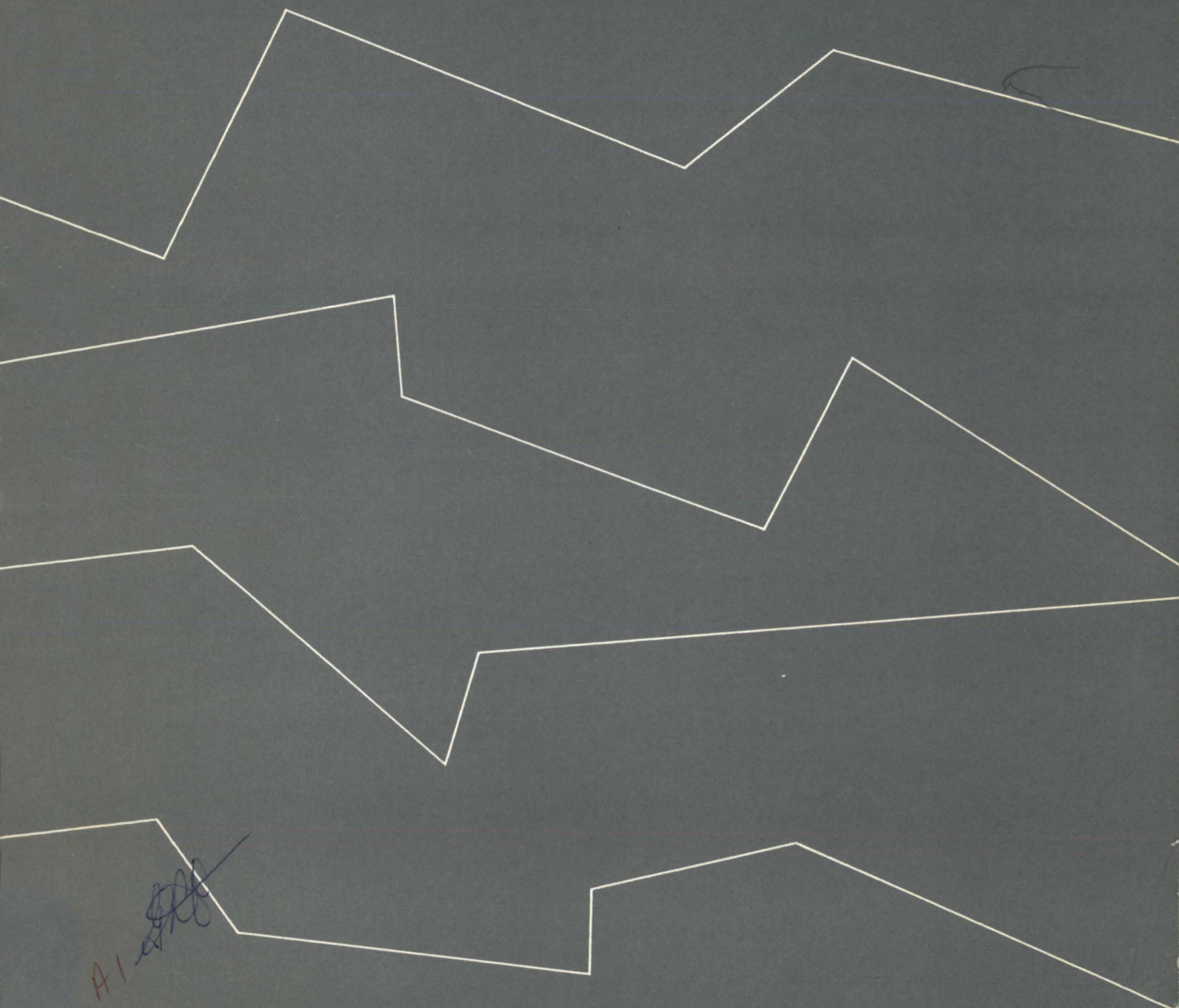




Trappers, Hunters and Fishermen

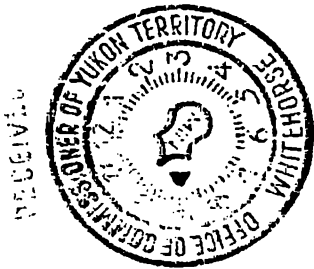
Wildlife Utilization in the Yukon Territory
by Adrian Tenner
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TRAPPERS, HUNTERS AND FISHERMEN.

Wildlife Utilization in the Yukon Territory

Adrian Tanner

No. 5 in Yukon Research Project Series.

**Requests for copies of this report should be addressed to the Chief,
Northern Co-ordination and Research Centre, Department of Northern
Affairs and National Resources, Ottawa 4, Ontario, Canada.**

**Northern Co-ordination and Research Centre,
Department of Northern Affairs and National Resources,
Ottawa 4, Ontario.**

February, 1966.

PREFACE

The Yukon Research Project is a regional research programme for carrying out studies in the social, economic, historical and other related fields in Canada's Yukon Territory. The aim of the project is to carry out both short term and long term studies, and to make the results of these studies available to everyone interested in the Yukon Territory.

The traditional ways of making a living in the North have received little attention in recent years. Helen Buckley's pioneering work in northern Saskatchewan indicated how the traditional land resources of the North - the game, the fish, the furbearers - were being used, and discussed some of the problems of earning a living from the land. Mr. Tanner's study has drawn together a great deal of information that was previously scattered, and he has pointed out a number of the problems of the Yukon Territory related to the traditional ways of earning a living in this northern region.

The field work for this report was done in 1964. Mr. Tanner travelled extensively throughout the Territory, and talked to many people about wildlife utilization. Everyone gave freely of their time and of their knowledge. I would like to thank all who helped Mr. Tanner to carry out

his study. Commissioner G.R. Cameron and his officers were particularly helpful. Mr. Tanner has returned to the Yukon Territory to spend a full year there, continuing the work he began in 1964.

The views expressed in this report, and the recommendations made, are those of Mr. Tanner, and not those of the Government of Canada or of the Government of the Yukon Territory.

J.R. Lotz,
Co-ordinator,
Yukon Research Project.

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INTRODUCTION

This report is one of a series of studies which share a common concern with the Yukon Territory and its development. Its subject is the hunting, trapping, and fishing industries of the Territory. The approach to be used is a general discussion of the main factors of production, as they appear to the author after a three-month period of data-collection. The subject matter is apt to splinter into the abstractions of zoology, economics, and sociology upon close inspection. For this initial study, however, a general survey of the data was considered more appropriate. It is to be hoped that this will be followed by more specialized research.

One fact which becomes quickly obvious is that the per capita production in these industries is low. Apart from big game outfitters, and a few trappers and commercial fishermen, those who depend on the wildlife resources do not make what most Canadians would consider an adequate living. Although most Indians of the Yukon depend primarily on wildlife resources, it is not sufficient to dismiss the problem of low production as part of the 'Indian problem'. Few non-Indian trappers or commercial fishermen make much more than their Indian counterparts. Whatever their ethnic background, most of these people share the common culture of poverty.

Work on this project began in 1964. In June the author travelled to Whitehorse, and during the first three weeks examined government records, with the cooperation of the Yukon Department of Game, and the Department of Fisheries. During this period helpful discussions were held with numerous government officials and local people working in the wildlife industries.

The remaining time in the Yukon was spent visiting most communities in the Territory, talking with trappers, traders, outfitters, fishermen and government officials. During this period, Whitehorse remained the base of operations. It was not possible to visit Old Crow, Fort McPherson and some of the smaller settlements in the southwest part of the Territory. Fort McPherson is referred to in this report, even though it is in the Northwest Territories, because trappers who trade there have a large registered trapping area in the Yukon Territory (map 3), where they also fish and hunt.

Questionnaires were not used, because of the large number of categories of informants and the drawback of the informal nature of the enquiries. An attempt was made to go beyond official statistics, and to add to or alter the impression given by them, as well as to understand the casual factors. Enquiries by a stranger on the subject of wildlife utilization can become confused by the informant with official attempts to administer regulations on hunting, trapping or fishing. In time a fairly standardized set of questions became included in interviews with each of the main categories of informant. Neither was the attempt made to interview every person involved in the wildlife industries. Key informants were sought, at first by their reputation and later through introductions, until an adequate picture was gained. At Ross River every household was visited initially, but at the time, as with most locations in the Territory, some of the men were away guiding, hunting or in other employment.

The survey method did not allow for extended stays or intensive research in any location. A study of the subject conducted in a single community over the period of a summer, or better still, a winter, would have permitted a deeper analysis, but of limited application.

Excellent cooperation, as well as many unexpected kindnesses, were received from government officials, both Territorial and Federal. Commercial fishermen, outfitters, missionaries, traders and particularly trappers gave of their time and hospitality with true Yukon generosity. I am also indebted to the Project Co-ordinator, Jim Lotz, for his valuable aid and stimulating ideas.

CHAPTER 1

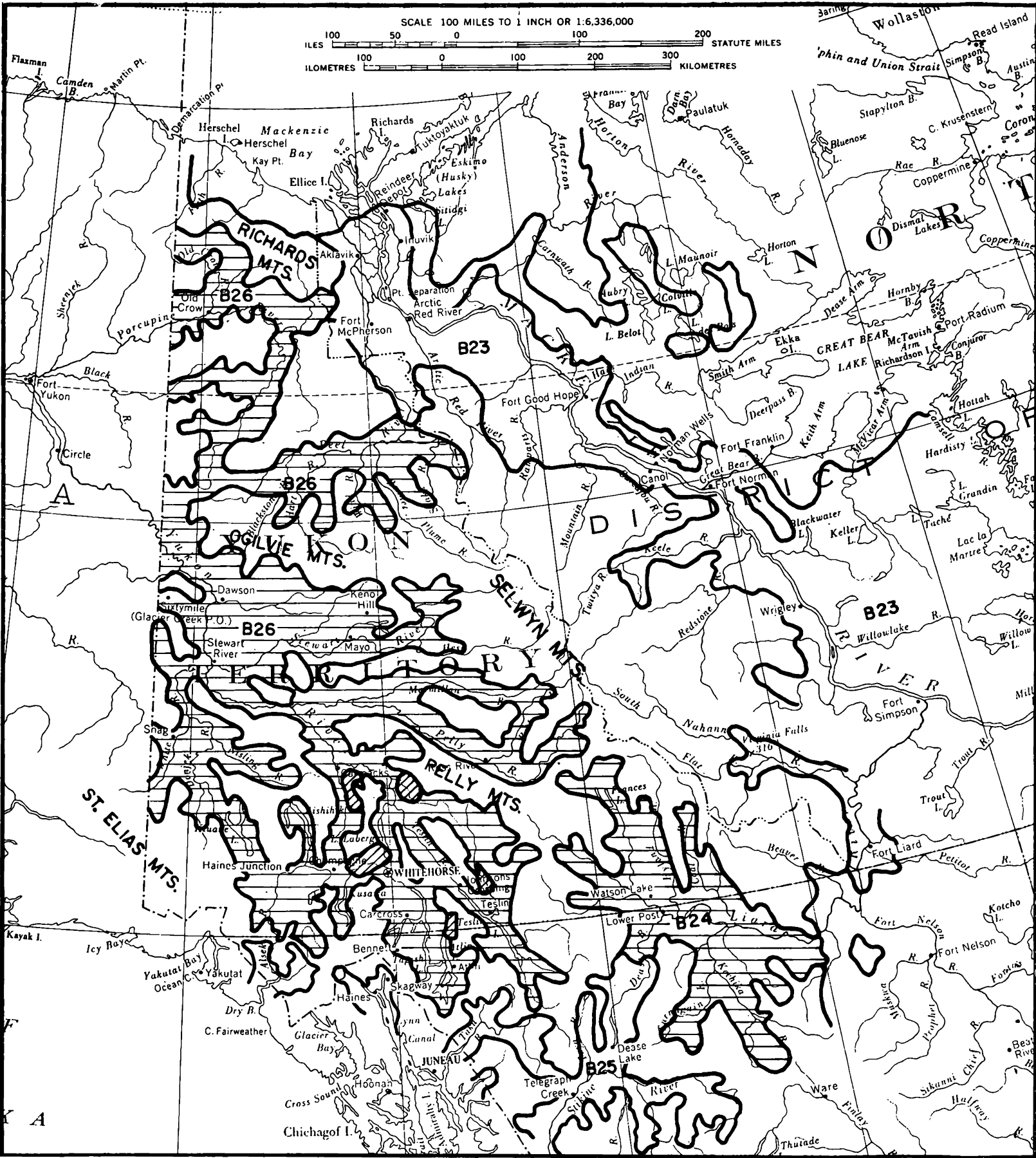
GEOGRAPHICAL OUTLINE

The Yukon lies almost entirely within the Canadian Cordillera, with the exception of the Arctic Littoral. The Cordillera consists of three regions: the Coastal or Western System, the Interior System, and the Eastern System. In the Yukon, these regions contain the following mountain ranges: (a) the coastal St. Elias Mountains; (b) the Interior Yukon Plateau, as well as the Pelly, Selwyn, and Ogilvie Mountains; (c) the Richardson Mountains.




Most of the Yukon forms the drainage area for the upper Yukon River system. This includes the largest of the three regions, the Yukon Plateau and its associated mountain ranges. The St. Elias Mountains drain both southward directly to the Pacific, by such rivers as the Alsek, as well as northward to the Yukon River. The Liard headwaters in the southeast of the Territory drain into the Mackenzie, and eventually to the Arctic Ocean. The same is true of the Peel River and its tributaries, in the northeast part of the Territory. Further north is the Porcupine River which flows into the Yukon River in central Alaska. In the far north, there are a few short rivers such as the Firth which drain into the Arctic Ocean.

The physiography of the area has been described by Bostock (1948) and is well illustrated in the Atlas of Canada (1957, plate 13). Most of the area is plateau land of about 4,000 feet elevation, apart from the mountain ranges; some peaks are over 19,000 feet in the St. Elias Mountains, while elsewhere the highest are between 6,000 and 9,000 feet.

The climate (Kendrew & Kerr, 1955) is continental. The winters are cold and dry, with January mean temperatures below zero. There are occasional very cold spells, such as the famous record of -81.0 degrees at Snag in 1947. Summers are warm and dry, with July mean temperatures around 60 degrees, and a maximum of about 90 degrees. Precipitation is from 10 to 16 inches a year, about half of which falls as snow. Permafrost occurs over about half the Territory.



Map 1. Yukon Natural Vegetation Areas

-  - Yukon Forest Section
-  - Mountain and Tundra Section
-  - Areas Burned within 15 yrs.

Map from: A Forest Classification of Canada,
 by W. E. D. Halliday.
 Ottawa, 1937.

From the point of view of wildlife utilization and management, particularly of furbearers and game, a useful study is that of natural vegetation habitat types. D.N. Daniloff (1953) has used forest types as the basis for a classification and valuation of trapping areas. Map 1 shows a forest classification for the Yukon, from Halliday (1937). Over half the area is alpine and arctic tundra. The rest is open forest, with trees of restricted height. North-facing slopes tend to be treeless, due to a deficiency of solar radiation. The main species in these forests are white spruce, Alaska white birch and aspen, with black cottonwood found in some southern valleys. There are a few areas which have been burned over by forest fires, and this changes the balance of wildlife populations. Recovery of vegetation after a major fire is very slow in this climate, and the burned-off areas are first covered by alders, willows, and jack pine. These provide good browse for moose and deer, but the return of some of the original fur species may be delayed for about twenty years until the original vegetation returns. The locations of some major areas burned within the last fifteen years in the southern part of the Territory are shown on Map 1.

CHAPTER 2

A SHORT HISTORY OF THE YUKON FUR TRADE

It is not possible to trace in detail the initial development of the fur trade in the Yukon, since for at least fifty years it was conducted by Indian middlemen mainly from outside the Territory. The coastal Tlingit tribes, particularly the Chilkats, controlled trade between the southern Yukon and the Pacific Northwest posts of the Russian-American Company, as well as rival British and American traders. This control was effective because the Tlingits were able to restrict the entry of Whites to the passes through the coast mountains, and also to prevent the inland Athapascans from journeying to the coast and trading directly with the Whites.

The presence of European goods, particularly guns and other hardware, started a chain reaction of trade which was felt far from its source. As early as 1789 Alexander Mackenzie, on his voyage of discovery down the Mackenzie River, was told by local Indians of a large river to the west, with a White man's trading post at its mouth (Burpee, 1914-1917: 678). This may have been the Copper River, where the Russians had established a post the previous year. Trade between the southern Yukon and the Pacific Northwest increased during the middle years of the Nineteenth century. This was because the fur seal was being hunted almost to extinction, and thus the traders began to turn their attention to inland furs. These were primarily fox and marten, which were increasing in value on the world market at that time. The drop in the fur seal catch, coupled with the loss of the China market, brought about the demise of the Russians in Alaska. In 1824 foreign companies were permitted to trade with Alaskan Indians (as they had done illegally for years). This was mainly due to the insistence of the Tlingits, who wished to procure British and American trade goods. In 1840 Russia leased the mainland of the Alaska panhandle to the Hudson's Bay Company, which had the effect of increasing trade with the inland Indians.

Trade also entered the Territory from the southeast. In the 1830's Robert Campbell of the H.B.C. was establishing posts in the upper Stikine and Liard River valleys. Fort Frances was founded by him in 1842, Pelly

Banks in 1846, and Fort Selkirk, on the Yukon River, in 1848. Meanwhile, John Bell had discovered the northern route from the Mackenzie River to the Yukon River. Alexander Murray founded Fort Yukon at the confluence of the Porcupine and the Yukon in 1847, although it was known to be inside Russian territory. The local Indians (Kutchuk Kutchin and Han) tried to prevent other tribes from trading directly with the fort, and to establish themselves as fur trade middlemen.

The founding of Fort Selkirk was seen by the Chilkats as a threat to their trade monopoly of the southern Yukon Territory. They attacked and destroyed the fort in 1852, even though they had often been able to undersell the H. B. C. at the Fort Selkirk gates with identical goods obtained from the H. B. C. steamer "Beaver" in Lynn Canal (Innis, 1962: 324). The fort was not rebuilt until after the Klondike gold rush.

The sale of Alaska to the U. S. A. in 1867 was in part due to stories of gold finds in the Yukon River basin, since the Russians were not prepared to administer a gold rush. The early prospectors were also fur traders and trappers. Leroy McQuesten and Arthur Harper were two of the first in the upper Yukon River region. In 1874 McQuesten founded Fort Reliance, downstream from the present Dawson City, while in the service of the Alaska Commercial Company. More and more miners overcame Tlingit hostility and entered the Territory by the Chilkat and Chilkoot Passes. The Tlingits lost their trading monopoly as these Whites traded with the interior Indians. By 1894 Dalton Post at the head of the Chilkat Pass was founded--close to the Indian village of Neskatahin, where Chilkat and Champagne (Athapascan) Indians had traded for years. The Dalton Trail, which led from the head of the Chilkat Pass to the Yukon River, near the present-day Carmacks, was probably an earlier Chilkat trade route.

The Gold Rush had its effects on the Indian population across the Yukon. The Yukon River between Whitehorse and Dawson became a major transportation artery to which Indians were drawn for employment, as they also were to the mining area. They were employed as wood cutters for the steamboats, as meat hunters and as labourers. Whites, some who had first gone to the Yukon to work in the goldfields, turned to trapping, and trading firms such as the Alaska Commercial Company and Taylor & Drury Ltd. expanded through the upper Yukon River drainage area, buying fur and selling supplies. This new trapping and trading activity was in part the result of



Note: The Southern Tutchone are divided into the following five bands: Burwash, Aishihik, Kloo Lake, Hotsi, Champagne and Lake Laberge-Whitehorse.

Map 2. Indians of the Yukon Territory

Source: C. McClellan, Culture Contact and Native Trade in the Southern Yukon Territory. 1950.

an opening up of communications between the central Yukon and the populated areas of North America, brought about by the Gold Rush. A second factor on the Arctic coast was whaling. Herschel Island became an important center of trade between the whalers and northern (Kutchin) Indians and Eskimos around the turn of the century. This created a demand for a source of cash, and for better goods from the local trading companies, in particular the H.B.C. (Innis, 1962: 373).

The Indians of the Yukon belonged mainly to the northern branch of the extensive Athapaskan language group. However, due to Tlingit control of the fur trade monopoly throughout most of the Nineteenth century, southern Yukon groups have been culturally influenced by the coastal people, to a greater or lesser extent. The Tlingits dominated the trade bargaining, and would not allow inland people to visit the coast, as this would have led to direct trade between Whites and Athapaskans. Parts of the complex Tlingit social system, including moiety and clan structures, were taken up by those groups who traded with the yearly coastal visitors, probably initially as a means of maintaining trading partnerships. Many marriages, most of them between Athapaskan men and Tlingit women, took place (McClellan, 1950: 61). The Tlingit language replaced Athapaskan among the Tagish and Atlin Indians, and many Tlingit words came into common use in Southern Tutchone groups. Some time during the Nineteenth century a Tlingit group from the lower Taku valley moved inland, due possibly to wars with the Tahltans as much as to the desire to trap fur and trade with groups still further inland. They occupied an area north and west of Teslin Lake, where they may have absorbed an earlier resident Athapaskan group (McClellan, 1953: 130). Today this Tlingit group lives at Teslin.

These 'Tlingitized' Athapaskans of the southern Yukon in their turn became middlemen in the trade with the groups further inland, such as the Kaska, Tutchone and Han. Yearly trading trips were made to places like Pelly Banks, Ross River and down the Yukon River Valley. Similarly, trade radiated through the Kutchin groups of the northern Yukon from Fort Yukon and Fort McPherson. The result of this century of trade interaction was that, by the time White settlement began, there were few sharp cultural divisions between different groups. Also there was a wealth and status gradation between the various groups, with the highest status groups living closest to the White fur markets.

Little has been written about the Yukon fur trade in the Twentieth century. Taylor & Drury Ltd. had at one time about 23 trading posts

in the southern Yukon, and they also made yearly trading trips by steamboat to places like Pelly Banks. Many of the White trappers also traded with such isolated groups, and resold this fur at posts along the Yukon River. At the posts trade was conducted on the credit system, which centered on the 'Jawbone', or debt, owed by the individual trapper. This system gradually died out as communications improved, and the monopoly of a particular area could not be held by any one post. At the present time only at an isolated place like Old Crow can a trapper obtain sufficient credit for the whole winter.

Fur production in the Twentieth century roughly followed the variation in the prices of fur on the world market. In general terms prices were high until 1914, slumped, and then rose between 1917 and 1929. After the depression they began to rise from 1935. Since 1946 they have fallen steadily, although some prices have regained a little in the past few years.

The figures for annual total value in Table 1 include the production of fur farms. These were introduced early in the century, and were found around many large settlements, particularly those with fishing facilities, like the Yukon River salmon. At present (1964), only one remains. It is located at Tagish, and produces mink, although many of the other farms raised foxes.

Table 1

Annual Take of Some Yukon Furs, 1922-23 to 1941-42,
and Value of Total Take, 1927-28 to 1962-63

<u>Year</u>	<u>Marten</u>	<u>Mink</u>	<u>Lynx</u>	<u>Beaver</u>	<u>Muskrat</u>	<u>Value</u> <u>(all furs)</u>
1922-23	964	1,754	1,433	-	36,960	
1923-24	1,170	2,578	2,566	2,581	34,904	
1924-25	147	2,577	3,757	2,792	20,929	
1925-26	18	5,026	3,503	3,570	18,067	
1926-27	56	2,779	3,357	2,185	12,382	
1927-28	2,222	1,697	3,786	2,955	46,315	\$610,348
1928-29	2,132	957	2,372	1,746	19,282	484,919
1929-30	4,272	1,171	1,436	2,774	92,953	295,492
1930-31	2,037	2,243	785	11	52,158	145,224
1931-32	1,976	3,360	699	3,296	41,545	132,268
1932-33	2,263	3,562	915	3,174	34,902	146,055
1933-34	2,154	3,030	1,024	2,216	30,386	122,999
1934-35	2,727	2,914	1,693	3,171	24,471	230,074
1935-36	2,890	3,073	2,943	2,237	25,337	276,948
1936-37	1,960	3,224	2,964	1,616	34,419	347,558
1937-38	3,471	2,494	2,752	3,786	48,445	295,857
1938-39	2,418	1,646	1,763	2,971	62,385	261,919
1939-40	3,887	1,293	1,191	3,411	63,880	288,292
1940-41	3,191	1,823	607	3,620	58,332	393,399
1941-42	2,586	2,377	745	3,845	51,288	398,132
1945-46						677,496
1948-49						143,810
1954-55						242,944
1958-59						67,571
1962-63						129,084

Source: D. B. S., quoted in Rand, 1945, and Yukon River Basin Report, D. N. A. and N. R., W. R. B., p. 74.

Large numbers of White people were also drawn into trapping during the periods of high fur prices. No published figures have been seen by the author, but some Yukon residents estimate that nearly half the trappers were Whites at one time. This may be partially due to the fact that some Indians left trapping for wage employment. Active hostility against White trappers occurred in at least one Northern Athapaskan group, in 1926 (Godsell, 1943: 197-98). No treaty, giving official recognition of native hunting and trapping rights, was ever signed for Indians of the Yukon. Starting in 1950, the Territorial Government began to register individual traplines, partially as a conservation measure, and partially to prevent individual trappers from taking each other's fur. Prior to that time the rights to a particular trapline were established by a trapper's long-term use of the area, and by the erection of cabins. It appears that Indians considered trapping areas to be held jointly by the extended family that used them, although this point is by no means clear (see, e.g., Field, 1957: 54).

The idea of individual ownership of traplines is familiar to most at the present time. Old Crow, Ross River and Fort McPherson are the only places where trapping areas are registered for groups. Within these areas individual trappers, families or partnerships are recognized locally as having exclusive rights to particular traplines. Where beaver and muskrat are concerned, these rights are quite specific, and ownership is expressed not in terms of land, but of the animal's houses.

Trapping is no longer a very important industry in the Yukon, although as recently as 1942 it had earnings second only to mining. It has now been passed even by big game hunting. However, it involves many more people, for much more of the time. Most of these people are not satisfied with their income from fur, and would take almost any kind of regular employment, if it were available. Exceptions to this are mainly White trappers who probably could get other employment, and thus are trappers by choice. This is not to say that there are no Indians who prefer trapping to wage employment. The author spoke to Indians in year-round wage employment, who stated that they, like many practicing trappers, would begin trapping again seriously if there were ever a return to high fur prices.

CHAPTER 3

TRAPPING

1. Introduction

In this description of trapping various statistics will be used. The figures quoted are intended to illustrate certain points, but owing to the problems of collecting highly accurate statistics about trapping in the Yukon, the actual amounts should not be taken too literally. Some of the obvious sources of error will be mentioned in the following section. However, despite these errors, it is felt that the points arising from the figures may still be valid.

The measurement of income from trapping was done by one of three ways. For the White and Metis trappers the amount of fur caught by each man in 1962-63 was multiplied by the estimated average prices for that year given in Table 2. These amounts of fur were taken from the returns made by each trapper. It is known that the returns are inaccurate, since their grand total for the year is always less than the total numbers of furs exported from the Territory (compare Table 3 with Table 4.). Reasons for the difference may be that some trappers forget to record all furs caught, some fear the imposition of quotas and so purposely underestimate, and others do not complete returns at all. Most of the missing returns for 1963-64 were those of Indians who did not trap the following year. Only the incomes of the Old Crow and Fort McPherson Indians were calculated on the basis of trapper's returns..

The non-isolated Indians (i. e., those in locations served by roads in winter) had an average income computed for them by subtracting the total incomes of all other groups from the total value of fur exports for that year, and dividing the result by the number of active trappers in this category. At Ross River there were complete records of the fur traded by each Indian for the season 1963-64, kept by the trader. These are a more accurate indication of income, since the actual, rather than average, price of each fur is used. Very little Ross River fur is traded in Teslin or Whitehorse, as the road was not kept open in winter prior to 1964.

Table 2

Average Prices of Main Yukon Fur Species, 1952-53 to 1960-61
and of all Species 1961-62 to 1963-64

	<u>1952-53</u>	<u>1953-54</u>	<u>1954-55</u>
Marten	10.25	7.00	7.50
Beaver	13.50	10.75	15.00
Muskrat	.95	.65	.72
Mink	24.40	18.90	23.00
Squirrel	.31	.34	.32
Lynx	3.50	2.50	4.00
Weasel	1.06	.74	.85
	<u>1955-56</u>	<u>1956-57</u>	<u>1957-58</u>
Marten	9.50	6.50	7.75
Beaver	10.90	10.20	9.00
Muskrat	.79	.75	.46
Mink	23.75	20.75	19.60
Squirrel	.33	.40	.31
Lynx	4.75	6.00	4.00
Weasel	1.10	.80	.72
	<u>1958-59</u>	<u>1959-60</u>	<u>1960-61</u>
Marten	6.20	7.80	6.25
Beaver	9.00	12.50	10.80
Muskrat	.70	.70	.55
Mink	18.50	21.00	18.00
Squirrel	.30	.35	.32
Lynx	8.00	14.00	10.00
Weasel	.60	.70	.75
	<u>1961-62</u>	<u>1962-63</u>	<u>1963-64</u>
Marten	6.50	10.25	7.50
Beaver	10.80	12.00	14.00
Muskrat	.65	1.00	1.05
Mink	15.00	17.00	14.00
Squirrel	.23	.50	.52
Otter	20.00	15.50	13.00
Fisher	--	4.00	--

Table 2 (Continued)

	<u>1961-62</u>	<u>1962-63</u>	<u>1963-64</u>
Lynx	10.00	9.00	9.50
Weasel	.75	.75	.80
Fox - Red	4.50	5.00	4.25
Cross	--	5.00	--
White	20.00	20.00	15.00
Silver	5.00	3.00	--
Blue	7.60	--	--
Polar Bear	60.00	75.00	--
Black or Grizzly Bear	12.50	12.00	15.00
Wolverine	15.00	12.00	10.50
Wolf	12.50	15.00	12.00
Coyote	4.00	4.00	4.00

Source: 1952-60: Government of Northwest Territories, Game Management Service. 1961-64: Yukon Department of Game, Fur Traders Returns.

Table 3

Yearly Catch of Main Yukon Fur Species, 1952-53 to 1962-63

<u>Year</u>	<u>Marten</u>	<u>Beaver</u>	<u>Muskrat</u>	<u>Mink</u>	<u>Squirrel</u>	<u>Lynx</u>	<u>Weasel</u>	<u>All Fox</u>
1952-53	1,923	2,202	52,604	747	186,345	408	1,827	105
1953-54	648	1,842	40,689	481	67,345	483	731	209
1954-55	850	2,843	42,565	427	80,983	1,140	552	508
1955-56	819	2,112	35,005	477	40,683	1,483	591	101
1956-57	215	1,299	23,565	283	27,207	793	609	58
1957-58	387	2,037	24,140	112	35,072	384	798	69
1958-59	602	2,210	17,621	230	36,169	116	572	42
1959-60	545	1,604	35,202	456	54,916	194	997	63
1960-61	904	2,346	25,496	610	44,828	246	603	65
1961-62	1,190	1,925	17,466	585	22,801	266	436	81
1962-63	1,669	3,217	21,485	866	30,831	1,130	704	261

Source: Yukon Department of Game Trapper's Returns

Table 4

Numbers and Value of Furs Trapped - Yukon - 1960-61 to 1962-63

Species	1960-61		1961-62		1962-63	
	Pelts	Value	Pelts	Value	Pelts	Value
Marten	920	\$ 8,280	1,088	\$ 8,704	2,010	\$20,603
Beaver	2,066	25,825	2,673	32,076	2,433	29,196
Muskrat	32,248	17,736	24,316	21,884	24,165	24,165
Mink	565	9,322	1,167	18,672	1,155	19,635
Squirrel	79,590	35,816	67,909	30,559	53,839	26,920
Otter	46	828	50	1,100	56	868
Fisher	2	20	6	60	13	52
Lynx	302	3,322	618	8,034	1,305	11,745
Weasel	708	602	787	515	883	662
Fox-Red & Cross	112	448	80	374	192	960
White	--	--	73	1,460	41	820
Silver	7	32	2	10	8	24
Blue	1	6	1	8	--	--
Polar Bear	1	65	--	--	2	150
Wolverine	135	2,025	84	1,245	102	1,224
Wolf	58	580	34	510	31	465
Totals		\$104,916		\$125,228		\$131,489

Source: Yukon Department of Game, Fur Export Permits and Fur Trader's Returns

The use of an average price for each fur species introduces error because the price of fur varies from market to market. As a rough generalization, traders furthest from the southern fur auctions pay less, and more money is realized if the trapper sends fur directly to the auction himself. As will be shown, almost half the White trappers, and very few others, send fur to the fur auctions. Also it is predominantly the Whites who own motor vehicles, with which they can take their furs to the trader who gives the best prices.

It will have been noticed that three categories of trappers have been referred to--Indians, Metis and Whites. These are social categories, although the term Metis is seldom heard in the Yukon. In its present use it serves as a catch-all term for all those people not covered by the other two. In local usages there are separate terms for (a) Indians who no longer come under the Indian Act, (b) offspring of White-Indian unions who are socially allied to an Indian group, (c) offspring of White-Indian unions who are marginally part of White society, and (d) White men who have Indian wives. However, in the present context, Metis means anyone with at least a partial Indian ancestry who is not an Indian as defined by the Indian Act.

Two other terms need explanation. The term 'isolated' is used with reference to the three communities of Old Crow, Fort McPherson, and Ross River, which do not have road connections with the rest of Canada during the trapping season. Those people who might trade only one or two skins a year have been separated from the main body of trappers by the use of the term 'active trapper', to refer to one who trades at least \$25 worth of fur in a season.

Table 5 shows the number of active trappers resident in each of twelve areas of the Territory. These areas roughly correspond to the hinterland around a central trading settlement. However, this is not the case for the Carcross-Tagish area, where there is no fur trader, or the Upper Alaska Highway area, which contains a number of small settlements and a scattered trapping population. Since I was unable to visit Old Crow or Fort McPherson, I have used Balikci's figure for the number of trappers at Old Crow in 1961 (Balikci, 1963: 86). For Fort McPherson, whose trappers trade in the Northwest Territories but trap partially in the Yukon, I quote the number of trappers who made returns of over \$25, but this number is probably seriously low.

Table 5

Number of Active Yukon Trappers For 1962-63

	<u>White</u>	<u>Indian</u>	<u>Metis</u>	<u>Total</u>	<u>Traders</u>
Old Crow	--	37	10	47	2
Fort McPherson	--	23	--	23	3
Ross River	--	30	1	31	1
Dawson	16	2	1	19	1
Mayo	8	10	3	21	2
Pelly	2	16	--	18	1
Carmacks	1	20	2	23	2
U. Alaska Hwy.	5	24	3	32	2*
Whitehorse	7	10	3	20	2
Carcross-Tagish	1	1	2	4	0
Teslin	4	28	3	35	1
Watson	<u>4</u>	<u>15</u>	<u>1</u>	<u>20</u>	<u>2</u>
Totals	48	216	29	293	17

*The traders are located at Haines Junction and Mile 1169, Alaska Highway.

The twelve areas are as follows: (a) Old Crow, where most trappers live in a fairly homogeneous community at Old Crow village. (b) Dawson, which includes a number of settlements in the vicinity of Dawson City, as well as Stewart River and Kirkman Creek, upstream on the Yukon River. (c) Fort McPherson, whose trappers trade at Fort McPherson, N. W. T., and trap muskrat in the Mackenzie delta. They have a large Group Trapping Area in the Yukon, shown on Map 3. (d) Mayo, where most trappers live in or around the town of Mayo. (e) Pelly, where most trappers live at Pelly Crossing, and which also includes Steward Crossing, Fort Selkirk and Minto. (f) Carmacks, where the trappers live at the village of that name, which has a small coalmine offering alternate employment to some. (g) Upper Alaska Highway. This includes several settlements on the Alaska Highway, northwest of Whitehorse (e.g., Champagne, Haines Junction and Burwash Landing), as well as Aishihik, Snag, and several smaller locations. (h) Whitehorse, where most trappers live in or near the town. (i) Carcross and Tagish. Trappers live in or near one of the two settlements, and sell fur mainly in Whitehorse. (j) Teslin, in which Teslin village is the main settlement, but which also includes other nearby locations on the Alaska Highway, such as Johnson's Crossing, Brook's Brook and Squanga Lake. (k) Ross River, where trappers live in a homogeneous Indian community at one edge of their Group Trapping Area. (l) Watson. Here, as in many parts of the Yukon, the Indian settlement is separate from the commercial and White residential area. In this case the Indian community is at Upper Liard, eight miles on the Alaska Highway from Watson Lake. Trappers in this area live in or near the twin communities of Watson Lake and Upper Liard, as well as in other scattered settlements in the immediate vicinity.

Most trappers are Indians. It is also true that most Indians do at least some trapping. Slightly less than half the male Indian population over the age of 18 are active trappers. In 1964 there were 477 adult Indian males in the Yukon (not including Fort McPherson). Forgetting that there are a few women trappers, 191 of these, or 40%, are active trappers. Nor do all of these active trappers have registered traplines. Many are the sons of trapline holders, friends or partners of the Indian on whose area they trap, or old people who trap within the five miles around each settlement which is reserved for them. There are also areas of unregistered land, but this is mostly unsuitable for trapping, or too far from any settlement. In 1962-63 at least fifteen Indians without traplines made returns of over \$25. Eight of these were from the Watson Lake-Upper Liard district.

A comparison between the numbers of active trappers (Table 5) and the number of traplines registrations (Table 6) shows that about 65% of Whites with traplines are not using them to any extent. The proportion of Indians and Metis who have registered traplines but are not active trappers is 26% and 24% respectively.

The areas with the highest proportion of Whites who have traplines and are not active are Dawson, Whitehorse, and Watson Lake, which are three of the largest urban centers. Most Indian trapline holders who do not actively trap live in the areas of Mayo, Upper Alaska Highway, and Watson Lake. It appears that for both Indians and Whites these are the areas where alternate winter income opportunities are the greatest, or where living is the cheapest, or where transportation and thus mobility to short-term winter employment is most available. It seems probable that most of these people are dissatisfied with the returns from trapping, but retain their rights to a trapline for reasons of prestige (they 'lend' their line to others-- Indians at Pelly and Teslin told me they did this), or the line is held until a younger relative matures and takes it over, or until the price of fur rises.

The Game Department and the R.C.M.P. frown on this practice of not using a trapline, so that the trapper may trade token amounts of fur each season. However, it is seldom that anything is done to force a man to release his line, simply because there is seldom any serious demand felt in the same area from trappers who are without lines. Such a demand would come mainly from Indians, and in fact I did hear complaints from Indians in Dawson, Pelly and Whitehorse who wanted lines. I was unable to judge the authenticity of these demands, but the complaint was made that Indians are unable to articulate them within the bureaucratic system which handles the assignment of traplines. At Dawson and Mayo, the R.C.M.P. do get requests for traplines from Indians, but the only lines available are not close enough to a highway to be economical, particularly for a man with little capital. Thus the applicants refuse these far off traplines, but do not know how to go about getting one closer to where they live.

No mention has been made of the Eskimo population of the Yukon. Herschel Island is a center for white fox trapping, although there is at present far less activity than in former years. In 1962-63 eight Yukon trapper's licenses were issued to Eskimos, and in 1963-64 there were four. Probably more Eskimos who live most of the time in the Mackenzie delta make trapping expeditions into the Yukon, but as I have so little data, and the total catch is probably quite small, I have chosen to leave the matter of Eskimo trapping out of this report altogether.

Table 6

Number of Trapline Registrations to June, 1964

<u>Area</u>	<u>White</u>	<u>Indian</u>	<u>Metis</u>	<u>Total</u>
Old Crow	--	39	12	51
Fort McPherson	--	46	2	48
Ross River	--	34	1	35
Dawson	31	3	4	38
Mayo	15	18	3	36
Pelly	6	18	--	24
Carmacks	4	27	3	34
U. Alaska Hwy.	16	36	--	52
Whitehorse	39	10	6	55
Carcross-Tagish	2	3	3	8
Teslin	10	30	2	42
Watson	<u>13</u>	<u>22</u>	<u>4</u>	<u>39</u>
Totals	136	286	40	462

2. Income

Table 7 shows the average cash income made by trappers from fur during the season 1962-63. For each category of trapper there were wide variations however. Among the Whites this range was from a low of about \$30 to a high of almost \$1500. Yet few had incomes in the top half of the range; only seven made over \$600. The range for Metis was from \$100 to \$1800. Six Metis made over \$1000.

It proved impossible to estimate the income from fur for each 'non-isolated' Indian trapper (i. e., all except those at Old Crow, Ross River and Fort McPherson), so that the average shown in Table 7 was computed from the total value of fur traded in the Yukon minus the White

Table 7

Average Income From Fur For Active Trappers 1962-63

<u>Category of Trapper</u>	<u>Number</u>	<u>Average Income</u>
White	38	\$ 342
Metis	29	\$ 555
Non-Isolated Indian	122	559
Isolated Indian		
(i) Old Crow	28	\$ 480
(ii) Fort McPherson	15	\$ 285
(iii) Ross River	31	\$ 168

Source: see text.

and Metis catch. This figure is probably high, due to the possibility that not all Indians who trap are registered with the Game Department. The incomes for a number of specific Indians were obtained for the season 1963-64 from interviews with the trappers themselves, or from the records of traders. In a few cases these exceeded \$2,000. Most of these higher earners appear to be located in the Teslin area, and elsewhere along the Alaska Highway.

There is no clear pattern in the location of the highest earning trappers in the other categories. Of the eleven Whites who made over \$500, two live in Watson Lake, two in Teslin, two in Mayo, two in Dawson, and three live together away from any large settlement. In two of the above locations there are close kinship ties which unite the more successful trappers, and no doubt this fact is significant in facilitating cooperation in the trapping venture. Informal trapping partnerships serve the same function. For instance, the top two White trappers of Mayo in 1962-63 both belong to such partnerships.

Of the nine Metis trappers who made over \$500 in 1962-63, five were at Old Crow. These men are not half-breeds, in the sense of being marginal to the Indian society. They are, or are descended from, people who have voluntarily resigned their Indian status, in order to be able to obtain liquor and to vote (prior to changes in these restrictions against Indians). Apparently these 'enfranchised Indians' formed a social elite at one time, and tended to live at one end of Old Crow village. Current figures suggest that they may still form a 'trapping elite'. The average income for the nine Old Crow 'enfranchised Indians' for whom I have figures was \$819 in 1962-63, compared with \$479 for each of the 28 trappers with full Indian status. The five other Metis who made over \$500 are located at Mayo, Teslin, Carcross and Fort McPherson.

The range of earnings for the 28 Old Crow Indians was between \$40 and \$1100, and almost half made less than \$300. Balikci gives the average total income at Old Crow (Metis and Indian) as \$1000 per household (Balikci, 1963, p. 104). Half of this comes from fur. With an average of something over one trapper per household, this figure of Balikci's is substantially in agreement with that given in Table 7. The range in earnings of Fort McPherson Indian trappers is similar to that of Old Crow, but in this case only 30% of the 15 trappers for which returns are available made over \$300.

Ross River had the lowest average income from fur. The range was small, the maximum being less than \$500. Five households had more than one trapper, so that the average income per household from fur was only \$237. Fur was the only source of winter income, apart from three paying jobs, and welfare, so that these figures indicate the winter standard of living at Ross River. Twenty-five percent of trappers made less than \$100; 84% made less than \$300.

Three of the active trappers at Ross River are women. In each case their income was well below the community average, but in no case was the woman the sole trapper in her household. There is little evidence here that success on the trapline runs from father to son, or that the best trappers form any kind of a social elite. In only one case do two of the best trappers live in the same household. In the other four households with more than one trapper each is, in almost all cases, a below average trapper, based on the figures for 1963-64.

Age does not appear to be a significant factor in success on the trapline, within the normal working range. Of the nine trappers who earned over \$200 the eldest was 55, and the youngest was 24. The average age for this group was just over 40, or within one year of the average for all Ross River trappers. There were few active trappers below the age of 22, but marital status is the important factor here. It appears that men wait until they are married before seriously engaging in trapping. Of the six men between 18 and 65 who do not actively trap, one worked for wages, while the others lived on savings from the past summer's work, or lived with relatives. The latter five were all under 21 and unmarried.

The data for all other Yukon trappers have not been analyzed for the factors of age and income. White trappers give the impression of a distinctly older group than the total labour force. However, those below the age of 30 are most often among the more successful in their occupation. The age range of Metis trappers is at least as wide as that quoted for the Ross River Indians. Data from other groups confirm what was found at Ross River, that marital status and position as head of a household are more significant in relation to a high income from fur than is age alone.

A large part of a trapper's income is made late in the season, in April and May. This is due to the technique most often used in catching beaver and muskrat. These two species are among the most valuable of any Yukon fur-bearers (see Table 4). In 1962-63 together they made up 40% of all earnings from fur. Muskrat are trapped or shot in spring, and most beaver are also shot at this time of the year. Beaver can be trapped beneath the ice throughout the winter, but many trappers do not bother, since this requires much time, equipment and skill. Beavers are sedentary through the winter, so that the holder of a registered trapline feels he can afford to leave them until spring when they will be

larger, as they are safe from being taken by other trappers. Trappers at Ross River get their spring beaver mainly from areas considered too far to travel to for winter trapping. At Old Crow and Fort McPherson spring time is taken up with muskrat trapping, and there are relatively few beaver shot. Beaver and muskrat can bring large and quick returns, and for beaver only a gun is required. For example, one Carmacks Indian told me he made \$400 in two weeks shooting spring beaver. I was told of two Dawson men who made \$300 in two weeks, and a Whitehorse Indian who got \$350 worth by the same means.

One sometimes encounters the criticism that shooting beaver is wasteful, because these animals often die below water and are not recovered, and that females with new or unborn young are shot. Also it is said that pelts tend to lose their condition at the time of the season when shooting takes place, so that prime fur is wasted. I can make no comment on the validity of these points, although one Indian told me that he can identify pregnant female beavers while they are swimming and that he never shoots one. However, low fur prices mean that the difference in value between a top grade pelt and one which is not prime is so small as to be not worth the extra effort of trapping under the ice.

Apart from the guide returns which are possible, beaver and muskrat hunts are popular because the warm weather and possibility of water travel allow wives and children to accompany the trappers. At Old Crow the school is closed during the muskrat season for this reason. In the Yukon many trapping communities are on rivers, and have their trapping areas upstream from where they live. Trappers travel to the beaver or muskrat areas by toboggan, on foot with pack dogs, or by aircraft, and return by any convenient rivers on simple rafts. This method is used at Mayo, Pelly Crossing, Ross River, Carmacks, Teslin and Watson Lake.

It has been argued here that beaver are mainly shot rather than trapped because the price of an average pelt does not warrant the extra time and capital involved. Some trappers spoke of the "minimum price at which I would trap beaver", which is what might be called the 'opportunity cost' of trapping beaver. In most cases the figure quoted was between \$15 and \$18. Beaver can also be snared, and even grabbed by hand in their holes, but none of these methods compares to shooting in terms of quick returns for the effort involved.

Along with muskrat and beaver, other high earning fur species in the past few years have been marten, squirrel, mink and lynx. Squirrel are snared rather than trapped. Their skins have only been of trade value during the last 20 years, and it is only a worthwhile fur because of the enormous numbers of them which can be caught--far more than any other species. The largest part of the labour of squirrel snaring is in the preparation of the skins, i. e., skinning, cleaning, making wooden stretchers, stretching and drying. The best method is for two people to work together, one visiting the snares while the other prepares the skins. For this reason many White trappers who trap alone do not consider it worth going after. Among Indians it is said to be a fit animal for teenagers, women and old people to hunt. However, because of the low cost of snares, trappers can be sensitive to any rise in the price of squirrels, and start snaring them at short notice. One Dawson trapper stated that, had he in late 1963 known the price of squirrels, he would have pursued nothing else.

Marten are found only in the drier uplands, and thus not all trappers can trap them in their areas. Early in this century they were caught in large numbers, but, as partially shown on Table 1, there was a drop in the catch between 1921 and 1927 (Rand, 1945: 23-24). Since World War II the catch has been generally low, but this may be as much a reflection of prices as a shortage in the marten population. The trader at Teslin, who has trapped in the district, says that there were few marten east of Teslin thirty years ago, while today there are plenty. Mink, one of the only furs to maintain a price close to what it would fetch before World War II, is caught in far fewer numbers than pre-war times. Trappers explain that mink has been over-trapped, but little scientific work has been done on the populations of furbearers in different parts of the Yukon.

Lynx and marten are two furbearers whose populations tend to vary widely. Each preys on a particular animal--the lynx on rabbits and the marten on squirrels--and their populations are subject to cycles of abundance and scarcity connected with the unstable equilibrium between the predator and its prey. Lynx and rabbits follow a nine to ten years cycle in the Yukon, while variations in marten populations are apparently only local. The price of a fur is only one determinant of the quantity caught in a season. Other factors are the abundance of the species, as well as the price and abundance of other furbearers, which compete for the attention of the trapper. In other words, the opportunity cost of any species depends on price, abundance and the

available alternatives. Lynx are usually snared, which requires less capital than trapping, so that its opportunity cost is lower than other species of similar price and abundance. For this reason the lynx harvest is more sensitive to changes in population of the species than to changes in its price. Tables 1 and 3 indicate that the 10 year rabbit-lynx cycle has its nadir around the beginning of each decade.

A few trappers specialize in the capture of live animals, for which there is a steady demand in some species. Prices quoted were, for instance, \$150 for an otter, and between \$100 and \$200 for a wolverine. However, the number of such animals sold in a year is insignificant by their addition to the Yukon trapping economy as a whole.

3. Costs

(a) Transportation

Trapping, although conducted by individuals and small, often kin-related groups, is an enterprise which must be analyzed in terms of costs, before data on its income have any real meaning. The largest expenses in trapping are connected with transportation. The setting out of a line of any length with steel traps requires a toboggan of some sort. Part-time trappers and old men who run short traplines may travel on snowshoes. Three or four Yukon trappers use motorized toboggans, and another has his trapline alongside a highway. He sets out the line and visits it by automobile. The 'automobile trapline' is quite common in the U.S. among part-time trappers.

Most Yukon trappers use a dog-pulled toboggan. This is usually constructed by the trapper himself, either from local wood, which is split into boards and bent, or from boards which are purchased already bent. Steel runners are required for use on wet spring ice. No clear estimate was obtained for the time required to manufacture these toboggans. They last about three to five years or more, depending on how they are stored when not in use. It appears that locally-made toboggans are seldom sold, as few trappers could estimate the price of one. At Teslin, the price quoted was \$45 unfinished, and \$70 finished.

Dog teams vary in size from two to over five dogs. White trappers often prefer a small team of large dogs, and they will pay from \$30 to \$75 for such animals. The price of dogs quoted by Indians was in the range of \$10 to \$40. Dogs are fed largely on lake fish or salmon--about one 5 lb. fish a day each when they are working. One commercial fisherman on Teslin Lake sells a dog meal prepared from smoked fish, at \$16 a sack.

The fish diet is supplemented by a half-and-half mixture of dog meal and rolled oats, both of which are sold by traders (see Table 8). This is fed at the rate of three to four cups a day, instead of the fish. Harnesses may be made from leather and hardware obtainable from stores, or may be purchased in manufactured form for about \$7 per dog. Snowshoes are made in the trapper's household, or purchased from a local specialist. Store-bought snowshoes cost about \$20 a pair.

Motorized toboggans are faster than dog teams. This speed is of advantage during the warmer periods which occur after a cold spell. Animal movement almost ceases when the temperature is very low. In the subsequent warming spells there is much activity among fur-bearers and it is during these periods that most fur is caught. If the trapper is able to visit his line quickly and often during these spells he is at a definite advantage. However, motorized toboggans are said to require more of a trail than do dog-pulled toboggans. These vehicles cost upwards of \$800, and they use gasoline at the rate of about 25 miles a gallon. A trapper using one requires more clothing than otherwise since far less physical activity is involved in its operation.

Some trappers also use pick-up trucks on highways to get as close as possible to their traplines. The remainder of the journey is made by dog team or on foot. Many White trappers use this method. In the Dawson area, at least six White trappers, and one Indian, own such vehicles. Pick-up trucks are also used by trappers at Mayo, Carmacks, Whitehorse, Teslin and Watson Lake. For this reason the all-weather highways of the Territory, in particular those in wilderness areas, such as the Dempster Highway, north from Dawson, and the Can-Tung Road, north from Watson Lake, are important to trappers. Many trappers use the regular bus service on the Alaska Highway and on the Mayo-Dawson Highway from Whitehorse to get as close as possible to their traplines. The cost of these journeys is calculated on a mileage basis-- $4\frac{1}{2}$ ¢ per mile on the Alaska Highway, and 5¢ per mile on other routes.

The final item under the subject of transportation is flying. In most parts of the Yukon, this is only used by trappers in spring, when profits from beaver or muskrat are quick, and toboggan travel becomes difficult. At Old Crow aircraft are chartered by trappers for the journey to and from their muskrat area at Crow Flats, about 50 miles north of Old Crow village. The cost is 85¢ a mile, using a 'Beaver' aircraft. This will carry six or seven passengers, or the equivalent in freight. Two trappers, with their families and supplies are often able to share a flight. At Mayo at least six trappers used aircraft to travel out to beaver hunts in the spring of 1964. Other charter airline companies who carry trappers are located at Watson Lake, Whitehorse and Teslin.

At Teslin the airline began operations in 1963. During the sea 1963-64 many Indian trappers used the aircraft for the first time to get to their lines. Some trappers made three round trips to their traplines during that season--one before Christmas, one just after, and a third around break-up. Before the airline company had opened its base at Teslin it had been necessary for a trapper to charter an aircraft from Whitehorse or Watson Lake, at considerably greater expense. This had been done by only one or two. The adoption of flying by a majority of Teslin Indian trappers was facilitated in part by the policy of allowing them to make flights on credit. The airline owners had hoped that fares would be repaid as soon as the fur from these expeditions had been sold. However, of the 17 Indians and one Metis who used the airline that season, only four were clear of debt to the airline by July, 1964. The remaining 13 owed an average of \$42 each, out of an average total expense of \$104 each. As this report covers events prior to the summer of 1964, it is not known what policy was followed with regard to credit in the season 1964-65.

It may well be that much of this flying was uneconomic at the prevailing fur prices. In other words, it may not have been possible for trappers to earn the amount of the fare in the time that was saved by the air journey. There were other motives for air travel, however. The journey was more comfortable and families could accompany the trapper. A third motive was suggested by some Teslin informants. It was said that flying became a matter of prestige, and that after a few had used this method others felt they had to as well.

In order to compare flying with the dog team, the example of two men who share the flight to and from their trapping areas 80 miles from Teslin will be used. At 50¢ a mile, the two flights will cost them \$80 each, since they pay for two round trips of 160 miles each. They would save about a week of travel time. Only under special conditions could a trapper expect to make \$80 in a week of trapping.

Although official returns on the fur catch from trappers and traders for 1963-64 were not available, Teslin informants state that the effect of the new airline was to increase the amount of trapping by local people.

(b) Supplies

Most goods sold in trade stores are brought from southern Canada. Prices depend on the weight/cost ratio, the distance from Whitehorse and factors of the individual market. Whitehorse prices are the lowest in the Territory, since most goods are distributed from there. Food prices at Whitehorse are about 25% above those of Vancouver, and at Dawson they are about 25% above those of Whitehorse. Table 8 shows the prices of some staple commodities at three other Yukon locations. Some of the prices at Ross River were higher for part of the winter of 1963-64, because supplies ran short and more had to be flown in.

Table 8

Prices of Some Staples at Three Yukon Locations

<u>Item</u>		<u>Carmacks</u>	<u>Ross River</u>	<u>Old Crow</u>
Flour	25 lb.	3.20	5.20	7.50
Sugar	lb.	.25	.30	.35
Tea	lb.	1.53	1.75	2.00
Rolled Oats	5 lb.	1.25	1.35	--
Lard	lb.	--	.40	.75

Note: Figures for Old Crow are for summer 1961
(Balikci, 1963, p. 98)

Steel traps cost between \$14 and \$18 a dozen depending on the locality. The number of traps owned by individual trappers varies considerably; for those trappers questioned about this, the range was between 5 and 80. Many of them state that they owned more traps in the days when fur prices were higher. At that time a single trapper might have up to 500 traps. Snares, made from various gauges of single and multi-strand wire, are used for catching squirrel, lynx and rabbits (the latter only as food). This wire is purchased quite cheaply in trading stores. Some trappers have as many as 1000 squirrel snares set at one time.

Trappers obtain most of their meat from wild sources, rather than from the store. Apart from this, almost all food and clothing is purchased. It is difficult to estimate the basic cost for groceries and clothing, but probably the best estimate available is the basic rate of Public Assistance payments made by Indian Affairs Branch. This allows for a minimum standard of living only, and does not include the extra expenses of trapping. The rates for three Yukon locations are shown in Table 9. It should

perhaps be emphasized that these figures are quoted only in order to give some idea of the minimum requirements of cash by families living in the same sort of conditions as many trappers. I do not wish to give the impression that Indian trappers are living on Public Assistance; in fact, Public Assistance to the able-bodied Indian is very rare in winter time.

Table 9

Standard Rate of Public Assistance to Indians
at Three Yukon Locations

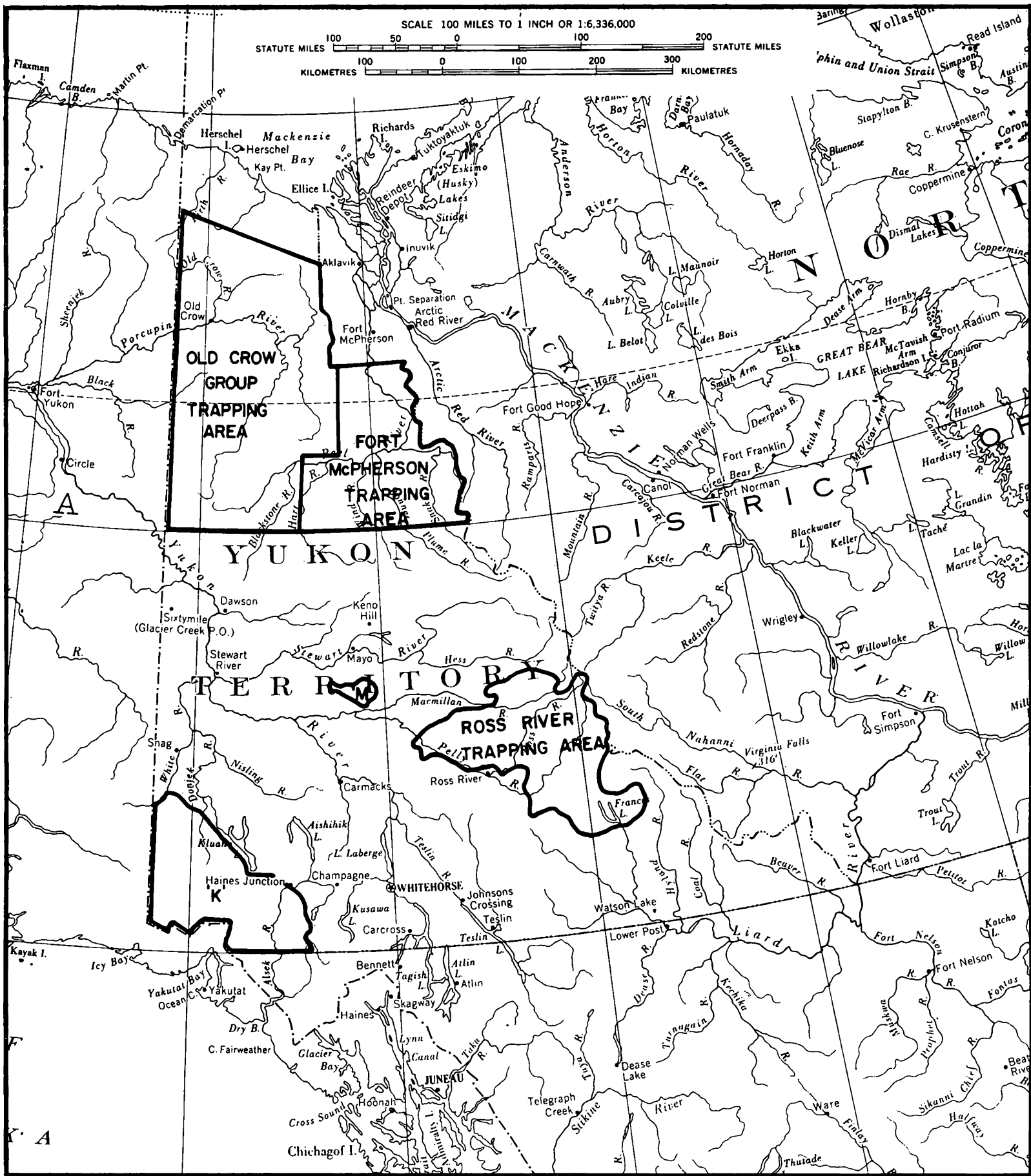
	<u>Rate Per Month</u>		
	<u>Ross River</u>	<u>Watson Lake</u>	<u>Old Crow</u>
Head of the Household	\$38	\$25	\$33
Each Other Adult (over 13 yrs.)	\$26	\$17	\$20
Child	\$21	\$15	\$17

Note: These allowances are for food only; clothing and other requirements are administered as needed in kind. Indian Affairs Branch now uses the same unit system with the same rates as the Territorial Department of Welfare.

(c) Traplins and Licences

The Territorial Game Department issues trapline registrations. These cost \$10 for five years, whether for an individual or a group registration. Trappers also require a General Hunting Licence, which covers both furbearers and game animals. This type of licence is only issued to persons "largely dependent on hunting and trapping for a livelihood" (Yukon Territorial Ordinances, Chapter 50, Section 37, subsection 1). It costs \$5 per year, but is issued free to Indians and persons over 65 years.

Individual Registered Trapping Areas cover almost all the Territory south of latitude 64 degrees, 30 minutes North apart from the Ross River Group Area and the Game Sanctuaries.



Map. 3 Group Trapping Areas and Game Sanctuaries 'M' - McArthur Game Sanctuar.
 'K' - Kluane Game Sanctuary

In this area there are 228 such trapping areas, which average 273 square miles each. The value which an area is considered to have depends upon the factors of distance from a settlement, its size, the abundance of furbearers, the particular species available, the abundance of fish and game, and its improvements, such as cabins. When a trapper gives up his line, he cannot sell the area itself, but preference may be given by the Game Department to the successor he chooses, particularly if it is a relative. Moveable improvements can be charged for, and this includes cabins. Only one instance of a trapper giving up his line was reported at the end of the 1963-64 season. The area was about 60 miles from Whitehorse; it had two cabins, and the trapper was asking \$500.

Map 3 shows the location of the three Group Trapping Areas of the Territory. Within these areas individuals have informal rights to particular traplines. At-Crow Flats, which is the muskrat area of the Old Crow trappers, the area was divided into individual areas in the late 1940's and early 1950's by the R.C.M.P. This was to avoid "the endless quarrelling over the shifting of muskrat trapping sectors..." (Balikci, 1963: 86). The rights to other traplines in the group areas are recognized by local people as lasting for as long as the occupant continues to exercise them. The Ross River area is officially divided into three sections, and the three groups of trappers assigned to these sections, roughly correspond to the traditional distribution of traplines. However, recently the trend has been to trap nearer to the settlement. Two or three trappers speak of 'their' trapline, referring to an area 100 to 120 miles east of Ross River, such as Pelly Lakes or Frances Lake. They no longer trap or hunt in these areas, except in some cases for spring beaver. For this reason the sections do not correspond to the current trapline distribution. Details of current Old Crow trapping partnerships, and the areas exploited by them, are given by Balikci (1963: 85-93). No recent data on this subject were obtained for Fort McPherson, although Slobodin, (1963: 47) gives information on the situation in 1947. The locations given for the following current Ross River partnerships are in many cases only of the base camp. From there each partner may branch out his line individually.

1. Hoole McLeod, his son-in-law Sid Atkinson, and Pete Sidney; at Swim Lakes, 25 miles northwest of Ross River post.
2. Widow Mary Charlie and her brother-in-law Stanley Tom; at Pelly Banks, 55 miles southeast; recently also around Hoole Canyon, 30 miles southeast.

3. Mac Peter, and his brother William Peter; at Poison Lake, north of Ross River post.
4. Chiney Sterriah and his brother George; occasionally below Pelly Banks.
5. Chiney Sterriah and his wife's brother, Alec Shorty; for spring beaver shooting, up the Pelly River, below Pelly Lakes.
6. George Sterriah, Jimmy Ladue and occasionally John Ollie and his brother Charlie Ollie; at two places 30 and 40 miles up the old Canol Road northeast of the settlement.
7. Sam McLeod, Robert Etzel and Allan Dickson; occasionally between the North and South Macmillan Rivers, about 80 miles north.
8. Jack Ladue and his sons Dick and Mack; 40 miles down the Pelly River near Fish Hook Point.
9. Duck Johnnie and his son George; in the vicinity of Orchay Lakes, about 20 miles northwest of the settlement.

Partnerships between trappers with individual registered trapping areas are to some extent discouraged by the Game Ordinance (Yukon Territorial Ordinance, Chapter 50, Section 57), presumably because it is considered that such groups are less efficient in their utilization of land than those trappers who work alone. For this reason data on such partnerships are difficult to collect.

Kinship is important in the formation of partnerships, particularly in the case of Indians. For instance, at Teslin one extended family, with several trappers in two generations, has four adjoining traplines. These are treated as a single family area. If one of the trappers gets a winter job, a person from outside the group may be invited to trap for the season. Three cases of men with traplines being accompanied by relatives who had no trapline of their own were noted, and many more may exist.

Partnerships are formed for the purpose of sharing both capital goods and labour. Travel by toboggan is said to require an extra man to break a trail when conditions are bad. When small animals are caught in large numbers, as is the case with squirrels and muskrats, it is most efficient to have one person collecting the animals while the other prepares the pelts (Balikci, 1963: 89). Husband-and-wife teams are still common, especially in cases where the children are away all winter in a residential school. When children attend a local day school the wife does not accompany

her husband, so that he may take a partner instead. Many Indians have a desire for a companion on a trapping expedition, and this no doubt is related to the fear of social isolation, which has been noted among Yukon Athapaskans (Slobodin, 1960).

4. The Fur Market

Most fur is bought by local trading stores, which also sell groceries, clothing and trapping supplies. The locations of the sixteen stores currently licenced to trade fur in the Yukon Territory, as well as the location of three in the Northwest Territories are shown in Table 5. A small amount of fur is sold to tourist lodges and souvenir stores for resale to tourists.

Other markets for fur exist outside the Territory. Some trappers sent fur directly to public fur auctions, mainly those at Edmonton or Vancouver. Some Teslin and Watson Lake fur is sent to traders in northern B.C. An export tax is paid on all fur leaving the Territory, and this is paid by the sender (see Table 10). Records show that, in fact, little fur is exported directly by trappers. In 1963-64, for instance, 29 trappers sent fur to public auctions or buyers in southern Canada. Of the 29, 18 were Whites who sent an average of \$457 worth of fur each.

Table 10

Tax Payable on Furs Exported From
The Yukon Territory

Bear--white or polar.....	\$5.00
Beaver.....	.50
Cougar.....	.25
Fisher.....	1.50
Fox, black.....	.10
Fox, cross.....	.10
Fox, red.....	.10
Fox, silver.....	.10
Fox, white or blue.....	.50

Table 10 (Continued)

Lynx.....	.25
Marten.....	.50
Mink.....	.50
Muskrat.....	.02
Otter.....	1.00
Squirrel.....	.01
Weasel.....	.05
Wolf or coyote.....	.25
Wolverine.....	.50

Source: Yukon Territorial Fur Export Ordinance

Five Metis sent an average of \$318 worth of fur each, and six Indians sent an average of \$126 worth each. Since most traders also send fur to the public auctions, prices there are generally higher than at local trade stores in the Yukon. The figures on direct export of fur by trappers show that White trappers use this market out of all proportion to their numbers. Moreover, many Whites send most of their season's catch in periodic shipments to the auctions. Indians, on the other hand, usually send only one batch of fur in a year.

Most trappers are aware of the generally higher prices in the southern markets, due in part to the circulars received from the auctions by some trappers throughout the winter. The reason for not directly exporting fur is that capital is required for shipping and export fees, or that cash is needed as soon as fur is caught for basic living expenses. Thus it is the poorer trappers who must settle for the lower local prices. None of the trappers at any of the isolated locations exported fur because of the transportation problem.

In Dawson there are two agencies through which a trapper can send his fur to an auction. A local bank will give an advance on a batch of furs, which they then send to the Edmonton Public Fur Auction. When

the money from the sale is received the balance is paid to the trapper, less an interest charge which is usually a minimum of \$2.50. A local grocery store offers the same kind of service, although merchandise rather than cash is advanced. Also, the purpose is to attract sales rather than to make any money from the interest.

In recent years the Indian Affairs Branch has exported some fur for Indians when it was felt that local prices were inadequate. About half the expected value was advanced to the trapper, and the balance was paid after the sale was completed. The scheme was discontinued in 1963, at which time the Indian Superintendent considered that prices offered by local traders had become more liberal. This general price rise was at the time attributed to the effect of a new Whitehorse fur buyer.

It was not possible to completely analyze the variation in fur prices offered by different traders, as there was no complete record available of all fur purchases in any one season. One trader explained how he arrived at his prices. He regularly received information on the prices at the fur auctions. For any particular fur he found the latest price given for the species and grade. If the price was quoted as a range, for instance \$30 to \$35, he would take the lower figure. He reckoned his commission at 10% (i. e., \$3). Postage would come to about 50¢ (between 1¢ and \$1.50; see Table 10). The fur auction commission and drumming fee is 5% of the hoped for \$30 price, or \$1.50. Thus he subtracted \$5.50 from \$30 and allowed the trapper \$24.50, or about 20% less than the price he hoped to get at the auction. At five Yukon communities there are two traders, and the practice is for trappers to offer a batch of fur to both for a bid. The rivalry between traders is not as intense as has been reported during the time when fur prices were high. No trader can make a fortune from a single season. Factors other than price determine to which trader a trapper will sell his fur. At Carmacks, for instance, there are two fur buyers, and some trappers sell predominantly to one, some to the other. Records suggest that the better trappers tend to be most loyal to a particular trader, but the evidence is thin and would require substantiation.

Apart from buying fur, the trader has two other functions. One is retail supply of general merchandise, and the other is financial services, mainly through the extension of credit. With regard to retail supply, it is apparently the policy of the Game Department that a fur buyer should have

a store in which he must conduct his business. In the Game Ordinance the term used is "trading post or outpost" (Yukon Territorial Ordinances, Chapter 50, Section 76, sub-section 3). The purpose of this trading post is to prevent travelling fur buyers who might present unfair competition to local buyers.

In many locations, the supply of credit by traders is merely a relic of the 'Jawbone' system of the monopoly fur trade (see page 8). Old Crow remains the one place where a good trapper can still get a grubstake of up to \$1000 at the start of a trapping season (Balicki, 1963: 98). At the other end of the scale, credit is not available from any of the Whitehorse traders, except with legal security. In smaller communities the amount of credit a trapper can obtain depends on the trust built up between him and the trader, but in most places it is only between \$20 and \$50, with a maximum, outside Old Crow, of \$200.

The reason for the lack of credit is only partially due to the fact that many trappers do not repay it. Another reason is that the trader no longer has a good reason to offer it. In the early days of the fur trade credit was used to encourage trapping activity, so that the supply of fur, on which a trader made most of his profit, was increased. However, in most areas today trapping activity is low anyway, due to low prices. Also, the trader cannot be sure of receiving any of the fur which is caught by his debtors, since there is more or less an open market on fur in most areas.

The Indian, owing to his lack of alienable property such as a house or land, is in a particularly unfortunate position with respect to credit. One Indian uses his pick-up truck as security for bank loans to outfit himself for trapping, but his case is rare. At Teslin it was suggested that a trapper tries to prolong the settlement of his debt--the reason being that the amount of credit a trapper can get is a measure of his prestige, at least in the context of his relation with the trader. The debt is the symbol of his status as a trapper. Settlement will only take place if the trader threatens to cut the trapper off altogether from future credit. A good deal of bluff is apparently used on both sides over the matter of credit.

CHAPTER 4

HUNTING

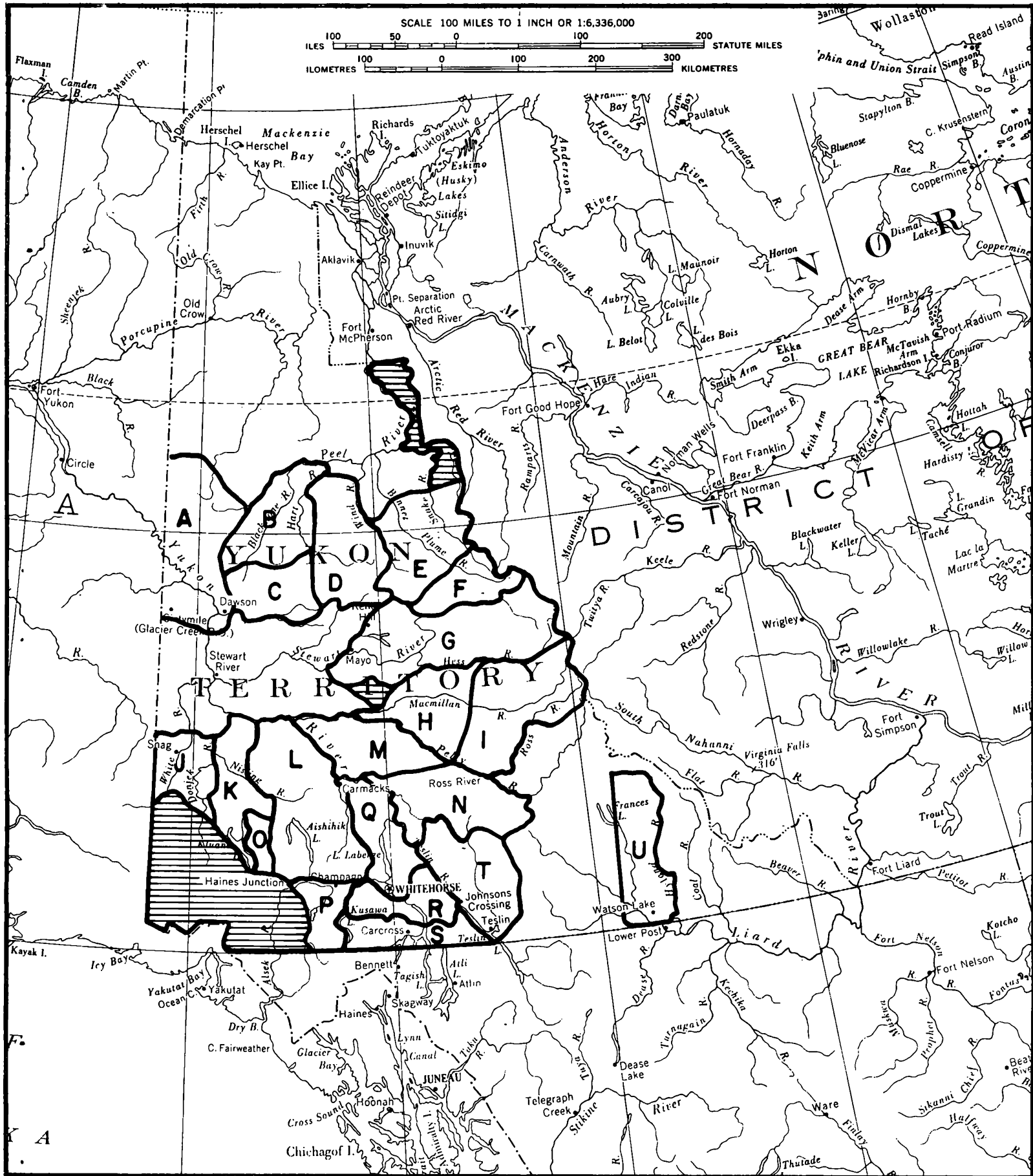
1. Outfitters

In the Yukon hunters are of two widely separated types, trophy hunters, and subsistence users of game. In terms of the categories used to gather statistics, these types are (1) the 'non-resident hunters' and (2) the 'trappers'. However, between them is a somewhat ambivalent class called 'resident hunters'. For many of the latter, hunting is both a sport and part of their livelihood. Also, there are prospectors whose main object in hunting is food. Thus, while big game may be clearly seen as a resource which is utilized for two separate purposes, sport and food, it has not been possible to arrange statistics to clearly illustrate competition for game animals.

The Yukon is well known among the elite of North American big game hunters as an area producing large trophies, particularly of moose, Dall sheep, caribou and grizzly bear. Many of these animals win awards in the competitions of the Boone and Crockett Club, which is a recognized authority in scoring such trophies.

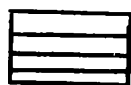
Big game hunting is expensive in this region, but the number of hunters is increasing. This is due in part to the shrinking number of wilderness areas in southern Canada and the U.S., and in part to an increasing interest in those species which are only available in this area.

Non-resident hunters are required to use a registered outfitter, or, with the approval of the Director of Game, to be accompanied by a Yukon resident. Few non-residents take this second alternative; in 1963 there were only two.



Map. 4 Yukon Registered Guiding Areas

Note: see text for names of outfitters



- Game Sanctuaries and Preserves.

Table 11

Yukon Game Taken for Specified Years 1953-1963

	<u>1953-54</u>	<u>1957-58</u>	<u>1960-61</u>	<u>1961-62</u>	<u>1962-63</u>
Bear: -non-res.	1	6	16	7	11
-res.	26	56	85	64	81
-trapper	27	40	34	37	68
Total	<u>54</u>	<u>102</u>	<u>135</u>	<u>108</u>	<u>160</u>
Grizzly: -non-res.	40	43	48	53	76
-res.	16	16	23	24	32
-trapper	23	12	17	9	19
Total	<u>99</u>	<u>71</u>	<u>88</u>	<u>86</u>	<u>127</u>
Caribou: -non-res.	25	31	56	69	55
-res.	589	239	191	193	335
-trapper	1,230	539	1,133	782	1,367
Total	<u>1,844</u>	<u>809</u>	<u>1,380</u>	<u>944</u>	<u>1,757</u>
Moose: -non-res.	25	47	50	60	67
-res.	117	188	334	364	400
-trapper	161	161	506	302	329
Total	<u>303</u>	<u>396</u>	<u>890</u>	<u>726</u>	<u>796</u>
Sheep: -non-res.	35	81	88	109	134
-res.	28	53	53	53	58
-trapper	15	17	17	8	24
Total	<u>78</u>	<u>151</u>	<u>158</u>	<u>170</u>	<u>216</u>
Goat: -non-res.	2	5	9	5	13
-res.	5	8	4	13	11
-trapper	4	1	3	--	--
Total	<u>11</u>	<u>14</u>	<u>16</u>	<u>18</u>	<u>24</u>
Wolf: -non-res.	--	2	2	--	4
-res.	27	19	8	3	7
-trapper	35	44	85	49	47
Total	<u>62</u>	<u>65</u>	<u>95</u>	<u>52</u>	<u>58</u>

Non-
 Non-res. -- Resident hunter
 Res. -- Resident hunter

Source: Yukon Department of Game

Each outfitter is assigned an exclusive area for his hunts. The areas of 20 Yukon outfitters are shown on Map 4. Apart from these, one outfitter, Frank Sidney, hunted in the region west of the area marked 'U' on the map in 1962, and planned to hunt there again in 1964. The areas on Map 4 are assigned to the following outfitters:

A.	D. E. Nowlan	L.	A. Davis, L. Berard
B.	D. Low	M.	Mrs. B. Desrosiers
C.	Mrs. F. Auston	N.	W. Desrosiers
D.	W. G. Brewster	O.	J. Muska
E.	L. J. Brown	P.	A. Van Bibber
F.	J. W. Fraser	Q.	Open Area
G.	Mrs. D. Brown	R.	M. V. Nolan
H.	H. Chambers	S.	S. Johns
I.	T. O. Connolly	T.	A. Smith
J.	R. A. Dickson	U.	L. Pospisil
K.	J. Jacquot		

The first big game trophy hunters in the Yukon went there at the same time as the first gold miner. The earliest outfitters were pack train operators in the Dawson and Whitehorse areas. Later, Whitehorse became the center for outfitters. There was a sharp increase in big game hunting in 1946, due mainly to the activities of one outfitter, Shade Brothers, on the then newly built Canol Road. Large parties of hunters were flown in by the outfitter's own aircraft. Thirty-eight people hunted with this outfitter that year, although subsequent operations were suspended. Other outfitters in 1946 were as follows:

<u>Outfitter</u>	<u>Number of Hunters</u>	<u>Region Hunted</u>
Eugene Jacquot	11	White River & Kusawa L.
Johnnie Johns	9	Watson River, E. of Teslin L.
Mike Noland	7	E. of Marsh L.
J. R. Dickson	4	White River
David Hammond	1	Aishihik Lake.

The total hunters that year were 70, and the game taken: moose - 35; caribou - 30; sheep - 39; goat 3; grizzly bear - 29; black bear - 10; wolf 3.

These 1946 figures can be compared with those for the total game taken by non-resident hunters in the ten-year period 1934-1944: moose - 45; caribou 68; sheep - 83; goat - 17; grizzly bear - 58; black bear - 43.

Since 1946 there has been a general increase, both in the number of non-resident hunters, and in the game taken by them. In 1962 there were 157 such hunters, and in 1963, 153. In 1962, however, hunters stayed an average of only 15 days, while in 1963 this average was 17 days. The income of outfitters also rose from 1962 to 1963. In 1962 there were 17 outfitters in operation, so that each had an average of about 142 'hunter days'. (A 'hunter-day' is one day of hunting for one man; e. g., if a party of four hunters go out for 10 days, this equals 40 'hunter-days'). In 1963, with 16 outfitters in operation, each had an average of 159 'hunter-days'. The income of an outfitter is directly related to the number of 'hunter-days' a season, since hunters are charged individually by the day.

Of the 10 outfitters for whom I have data, the average charge is \$78.50 a day per hunter. Many outfitters have reduced rates when two and three hunters book a hunt together. This is because it is often the policy that strangers are not put in the same party, so that a separate hunting party is required for a solitary hunter. Where such is the case, the rate for a party of two was used in computing the above average rate. It is possible that rates have increased in the last few years, as one writer quotes them at between \$50 and \$60 a day in 1959 (Jobson, 1960).

About half the outfitters require hunters to use chartered aircraft to fly to their base camps. The charge for this depends on the local airline, but the average is about \$85 per hunter for the round trip. This rate is calculated for two hunters traveling together. These chartered flights are from either Whitehorse or Mayo. Other outfitters have base camps near a highway, or the first day of a hunt is spent riding in to the base camp. In one case the cost of flying is included in the price of the hunt.

One outfitter, L. Pospisil, provides river hunts only. He uses a boat on the Liard and Frances Rivers to hunt for moose which inhabit the river flats, as well as bears and other game. His rates are less than other outfitters; principally due to the fact that he has no horses and riding equipment. For this reason many general remarks about outfitters do not apply in this case. All other outfitters use saddle and pack horses, and are equipped to hunt any game which occur in their territory.

Prices of hunts vary between outfitters to some extent, quite apart from the question of whether flying is involved. On the basis of a party of two hunters, the lowest rate (out of a sample of 50% of outfitters) was \$65 a day per man, and the highest was \$85. These rates are for the fall hunt with horses. One outfitter offers a late autumn river hunt, beginning after his return from his wilderness hunts. The cost is \$50 a day. There are also spring bear hunts available from some outfitters at about \$50 a day. These take advantage of a special season on bear from April 15 to June 15.

According to the Director of Game for the Yukon, who handles any comments or complaints from non-resident hunters, there is some variety in the standard of those services offered by outfitters. His department, through its regulations regarding equipment, attempts to improve and standardize these services.

Normally the outfitting season lasts about two months. The hunting season opens legally on August 1st, and by the end of September there are snow storms at higher elevations, where sheep, goat and caribou are found, and hunting draws to a close. The outfitters in the southern part of the Territory are able to extend their season by a few weeks, but none take bookings to the end of the hunting season, which is November 30th.

2. Costs of Outfitting

The minimum number of hunters which the smallest outfitter is equipped to accommodate is a party of four. This size of outfitter will be used as the basis of the following examination of the basic capital costs of outfitting.

However, some outfitters have up to three parties of hunters out at one time, with up to four hunters in each party. Thus they must own nearly three times the equipment listed in Table 12.

Table 12

Basic Capital of an Outfitter, for Four Hunters

20 horses, @\$200 each.....	\$4,000
12 riding saddles, @ \$180.....	2,160
12 pack saddles, @ \$90.....	1,080
40 saddle blankets, @ \$10.....	400
Tents: 1 cook, 4 sleeping, 4 trail -- about.....	1,000
Misc. equipment: halters, bridles, ropes, saddle bags, 24 panier boxes, shoeing material, etc.....	600
Stationery, advertising.....	400
Kitchen equipment; including portable cooking stoves, portable heating stoves, camp dishes, cutlery, buckets, pots, axes.....	350
Paddock, hay barn, equipment shed (homemade, cost mainly labour).....	1,000
Vehicles: 3 ton truck for moving horses, pickup truck, boat and motor -- at least.....	<u>5,000</u>
Total.....	\$15,990

All of the above prices in Table 12 are rough estimates of the minimum cost. Many outfitters, however, have more expensive equipment, including, for instance, two-way radios. These are used to call in aircraft at the end of a hunt, as well as for emergency purposes.

The advertising item is apparently almost non-existent for some outfitters. Several send out illustrated brochures in reply to inquiries, as well as letters answering specific questions. The Game Department also sends illustrated literature and copies of hunting regulations. In 1964 advertisements for two Yukon outfitters were seen in magazines, although no exhaustive search was made. Many outfitters say that the most effective advertising was from articles in national hunting magazines by writers who had hunted in the Yukon. Invariably the writer concerned names his outfitter, and in many cases heaps praise on him and the guide. Such articles bring inquiries from other hunters, and may keep the outfitter booked up for the next few seasons.

One of these writers (Jobson, 1960) makes some comments about the difficulty of selecting an outfitter. He states that replies by outfitters to inquiries are often poorly presented, but to the point. It is also unreliable, he says, to select an outfitter by talking to people in Whitehorse. Local people never hunt with outfitters, and only judge one by his social position.

In addition to capital costs there are numerous operating expenses. Attention will be focused here on the provision of winter feed for horses, and the employment of guides, cooks and horse wranglers. Apart from these items there are food costs, although much of the meat eaten in camp is from game taken on the hunt. Also there is the cost of licences. An outfitters's licence is \$25 a year, and the registration of a guiding area is \$10 for five years. Some outfitters pay the licence fees of their guides. These are \$20 a year for a chief guide, and \$10 a year for an assistant guide.

All outfitters own horses, except for the one who only gives river hunts. There are between 20 and 60 animals for each outfitter. They fend for themselves for much of the year, and only one or two outfitters keep them in a barn or corral through the winter. However, supplies of hay must be on hand, to be fed when snow and cold prevents the horses from foraging for themselves.

Hay may be either cut by the outfitter, or purchased by him. Any discussion of hay in the Yukon has to be understood in relation to the rather complex regulations governing the use of Territorial land for hay and for grazing. Prior to 1960 land was leased to outfitters for grazing at 2¢ an acre. In addition, up to 5 tons of hay could be cut

free of charge on unused Territorial land for each animal owned. A charge of 25¢ a ton for all hay over the 5 ton limit was charged. If the hay was to be sold, an annual permit was required, and was issued only if the needs of local livestock were considered to have been satisfied. Hay to be sold was charged at \$1 a ton. The individual who had made improvements on a hay meadow and had used it the previous year was given first option for a permit for cutting.

The result of this was that outfitters, and others who cut hay for cash, had permits for hay meadows which were used by them year after year. Permits were taken out even when less than 5 tons a head was cut in order to maintain first rights to these meadows.

Since December 16, 1960, land has been leased for grazing at 5¢ an acre to the Crown, plus a Territorial tax of 3¢ an acre--a total of 8¢. Hay can be cut without a permit on unused Territorial land by residents who own stock, but not over 5 tons per head owned by him. Such hay cannot be sold or bartered.

What has happened since 1960 is that, in order for those who cut hay to maintain exclusive rights to their traditional hay meadows, these acreages have been rented under grazing leases. This is cheaper than a normal lease on Territorial land, which is 10% of the assessed value per annum. It is known that this land is not rented for grazing, since some outfitters' horses roam at will on unfenced land without payment of rent. Some outfitters own choice hay meadows, or rent them from private individuals. These meadows, of which there are many around Dawson, were part of original homestead land.

Eleven Yukon outfitters, and one from B.C., have grazing leases. The Yukon outfitters pay an average of \$38 each per year in rentals. Two of these eleven outfitters also had applications for additional leases on a total 2,600 acres in 1964.

Hay can be bought in Whitehorse at \$80 to \$100 a ton baled. One outfitter estimated that it cost \$45 a ton to cut hay. The stock of hay an outfitter has on hand depends on whether he leaves his horses to roam free in the winter. One outfitter with 30 horses who does this has 10 tons on hand, as well as oats and antibiotics. Considerably more hay is required for corralled horses, or in areas of high snowfall, such as Haines Junction, close to the St. Elias mountains.

Other costs to be considered were wages. Every individual who hunts with a Yukon outfitter must have his own registered guide, and every hunting party must have a chief guide. In 1963 there were 26 chief guides and 50 assistant guides licenced in the Yukon. These guides are either outfitters or in most cases Indians. A chief guide makes about \$15 a day, and an assistant guide about \$12 a day. In addition each hunting party has a cook, paid about \$12 a day, and a horse wrangler, paid about \$10 a day. In 1963 all but one of the sixteen outfitters who did any hunting were themselves guides.

Guiding is of considerable importance to the economic life of many Indians. In 1963, for instance, the 25 registered chief guides had an average of 54 days of guiding each. Nine of these were outfitters, but the other 16 made approximately \$810 each. Assistant guides, however, made an average of only about 24 days each. Five of the 50 guides were outfitters, and the other 45 guides made about \$288 each. The reason for the lower average income of assistant guides is that their pattern of employment is less stable than that of chief guides.

This instability of employment has two causes. First, the number of hunters (and thus the number of guides) out at any time varies according to the size of the hunting parties. For this reason there is a pool of qualified assistant guides, most of whom will get employment for only part of the outfitter season. Second, many assistant guides leave an employer after being paid at the end of a hunt, even when they are needed for another hunt later in the season. Outfitters with base camps near a highway are more subject to this loss of guides in mid-season than are those with isolated base camps.

Other benefits from guiding in addition to wages are gratuities and game meat. Some satisfied hunters are said to tip their guides more than \$100. Non-resident hunters shot an estimated 48,375 lbs. of game meat in 1962-63. Some of this is consumed during the hunt, and less is taken away by the hunters when they leave. As it is illegal to waste game meat, much of it is shared among the guides. This is often smoked, and at the end of the outfitting season carried out by pack horses. One outfitter flies out all unwanted game meat, and it is distributed among the wives of his guides.

Outfitting is important in the economy of the Yukon as a whole. Just under \$200,000 was paid in outfitters' fees in 1963, of which approximately \$54,370 was spent in wages for chief guides, assistant guides, cooks and horse wranglers. In addition there was considerable business to local charter airlines. Also, the Territorial Government collected large revenues from hunting licences and trophy fees.

3. Wildlife Resources

Rand (1945) gives some information on the distribution of Yukon big game species, but little information is available on their populations. Some attention has been paid to the Stone caribou, Rangifer arcticus stonei Allen (see Murie, 1935), which are the only Yukon big game which form large herds. The two main herds in the Yukon are the 'Peel River herd', which is found in the area of the headwaters of the Peel and Porcupine Rivers, and the 'Dawson herd', which is located between the Yukon and Tanana Rivers. The former herd have complex and irregular migration routes (Balicki, 1963: 5-7), while the latter tend to move south in the late autumn. Prior to the Gold Rush the Dawson herd was seen regularly around Whitehorse and further south. As this herd was reduced in size by hunters its migrations became less widespread. This herd was most recently seen in the Whitehorse area in 1924 and again in 1932. In 1936 it crossed the frozen Yukon River at Carmacks and reached Kluane Lake. In 1944 a large winter herd was seen at the confluence of the White and Yukon Rivers. According to one observer, it formed a block $1\frac{1}{2}$ miles long by $1\frac{1}{4}$ miles wide. The winter of 1946-47 was particularly severe, and large numbers of wildlife did not survive, including caribou. At the present time the herd is regularly seen in the autumn west of Dawson.

The other caribou subspecies is the larger Osborn caribou, Rangifer arcticus osborni Allen. These form only small herds, and are found mainly in the higher areas in southeast Yukon. Stone caribou also sometimes break into smaller herds in the summer. It may have been one of these herds that was sighted in 1964 east of the Whitehorse-Mayo road near Tatchun Creek, north of Carmacks. Osborn caribou are less important than moose as subsistence food for trappers, because they are only rarely found in the side valleys and lake areas where most trapping is conducted.

The range of mountain goat, Oreamnos americanus columbiae Hollister, is limited to the mountains of southwestern Yukon. Other big game species are found in all parts of the Territory, with the two subspecies of Northern sheep, Ovis dalli dalli Nelson (White, or Dall sheep) and Ovis dalli stonei Allen (the larger, darker Stone sheep), limited to the higher ranges. Moose, Alces americana gigas Miller, are found throughout the Yukon in valleys, swamp land, lake regions and burned

off areas, although in summer they may seek higher valleys. Conflicting reports are heard as to whether the moose population has dropped in the past five years. Many trappers claim that large numbers did not survive the winter of 1946-47, although no serious shortage of moose was apparent in any areas in 1963-64.

Small game are important for the subsistence food requirements of many Indians. Apart from the furbearers which are utilized as food--mainly beaver and squirrel--the most important animals are snowshoe rabbits, Lepus americanus macfarlani Merriam, ground squirrels, Citellus parryii parryii Richardson, and C. p. plesius Osgood, and hoary marmots, Marmota caligata caligata Eschscholtz, and M. c. oxytona Hollister. One Indian trapper, whose eyesight is failing, stated that he would have starved during the winter of 1963-64 if it had not been for these small game. They are taken with a .22 rifle, or with wire snares. Most of this hunting is done close to the settlement or camp by teenagers or old people. The numbers of snowshoe rabbits vary from year to year and it is possible that the requirements of Indian trappers for larger game varies inversely to the numbers of small game caught. It would require some overall quantitative studies of subsistence game utilization before such a conclusion could be drawn, however.

Moose and caribou are the two major game animals which all classes of hunters, non-resident, resident and trappers, depend upon. For this reason all are interested in the control of predators of these animals, in particular the timber wolf, Canis lupus tundrarum Miller, and C. l. pambasileus Elliot. In addition to other predations, wolves were responsible for killing five outfitters' horses in early 1963, but these were reportedly in a very poor condition. Trappers consider the grizzly bear, Ursus horribilis Ord, a predator of moose and caribou, but sportsmen value it as a big game trophy. The Canadian Wildlife Service officer in Whitehorse even considers that protection may be necessary for grizzly bears in a few years. It is possible that trappers over-emphasize its predatory characteristics. Rand states, "The importance of grizzly as a predator on moose, caribou and sheep is negligible." (Rand, 1945: 21). However, one bears many accounts of grizzlies carrying off moose calves.

The Game Department carries out a predator control program, using two methods. Poison baits are placed on lake ice at least 400 yards from the shore. This method is expensive in the Yukon, owing mainly to the amount of flying that it involves. In 1963, 65 wolves were poisoned at an average cost of \$85 each. It is also argued by trappers that other eaters of carrion are killed by this method, including fur-bearers and ravens, although such losses may not be serious.

The second method of control is by the payment of a bounty for wolves. This was introduced in December, 1959, when the bounty was \$15. In 1963 the bounty was raised to \$25. The number of wolves taken for bounty are as follows:

Dec. 10, 1959, to Mar. 31, 1960.....	15
Apr. 1, 1960, to Mar. 31, 1961.....	87
Apr. 1, 1961, to Mar. 31, 1962.....	55
Apr. 1, 1962, to Mar. 31, 1963.....	59
Apr. 1, 1963, to Mar. 31, 1964.....	108

The program has not been running long enough to tell whether trappers are sensitive to the amount of the bounty, or whether variations in the take are due to changes in snowshoe rabbit populations, which are a dietary staple of the wolf. When there are few rabbits the wolf population drops, but their predations against big game, as an alternative food supply, increase. Many people, including Game Department and Canadian Wildlife Service personnel, and outfitters, are of the opinion that bounties do not increase the wolf kill. It is stated that wolves are difficult to hunt, and are not worth going after at \$25 each. Some are snared or shot, more by chance than calculation, and the trapper, it is said, needs no more inducement in this hunting than his natural aversion to wolves as predators of his food supply.

Bounties are of some economic benefit to trappers, but the complaint is often heard from them that no bounty is paid for wolf pups. The Director of Game is of the opinion that a bounty on pups would result in some individuals finding a den, cleaning the pups out each spring, and leaving the old pair to produce again the next year. A further argument used against a bounty of wolf pups is that at this stage of growth it is difficult to distinguish one from a malemute pup. Some malamutes have wolf blood, and are used as sled dogs by many Yukon trappers.

Some conservation authorities have questioned the wisdom of any predator control program. Rand has the following to say on the predator-prey relationship, and its implications for game management:

"Predator-prey relationship is a complex one. The predator may fluctuate greatly in numbers, irrespective of its prey. Normally the prey-species are adapted to withstand predation, and when the predator becomes too abundant and its prey scarce, the predator also sooner or later becomes scarce. Then the prey-species increases, perhaps until their food supply becomes depleted and a period of scarcity is indicated for them. Thus there is no balance, but a huge pendulum swing.

Management is directed towards changing this swing to an artificial "Balance of Nature", and where there is much human hunting some control of wolf numbers may be necessary." (Rand, 1945: 37).

A further factor in the question of wolf control is that the animal is also hunted as a big game trophy. Few are taken in this way (see Table 11), but those outfitters spoken to did not wish to see the wolf become extinct for this reason.

4. The Value of Game as a Food Resource

The rise in the economic importance of big game trophy hunting has been accompanied by the decline in the commercial exploitation of game meat. In the Yukon there is a history of dependence on game meat as a commercial food. During and after the Gold Rush, both White and Indian hunters supplied meat to the rapidly rising population. Most of this meat was shot in the winter, when storage was no problem, and transportation of meat from southern Canada was most difficult. Prior to 1935 moose meat was sold in stores in Whitehorse and Dawson for human and dog food. The price was 10¢ a lb., and the hunter was paid 7¢ a lb. Moose and caribou meat was bought by mining and construction camps, as well as institutions such as hospitals and Indian residential schools. The sale of game meat was eliminated by a series of injunctions. First its sale to the public was forbidden. In 1951, 11,853 lbs. of moose meat was sold to institutions at 30¢ a lb. The following year steps were taken by the Game Department to reduce this use of game. Only 3,000 lbs. of moose meat was sold to institutions that year. Since 1958 only the mission at Old Crow, by a special clause in the Game Ordinance, has been permitted to purchase game meat. No record has been found of such purchases in recent years, and it appears that the privilege would only be used in cases of dire necessity resulting from the isolation at Old Crow.

No data are available to confirm the rumors one hears in Whitehorse that bootlegged moose meat is sold by Indians. The most experienced White informants were of the opinion that only a negligible amount of meat fit for human consumption is sold by this means.

Table 13

Pounds of Usable Meat Obtainable from Yukon Game

<u>Species</u>	<u>Average Live Weight</u>	<u>Pounds of Usable Meat</u>
Moose	800	400 - 600
Sheep	200	100
Goat	200	100
Caribou	250	125
Beaver	55	38
Snowshoe Rabbit	3	1.5
Ground Squirrel	1.5	1.0

Source: White, 1953: 397-8.

Note: It is probable the weights of Yukon sub-species may be different from those given here. For instance, Rand (1945: 76), gives Yukon Moose as up to 1,800 lbs. live weight.

Table 13 shows the amount of edible meat obtainable from Yukon big game species. Because of the injunction against the waste of game meat, a figure for the amount of game meat obtained for subsistence purposes can be calculated from Table 13 and Table 11. By this method the amount of sub-sistence meat from big game in 1962-63 is as follows: moose, 318,400 lbs.; caribou, 219,625 lbs.; sheep, 21,600 lbs.; goat, 2,400 lbs.; with a total of 562,025 lbs. Although Indians use bear meat, mainly as dog food, it has not been included here since the Game Department does not consider bear meat to be included in the prohibition against waste.

The total cash value of subsistence meat is difficult to calculate, since it cannot be sold, and local or imported meat sold in retail stores is priced beyond the means of most people who regularly use game meat. One method is to use a price similar to that of the going price for local fish (whitefish or salmon). This sells at between 35¢ and 45¢ a lb. and ignoring the difference between game species, the value of game meat taken in 1962-63 was as follows: moose, \$127,360; caribou, \$87,850;

sheep, \$8,640; goat, \$960; with a total of \$224,810. Of this figure, \$121,950 was taken by trappers, and, \$83,510 by other Yukon residents.

There are two main reasons however, to doubt the figure for the total value of game meat. First it is known that game meat is wasted. Hunting guides and trappers sometimes come across game that has been shot and abandoned after having been only partially consumed. Resident hunters who are more interested in sport than food are most often blamed for this. These individuals most often hunt on foot in groups of two or three early in the hunting season before snow is on the ground. A strong man can carry little more than one hundred pounds on his back for any distance, so that it is likely that quantities of moose are left behind, particularly in the case of hunters who have only a week or a weekend in which to complete their hunt. One Yukon resident spoken to by the writer hunts by boat along the Yukon River, and in this way is able to transport his moose easily. However, he says that few other hunters use this method. Other hunters only shoot at game which they first see from the highway, and do not track the animals very far from their vehicles. This method is used by those residents whose primary purpose in hunting is to obtain a winter supply of meat. It is not known how many resident hunters shoot game mainly for sport, or even if such a category of hunter could in practice be defined. Indians are also reported to waste game meat at times. Balikci notes the abandonment of several caribou carcasses by Old Crow Indians (Balikci, 1963: 77).

The second reason for doubting the figure given for the total subsistence value of game meat is that the figures for game taken (Table 11) are probably not accurate. The Game Department is particularly doubtful about statistical returns on the game taken by Indians. According to the Game Ordinance, the bag limits, seasons and prohibitions against hunting in a game sanctuary apply equally to Whites and natives, with the exception of Indians and Eskimos north of the Arctic Circle (i. e., Old Crow and Fort McPherson), who are allowed larger bag limits of moose and caribou. Some Indians pay verbal respect to these restrictions in the presence of White people, while others protest the hardships which the game laws impose. It is considered by Game Department officials that returns for game taken by Indians trappers is substantially low. From time to time cases come to the notice of authorities of Indians exceeding the limits or hunting out of season. However, in the last few years at least, charges have not been laid.

The main reason given for not laying such charges is because of a ruling handed down by Justice J.H. Sissons in the case of a Yellowknife, N.W.T. Indian, Michael Sikyea. This case involved the shooting of a duck outside the season laid down in conformity with the Migratory Birds Treaty between Canada and the U.S. Judge Sissons ruled that native treaty rights took precedent over hunting season regulations. Although Yukon Indians have no treaty (apart from those at Fort McPherson), it is felt that this judgment has application to the Yukon.

The Game Department, as of 1964, had only two officers who enforced the game laws. Both R.C.M.P. and Forest Service personnel are ex-officio game wardens, and thus the main responsibility for the enforcement of these laws falls on them. However, there was not complete conformity of opinion between the different game wardens as to the position of Indians with respect to the question of seasons and bag limits. Replies from these game wardens to enquiries about the status of Indians ranged all the way from the statement that an Indian could take what game he wanted when he wanted, due to his "aboriginal rights", to the assertion that Indians and Whites were identical as far as the game laws are concerned. Because at the moment it is not felt by officials that overhunting is taking place on any big game species (with the possible exception of grizzly bear), their main concern over the question of hunting regulations is that of obtaining accurate statistics. However, many Indians believe that they are held responsible for any infringements of hunting regulations, particularly where they are warned against such violations by local game wardens, and are probably careful to keep their annual declarations of game taken within the official limits.

This practice of regularly taking game outside the season and beyond the specified bag limits is not restricted to Indians. Many White trappers expressed the view that the amounts permitted under a General Hunting Licence--two caribou (either sex) and two moose (male only)--are not sufficient for a man with a large family, particularly as caribou are not available in all regions. One White person, who was not a trapper, stated that he regularly shot at least one moose a month at all times of the year. Moreover, he always shot female moose if he could, although they are smaller than males, and protected at all times of the year. His reason was that, because only male moose could be hunted legally there was, in his opinion, a surplus of unserved females. This man had a large family, and he claimed it would have cost him \$200 a month for groceries had he bought all his meat in a store. He estimated his food expenses at between \$50 and \$60 a month. Thus over a twelve month period he saved about \$1680 by using wild fish and game.

Although no value can be set on either of the two sources of error of the figure for the total annual value of game meat, it will be noted that they tend to cancel each other out. Thus the final error may not be sufficient to render the figure given entirely useless.

CHAPTER 5

FISHING

1. Subsistence

Most subsistence fishing in the Yukon is done by Indians. This is partly due to the regulations, which are administered by the federal Department of Fisheries. A certificate for domestic gill net fishing can be obtained only by an Indian (as defined by the Indian Act), and fish caught under this certificate cannot be sold, bartered or given away. In consequence, Metis and Whites who have a large domestic consumption of fish (mainly trappers) are obliged to take out commercial licences. Formerly they could take out a special domestic fishing licence, but this has been abandoned since 1961. For this reason the domestic catch of non-Indians is included with the figures for commercial fishing.

The most active period for Indian lake fishing takes place during the spawning season in the late fall. Many Indians also have nets under the ice throughout the winter. The main resident species which are caught are whitefish, lake trout, Arctic grayling, ciscoe, longnose sucker, inconnu (shefish) and burbot (ling). The most productive lakes include Watson, Teslin, Marsh and Kluane Lakes, on the Alaska Highway; Simpson Lake, north of Watson Lake; Lakes Bennett and Kusawa, southwest of Whitehorse; and Wellesley Lake, near Snag. These lakes, with the exception of Marsh and Teslin, are not visited by spawning salmon. For this reason fishing in these lakes is not interrupted in the latter part of the summer while salmon fishing replaces lake fishing, as happens in other parts of the Territory. Fishing is less intensive on lakes in summer, because of the requirements of a boat and the need for storage techniques. Over 40% of the resident fish caught by Indians for personal use are from the larger lakes previously listed. The rest come from thousands of other lakes, as well as rivers, most of them near Indian settlements or traplines.

TABLE 14

Indian Domestic Fishery--1962 & 1963

<u>Species</u>	<u>Pounds Round Weight</u>	
	<u>1962</u>	<u>1963</u>
<u>Resident Fish</u>		
Whitefish	54, 140	63, 900
Lake Trout	44, 300	47, 350
Grayling	11, 650	19, 650
Burbot	500	600
Inconnu	150	150
All Other	19, 150	14, 450
<u>Anadromous Fish</u>		
King Salmon	148, 500	121, 620
Dog Salmon	42, 000	153, 000
Sockeye	<u>1, 500</u>	<u>3, 000</u>
<u>Total</u>	321, 890	423, 720

Source: Department of Fisheries, Whitehorse

TABLE 15

Indian Salmon Catch, by location, in Pounds Round Weight

<u>Location</u>	<u>1961</u>			<u>1962</u>		
	<u>King</u>	<u>Dog</u>	<u>Total</u>	<u>King</u>	<u>Dog</u>	<u>Total</u>
Old Crow	7,500	12,000	19,500	9,000	12,000	21,000
Ross River	15,000	--	15,000	7,500	--	7,500
Dawson	15,000	3,600	18,600	30,000	18,000	48,000
Mayo	4,500	--	4,500	4,500	--	4,500
Pelly Crossing	15,000	3,000	18,000	15,000	--	15,000
Minto	25,500	6,000	31,500	22,500	--	22,500
Carmacks	45,000	12,000	57,000	45,000	12,000	57,000
Kluckshu (Sockeye)	15,105	--	15,105	1,500	--	1,500
Johnson's Crossing	22,500	--	<u>22,500</u>	15,000	--	<u>15,000</u>
TOTAL			201,705			192,000

Source: Department of Fisheries, Whitehorse

Table 14 indicates the importance of salmon in the economy of Yukon Indians. As with game meat, it is difficult to place a cash value on fish, but if the figure of 30¢ a lb. is used, in 1963 salmon added \$83,286 to the subsistence economy of Indians, and the total for all domestic fish was \$127,116. In Table 15 the Indian salmon catch is broken down into the locations where it is caught.

The species referred to in Table 15 are King (Chinook or Spring) salmon, Onchorhynchus tshawytscha, and Dog (Chum) salmon, O. keta. Some of these upstream Yukon salmon migrate over 2,000 miles to spawn, further than any other salmon in the world. For this reason they are larger, and have a higher oil content than those that spawn near the coast. However, much of this oil has been lost by the time the salmon reach upstream locations like Johnson's Crossing and Ross River. The only locations in the Yukon where salmon are fished commercially are downstream from Dawson.

Several methods are used by Indians to catch salmon. Fish traps across small rivers and streams was the aboriginal technique, and is still used at Klukshu. The salmon caught there are Sockeye, O. nerka, with a few Coho, O. kisutch. These salmon travel only a short direct route from the Pacific Ocean, rather than via the Yukon River.

The salmon caught at Johnson's Crossing are taken by a process of drift netting. In this method a gill net is stretched between two boats which are allowed to drift down the Teslin River across the salmon spawning beds.

Fishwheels are only permitted downstream from Dawson. In the summer of 1964 only one non-commercial wheel was in use, although another was under construction. Local people say that between 10 and 15 wheels for domestic use were in operation during the 1940's, and that the current lack of this type of fishing is not due to a lessening of the salmon runs. It is probable that the reason is connected with the current shortage of Indian trappers in Dawson (see Table 5), since it is mainly trappers who have a domestic consumption of fish in the quantities which a fishwheel can produce. Another reason, suggested by the man who was constructing a wheel, is the current difficulty in salvaging construction materials, in particular

wire netting and cables, of which there were adequate supplies 15 years ago, due to the many abandoned steamboats and fox farms in the district. The construction and operation of a fishwheel will be described in the section on commercial fishing.

The majority of salmon caught by Indians are taken with gill nets, which are attached to wooden booms, and project out from the river banks about 30 to 50 feet. The best locations for these nets are at the upstream end of a large eddy, where the net is protected from heavy driftwood which would tear it to pieces. Fish tend to collect in these eddies to rest before renewing their journey. The rights to use such prime fishing locations close to a settlement are held from year to year by domestic family groups. One of these nets will produce between three and eight fish a day when the run is on, or in other words, perhaps over 100 lbs. in a day. If a choice fishing location is some distance from a settlement, a fish camp may be set up during the season, or a number of men will use a boat and motor belonging to one of them to carry the fish back to the settlement. One temporary fish camp on the Yukon River is at Minto, which at one time was a sizable Indian village and steamboat landing. The settlement is almost abandoned, but Indians return each year when the salmon run is on, and make large catches, as Table 14 indicates.

In addition to the figures for the Indian domestic salmon catch for 1961 and 1962, annual catches have been computed for a 25-year-period by the U.S. Fish and Wildlife service (Rampart Report, 1964: 23 and 25). These figures are based on the estimated percentage of the total Yukon River salmon run caught in the Canadian section of the River. The estimated average catch--1937-1962--is 3,798 Kings, and 3,335 Dog salmon, or a total of 76,980 lbs. of salmon. (This is assuming an average weight for Kings of 15 lbs., and for Dog salmon of 6 lbs.). The figures in the Rampart Report indicate that salmon, particularly Kings, have maintained their importance in the subsistence economy of Yukon natives over the past forty-five years.

Some Yukon King salmon spawn above the Whitehorse Rapids, and consequently when a hydro-electric dam was built in 1958-59 a fish ladder was installed. These facilities are apparently successful (Gordon, R.N., R.A. Crouter and J.S. Nelson, 1960). The count of upstream salmon migrants in recent years is as follows: 1959 - 1,054; 1960 - 660; 1961 1,068; and 1962 1,500.

Gill nets, used for both river and lake fishing, are purchased for between \$6 and \$10 for the cotton variety. These are not considered strong enough for salmon fishing, and a thicker twine is purchased for the local manufacture of such nets by Indians. At Carmacks, salmon nets are made from a strong twine which the local R.C. priest has sent in for local Indians. Indians Affairs Branch has attempted in recent years to encourage fishing activity by the provision of free nets to some Indians. Cases have been reported of these nets not being given the same care as the nets provided by the fisherman himself (e.g., Balikci, 1963: 97), and the program has since been abandoned.

2. Sports Fishing

Table 16 indicates that in 1963 sports fishing took 16% of the total Yukon fish catch. Moreover, in most cases these fish were taken from the same lakes as the major part of the Indian subsistence and commercial fish harvest. The same factors attract all three kinds of fishing. These are the availability of road transportation and nearby settlement. However, other factors also have an influence on the location of sports fishing. These are scenic beauty, the presence of fishing guides, boats for hire, and public campgrounds. Charter airlines and big game outfitters also have the effect of directing the attention of the sports fisherman away from the better known lakes close to a highway.

Teslin Lake had six fishing guides in 1964, more than any other Yukon lake. The business records of one of these guides indicates that his income has increased slowly over the past few years, except for the year when a rival fishing guide opened for business. Guides rely on summer tourist trade so that the season is only three or four months long.

TABLE 16

TOTAL YUKON FISH PRODUCTION
1959-63
(Pounds Round Weight)

<u>Year</u>	<u>Domestic</u>	<u>Sport</u>	<u>Commercial</u>	<u>Total</u>
1959-60	168, 140	27, 000	123, 597	319, 097
1960-61	283, 140	41, 442	139, 661	464, 243
1961-62	327, 665	51, 956	130, 744	510, 265
1962*	336, 400	83, 600	112, 269	532, 269
1963	427, 420	103, 825	119, 733	650, 978

Source: Department of Fisheries, Whitehorse

*From 1962 statistics were compiled by the calendar year.

TABLE 17

COMMERCIAL FISH PRODUCTION--1959-63
(Pounds Round Weight)

<u>Year</u>	<u>Gill Net</u>		<u>Fishwheel</u>		<u>Total</u>
	<u>Local</u>	<u>Export</u>	<u>Salmon</u>	<u>Other</u>	
1959-60	78, 954	--	44, 643	360	123, 597
1960-61	44, 891	--	94, 770	--	139, 661
1961-62	49, 553	3, 579	77, 561	51	130, 744
1962	40, 220	2, 669	69, 378	2	112, 269
1963	65, 770	6, 366	47, 397	200	119, 733

Source: Department of Fisheries, Whitehorse

Twenty-two guides are listed by the Yukon Department of Travel and Publicity, including two Indians and two Metis. In some cases the guiding service is offered in conjunction with a tourist lodge or boat rental business.

It is not possible to calculate an average rate at which guides are hired, because of the different terms of payment and the different amount of equipment provided by the guides. One fishing lodge includes the guide and the boat in its daily rate for its guests. One guide has a policy that if no fish are caught no money should be paid. His rate is \$2 an hour per person, with a minimum of four hours. Another guide charges \$5 an hour, no matter how many persons go on the trip, up to a limit of five adults.

Teslin Lake produces the largest catch of sports fish--6,000 lbs. in 1963. Other Lakes popular with tourists and residents are Watson, Marsh, Tagish, Little Atlin, Leberge, Aishihil and Kluane. Lake trout is the major sports fish, particularly in terms of the weight caught. Arctic grayling are caught in comparable numbers, although it is a much smaller fish. Grayling are caught in fast flowing streams and rivers, and thus are ideal for a tourist without a boat who cannot store large quantities of fish. The total catch, in lbs. round weight, of sports fishermen in the past two years in the Yukon is as follows:

	Lake Trout	Grayling	Others	Total
1962	53,950	11,850	14,200	80,000
1963	69,650	16,350	16,975	102,975

3. Commercial Fishing

The program of fisheries management in the Yukon is directed towards maintaining adequate stocks of fish for local subsistence and sports fishing needs. However, commercial fishing in 32 of the largest lakes is open to Yukon residents. Quotas have been set so that subsistence and sports needs are first taken care of. These quotas are based on a growth rate of $\frac{1}{2}$ a lb. per acre per year. No more than half this quota may be taken in lake trout. Experience in the Northwest Territories has shown that the growth rate of fish in northern lakes is slow, but little quantitative research has been conducted in the Yukon. Quotas used are therefore probably on the conservative side.

Commercial fishing in the Yukon is conducted by individuals, rather than by companies or partnerships. The main reason for the one-man units of production is the small size of the lakes. Commercial fishermen can use only those lakes served by road. These same lakes tend also to be used by sports and subsistence fishermen, a factor which keeps quotas low. In addition to the matter of quotas, the restriction of fishermen to using no more than 600 yards of gill net does not permit a man to fish on a large enough scale for him to require employees.

The total number of Yukon commercial fishermen is not great. In mid-1964 there were 33 current licence holders, but it is doubtful whether more than half actually fished for a commercial purpose. These included two Indians and one Metis. Those without a commercial purpose required fish for domestic needs. Some commercial fishermen have businesses for which the fish are caught; for example, several tourist lodges, a big game outfit, and a mink farm. In addition to these lake fishermen, there were four licences for commercial fishwheels sold in 1964, one to an Indian. This was a reduction from seven in the previous year, and nine in 1962.

(a) Lake Fishing

Summer lake fishing differs both in production and in marketing techniques from winter fishing. Extra capital goods which are required in summer include boats and motors, and cold storage facilities. The Yukon demand for fish is greater in summer, due to the influx of seasonal workers and tourists. In winter, on the other hand, vehicles for use on the frozen lakes, such as four-wheel-drive trucks, or motorized toboggans, are needed, as well as gear for setting nets under the ice. The local demand for fish shrinks in winter, but Edmonton prices rise so that it becomes economical to send fish outside the Territory.

TABLE 18

YUKON COMMERCIAL FISH PRODUCTION, BY MAIN SPECIES
1959-1963
(Pounds Round Weight)

<u>Species</u>	<u>1959-60</u>	<u>1960-61</u>	<u>1961-62</u>	<u>1962</u>	<u>1963</u>
Whitefish:					
Summer	20,515	9,285	12,780	13,960	10,781
Winter;Local	9,900	9,585	7,457	3,096	18,528
Export	--	--	2,275	1,713	5,139
Lake Trout:					
Summer	30,413	12,701	9,291	15,102	10,078
Winter;Local	11,811	11,003	9,334	1,466	10,268
Export		--	1,304	956	1,227
Other	6,315	2,317	10,591	6,596	6,513
Total - Local	78,954	44,891	49,453	40,220	56,068
Total - Export	--	--	3,579	2,669	6,366
TOTAL	78,954	44,891	53,032	42,889	62,434

Source: Department of Fisheries, Whitehorse

Fish may be sold directly to housewives, and two or three fishermen also sell to tourists on the highway. Fish is also sold wholesale to food distributors, stores, hotels, cafes and institutions. The retail price is about 30¢ a lb. for lake trout, and slightly less for whitefish. The winter rise in Edmonton freshwater fish prices (Jenness, 1963: 12) enables Yukon fishermen to get around 35¢ a lb. for lake trout, of which 4¢ a lb. is paid for shipping by truck.

For each lake where commercial fishing is allowed, there is a specific quota for lake trout in addition to the general quota on the combined weights of lake trout and whitefish. This is because lake trout is also a sports fish, while whitefish is not. Also, commercial fishermen are liable to catch more lake trout than whitefish. It thus happens that the commercial fishing in a lake is sometimes closed before all the allowable whitefish have been taken. No economic method of selectively fishing for whitefish only is known, and disproportionate fish catches remain a problem.

Other problems include finding an economic use for coarse fish varieties (ciscoes, suckers, ling, pike). Such a use would add to the value of the present catch. Apart from the one remaining fur farmer and the commercial fisherman who manufactures dog food (see page 27), most fishermen throw back coarse fish, or leave them on the ice in winter. It is unlikely that these fish could be used for anything but a strictly local use, because of competition from sea-fish by-products. A fish meal plant was tried at Lake Athabasca, Saskatchewan, but it was unable to compete with sea-fish varieties, and had to close down (Jenness, 1963: 24).

A further problem is the high infestation rates of white-fish in many Yukon lakes. The parasite, Triaenophorous crassus forms cysts in the flesh of the fish. On inspection, fish with more than 25 cysts per 100 lbs. are rejected from the Edmonton market, and with more than 5 cysts per 100 lbs. from the U.S. market. Certain lakes are particularly badly afflicted, and commercial fishing in Aishihik Lake, among others, has been affected. One method of avoiding loss of production due to infestation was suggested by the Yukon Fisheries Officer. If fish were filleted by the fishermen the cysts could be removed during this process. It is not known if filleting could be done locally on an efficient enough basis for the product to be competitive with fillets from outside the territory, or with alternative food products.

Although fish is exported from the Yukon in winter, it is sometimes imported in summer. If lake trout prices fell below 24¢ a lb. in Edmonton, the same fish will cost less than 30¢ a lb. in Whitehorse, allowing 6¢ a lb. for transport. Edmonton lake trout can compare with local fish at such times, particularly since they are individually wrapped ready for sale, which the local product is not.

(b) Salmon Fishing

Commercial salmon fishing is also conducted by small scale units of production. A man is limited to one fishwheel licence, although he may also take one out in his wife's name. During a heavy run of salmon a wheel may catch at the rate of one fish a minute or more, night and day. At such times a man must remain with the wheel all the time, while another transports the fish at least once a day for sale or to cold storage in Dawson.

The fishwheel is most often built by the fisherman himself, and hardly ever sold, although one man set a value on his of \$300. It consists of two large rectangular buckets, or scoops, set on a solid axle, rather like a ferris wheel. The axle is supported between two connected rafts at such a height that first one bucket and then the other scoops into the water as the axle rotates. The force of the river current on the buckets rotates the axle, and as they dip through the water they scoop out any fish swimming upstream to meet them. Lateral guides in the buckets direct the fish into storage boxes on the rafts on either side of the wheel. The whole wheel is made from local, unsawn lumber, while wire netting is used to cover the buckets. Like salmon gill nets, the wheel is often located upstream from a large eddy, and heavy booms and cables are required to prevent it being swept away by the river current. A small wheel has buckets 10 feet wide, and a radius from the axle of 9 feet. Most wheels are somewhat larger, however.

The operation of a fishwheel requires much hard work for the few weeks of the salmon run. This work is often shared between the fisherman and his family. The man who remains camped by the fishwheel empties the storage boxes as they become filled, keeps away thieves such as ravens and minks, and cleans fish for sale. Fish not suitable for marketing must be split and smoked for winter domestic use or for sale as dog food.

Salmon is sold mainly in the cafes, stores and private homes of Dawson, as well as the stores at Whitehorse. Institutions like the gold mining camps near Dawson also purchase fresh fish. However, the market is uncertain, particularly since the cafe business is largely dependent on the tourist trade. The bulk of the season's catch arrives within the space of a week or two. Few fishermen have access to freezers, so that surplus fish must be dried right away before they go bad. These fish can only be sold for dog food, at prices well below those for fresh fish.

Fresh, gutted salmon sells at 35¢ a lb. wholesale in Dawson, and is retailed by local stores at 45¢ a lb. Whitehorse prices are a little higher. A few tourist lodges along the highways make arrangements to have fresh salmon delivered, but the complaint is heard at many places outside Dawson and Whitehorse that supplies are difficult to obtain. In 1964, for the first time in recent years, Yukon salmon was sold in Edmonton. One fisherman arranged to supply 3,000 lbs. initially, at 42¢ a lb. delivered. Shipping cost him 8¢ a lb., plus \$1.04 a box, each of which carries 60 lbs. It is not known at the present time how successful this shipment was, or whether this market will be expanded in future years.

CHAPTER 6

CONCLUSION

1. The Pattern of Wildlife Exploitation

In earlier chapters the activities of hunters, trappers and fishermen in making a living have been dealt with under three separate headings. In many cases, however, all three roles are filled by one individual. This is most often true, for instance, in the case of Indian and Metis trappers. Trappers must hunt and fish to fill their subsistence needs. They take part, in fact, in an interrelated collection of productive activities which might be described as the annual cycle of wildlife exploitation. There is trapping, and a little hunting and fishing in winter; beaver or muskrat hunting in spring; maintenance of equipment or casual wage labour in early summer; salmon or lake fishing in late summer; and hunting or guiding in autumn. A trapper can only neglect any of these activities if he is giving up the trapping life altogether. It would not be economically possible, for instance, to neglect fishing, and purchase an alternate dog-food supply, since the cost of keeping dogs for twelve months would be greater than the expected returns from a winter's fur.

There are other reasons why the hunting-trapping-fishing life cannot be given up temporarily, and resumed again at short notice. Trappers suffer from a shortage of liquid capital. What capital they have is tied up in not-easily-saleable equipment such as toboggans, dogs, cabins, tents, boats, nets, traps, and guns. Another reason is the necessity of maintaining rights-through-use of individual trapping areas. The five-year trapping area registrations create obligations to use the land. These obligations can be ignored or avoided, but they cut down the occupational mobility of registrants who cannot be sure that there will be an area available for them when when they wish to re-enter trapping. The trapping-hunting-fishing cycle is incompatible with the conditions required by a mobile casual labour force. This is not to say that trappers cannot successfully be absorbed into year-round employment in other industries. This is illustrated at Carmacks, where a number of Indians, formerly trappers, have regular employment in a local coal mine. Most Indian trappers I spoke to said they would prefer regular wage employment to the hunting-trapping-fishing life under present conditions.

Not only do furs bring in less than they used to, but also, it seems to the writer, individual effort in trapping is dropping. A successful trapper must be committed to an annual round of activities. If he finds this way of life unsatisfying he may look around for an alternative one, and attempt to loosen those commitments which form the basis of successful trapping. Examples of what is meant by the loosening of commitments to the trapping way of life include the man who has no dogs and attempts to borrow some when he wants to go trapping; or the man without a trapline who waits until the end of the trapping season to go shooting beaver. The result of this half-involvement in trapping is frustration. Trapping is not worth the effort, but no alternative for cash exists. The demand for cash sinks to the bare necessities and poverty is the result.

One outcome of this poverty is a welfare problem. Responsibility for this is divided between two agencies, the Yukon Department of Welfare, and the federal Indian Affairs Branch. In most cases where social assistance is granted to an able bodied White trapper or commercial fisherman there is a large number of dependants living with him. Often the wife and children are of Indian status, although the Department of Welfare provides all assistance in such cases. Data on the provision of social assistance to trappers and fishermen, between April 1, 1963, and March 31, 1964, are summarized below:

Place	Number of Recipients	Average Number of Dependants Per Recipient	Average Amount of Assistance Per Recipient
Whitehorse	5	4	\$838
Dawson	8	5	\$455

Three other White persons in the trapper-fisherman category were aided during this period, and a total of \$8, 280, plus medical expenses for one person, was expended.

There is some difficulty in ascertaining how many of the Indians in receipt of public assistance fall into the category of trapper-hunter-fisherman. Indian Affairs Branch issued over \$60, 000 in food assistance between April 1, 1963, and March 31, 1964. Many recipients were not active trappers, but merely trappers 'by default'. Trapping is the winter occupation which an Indian who does not have a regular job is expected

to follow. The main concern of this report is with those household heads receiving public assistance who are able-bodied. These households are found predominantly in localities where incomes from trapping and employment opportunities are generally low; for instance, Pelly Crossing, Ross River, and Upper Liard are such places. Trapping is still the major winter source of cash, however. Public assistance is only given to able-bodied Indians in exceptional circumstances. Yet when a family breadwinner is disabled, and the trapping life is certainly hazardous, there are often no savings to carry the family through for even a short period. In this sort of case assistance must be rendered immediately. This inability of trappers to deal with economic misfortune also applies to some Whites and Metis. Many trappers do no more than survive the winter free of debt, if that, so that summer cash requirements must be met with employment. If no jobs are to be had public assistance is issued to Indians in summer than in winter. This statement applies to the Yukon as a whole, but not to every locality. In some places there are other factors at work, but it applies generally to those places where there is a winter reliance on trapping, and a lack of adequate summer employment.

2. Summary

(a) Trapping

1. There has been a 70-year history of open competition between Whites and Indians for fur, with only recent and partial measures to ensure Indian rights to furbearing animals. During this period fur prices have been unstable, and this has not been conducive to the utilization by Indians of the concept of the open market and credit. Casual labouring jobs of short duration, but little regular employment, have been available for Indians over the period of White settlement.
2. The 19th century fur trade created (or added to already existing) differences in the wealth of the various Indian local groups in the Yukon.
3. The size of the fur catch in any year is dependent on a number of factors: efforts of trappers; alternate employment opportunities; credit supply; need and availability of goods requiring cash; furbearer population numbers; fur prices.
4. Trappers' incomes for the winter months are low by comparison with almost any other occupation.

5. Little information is available to the Game Department on the populations and locations of the various furbearing species. Government fur conservation measures do not extend far beyond a beaver tag system, by which it is possible to administer limits on the number of beaver pelts traded by each trapper, and an individual trapline registration program.

6. There is a problem of lack of capital, and of institutions providing savings and credit facilities, for use by trappers, particularly Indians. Such capital is required for the purchase of a winter trapping outfit, for vehicles, for air-craft trips to distant trapping areas, and for sending fur to fur auctions.

7. Little credit is available from the traditional source, the trader, because, since monopoly fur trading ended, traders have no means of making sure debts are repaid. Indians are particularly short of collateral for credit.

(b) Hunting

1. Big game outfitting is potentially profitable, despite a limited market. It provides employment and game meat for Indians, and is a source of income for the Territorial Government.

2. Little accurate information is available on big game populations, so that potential harvests cannot be calculated.

3. Subsistence hunting is very important to the economic conditions of trappers, other Indians, and other Yukon residents, in particular those with low incomes.

4. There is a lack of understanding between authorities and subsistence game users, particularly Indians, over the questions of subsistence needs, conservation practices, and native rights to game.

(c) Fishing

1. There is competition among the following three types of users for the fish resources of the Yukon: subsistence, sport and commercial.

2. There has been little opportunity for the development of a substantial commercial fishery for any but a local market.

3. Production of all three branches of fishing is affected by roads, and whether they are open in winter.

3. Recommendations

(a) Trapping

1. Steps should be taken to enable trappers to obtain short-term summer employment in seasonal industries, such as mining and transport, in order to capitalize their winter trapping expeditions.
2. A trapping development program is needed, based on research conducted to establish the numbers and locations of principal furbearers, and the factors which cause changes in these numbers and locations.
3. The problem of the supply of credit for the trapping enterprise must ultimately be solved by the provision of basic financial services for trappers. Savings and loans could be handled by a single government-run organization. For Indians, the problem of the shortage of collateral prompts the suggestion that credit services might in some way be connected with a scheme for marketing their fur. In other words, marketing services would be the basis of credit security. An alternative to this is to encourage the possession of conventional security by Indians; that is, a regular wage income, or the title of ownership of a house or alienable land. The ownership of such real property is, for an Indian, almost impossible at the present time without a regular job. Research is needed to determine the best means by which financial services can be provided in order to promote trapping activity.
4. The marketing of furs could be improved in order to obtain higher prices for trappers. Expert advice is needed to determine whether a monopoly fur marketing board, the authorization of travelling fur buyers, or some other scheme, would best improve prices in the Yukon and thus encourage trapping activity.
5. Education of trappers in good trapping practices, in fur preparation and in conservation techniques is needed, particularly by those young Indians who have not learned these skills early in life. This program could be handled on the local level, using established trappers as instructors, through the vocational or public school system, or by means of information circulars or local C.B.C. radio programs with educational talks and market information.
6. In order to best serve the economic development of trapping, administrators must be aware of the needs, ambitions and values of those whose conditions they are working to improve. This goal also requires specialists in the practical application of some of the principles of economic and social development.

(b) Hunting

1. The possibility of expanding the big game outfitting industry should be investigated, based on researches into the potential annual big game harvest, and with allowance for the requirements of trappers and other residents:

2. Five methods by which this expansion of outfitting could be handled are as follows: (a) Opening additional areas of the Territory as guiding areas. (b) Dividing some of the larger hunting areas, if and when it is apparent that portions of the existing areas are not being used. (c) Opening outfitting to non-residents. (d) Creating new hunting areas along major river valleys, for outfitters to hunt by boat only. (e) Relaxing restrictions on equipment so that outfitters without horses, using boats or pack dogs, can offer hunts to tourists on a low budget. Many of these visitors drive to the Yukon during the hunting season, via the Alaska Highway. (f) Increased publicity for Yukon hunting, both by the Territorial Government, and by the present outfitters. One possibility would be for all interested parties to be associated in the production of annual illustrated publications, possibly in magazine form, in which individual outfitters could place advertisements. This could be mailed to enquirers, and to hunting clubs and associations. Another measure would be the production of more films on hunting in the Yukon, and an expanded schedule of showings. Some of the above suggestions come from various interested persons in the Yukon. They are presented here only as a basis for discussion.

3. The questions of Indian rights to game, and of the determination of rational allowances for all those dependent on game for subsistence purposes, need to be settled--and the regulations as to limits and season changed accordingly. These measures are needed in order to improve statistics on the numbers of game taken, improve the economic conditions of those who use game meat for subsistence purposes, encourage trapping and other rural economic activities, and improve White-Indian race relations.

(c) Fishing

1. Research is needed to determine the potential harvest of Yukon lakes and of the Yukon River salmon, with a view to possible quota adjustments.

2. Competition between angling and gill net fishing could be lessened to some extent by the encouragement of sports fishing facilities at the picturesque smaller lakes which are not used by commercial fishermen. Such a program would include the building of summer roads to these lakes.

3. Indian rights to fish for domestic needs should continue to be given precedent, in order to encourage trapping.

4. Ways and means should be discovered to store, market and distribute king salmon caught commercially at Dawson more efficiently. This item could become more important as a specialty food for tourists in hotels and lodges all over the Territory. Measures might include a community freezer at Dawson, and a salmon marketing and distribution agency, either of which could be supported by a fishermen's co-operative.

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