Ruttan, Stevens to Chief, 3 June 1962). That freedom of action was soon curtailed.

At the ACCP meeting in June 1963 Ruttan suggested some new approaches to the "Caribou problem" (NAC RG 109, Vol 403, WLU 228-8 (7) Minutes ACCP, 25 June 1963). Ruttan proposed a survey of the three main herds. He argued that full-scale management and use was not possible without accurate total population estimates of each of the herds. This was not a new idea. He added, "without it, herd composition data, increments, etc. [which had been the focus of the CWS for some time] only suggest trends and leave approaches to management open to a great deal of personal (and frequently uninformed) bias" and Ruttan suggested, "we must change our attitudes toward caribou" because although caribou had declined, that decline had slowed or stopped so caribou were not likely to become extinct (NAC RG 109, Vol 403, WLU 228-8 (7), Minutes ACCP, 25 June 1963). He continued: "Once we have taken the attitude that caribou are a valuable resource and no longer a romantic species, then management is possible" and he added "many of us have been guilty of playing down the dollar value of caribou and going overboard on the aesthetic and romantic side" (NAC RG 109, Vol 403, WLU 228-8 (7), Minutes ACCP, 25 June 1963). He ruminated "I wonder, how much more it would cost in welfare ... if caribou were not used at all by northern natives" (NAC RG 109, Vol 403, WLU 228-8 (7), Minutes ACCP, 25 June 1963) (emphasis in
original). He justified his proposal of an expanded comprehensive
survey of discrete herds by questioning the value of the last 5-8
years study which focussed on the Saskatchewan or Beverly herd.
He said: “Furthermore, we have been repeating since 1955 that the
total population is about 250,000 animals, which is utter nonsense
without considerably more evidence than we now have” (NAC RG
ended by concurring with the suggestion of another member, that
the TCCP be disbanded as it served “no useful purpose that could not
be accomplished by correspondence “ (NAC RG 109, Vol 403, WLU
228-8 (7), Minutes ACCP, 25 June 1963). This frank and accurate
evaluation of the attitudes and actions of his predecessors stirred up
a hornet’s nest and other members were quick to counter-attack.

Loughrey, biologist in charge of the eastern region was the
first to react to Ruttan’s suggestions. In a letter to the Chief, CWS he
recommended that a small group be formed to act as a forum for
internal conflict and to represent the CWS at outside meetings. He
explained that at the June, 1963 ACCP the seven biologists present
had engaged in “ad hoc wrangling ... to the detriment of the Service
image” (NAC RG 109, Vol 380, WLU 200 (20), Loughrey to Chief, July
29 June 1963). Loughrey stated that many of Ruttan’s views were
“incorrect, misleading or both” and, he suggested, that if Ruttan did
not have a new and better technique for surveying the herds he
should not proceed because doubt could also be cast on his results
and for the same reasons (NAC RG 109, Vol 380, WLU 200 (20),
Loughrey to Chief, 29 June 1963). That comment pointed to the
awareness of the questionable validity of past counts.
The doubt about the reliability of censuses had spread and other government departments questioned CWS about the conflicts of opinion. Chief Mair, in answer to a query from the National Parks Branch, explained that Ruttan's attitudes stemmed from not “believing anything we have done previously is particularly useful ... we are in the process of combing him out ...” (NAC RG 109, Vol 403, WLU 228-8 (7), Mair to Reeve, 25 Sept. 1963). He admitted that the annual kill of caribou had declined, but the difficulty was that agencies involved had never been able to produce accurate statistics. He ended by saying the answer of the biologist had to be to discontinue all caribou hunting for five to ten years at least, then, “we would be held up throughout the world as an enlightened nation in the field of conservation” (NAC RG 109, Vol 403, WLU 228-8 (7), Mair to Reeve, 25 Sept. 1963). Image was always important to the CWS. And in this sense, an image of preservation could be created despite the data on human use of caribou.

A. Benson, of CWS was the next to criticize Ruttan. In a twelve page memo to Chief Mair he argued vehemently against Ruttan's remarks and proposed survey on the grounds that Ruttan was taking liberties he was not entitled to. He stated: “Mr. Ruttan has arrived at a point where he is planning, describing, justifying, coordinating and carrying out major biological investigations which to be effective, must include a considerable amount of research” (NAC RG 109, Vol 380, WLU 200 (20), Benson to Mair, 14 Aug 1963). Benson argued that Ruttan was not experienced enough for that responsibility. In addition, he pointed out that the assignment was one for a Biologist III position which was above the level of Ruttan's
position as a Biologist II (NAC RG 109, Vol 380, WLU 200 (20), Benson to Mair, 14 Aug. 1963). There was obviously some jealousy among CWS members. Chief Mair in a letter to Stevens, Superintendent, Western Region, made the point that Ruttan's place in the chain of command, as a management biologist, was under the command of the western region. Thus, he dumped the controversy into the lap of his junior, W.E. Stevens (NAC RG 109, Vol 380, WLU 200 (20), Mair to Stevens, 2 Oct. 1963).

By January, 1964, Ruttan had been demoted from Secretary of the ACCP to observer. As David A. Munro, Acting Chief, explained to the superintendent of the Western Region, since Ruttan's view were at variance with more experienced biologists in the CWS, there was no objection to him expressing them with other members of the CWS, but it was intolerable that he should express disagreement in public, i.e., the ACCP meeting (NAC RG 109, Vol 404, WLU 228-8 (8), Munro to Supt. Western Region, 27 Jan. 1964). Paynter, Director of the Wildlife Branch, Saskatchewan, complained that CWS was holding Ruttan's proposed survey back. He argued that since a number of agencies made up the membership of the ACCP, they wanted Ruttan's reports before they were re-drafted by the CWS (NAC RG 109, Vol 404, WLU 228-8 (8), Minutes ACCP 27 Jan. 1964). Stevens (CWS) countered that Ruttan's plans were not yet ready and that changes were guided by the TCCP (NAC RG 109, Vol 404, WLU 228-8 (8), Minutes ACCP 27 Jan. 1964).

The flow of information by the CWS was important to policy making. In an effort to get more information, once again, at the next ACCP meeting Paynter argued that information was being withheld:
"we are not getting all the reports on caribou that have been submitted to the Canadian Wildlife Service" (NAC RG 109, Vol 404, WLU 228-8 (8), Minutes ACCP, 20 June 1964). Munro responded that Paynter misunderstood the authority structure with respect to Ruttan. As biologist with CWS, Ruttan had to work through CWS structure which had the authority to control his work. D.H. Gimmer supported Paynter. He argued that member organizations should be free to hear Ruttan’s thoughts whether they represented the thinking of the CWS or not (NAC RG 109, Vol 404, WLU 228-8 (8), Minutes ACCP, 20 June 1964). Political dissension among biologists continued. Kelsall and Ruttan also disagreed about the effect on aircraft noise on caribou (NAC RG 109, Vol 404, WLU 228-8 (8), Minutes ACCP, 25 Feb. 1965).

Tener, Deputy Director, CWS, wrote to his superior Munro about the problem of information and policy making. He expressed his concern with having to use five year old data on population numbers while reports from Churchill Game Superintendent, and from RCMP posts in the Keewatin District reported increasingly large numbers of caribou. Local observers had recommended relaxation of NWT hunting regulations on the grounds of increased herds, and also expressed concern over the ability of the range to support such numbers (NAC RG 109, Vol. 404 WLU 228-8 (9), Tener to Munro, 17 Nov. 1965). He noted that the CWS had no factual data to support relaxation of regulations. But, since the department had been maintaining for so long that only 200,000 barren-ground caribou were in existence, if the figures were greater, then the CWS should be the first to be aware of it in order to “protect our professional
integrity” (NAC RG 109, Vol 404, WLU 228-8 (9), Tener to Munro, 17 Nov. 1965). He urged that the department keep the initiative in research and management recommendations or “run the risk of having our future advice ignored” (NAC RG 109, Vol 404, WLU 228-8 (9), Tener to Munro, 17 Nov. 1965). To prevent this, he asked that a survey be done the following year.

No longer employed by the CWS, Ruttan had, by August 1966, disclosed to outside sources that based on a count in 1965, the caribou herds had increased to 700,000 (Saskatoon Star-Phoenix, 6 August 1966). This information generated a flurry of angry correspondence between biologists and departments who were pressed for a rebuttal. Tener answered a query by Sivertz, Commissioner of the Northwest Territories. He stated that the CWS did not know the numbers, but planned an aerial survey in 1968 and until that time Ruttan’s figures should not be used to develop management plans (NAC RG 109, Vol 381, WLU 200 (23), Tener to Sivertz, 22 Aug. 1966). Tener wrote Malaher (Manitoba) a confidential memo in which he admitted that the department was “conscious of the gaps in our information about barren-ground caribou and that in spite of eighteen years of research on the species, information is not yet available for intensive management” (NAC RG 109, Vol 381, WLU 200 (24), Tener to Malaher, 14 Dec. 1966). The implication was that CWS could not, publicly or otherwise, refute Ruttan’s claim. Moreover, this admission that past policy recommendations concerning the regulation of caribou hunting, were, in retrospect, not based on science.
As a subtle way of deterring public attention from controversial estimates of caribou numbers, Loughrey drafted a statement to be presented by the Minister of Indian Affairs and Northern Development, drawing attention to the biological work in progress. This course he deemed to be less controversial than a public rebuttal of Ruttan’s media releases (Country Guide had also published an article by Ruttan in November, 1966) (NAC RG 109, Vol 381, WLU 200 (24), Tener to Malaher, 14 Dec. 1966). Munro confided to Kelsall, that Ruttan’s disclosures were having some effect, and that CWS was unable to refute his statements because of lack of accurate data. Munro said: “we must as quickly as possible get ourselves in the position of having information that is a bit better and a bit more current than our critics have” so “make contact with all the individuals whom you believe might have useful, albeit subjective, impressions of the current status of caribou generally” (NAC RG 109, Vol 381, WLU 200 (24), Munro to Kelsall, 27 Jan. 1967). By April, 1968, Kelsall departed from CWS policy and openly attacked Ruttan’s credibility in a letter to The Drum which had published an article of Ruttan’s the previous March (NAC RG 109, Vol 382, WLU 200 (25), Kelsall to Editor, 23 April, 1968). The publicity surrounding Ruttan’s empirical critique of the credibility of Kelsall’s alarmist predictions placed the control of caribou by the CWS in question. The CWS was unable to publicly contradict Ruttan’s statements: after eighteen years of study they had no credible data. Discredited, the CWS lost control of the barren-ground caribou resource.
6.6 The Demise of CWS Control of Barren-Ground Caribou

In 1968 Northwest Territories legislation liberalized the regulations pertaining to the hunting of caribou. The Game Ordinance permitted sale of big game licenses to resident hunters (non-Aboriginal) for the taking of five caribou of any sex or age. In addition, legislation allowed the holders of General Hunting Licenses to sell caribou meat within the NWT to improve the economy of the Aboriginal people (NAC RG 108, Box 12, 1165-1C14, Vol 2, ACCP Minutes, 29 December 1969). Furthermore, Saskatchewan regulations on non-Aboriginal hunting were relaxed and sports hunting was permitted by special northern resident caribou licenses (NAC RG 108, Box 12, 1165-1C14, Vol 2, Minutes TCCP, 5-6 May 1970).

Finally, the need for integrated and co-ordinated management of caribou was recognized. At a special meeting of the ACCP, July 13, 1970, it was recommended that a co-operative management program of the combined jurisdictions of Alberta, Manitoba, Saskatchewan, and the NWT be organized to take over responsibility from the CWS. The chairman stated that "the question of control of Indian hunting is jurisdictional and to a certain extent the historical role of the Canadian Wildlife Service which related to Indian hunting the caribou resource is largely coming to an end" (NAC RG 108, Box 12, 1165-1C14, Vol 2, Deputy Minister Robinson to Deputy Minister Weymark, 4 Nov. 1970). The new management group was charged with monitoring of harvesting and populations of the Beverly and Kaminuriak herds to assure maximum sustained yield. By 1971 the new management group had taken charge of the
management of these herds. Exasperated at the lack of conservation action on the advice generated by the CWS, Kelsall resigned from the TCCP saying "If the current crop of caribou experts want my advice, they can read my monograph, and Management Bulletins" (NAC RG 108, Box 12, 1165-1C14, Vol 1, Kelsall to Stephen, 14 Jan. 1971).

The final meeting of TCCP was held on June 26, 1974. The main issue discussed regarded its own future. The TCCP members recommended that the TCCP be dissolved and that in the future the field workers form a workshop to meet every two to three years to discuss technical aspects, but without an advisory role. This decision was reached in recognition that responsibility for management had been assumed by the provinces and territories. The ACCP accepted that recommendation, and its members agreed that the ACCP also should dissolve in favour of a new Canadian Committee for Caribou Management (CCCM). The CCCM would operate under the direction of the Federal-Provincial Wildlife Conference. Membership would be administrators from the provinces, territories, and Federal agencies, i.e., DIA, RCMP, CWS (NAC RG 109, Box 12, 1165-1C14, Vol 3, Minutes TCCP, 2-3 April 1974). The archives contain no further information on the actions of the proposed CCCM.

6.7 Establishment of the BKCMB in 1982

Although policy development beyond the demise of the CWS's hegemony over caribou conservation is outside the scope of this thesis, it is worth noting here the establishment of the Beverly and Kaminuriak Caribou Management Board (BKCMB) in 1982. The
Board brought together the jurisdictions of Manitoba, Saskatchewan, and the Northwest Territories as well as users and managers. The mandate of the Board was to make recommendations to governments and to user groups regarding the "conservation and management of the two herds, and to promote conservation through education and communication" (Usher 1993: 111). The Board membership consisted of two user members from each of the following jurisdictions: Manitoba, Saskatchewan, NWT (Keewatin), NWT (Mackenzie); and one government member from Canada (Indian and Northern Affairs Branch), Canada (Environment), Manitoba (Natural Resources), Saskatchewan (Parks and Renewable Resources), and Northwest Territories (Renewable Resources), for a total of thirteen members. The user communities (Manitoba, four - population 2,445) (Saskatchewan, six - population 3,446) (NWT Keewatin, five - population 4,388) (NWT Mackenzie, three -population 3,277) in all a total of 18 communities with an aggregate population of 13,556 (Usher 1993: 12). Users, managers, and biologists found a meeting ground and engaged in direct dialogue. From the Aboriginal perspective, the meetings gave them the opportunity to discuss objectives, disseminate information on range conditions, and to provide mutual support on issues. The government, from its perspective, valued the board as a way of consulting users, co-ordinating research among jurisdictions, and as a sounding board for new initiatives (Usher 1993: 113). However, as Usher pointed out, there had not been, at that time (1993) adequate utilization of Aboriginal hunters' knowledge integrated into the management process (Usher 1993: 117). Nevertheless, the
operation of the BKCMB was an improvement over past state policy formation. At last Aboriginal voices were being heard, if only in a limited way.

In summary, the advice of the CWS service, generated from two decades of research, did little to manage the Barren-ground caribou. The Aboriginal peoples' treaty and Aboriginal rights to hunt caribou for food were opposed by wildlife scientists who sought restrictive legislation to curb the use of Aboriginal food sources. Flawed statistics were used by the CWS to advise policy makers on conservation policy. Only the public conflict of opinion regarding herd statistics, which shattered the credibility of the CWS's ability to manage caribou, prevented the CWS from applying further pressure on the state to change the treaties and the NRTA. Aboriginal and treaty rights came close to being wiped out by the recommendations of the CWS biologists.
CHAPTER SEVEN
DISCUSSION

7.1 Discussion of Findings and Conclusions

This study has examined the Chipewyan people, their region, and one of their resources. In addition it has documented the influence of government-employed biologists of the CWS in recommending action to be taken by state policy makers. This research disclosed some dominant themes.

Aboriginal voices were dismissed when they were in conflict with the many others. Their traditional ecological knowledge was never integrated into the process of policy making which led to broad-based conservation schemes which restricted the hunting of their own caribou.

In addition, Aboriginal people's rights to hunt their own animals were given a low priority when their rights were in conflict with the objectives of scientists. Wildlife scientists assumed a proprietary attitude in regard to caribou. They were so determined to curtail the hunting of caribou that they recommended legislation to irradicate treaty rights to hunt them. Only the internal conflict among biologists which discredited the Canadian Wildlife Service's ability to estimate herd sizes prevented them from further pressuring the state to enact legislation which would have done away with treaty rights.

The advice of CWS biologists to policy makers was based on invalid information, yet that information was used to justify
increasingly restrictive conservation regulations, and also used to justify the attempts to eradicate hunting rights.

Field biologists and Ottawa policy makers held the view that caribou was more important than the traditional lifestyles and treaty rights of Aboriginal people who were the owners of the resource, thus acculturation and assimilation of Aboriginal people into a wage economy was initiated by state agencies as the predominant solution to wildlife depletion. The impact of the regulation of caribou hunting, the Aboriginal peoples’ subsistence staple, was given little recognition, and Aboriginal peoples’ resistance or non-compliance in response to imposed regulations was dismissed as ignorance.

A major barrier to mutual understanding was the geographical distance between the state policy makers and the users of the resource. The policies were formulated in Ottawa while the users lived in areas remote from Canada’s capital. Policy makers had no practical experience of living off the land to refer to, and so promulgated unrealistic regulations because their knowledge of living off caribou was only theoretical. They lived in southern cities and were members of a fraternity which met in exotic places for conventions and referred to each other as “the boys” (NAC RG 109, Vol 402, WLU 228-10 (1), Mair to Stevens, 27 March 1956). These men enjoyed privileges, which the Aboriginal hunters could not even dream of, in the name of doing what was good for Aboriginal people.

The state imposed policy on Aboriginal people on the advice of its scientists rather than asking for the advice of Aboriginal hunters.
More importantly, there was an ideological distance between policy makers and wildlife users. Informed by the decimation of the plains buffalo, policy makers saw wildlife as game to be protected while Aboriginal people saw wildlife as their food. Wildlife officials were concerned with their image on the international conservation scene; Aboriginal people were concerned with staying alive.

There was a lack of communication between the state and the users. Wildlife officials, who made the recommendations upon which policy was formulated, were too arrogant to take the advice of Aboriginal people or veteran northerners. For example, Bishop Breynat, from the vantage point of long experience in the north and close communication with the Chipewyan, gave officials some good advice. He advised:

> Whenever new demands are made for more restrictions ... give to the one making the demands, a gun and nets and let him try and live on the barren land for a few months. On his return, if he ever does return, he will have acquired enough personal experience to discuss the matter (NAC RG 10, Vol 6744, File 420-6C 4,1934, Breynat to Commissioner NWT, 4 Nov. 1936).

However, Breynat's sound advice fell on deaf ears. State officials maintained an aloofness from the face-to-face hunting culture realities of life in Canada's north.

This study found that with the increased involvement of wildlife biologists and their subsequent rise to power as advisers to the TCCP, Aboriginal traditional livelihood became increasingly expendable as caribou were increasingly valued. Biologists of the TCCP, who were building careers on the study of caribou, focussed
dogmatically on restriction of Aboriginal peoples’ use of the caribou. In their crusade to save the caribou they used their ever decreasing estimates like a mantra. In addition, they used shock tactics to impress legislators; they exaggerated the kill sizes; they used moral arguments; they used propaganda both on the Aboriginal hunters and the general public; they used economic arguments; they allowed game wardens to harass Aboriginal hunters; they maintained secrecy regarding their activities; they suppressed controversial information which did not support their aims; they advised the state to break the law by illegally seizing .22 rifles; and, eventually, they appealed for protection of caribou under the endangered species legislation despite knowing that their appeal was on false grounds. Eventually CWS recommended changing the NRTA and the Indian Act to enable the state to impose hunting restrictions which would abrogate the treaty rights of Indians. Caribou were never in danger of extinction, but with increasing restrictions on hunting, traditional lifestyles and Aboriginal and treaty rights were.

Aboriginal hunters had little recourse but to react by non-compliance and non-co-operation. They had appealed through their Indian Agents, their clergy, and their member of parliament (although Indians were not able to vote). Few of these actions were successful. But with devolution of administrative power to the NWT government and the agreement for co-operative caribou management between the provinces and territories, Aboriginal people had gained limited input into the management of their own resource through the formation of the BKCMB. The emphasis had shifted from research and preservation to long-term management.
Unfortunately the development of the BKCMB was a long time in being realized even though the means to resolve conflict were always available. If a more sensitive administration had been appreciative of the ability and knowledge of Aboriginal users to monitor and collect data, to restrict by social sanctions, to make decisions reached by consensus, the idea for co-operative management could have been accomplished earlier. The idea of co-operative management had languished in the files of the Manitoba Game Branch for years. In 1946, Alex Sinclair, a treaty Indian game guardian at Oxford House, with Delphic foresight, suggested that it would be a good idea to “organize a sort of club in which most of the hunters would be interested and to which they could bring their views and findings ... a sort of adult education in conservation” (NAC RG 109, Vol 381, WLU 200 (22), Malaher to Munro, 19 Nov. 1964). A copy of this letter was found by Malaher and sent to the Chief to be included in the information for the history of conservation in Manitoba. Aboriginal peoples’ ideas had not been valued, while scientists’ ideas had been solicited by the state.

Caribou biologists were a special interest group who depended on caribou for their livelihood. They were concerned with saving caribou because caribou study was their field of expertise and central to their careers. One of their problems was that they were southern born and trained. Their career futures were based on saving the caribou as an exotic subject of study; they had never depended on caribou as a food source. In addition, their outlook on wildlife was southern oriented, and they had inherited the legacy of the shame of the buffalo demise. They had also inherited the notion
that the whiteman should control game since the Aboriginal person had inherent tendencies to slaughter wildlife indiscriminately. Scientists were imported to the north by the state, thus they were well supplied with food, supplies, transportation, accommodation, and salaries while they pursued information to enhance their careers. They had a vested interest in saving the caribou which they, as southern experts on northern problems, could later lecture on, write about, and publish for their peers' edification. Unlike Aboriginal hunters whose subsistence depended on the caribou for meat, caribou biologists depended on the caribou for self promotion.

The state's special interest was the concern that caribou be saved from extinction and maintained as a food source until Aboriginal people could be assimilated into the dominant economic system as a work force. The responsibility of the state for all Canadians, not just Aboriginal people, was to supply food to destitute people. Although the state had accepted responsibility for Aboriginal peoples' welfare by extending its sovereignty over their territory, the state's economic interest was in having Aboriginal people feed themselves in the short-term, before assimilation.

In conclusion, this study found that caribou biologists served their own ends in recommending restriction on hunting caribou, i.e., preservation of their study specimen. But, more importantly, by their recommendations they subscribed to the long-term plans of the state for assimilation of Aboriginal people. They added to the pushing of Chipewyan off the land by curtailing the food supply needed to pursue country living particularly when trapping income
was low. In addition, they advocated fishing as a lifestyle to replace hunting. In that regard they facilitated the long-term aim of the state in sedentarizing Aboriginal people. Recommendations of the TCCP to the ACCP were used as a basis for state policy formulation which resulted in state-sponsored community lifestyles where relief, compulsory education, and minimal employment were provided, a type of social engineering. The 'evidence' that caribou could no longer provide food for Aboriginal people fed into the notion that hunting and trapping lifestyles were no longer viable. The result was long-term planning of the state to develop resource extraction as a way of stimulating the economy of the north so that Aboriginal people could participate in a wage economy.

Forced acculturation, through education, sowed the seeds of revolutionary ideas. Armed with the language of the dominant culture and brought together with other disaffected hunters who shared common negative experiences and the newly acquired ability to easily communicate over distance, a growing political movement was fostered. A resentment toward southern exploitation of the non-renewable resources united diverse Aboriginal groups in an effort to regain control over the management of their own resources.

If the BKCMB had not been formed subsequent to the dissolution of the Canadian Wildlife Service's hegemony over caribou hunting, it would not have been long in coming. The Dené recognized that, as a renewable resource, the caribou has always been the core of their cultural traditions and economy.
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