ANNUAL REPORT

OF

GAME BRANCH ACTIVITY IN THE NORTHERN

YUKON TERRITORY

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Interim Report: Persons are free to use this material for educational or information purposes. For use in publication, permission should be obtained from the Game Branch and a draft submitted for proofing. This is a continuing study; tentative conclusions should be quoted as such and due credit would be appreciated.

ACKNOWLEDGEMENTS AND STAFF INVOLVEMENT

Bob Hayes, Casual Wildlife Technician, ably assisted in virtually all aspects of the field work, adopting many weeks of the study with minimal supervision. His work with peregrine falcon food habits will be especially valuable and will play an important role in future raptor studies. His wife, Carolyn, gave freely of her time and effort assisting in the field work as well; I am indebted to her for this.

Ed Russell and Tony Nette, Conservation Officers, assisted in matters of enforcement and Tony lent special assistance during a canoe survey of the Eagle River. Don Russell, Habitat Biologist, gave assistance in botanical study and greatly aided the drive trapping program.

The field work was also aided by William Josie and Michael Frost of Old Crow - students assisted under the Indian and Northern Affairs' student assistantship program. William and Michael lent valuable assistance to the bait trapping effort, drive trapping of moulting ducks and the carrying out of the daily routine at base camp.

Lorne Osburn piloted our helicopter and Dean Cameron performed the engineering. The special contributions both these gentlemen made for the program over and above the strict duties of their professions is gratefully acknowledged.

The pilots and crew of Canadian Forces "Husky Omen" lent valuable assistance by freely tranporting our personnel and equipment to Old Crow. The assistance of Bob Mackenzie in once more making our stops at Herschel Island additionally fruitful is gratefully acknowledged.

OUTLINE

Annual Report of Game Branch Activity in Northern Yukon Territory - 1976

1976

PATROLS AND OUTLINE OF HUMAN ACTIVITY IN NORTHERN YUKON

GAME BRANCH

D. MOSSOP

ENFORCEMENT PATROLS AND OUTLINE OF HUMAN ACTIVITY IN NORTHERN YUKON 1976

A. Patrols

The Game Branch program in the northern territory was supported this year by a Bell 47G helicopter. On all flights personnel carried out enforcement surveillance. Extensive patrols were also carried out through most of the drainages of the arctic slope and Herschel Island.

Approximately 12,000 miles were flown in the area of the Yukon north of Old Crow from May 20 until September 10. Of these, 4,800 were flown on flights primarily for surveillance of human activity.

River surveys were conducted on the Porcupine River from the Bell River to the Alaska border. The lower segment was accomplished through cooperation with R.C.M.P. Constable McFadyen, Old Crow. A further survey was conducted by canoe from the Dempster Highway crossing of the Eagle River to Old Crow.

Assistance in matters of enforcement was afforded by Conservation Officers E. Russell and T. Nette.

B. Activity

Resident activity in general was more widespread than last year, notably along the arctic coast. Specific areas receiving residents were: the Old Crow Flats, the Porcupine River, Herschel Island, coastal beaches, and the Moose Channel area.

By May 20 most camps were on the Old Crow Flats for spring muskrat harvest. By June 16 the last camp was retrieved (by aircraft). Eleven base camps were established involving (by May 28) 55 persons. The locations of these camps are recorded in "Detailed Flight Records, 1976". Approximately 14,000 muskrats were harvested in the operation.

Several residents of Old Crow were active on the Porcupine and Old Crow Rivers during the summer in support of the University of Toronto and the National Museum of Man engaged in archeological research. This activity reached to Berry Creek on the Porcupine as well as the various locations north of the Old Crow Flats.

First salmon are caught about July 25 (Chinook). First caribou cross river about September 4.

Residents of Aklavik, McPherson, Inuvik and Barter Island (Alaska) were encountered on the coast in fair numbers. Six whaling camps were active in the Moose Channel area during summer. A large tent camp was established on Shingle Point for about a month and a camp of 3 tents was located near Ptarmigan Bay for a brief period. We have a very sketchy picture of this activity and its effects on wildlife. The expense of patrol in the coastal area prohibits a proper assessment. It appears that the activity of Inuit people on our coast this summer was greater than it has been for years.

Herschel Island was visited by many of the excursions mentioned above. The Mackenzie family spent the winter at Herschel and were engaged in an average seal harvest during the summer.

Non-resident activity this summer was increased over that witnessed last year. (For the purposes of this discussion some persons who strictly speaking are residents of the Yukon but live most of the time outside its borders - or who work in a group of mostly non-residents - are included). Activity occurred in the Firth Valley, Herschel Island, the coastal plain, the Barn Mountains, the Porcupine River, Old Crow Range and the Old Crow basin.

Group Name	No.of Personnel	Activity	Firearms	Support
1. Northern Engineering	7	Soil testing along Gas Arctic route	yes	Hughes 500
2. Canmar	10	Crew of ship overwintering at Herschel	?	Bell 205
3. Geological Survey Canada	2-6	Conduct study of sand spit & Babbage Delta	30.06	Bell 205 Power Boat
4. University of Toronto	20-30	Archeological research in Porcupine & Old Crow Basin	several	Bell 47
5. National Museum of Man	2	Paeleontological research on Old Crow River	yes	Power Boat
6. Roy Parkes	2-6	Placer mining-Sheep Creek	3	Supercub
7. G.S.I.	2	Run navigational instruments Sabine Point, Herschel Island, Clarence Lagoon	2	Bell 205 ?
8. Eastern Associates	13	Geological exploration and staking, Barn Mountains	yes	Bell 206 Twin Otter
9. Canadian Wild-life Service	2	Collect birds Herschel Island	2	Twin Otter Power Boat
10. Mr. Hunter and family	3	Private holiday at Herschel Island	yes	Power Boat
11. Aquitane Ltd.	3	Geological exploration - Firth Valley	?	Bell 206
12. Unnamed drilling company	?	Sub surface drilling for Geological Survey of Canada - Kay Point	?	?
13. L.G.L. Consulting	2	Snow goose survey on North Slope	yes	Cessna
14. American tourists	2	Walk overland from Alaska coast to Old Crow	yes	Cessna
15. U.S. Dept. of Mines	4	Geological Survey near Canadian border, over-nighting at Old Crow	3	Helicopter
16. American tourists	2	Walk overland from Alaska down Firth River	no	Fixed Wing
17. Inuvik tourist	1	Rafting Firth River	yes	Fixed Wing

18. At least 5 groups of tourists floated the Porcupine River from Summit Lake to the Alaska border. This activity is very hard to monitor as it would require a person on the river all summer. The activity is becoming more popular and poses a variety of potential wildlife problems.

Matters of Enforcement Needing Attention in Northern Yukon

Our patrol commitment in the north is supported by a minimal budget. There is no Conservation Officer hired specifically for the northern area and thus our effort to date primarily chronicles activity and recognizes problems. Some of the problems (or potential problems) which can be documented from our patrol effort to date are:

1) Dogs run at large from D.E.W. sites and other camps. At least 2 caribou calves were killed this spring by a loose dog at the Komakuk site.
2) Complaints of snowmobile hunting of caribou and wolves are received.
3) Disruption of peregrine falcon aeries by archeological workers and other operators, notably river travellers and photographers, continues to be a problem.
4) Non-residents in possession of firearms and/or hunting with native people.
5) Native people supplying non-resident camps with fish and game taken under special privilege.
6) Removal of falcons from nests for illicit trade.
7) Over-fishing at traditional 'fish-holes' along arctic drainages.
8) Transport of game or parts by helicopter.
9) Aircraft harassment of wildlife.

The present policy of "borrowing" enforcement staff from the southern Yukon for short periods has been ineffective to date. There is no doubt that our mere presence during patrols is having benefits. It seems most logical, however, that if specialized enforcement staff are to be on the program at all, they would be most effective if they could stay all summer.

A policy of hiring an enforcement member specifically for the summer biological program may be feasible if his time is divided between assisting in biological research and enforcement. A native person would perhaps be preferable if qualified applicants exist.

1976

WATERFOWL POPULATION STATUS AND BREEDING ECOLOGY ON THE OLD CROW FLATS, YUKON TERRITORY

D. MOSSOP

Interim Report:

Part 1 - Demographic Studies
Part 2 - Climatic Studies
Part 3 - Banding STudies

Interim Report

D. Mossop

Waterfowl Population Status and Breeding Ecology on the Old Crow Flats, Yukon Territory.

Introduction

This segment of a continuing study of the ecology of the Old Crow Flats was begun in 1974 with initial aerial reconnaissance. (Mossop, 1974). The area under study is about 1,600 square miles, located 20 miles north of Old Crow, Y.T., and is responsible for supporting much of the wildlife the people of Old Crow depend on for trapping and hunting. The purpose of this work is to accumulate information on the ecology of the Flats from which to devise management techniques and on which to base land use decisions in the future. (See 1975 Interim Report, Mossop, 1975).

The objectives of the 1976 field season were:

1) Continue gathering demographic data on waterfowl populations.
   a) Aerial census of breeding population.
   b) Aerial census of moulting waterfowl.
   c) Brood census.
2) Continue nesting studies of waterfowl.
   a) Identify strategies and adaptations to northern conditions.
3) Habitat analysis and use by waterfowl and study of other environmental parameters affecting wildlife on the Flats.

Timing of the Field Work

Personnel were in the field from May 20, 1976 to September 10, 1976.

PART 1

Demographic Data of Waterfowl Populations Using the Old Crow Flats - 1976 -

(1) Aerial Counts

Waterfowl were counted from a Bell 47G helicopter flown at an altitude of 50 - 75 feet above ground at a speed of about 60 m.p.h. Identical transects and segments as those established in 1974 and 1975 were flown.

Pilot L. Osburn flew all the transects; Bob Hayes navigated the straight lines and made additional observations including a moose count done concurrently (See section 4). D. Mossop made all waterfowl counts. Ducks were counted in a transect of 1/8 mile wide and geese and swans in a 1/4 mile transect. Coverage of the Flats was 2.12%.

Two surveys were conducted in 1976. One on May 30-31 was designed to give a count of breeding ducks (especially dabblers) on territory. The second on September 6 gave an indication of accumulation of moulting ducks on the Flats and a count of numbers available after commencement of the hunting season.

The aerial counts were corrected by the factors determined through ground counts in 1975.

Table 1 Waterfowl Counts, Old Crow Flats, 1976,

Corrected For Visibility Bias

Species	May 30 - 31 Count	May 30 - 31 Adjusted Count	May 30 - 31 Whole Flats	Sept. 6 - 7 Count	Sept. 6 - 7 Adjusted Count	Sept. 6 - 7 Whole Flats
Canvasback	3	3	140	350	350	16,520
Scaup spp.	1,053	769	36,296	3,694	2,697	127,298
Ring-neck	8	8	378	5	5	236
Goldeneye spp.	-	0	-	25	25	1,180
Oldsquaw	299	308	14,538	312	321	15,151
Scoter spp.	327	451	21,287	585	807	38,090
TOTAL DIVERS:	1,690	1,539	72,640	4,971	4,205	198,476
Mallard	18	4	189	40	8	378
Pintail	349	422	19,918	933	1,128	53,242
Wigeon	281	102	4,814	1,205	434	20,484
Green-winged teal	47	401	18,927	165	1,409	66,505
Shoveler	8	8	378	-	0	-
TOTAL DABBLERS:	700	937	44,226	2,343	2,979	140,608
Loon	39	137	6,466	92	322	15,198
Goose (grey)	108	108	2,549	63	63	1,487
W. swan	20	20	472	53	53	1,250
Gull, tern	55	71	3,352	-	-	-
Grebe	1	30	1,416	1	30	1,416
GRAND TOTALS:		2,842	131,121		7,652	358,435

Discussion

Annual variations in breeding population sizes and moult concentrations among waterfowl are common ~~phenomenon~~. Habitat conditions on alternate moulting areas and breeding grounds elsewhere generally can be used to explain the variations. A steady decline in the number of moulting ducks on the Old Crow Flats from 1974 - 1976 probably reflects improving conditions on alternate moulting areas. Unfortunately, our counts are not sufficiently widespread to determine the location of (for example) the Flats' missing sea-ducks and canvasback in the current year. The need for cooperation between agencies involved in waterfowl work in different jurisdictions is obvious.

In many ways waterfowl habitat is critical in years when options become limited elsewhere. The Old Crow Flats is hypothesized to be a very stable wetland habitat. This, in all likelihood, ensues because of its permafrost base and lack of dependence on regional climatic conditions. (Our climatic investigations and limnological observations ---part 2--- are our attempt to better understand this feature of the Flats). If this idea can be substantiated, the Flats will be described as a vital "last ditch" wetland in north western Canada. If so, management and land use decisions will have to take this into account.

These counts reflect a number of changes in duck use of the Flats in the current year. The early count is probably a more accurate estimate of the breeding population of dabblers than has been obtained to date. At that time dabblers were well into breeding behaviour; on the other hand diving ducks were still in large flocks and therefore the transects probably yielded a less accurate count of them. The ice melt apparently plays a large role in duck distribution at that time of year (see part 2).

The number of dabblers counted in the early count was almost identical to 1975's early count (approximately 45,000 birds). This, in spite of a significantly lower number of wigeon and a tripling in the number of green-winged teal.

The number of divers in the early count was about ½ that of the early count in 1975. This probably was due to the clumped distribution of the divers at the time. The number of divers in the later count adjusted itself upward - further indicating bias in the early count. A count about the end of the first week of June (as in 1975) would apparently be the most economical way to census both segments although the most accurate would be an early count in May for dabblers and a later count in June for divers.

One feature of the diver count remained unchanged through the summer and is of significance. The number of sea ducks (especially the scoter species but also oldsquaw) was significantly lower this year than in the last two years.

The late count as it has for the last three years, shows an influx of waterfowl to the Flats during moulting and pre-migration. Scaup, the most common ducks on the Flats came in about equal numbers as did goldeneye, pintail, wigeon and green-winged teal. Canvasback did not moult on the Flats in the numbers they did last year (57% decline). Scoters and oldsquaw also showed large declines (50 - 60%). The overall number of ducks using the Flats for moulting was down from 450 thousand to 340 thousand birds.

The total breeding population on the Flats according to these counts is in the order of 17,500 pairs (approx. 10 pairs/sq.mi.).

(b) Brood Counts.

Brood counts were taken from canoes by paddling lengths of shoreline as was done in 1975. All broods seen from shore to the approximate middle of the lake were identified and counted.

To extend coverage of the central Flats area new search routes were explored in addition to three established in 1975. Counts were conducted from July 14 to August 16; the earlier counts primarily netted dabblers and the later ones, divers.

Table 3: Brood Counts - Old Crow Flats - 1976

Transect Number	Length (miles)	Date	A.Loon	G.Scaup	L.Scaup	W.W.Scoter	Oldsquaw	Mallard	Pintail	Wigeon	G.W. Teal	W. Swan
1	8.2	July 14	1					1		5	1	1
2	10.2	July 18	3		1							
		Aug. 16	(2)		(1)	1					1	
3	5.2	July 23							1	8		
		July 27				1				3		
4	7.8	July 24		2	1	3		1	1	8		
5	1.8	July 25	1		1			1		3	2	
6	1.0	July 28				1				1		
7	5.6	July 31		1	1	3	1			3	2	
8	3.7	Aug. 1	1			1	1			1		
TOTALS:	43.5mi.		6	3	4	10	2	3	2	32	6	1

TOTAL BROODS: 69 (1.59/mile)

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1	8.2	July 14	1					1		5	1	1
2	10.2	July 18	3		1							
		Aug. 16	(2)		(1)	1					1	
3	5.2	July 23							1	8		
		July 27				1				3		
4	7.8	July 24		2	1	3		1	1	8		
5	1.8	July 25	1		1			1		3	2	
6	1.0	July 28				1				1		
7	5.6	July 31		1	1	3	1			3	2	
8	3.7	Aug. 1	1			1	1			1		
TOTALS:	43.5mi.		6	3	4	10	2	3	2	32	6	1

TOTAL BROODS: 69 (1.59/mile)

(c) Nest Search.

Search was conducted in a manner similar to that done in 1975. Sections of shoreline were chosen to give extensive coverage of the Flats and a good diversity of shoreline types. Search was conducted on foot by walking through all habitat from water line to spruce forest. This search was aimed primarily at divers.

In conjunction with this search, the shoreline vegetation was described according to the rough classification suggested in the 1975 interim report:

Woody Vegetation	(Dry) Outer Shore	Submerged Shore
(a) Spruce-tundra	1) nil-actively eroding	I) - nil
(b) Shrub-tundra	2) herb-interrupted erosion	II) - mud flat-Senecio
(c) Poplar	3) grass association, beach or marsh	III) - sedge mat
	4) sedge beach or marsh	IV) - true emergents
	5) wet shrub	V) - submergents

At each nest site, the vegetative cover was noted. Over the two years of field work a total of 93 waterfowl nests have been located. Of these 67% were located in areas having sedge grass beach, emergents or sedge mat formation (Table 5). Dabblers, Oldsquaw and some swans use spruce tundra. Our shoreline studies are therefore primarily aimed at diving ducks notably the scaup.

Areas on the Old Crow Flats having emergent vegetation and/or sedge mat formation are fairly localized. An intensive study area was established in one of the areas. This area, called "Pintail Slough" will be the basis for much of the future waterfowl study on the Flats. It has been search intensively for nests and its vegetation associations will be described.

A major contribution toward understanding the ecology of the Flats will be a description of the formation and decay of these unique areas. All major examples will be mapped.

Table 5. Waterfowl Nests and Shoreline Vegetation - Old Crow Flats - - 1975-76

	'high' tundra	spruce-tundra	shrub-tundra	poplar	herb beach	grass beach or marsh	sedge beach or marsh	wet shrub	mud flat-Senecio	sedge mat	emergents	submergents
	(dry assn's)					(beach assn's)			(submerged shore)			
G. Scaup										4		
L. Scaup						3		1		3		
Unident.Scaup						1	4					
Oldsquaw		3	1									
Pintail		2										
Wigeon		1						1				
Green-winged Teal		1	1									
W.F. Goose	1											
C. Goose		1										
W. Swan		5					6		1	9		
R.T. Loon											3	
A. Loon			1			1	2	8		10	8	
R.N. Grebe							1					3
Horned Grebe							1				6	
TOTALS:	1	13	3	0	0	5	14	10	1	26	17	3

(d) Clutch and Brood Sizes.

Table 6. Waterfowl Clutch and Brood Sizes - Old Crow Flats - 1976

Species	Clutch	Class 1-a ducklings	Class 1-b and older
	(sample sizes in brackets)		
G. Scaup	6.8 (5)	5.5 (2)	9 (1)
L. Scaup	6.5 (4)	7.8 (5)	5.2 (4)
Scaup (incl.unident. scaup)	6.8 (10)	7.0 (8)	5.5 (6)
Oldsquaw	3 (2)	7 (1)	4.0 (4)
W.W. Scoter	-	6.3 (7)	?(amalgamate up to 300 in group)
Pintail	-	7.2 (3)	3.3 (9)
A. Wigeon	-	6.8 (10)	4.0 (31)
G.W.T.	-	4.5 (2)	5.2 (7)
N. Shoveler	-	7 (1)	3.5 (2)
Mallard	-	6 (1)	3.3 (3)

PART 2

Climatic Investigation and Studies of Spring Break-up on the Old Crow Flats.

A. Pattern of Spring Break-up and Early Spring Waterfowl Staging

One of the most interesting feature of waterfowl in arctic latitudes is the spring migration. As a rule this migration takes place prior to general spring break-up and is dependent upon unique and highly traditional staging areas where for various reasons open water occurs unusually early. The use of such areas is apparently a strategy for survival in the far north where general break-up comes too late for an adequately long breeding season.

In the southern Yukon such areas occur at the outlets of large, deep lakes (Mossop, 1976: Game Branch Manuscript). In the far north such a phenomenon is unknown. The early spring ecology of waterfowl on the Flats is one important unknown.

The Survey:

A high level (500'a.g.l.) reconnaissance flight was conducted on May 23, 1976, by helicopter. The purpose was to survey the entire Flats, mapping all open water areas and to obtain a general estimate of waterfowl use in each case.

The flight lasted 4 hours. Areas of open water were very visible on the generally white background and it is unlikely any were missed. A cursory count of waterfowl on each was made, the vegetation associated with the area noted, its acreage estimated and any other wildlife in the area were noted.

Results:

May 23

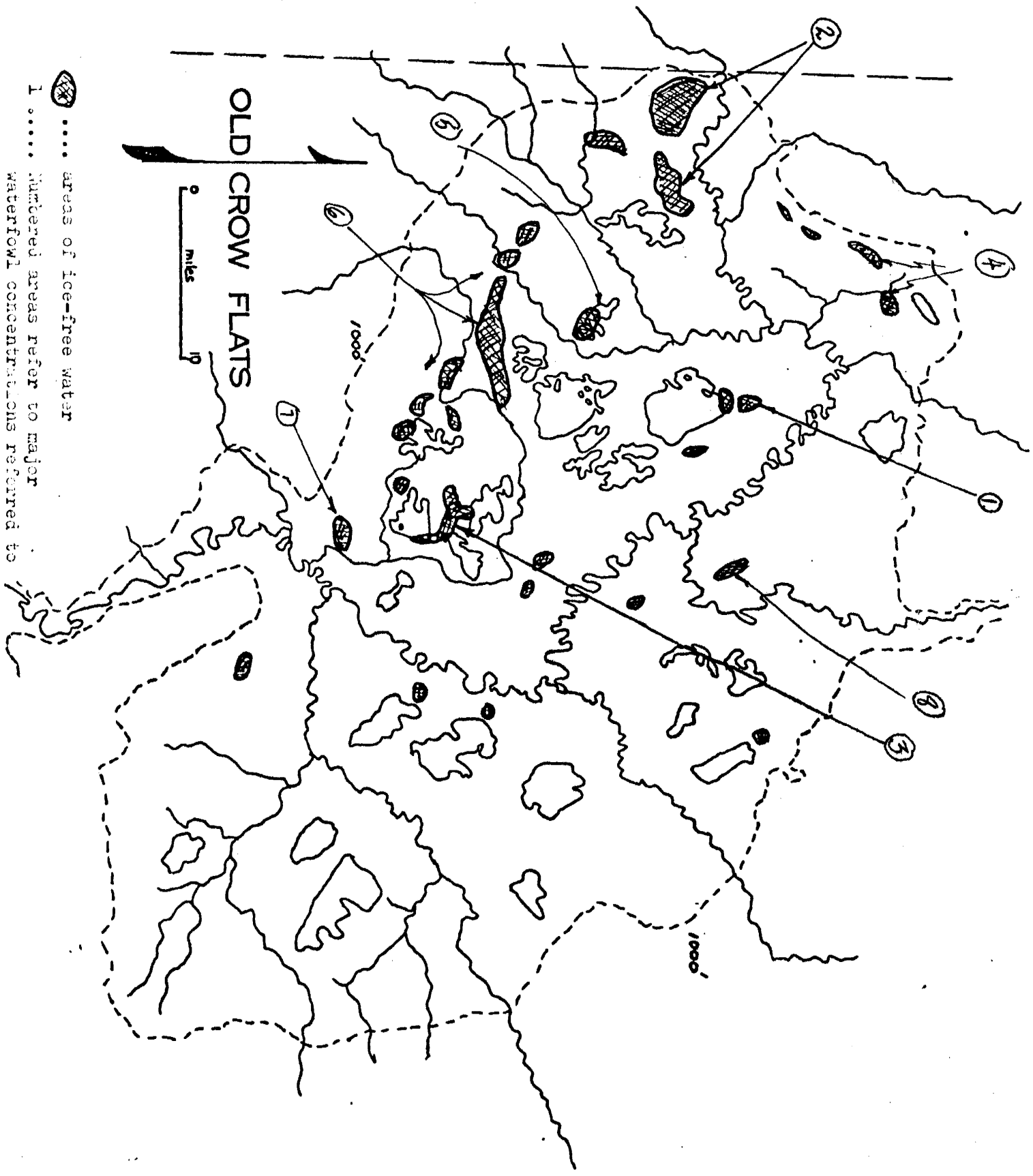
Very little melt water was present at the lake margins. Melt ponds on tundra areas were likewise rare and little used by waterfowl. The flooding of the Old Crow River had begun and extensive areas of willow were found under water. These areas were being used by a very few dabblers. The general impression of the Flats itself was of winter landscape with total snow cover.

A startling result of this flight was the discovery of a series of lakes and marsh areas which were ice-free. The distribution of the areas appeared non-random, extending in a loose chain across the south-western flanks of the Flats. Their appearance among the totally frozen water bodies was especially striking. (Fig. 1).

The immediate impression was that if these are indeed an annual phenomenon, their presence is undoubtedly of great importance to the ecology of the Flats. Waterfowl and other wildlife were seen in abundance near the sites.

The areas are catalogued in Table 1 with notes on waterfowl use and numbers of other wildlife observed. The sites in the western extremities of the Flats seem especially important to moose in the early spring.

Figure 1. Areas of open water, May 23, 1976, on the Old Crow Flats showing major waterfowl staging areas in early spring



.... areas of ice-free water

1 ..... Numbered areas refer to major waterfowl concentrations referred to in text.

Table 1: Areas of open water used for spring staging, Old Crow Flats, May 23, 1976. (see fig. 1)

Site #	Approx. Size	Vegetation	Waterfowl		Other Wildlife	
1	500 - 800 acres	Shallow lake Sedge Marsh	Ducks W.swans S.crane	1600 2 2	Moose	1
2	1000 acres	Sedge marsh Stable lake shore	Ducks Goose W.swan Gulls	3775 160 31 1000	Moose	19
3	1000 acres	Sedge marsh	Ducks W.swan Goose	400 12 17	Moose	1
4	500 acres	Drained lake	Ducks W.swan	500 2	Caribou	2
5	500 acres	Stable lake	Ducks	525		
6	2000 acres	Stable lake and sedge marsh	Ducks (scattered throughout) Goose W.swan	2000 30 15		
7	500 acres	Sedge marsh	Ducks Goose W.swan	100 20 2		
8	800 acres	Poorly developed emergents in drained area	Ducks Goose W.swan	225 165 2	Caribou	15

Discussion:

An earlier survey and more intensive groundwork will be necessary to properly develop this aspect of the ecology of the Flats. The survey was conducted at a time when most dabblers had likely been on the Flats some time. As the early migrational staging is probably the most important, a few of the areas mapped are undoubtedly of more value than others. The waterfowl activities that take place on the sites should be studied. Limnological investigation should include water temperatures and plankton availability. Vegetative surveys should be designed to give at least a rough idea of associations. Some of this work will be grafted into the 1977 program.

Cursory examination seems to indicate little relationship between the type of habitat, or water depth, and the appearance of early ice-free water. Commonly ancient "dry" lakes with well-developed sedge mats were associated with water. However, deeper lakes were also ice-free. (In instances immediately neighbouring lakes were frozen solid). The string of open water areas extending S.E. across the southern flats (number 6 in Figure 1) is especially intriguing.

Speculation on causative factors does not seem possible at present. Suggested areas of study will be the track of weather systems and adiabatically heated air S.E. across the southern flats, the presence of geological phenomenon below the overburden and warm spring sources in the Crow Ranges along the S.W. flanks of the Flats.

B. WEATHER

During this study a small weather station has been maintained and read twice daily. Its location at the Schaeffer Lake base camp is approximately in the middle of the 'flats'. Maximum and minimum temperatures are taken, precipitation measured and notes are kept on wind and cloud cover.

The objective of this work is, in part, to compare the weather progression of the 'flats' with that gathered at Old Crow near the mountains to the south of the 'flats'. The idea is being tested that part of the explanation for the high biological productivity of the Flats is a result of unique weather patterns. Its physiography would apparently support this notion; the plain is ringed by mountains and the area of the northern Yukon in general receives minimal rainfall. I am particularly interested in measuring percentage cloud cover and surface temperatures as indications of insolation.

Rainfall is valuable primarily as it relates to cloud cover. Rain per se is probably insignificant in terms of primary productivity as the high water table of the flats is primarily a permafrost-induced phenomenon. The following table gives summaries of weather data gathered at Old Crow and on the Flats. Final conclusions will await at least one additional year of data. The data recorded at Old Crow, in particular, have not apparently been recorded in the past with the consistency which our analysis requires.

A method for comparing our records of cloud cover with those taken at Old Crow has yet to be devised. To date the only conclusion that is possible is that approximately twice the number of days are recorded in Old Crow with precipitation totaling over 0.1" as are recorded on the Flats with that amount. (22 in Old Crow, 10 on the Flats).

Table 6. Maximum Daily Temperatures (4-day averages), Comparing Old Crow and Schaeffer Lake - Old Crow Flats, 1975-76.

Month	4-day Period	Flats	Old Crow
1975			
June	1	--	51
	2	62	62
	3	60	61
	4	69	69
	5	64	63
	6	73	72
	7	71	70
	8	80	81
July	1	--	76
	2	80	78
	3	81	82
	4	76	79
	5	62	66
	6	63	62
	7	--	57
	8	--	68
August	1	66	60
	2	51	56
	3	54	61
	4	77	80
	5	70	71
	6	67	68
	7	56	62
	8	59	58
September	1	51	--
1976			
May	6	54	55
	7	50	50
	8	49	51
June	1	60	63
	2	63	66
	3	59	62
	4	68	65
	5	59	57
	6	66	66
	7	63	--
	8	57	--

Table 6 (cont'd.)

1976 Month	4-day Period	Flats	Old Crow
July	1	68	65
	2	62	68
	3	58	56
	4	70	68
	5	73	68
	6	81	78
	7	70	71
	8	79	81
August	1	78	80
	2	62	67
	3	66	61
	4	66	61
	5	58	66
	6	62	57
	7	71	70
	8	69	66
September	1	60	--
	2	52	--

Table 7. Rainfall at Old Crow and on Old Crow Flats - Summer 1975/76

	Days with:	Trace	to .1"	.1"+	
1975:					
June 7-30	Old Crow:	?	3	3	
	Flats:	7	3	1	
July 6-25	Old Crow:	?	?	2	
	Flats:	1	0	1	
Aug. 3-31	Old Crow:	8	5	1	
	Flats:	2	3	1	
1976:					
May 22-31	Old Crow:	?	0	5	
	Flats:	0	0	2	
June 1-30	Old Crow:	?	4	6	(June 1-13
	Flats:	6	2	2	data missing)
July 1-31	Old Crow:	?	?	?	(none recorded)
	Flats:	4	0	1	
Aug. 1-31	Old Crow:	?	1	5	
	Flats:	6	1	2	

PART 3

Banding Studies

The objectives of this work are:

1. To determine harvest levels and areas of harvest pressure on the Old Crow Flats' waterfowl.
2. To determine wintering areas and migrational patterns.
3. To measure the discreteness of the Old Crow Flats' waterfowl populations.

The effort is directed at two segements of the population: the breeding population and the moulting concentrations.

Breeding ducks are captured with bait traps attended throughout the summer. The pintail slough study area and the Schaeffer Lake base camp are the banding stations. Both are located roughly in the centre of the Flats.

Moulting birds are captured by being driven into large drive traps constructed in the lakes used for moulting. This is carried out on a variety of lakes, all located in the central part of the Flats.

The banding effort in the 1976 season netted a total of 1,753 birds. This is just over double the number banded in 1975 and probably represents our ultimate capability as our program is now designed. A similar effort for 1977 is planned.

Table 1: Waterfowl Banded 1975-76 - Old Crow Flats.

Species	1975	1976	Total
A. wigeon	28	54	82
Pintail	123	382	505
Mallard	27	93	120
N. shoveler	-	7	7
A. g.w. teal	22	354	376
B.W. teal	-	1	1
Oldsquaw	26	4	30
Unident. scaup	36	69	105
Greater scaup	-	54	54
Lesser scaup	21	80	101
W.W. scoter	1	3	4
Surf scoter	4	0	4
Barrow's goldeneye	506	602	1108
Canvasback	-	5	5
Redhead	-	1	1
W. swan	28	44	72
Herring gull	18	-	18
			2593

Band returns

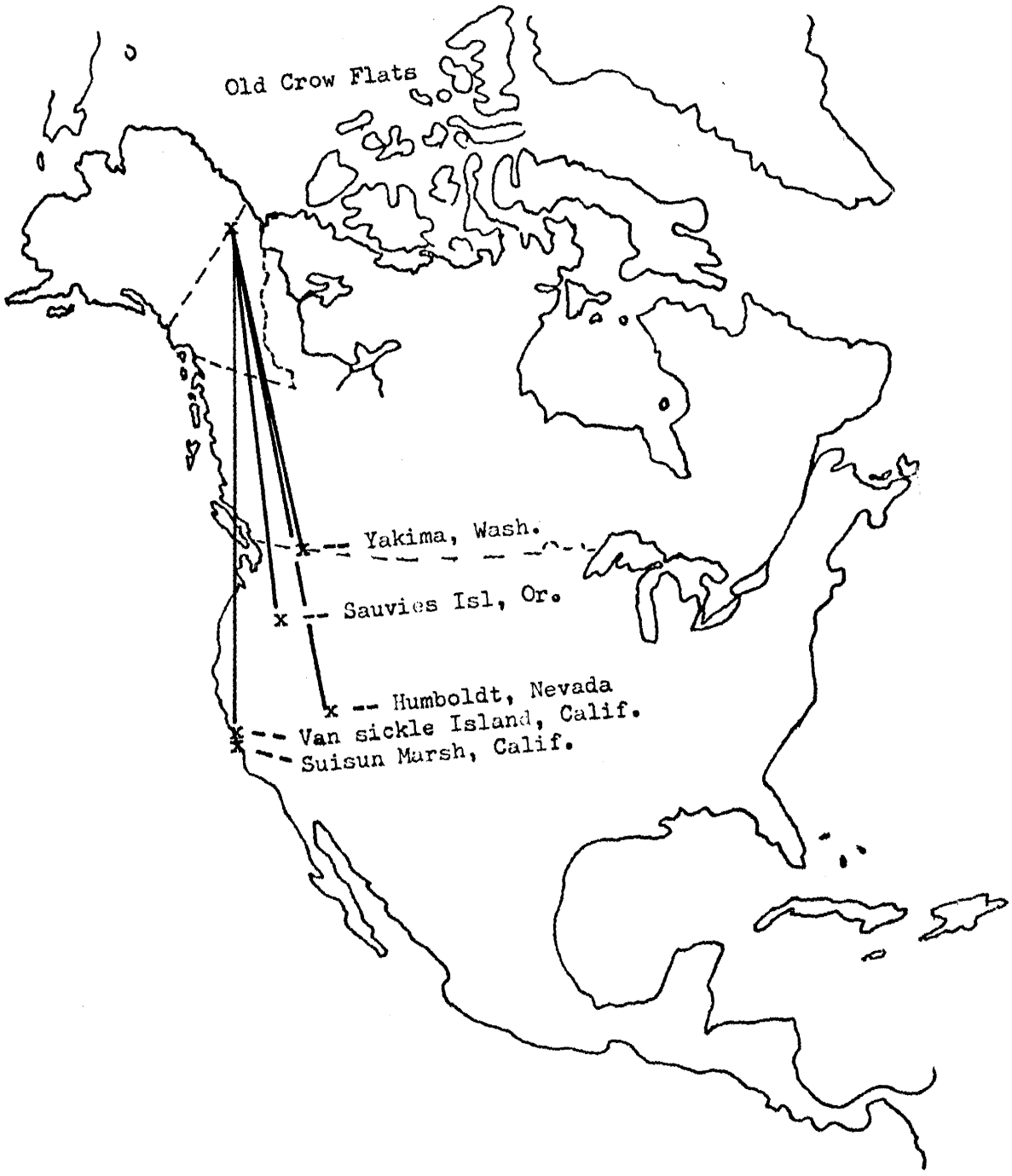
The number of returns received from the relatively small 1975 banding effort was encouraging. However, the banding program has not been in existence long enough to draw lasting conclusions. Some of the species appear to be harvested at a relatively good level while others (Barrow's goldeneye) are apparently harvested very little.

The species for which returns were received and the number of bandings for those species are as follows:

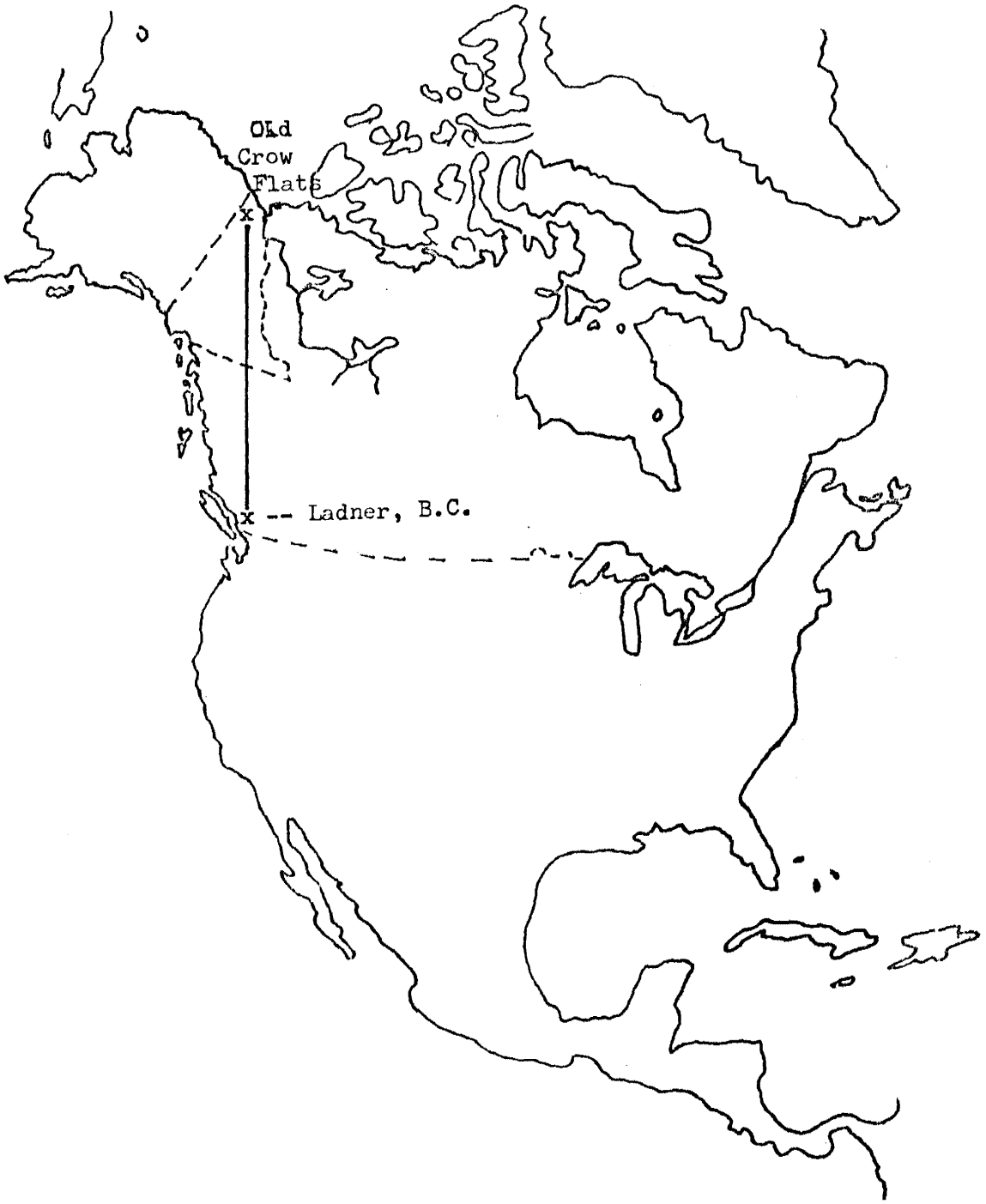
Species	# Returns	# Bandings	% Return First Year
Pintail	5	123	4.1%
A. wigeon	2	28	7.1%
Mallard	1	27	3.7%
Scaup	1	57	1.8%
All Returned spp	9	235	3.8%

All returns of dabblers occurred from the western coastal areas south from Vancouver to California. (The following figures show band recovery locations). The one scaup was returned from the Gulf of Mexico.

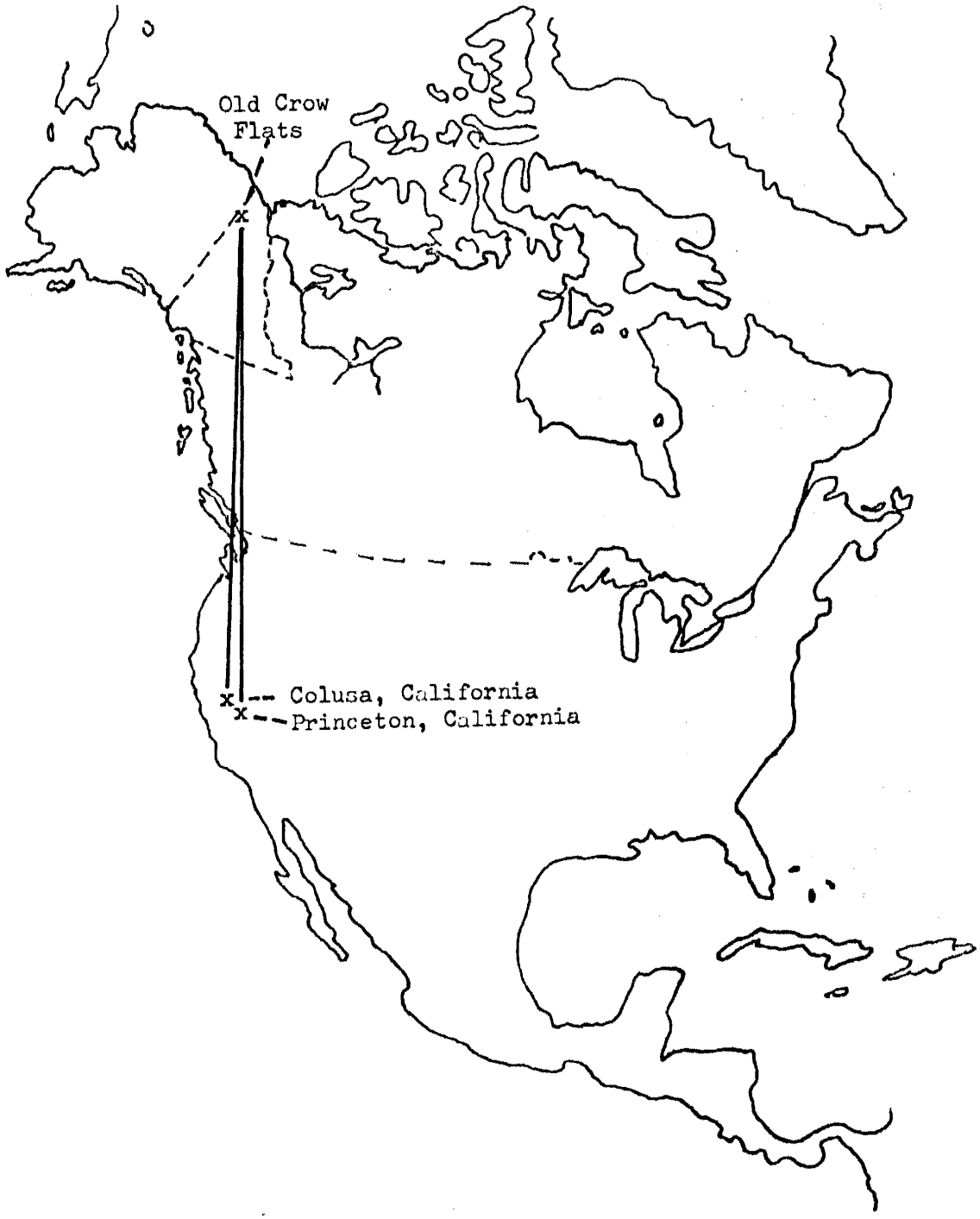
Pintail - band returns, 1975



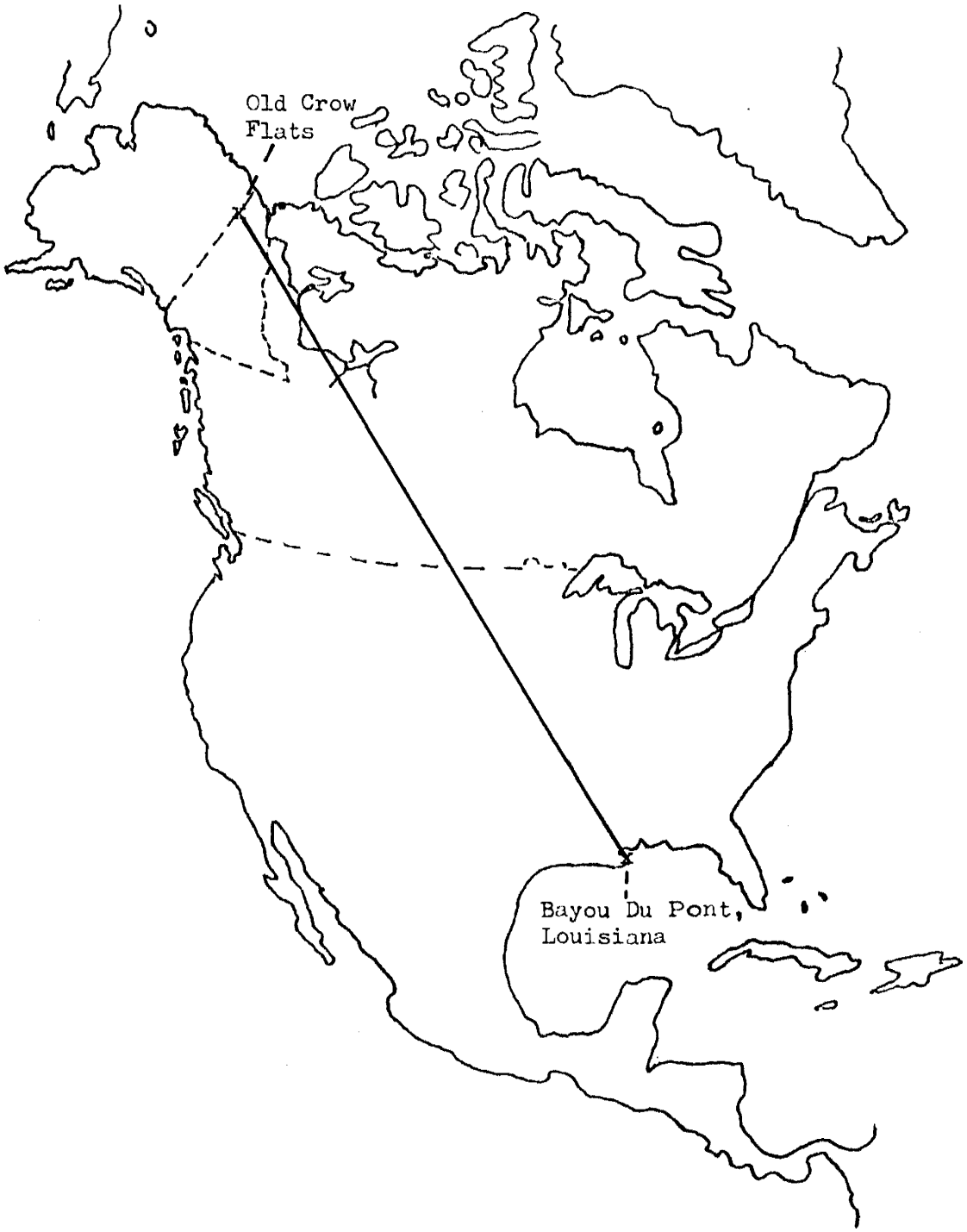
Mallard - band returns, 1975



American Wigeon - band returns, 1975



Scaup - band returns, 1975



Whistling Swan -- band returns, 1975

1976

STUDIES OF RAPTOR POPULATIONS IN THE NORTHERN YUKON TERRITORY

D. MOSSOP

Interim Report:

Part 1 - Peregrine

Part 2 - Gyrfalcon

Raptor Studies - Part I

Productivity studies of the peregrine falcon in the Porcupine drainages, N. Yukon 1976.

D. Mossop

This work is a continuing study of occupancy and productivity of Peregrine Falcon aeries in the area of the Old Crow and Porcupine drainages. Historically these waterways have supported a relatively dense population of Peregrine Falcons. With the continent wide decline in their numbers, it became evident that peregrine aeries in the northern Yukon were beginning to be vacated. Many of the sites included in this survey have been visited on a more or less regular basis since the early 1960's. In 1973 the C.W.S. conducted a systematic search for aeries in the northern Yukon and in 1975 the Yukon Game Branch began annual surveys to monitor the performance of the population on a regular basis.

In 1975, of the sites visited annually, 55% were occupied and 30% produced young. This represented one of the healthier sub-populations in the 1975 North American peregrine survey. However, it offered no indication that the population had ceased its decline.

1976 Methods and Results

Visits to nest sites were carried out early in the year to ascertain occupancy of the sites by adults, and later to observe the presence of young. A small helicopter was used in the first visit; all that was recorded was the presence or absence of adults at the nesting cliff. This was done June 15-20.

The later visit was done by canoe and power boat from July 17-28. The number of young in the nest, size of young, behaviour

of the parents, and presence of wash were recorded. A sample of castings were collected for analysis. In a few instances a helicopter was used for these late visits in which cases the machine was landed and the site was approached on foot to minimize disturbance.

During this phase an extensive survey of the upper Porcupine drainage was carried out by canoe as far as the Dempster Highway crossing of the Eagle River. The object of this survey was to locate new aeries and suitable nesting cliffs.

Wildlife technician, Bob Hayes, assisted in the collecting of data and castings at the nest site and Conservation Officer, Tony Nette, assisted in the canoe survey. The young at nests were banded only when this could be done with a minimum of time and disturbance.

Table 1 summarizes the productivity information of the 20 aeries constituting the study population. It is of interest that virtually every parameter which can be described with these data indicate increase over 1975.

Occupancy of the sites increased from 55% to 60%. In two instances, sites which were unoccupied in 1975 were occupied by pairs in 1976, and in two other instances, sites which were occupied by lone adults in 1975 were occupied by pairs this year.

40% of sites were successful in producing young this year as compared to 30% in 1975. In 1975, 8 young are known to have been fledged in the study population,while in 1976, 18 were - - an increase of over 100%. At the successful sites an average 2.4 (±0.975) young were fledged in 1976. This is significantly higher than in 1975, when successful nests fledged 1.5 (±0.58) young.

These increases were offset slightly by two aeries which failed at least partially as a result of human disturbance. One site having been disturbed drastically in 1975, and again in 1976, by archeological researchers, has been abandoned completely.

Table 1: Occupancy and Productivity of Peregrine Falcon Aeries in the Porcupine-Old Crow Drainages, 1975-76.

Aerie #	1975 Occupied	1975 Young Produced	1976 Occupied	1976 Young Produced
7385	F	No	M + F	4
2095	-	-	M + F	No
9998	M + F	1 yn	M + F	3
9703	No	-	No	-
7090	No	-	M + F	No
7793	M	No	M	3
5897	No	-	No	-
4585	M + F	Yes	M + F	2
4191	No	No	No	-
3289	F	Yes	M + F	No
1883	M + F	No	M + F	(1+)
1080	M + F	2 yn	M + F	2
5300	M + F	2 yn	M + F	1
5206	M + F	No	M + F	No
4523	No	-	No	-
4845	M + F	No	No	-
5534	No	-	No	-
5843	No	-	No	-
5450	No	-	No	-
4359	No	-	No	-
4962	M + F	1 yn	M + F	2

Total Sites	Total Occupied	Number Successful	Total Occupied	Number Successful
20	11 (55%)	6 (30%)	12 (60%)	8 (40%)

In 1975, a pair had occupied the site. At another site the female disappeared midway through the summer and it is suspected she met with foul play.

Discussion

These results indicate that this peregrine population increased its nesting performance this year. They are of importance because they relate to the hypothesis that D.D.T.-related pesticides in the environment have caused the decline of the peregrine through interference with reproductive success. It was predicted that, with the banning of D.D.T. in the U.S.A. and Canada, the few remaining wild birds, if protected adequately during the period when residual pesticide remained in the ecosystem, would begin to show recovery through increased productivity. This could be beginning in the northern Yukon populations.

Although reproductive performance has apparently increased this year, the production of 18 young (from an adult population of 24) may be only marginally significant to the population demography. These 18 young represent a productivity of about 75%. Since up to 70% of fledglings can be expected to die before reaching breeding age, the study population is probably only raising adequate young for stability at present.

Raptor Studies- Part II

Productivity Studies of the Gyrfalcon in N. Yukon 1975

D. Mossop

This work was begun in 1973 by the C.W.S. (Schowalter, 1973), who conducted an intensive survey of drainages in the northern Yukon for raptor nest sites. Canadian Arctic Gas Ltd. contracted L.G.L. in 1974 (Platt, 1976) to continue gyrfalcon studies in the northern Yukon to support their application to build a gas pipeline across the Yukon. That field work ended in 1975.

In the present year the Yukon Territorial Game Branch adopted the study as part of its general biological program in the northern Yukon. The purpose of the research is to measure occupancy and productivity of known aeries on an annual basis. This will allow assessment of the demographic state of the population associated with other developments in the northern Yukon. It will also lay the groundwork for more involved population research with the birds in the future.

1976 Methods and Results

30 aeries were visited in the northern Yukon in the summer of 1976. A (Bell 47-G) helicopter was used in the survey. One survey was conducted on June 10-11, in which 23 sites were visited. This visit was timed to coincide with the presence of small young in the nests. A later visit was made on August 9 - 15, when the remaining 8 sites were visited and some of the earlier sites were rechecked. Considerable time was spent in additional search of the waterways for new nest sites. Wildlife technician Bob Hayes assisted with the gathering of data and banding of young.

At each site an examination was made of the cliff face for perched or flying adults, wash, and youngsters in the nest. The numbers of youngsters and eggs in the nest was recorded, the size of young recorded, and in most instances the young were banded. Notes were made of the parent birds' behaviour.

Occupancy of the site was established by the observing of adults in the general vicinity. In instances when no visit was made before July when the birds leave the nesting cliff, occupancy was determined by the presence of white wash at the nest and perch points. Productivity of the few sites visited only in August when no youngsters would be observed was established by indirect observation of large amounts of fresh wash at the aerie and by large amounts of fresh prey remains at the site.

Of the 30 sites visited, 24 (80%) showed evidence of occupancy. 18 (60%) showed evidence of having raised young. This information is summarized in Table 1.

At the successful sites an average of 3.2 (±1.26) young were fledged. A similar 3.16 (±1.02) were raised at successful sites in 1975 (Platt et al 1976).

Discussion

The gyrfalcon population in the northern Yukon increased productivity significantly in 1976. It is of interest that this increase coincided with an eruption in the numbers of willow Ptarmigan in the coastal drainages (see "Ptarmigan counts, 1976").

The occupation at gyrfalcon aeries and productivity of young from them may be related directly to the abundance of prey. This relationship could mask changes in occupancy and productivity brought about by other factors, such as human disturbance. The experiments conducted by L.G.L. for Canadian Arctic Gas Ltd. were apparently carried out during a declining phase in Ptarmigan numbers.

Their results are currently being re-evaluated and supplemented with the data collected by the Yukon Game Branch (Platt et al 1976).

Table 1: Nesting Occupancy and Productivity of Gyrfalcon Aeries in N. Yukon

Nest #	1975 Occupied	1975 Young	1976 Site Occupied	1976 Young Produced	1976 Number Banded
0815 & 0917	yes	2	yes	2 plus	nil
1396	yes	no	yes	yes	nil
2100	yes	4	yes	yes	nil
2264	no	no	yes	no	nil
2809	yes	no	yes	yes	nil
2969	no	no			
4152	yes	no	N.W.T. Sites - No Visit		
4962	no	no			
5670	yes	no			
7824	no	no	(moved to 8731)	2	nil
7887	yes	no	no	no	nil
8045	yes	4	yes	4	4
8194	yes	4	yes	2	nil
8606	no	no	yes	4	3
8707	no	no	yes	no	nil
8719	yes	4	no	no	nil
8933	yes	2	yes	4	nil
8963	yes	4	no	no	nil
9153	yes	1	yes	yes	nil
9253	no	no	yes	5	5
9422	yes	3	yes	3	3
9542	yes	no	(moved to 9540)	5	nil
4011	yes	4	yes	1	1
4792	yes	no	yes	3 + 1 E.	3
5084	yes	3	(moved 200 yds.)	yes	nil
5103	no	no	yes	no	nil
5285	no	no	yes	no	nil
5587	no	no	no	no	nil
5792	no	no	yes	no	nil
6465	yes	no	yes	yes	nil
7080	no	no	no	no	nil
7472	yes	2	yes	no	nil
9364	yes	3	yes	3	nil
9757	no	no	no	no	nil
	21 (61.8%)	13 (38.2%)	24(80%)	18 (60%)	19 young
Total Sites:	34		Total Sites:	30	

Gyrfalcon nesting summary, Northern Yukon, 1976.

D. Mossop, Yukon Territorial Game Branch.

Map 117 A

F.G. 0815 and 0917	0815 was visited on June 11, ravens and rough-legged hawk are occuping site. One gyrfalcon seen here.
	Aug. 15: Site 0917 was visited. An active aerie with one adult gyrfalcon and at least 2 young are present.
ML 1396	No early visit was made.
	Aug. 9: This site contained a considerable amount of fresh white wash. No birds were seen but it seems almost certain young were raised.
MM 2100	No early visit was made.
	Aug. 9: The nest has lots of fresh wash. A perch across the creek also contains fresh wash. No birds were seen. Probably raised young here.
FF 2264	No early visit.
	Aug. 15: 1 adult was seen, no nest or large white wash is visible, small amount of white on several perches.
MM 2809	No early visit.
	Aug. 9: Lots of white wash at nest and at various perches on cliff. Probably raised young. No birds seen.
ML 2969	No visit.
ML 4152	No visit.
ML 4962	No visit.
ML 5185	No visit.
ML 5670	No visit.
EG 7824	June 10: Golden eagle incubating. No gyrs seen.
EG 8731 (new site)	June 10: About 6 miles upstream from mouth of Canoe River with 2 young in nest.

Map 117 A (cont'd.)

LL 7887	June 11: Rough-legs at site, no gyrs seen.
EG 8045	June 11: 4 young plus female at site.
LL 8194	June 11: 2 young plus both adults at site.
EG 8606	June 10: 4 young plus female at site.
LM 8707	No early visit.
	August 15: A small amount of wash is visible on the cliff, no nest site or large wash.
LM 8719	June 11: Golden eagles at site. No falcons seen.
EG 8933	June 10: 4 young plus female at the site.
LL 8963	No early visit.
	Aug. 15: Golden eagle flushed from cliff. Old Rough-leg nest has a little wash, no falcons seen.
LL 9153	No early visit.
	Aug. 15: A very good aerie with lots of wash on the lower site. Probably raised young here. One adult gyr was seen near site.
EG 9253	June 11: 5 young plus female at site.
LM 9422	June 11: 3 young plus female at site.
EG 9542	June 10: Golden eagle incubating. At EG 9540 gyrfalcons have 5 young on the west side of river on a shale cliff. Probably the adults from 9542??

Map 117 D

EH 4011	June 10: 1 young plus female at site.
EG 4792	June 10: 3 young, one egg plus both adults at site.
EG 5084	June 10: No falcons seen, nest is unoccupied.
	August 16: About ¼ mile downstream — a good aerie with lots of wash is discovered. There is also a lot of wash in vicinity. Probably adults from 5084?? Probably raised young here.

Map 117 D (cont'd.)

EH 5103	June 10: 2 adults present but no young in nest.
EG 5285	No early visit (could not find).
	August 16: A small amount of wash was found in vicinity and one gyr flushed from the site. Probably did not raise young here.
EG 5587	June 10: No adults or wash seen.
EG 5792	June 10: Pair of gyrs flushed and circled. Probably a nest but could not locate.
EG 6465	No early visit (could not locate).
	August 16: Aerie has lots of fresh wash plus several good white perch sites. Probably raised young here; no falcons seen.
EG 7080	June 11: No falcons seen; rough-legs at site.
EG 7472	June 11: Pair of gyrs at site. No active aerie seen and adults disappeared immediately.
EG 9364	June 11: 3 young in aerie, both adults present.
EG9757	June 10: Golden eagle and peregrine falcon incubating at site, no gyrs seen.
	August 9: Peregrine falcons with young at site, no gyrs seen.

1976

INCIDENTAL WILDLIFE OBSERVATIONS

GAME BRANCH

NORTHERN YUKON TERRITORY

D. MOSSOP

1) Moose Counts - Old Crow Flats
2) Porcupine Caribou Herd
3) Grizzly Bear Sightings
4) Ptarmigan Counts
5) Ornithological Data

MOOSE COUNTS, OLD CROW FLATS - 1976

D. Mossop

Moose were counted from a Bell 47G helicopter flown on straight transects 50 - 75 feet above ground level across the Old Crow Flats. Similar transects as those described in 1974 (report on file) were used. The pilot was L. Osburn.

The survey was flown twice, once in late May, the other in early September. In addition, observations of moose taken incidental to other work on the Flats were recorded. This allowed accumulation of more data on calf crop and general movements which are here given.

Table 1. Number of Moose Counted on Transects, Old Crow Flats - 1976

Date		TRANSECT 1	2	3	4	5	6	7	8	Total Moose	Square Miles
May 30-31	Bulls	0	1	0	0	0	0	0	0	1	83.0
	Cows	1	1	3	0	0	1	9	0	15	
	Calves	0	1	0	0	0	0	1	0	2	
Sept. 6	Bulls	1	2	0	0	1	0	0	0	4	83.0
	Cows	4	3	3	1	1	1	4	0	17	
	Calves	0	1	2	1	0	0	1	0	5	

These counts show some differences from those of last year. The cow count is almost identical and varies little from count to count within any one year. For some reason, bulls were not counted with as great a frequency this year. It seems most logical to assign this to unknowns relative to distribution. The calf crop is also noticeably smaller than last year's.

Cow-Calf Ratio

Ground observations of cows are lumped with air counts for the purposes of the calculations.

Table 2. Cow-Calf Ratios, Old Crow Flats - 1976

	Transects (September)	Ground Counts (June - Sept.)	Totals	Rates
Cows	17	14	31	(cow-calf ratio)
Calves	5	5	10	100:32
Twins (sets)	nil	nil	nil	Twinning rate 0%

This indicates a significant decline in the production from this population in 1976. The calf crop, as measured, is about half that of 1975 and the twinning rate which in 1975 was 20% has dropped to zero.

The causes of this decline and its effects on the population are unknown. The overall increment to the population this year is in the order of 16% (down from 36% in 1975).

OBSERVATIONS ON THE MOVEMENTS AND BEHAVIOUR OF THE PORCUPINE CARIBOU HERD - 1976.

D. Mossop

May:

On arrival in Old Crow May 20, it was reported that caribou had been available for harvest all winter and had been shot virtually in all months. Many carcasses were observed in town.

Caribou had been crossing river headed north for two weeks.

May 21: Flights over Flats. Small bands of caribou are seen near Selma Lake apparently heading north (females).

May 23: Reconnaissance flight over Flats. Groups of bulls first seen. Groups of caribou were seen standing sedentary throughout Flats (mixed sex): 16, 5, 25, 100.

May 26: Patrol flight was taken down Blow River to Shingle Point, Herschel Island, Komakuk Beach, up Firth Valley, return to Old Crow Flats. Following groups of caribou were seen between Flats and Bonnett Lake - 14, 5 (bulls), 3, 4. Caribou are encountered in small bands throughout the southern Barn Mountains. None are then seen until the Komakuk area. At Herschel Island it is reported that there were no caribou around all winter (unlike 1975) but that cows are now appearing on the coast.

On a straight line flight from the mouth of the Firth to Komakuk and then from Komakuk to the entrance to the Firth Valley the following groups were encountered (all were female).

17 groups, mean group size 3.6 ±8.3. None were seen in Firth Valley.
At head of Thomas Creek 4 bulls were encountered and in Thomas Creek 15 bulls.

May 30 - 31: Transects were flown over Old Crow Flats to census waterfowl. The following caribou were seen: 8 bulls, 12 bulls, 40 bulls, 10 bulls, 10 mixed sex, 6 cows, 5 bulls, 14 bulls, 30 bulls, 5 bulls, 19 mixed sex, 11 bulls, 1 bull, 4 bulls, 12 mixed sex.

June 2: Surveillance flight was taken this date down Babbage River, Stokes Point, Komakuk Beach, Herschel Island, return via Firth Valley.
Caribou were encountered in groups of 4 - 25 beginning at Timber Creek entrance to Barn Mountains. All are apparently antlerless females. In the Babbage Valley 2 groups (20, 15) of antlerless females right at top of pass. No more were encountered until coastal plain where 2 were encountered.
On a straight line flight from Trout Lake to Stokes Point. Cows: 10, 2, 15, No calves. On direct flight from Stokes Point to Komakuk: cows - 4, 6, 7, 6, 3, 2; calves - 4.
On direct flight Komakuk - Shingle Point:

Komakuk - Firth (17 groups) 42 cows 21 calves
Firth - Roland Bay (15 groups) 47 cows 11 calves
Roland Bay - Babbage River (2 groups) 4 cows no calves
Babbage - Shingle Point - no caribou.

No caribou are encountered in Firth until Sheep Mountain where group of 10 is seen. A small group of bulls is seen on the divide between Thomas Creek and the Firth.

May 10: Flight into coastal drainages on falcon banding mission.
A scattered group of bull caribou is encountered at the mouth of the Old Crow Flats.
At the head of the Babbage River a scattered group of mixed sex is feeding.
15 bulls near Trout Lake.
From trail river westward across coastal plain a scattered herd of antlerless females. Group size increases to 100 opposite Herschel Island. Cows with calves are encountered after crossing the Firth.
The northern flanks of the British Mountain have caribou (all female, some with calves) scattered throughout.

May 11: In the Rolling River area scattered groups of cows, very few with calves, are encountered. Cows 20 (5 groups), 4 calves.
15 bulls are encountered between Shingle Point and mouth of Rapid Creek. None seen on return to Old Crow until over Flats where herd of 45 bulls seen.

Aug. 9: Flight this date from Old Crow Flats via Babbage River, Rapid Creek to Shingle Point, across coastal plain, Herschel Island return via Firth Valley.
No caribou were seen in Babbage Valley. A sizeable number were encountered along Rapid Creek south from Mt. Davies Gilbert. At least 10,000 animals of mixed sex were seen. They extended at least to the uplands at the head of Rapid Creek.
No more caribou were seen on coastal plain or in Firth Valley.

Aug.15
- 16: Surveillance flight from Old Crow to Bonnet Lake, across to Rapid Creek, Shingle Point, Herschel Island, return Firth Valley.
A few scattered caribou (mixed sex) were encountered east of Bonnet Lake. Single animals are encountered and groups of 2 - 3. At the headwaters of Rapid Creek a group of 300 - 500 are encountered.
In the Fitton Creek area scattered caribou are again encountered. Groups of 50 - 100 totalling about 1,000 animals were seen. The main body of the herd we saw on 9th apparently has moved westward further into Barn Mountains. A scattered group is seen at the uplands near the junction of the Blow and its main tributary, which seems to be moving slowly southward. The main group may have split, some headed south down the western flank of the Richardsons, the other headed westward.
No other caribou were seen on this flight.

Sept. 4
- 5: Flight from Shingle Point, Herschel Island, fly border to Joe Creek, return to Flats.
No caribou were seen on this flight.

Sept. 6: First caribou begin crossing Porcupine River at Old Crow in Driftwood River area. For about 3 weeks the crossing continues and the people report that enough caribou have been shot for whole town.

Sept.11: Flight from Old Crow to M.P. 204 on Dempster Highway.
Small number of caribou were seen on western foothills between Old Crow and Dempster. These animals are heading roughly southward and are probably the ones that crossed the Porcupine near Old Crow.

Oct.19
- 21: At Old Crow a trip is taken by snowmobile into Old Crow Range.

A small number of caribou are reported on the mountain and have been hunted by teenagers from town. The number of tracks indicated a fair movement through the area. This movement apparently started after a lapse of several weeks when last animals were shot on river.

GRIZZLY BEAR SIGHTINGS 1976 - NORTHERN YUKON

D. Mossop

These sightings were made incidentally during patrols, raptor surveys and waterfowl research in the northern Yukon. A Bell 47-G helicopter was used for all observations. A total of 233 hours of helicopter flying were used to make the sightings. Of these, 145 were primarily flown in the area of the Old Crow Flats during waterfowl research. The majority of observations were made during more extensive surveys (88 hours).

Date	Location	Sex	Size	Colour	Tagged
May					
23	Timber Hill, Old Crow Flats	♀ (2 cubs)	med. 2 yrs+	med.lt. dark	No
31	Old Crow Flats	?	med-lg.	?	-
26	Fitton Creek	?	med.	med.lt.	No
30	Old Crow Flats	M?	large	dark	No
June					
2	Old Crow Flats	M?	med.lg.	med.dk.	No
2	Babbage Falls	M?	med.	med.dk.	Yes(blue,blue)
2	Babbage River	F?	med.sm.	light	Yes
2	Coastal Pl. between Malcolm and Firth	M?	med.lg.	med.lt.	No
		F?	med.lg.	med.lt.	No
2	Malcolm Delta	M?	large	med.lt.	No
2	Babbage Delta	F	small	light	No
		2 cubs	2 yrs.?	light	
10	Trout Lake	F	med.	med.lt.	Yes
		2 cubs	2-3 yrs?		
10	Babbage River	M	large	dark	No
10	Firth Valley	M	V.lge.	dark	No
11	Coast Pl.between Malcolm and Firth	M?	med.lg.	V.light	No

Date	Location	Sex	Size	Colour	Tagged
June					
11	Okpiowuak Creek	M	large	med.lt.	No
11	Trail River	F?	med.	med.dk.	No
16	Old Crow Flats	M?	med.	?	No
		F?	med.	?	No
20	Old Crow Flats	?	med.	medium	No
August					
15	Rapid Creek	?	med.	med.lt.	No
19	Old Crow Flats	?	V.small	?	?
29	Babbage Falls	?	small	?	?

Three observations of some significance were made this field season.

(a) The relocation of numbers of bears to the Old Crow Flats in early spring may have taken place once more. Observations were made regularly at that time of bears and in waterfowl transects 2 adults and 2 cubs were encountered.

(b) A concentration of bears on the calving grounds of the Porcupine caribou herd was documented. Nine observations were made of apparently different bears near or on the coastal plain at the time when calving was in progress. On June 11, a large bear was seen running with a calf caribou in his mouth. Later flights over the plain revealed no bears.

(c) On June 10, an observation was made of a grizzly apparently attempting to depredate a wolf den. The den situated near Trout Lake on the Babbage River had been located on the 2nd of June. Upon approach on the 10th a medium-sized sow grizzly with two half-grown cubs was seen at the site. The sow was in the process of digging at the mouth of the den. Seven adult wolves were present. One adult wolf was harassing the bear cubs.

Upon approach of the helicopter the sow left the den and began moving slowly up slope. Four adult wolves then took up the chase and the sow charged them twice before retreating. We did not alter course but left the area immediately.

The site was visited on August 15. Apparently the bear had not returned as the den mouth appeared intact. Numerous wolf scats of "cub" size were found. There were no wolves at the site.

WILLOW AND ROCK PTARMIGAN DENSITY - NORTHERN YUKON - 1976

D. Mossop

Ptarmigan density is an important variable in the northern Yukon. Numbers of the birds apparently cycle with a 8 - 10 year periodicity in most areas when they are measured. Platt (1976) has pointed to the importance of ptarmigan in the diet and nesting success of gyrfalcons. In fact, most predators are probably greatly affected by the changes in abundance of the ptarmigan.

In 1975, ptarmigan were observed on most survey flights over the coastal plain and they were seen on the Old Crow Flats although infrequently. In 1976 this changed; a dramatic increase in the number of both rock and willow ptarmigan had apparently begun. In response an attempt was made to census ptarmigan on the coastal plain, Herschel Island and on the Old Crow Flats.

All counts were made from a Bell 47-G helicopter flown 50 - 75 feet above the ground.

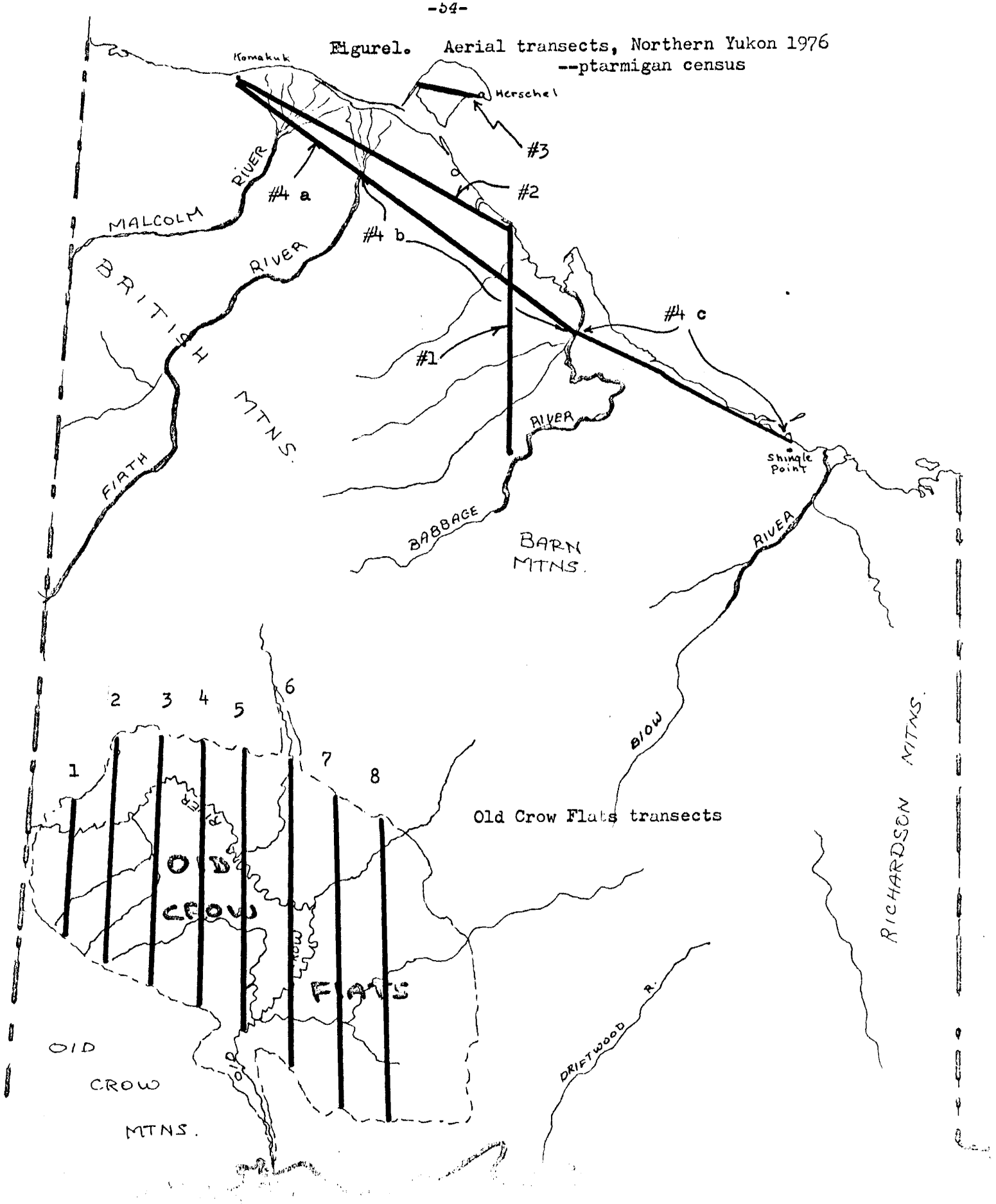
On the Flats territorial males were counted on May 30-31 concurrent with waterfowl counts. Straight line transects were flown over the Flats censusing 2.12% of the whole area.

On the coastal plain counts were similarily made by flying low level straight-line transects. Four of these were flown as shown in Figure 1. They totalled 160 miles and the longest was divided into 3 segments as shown in Table 1. Transects one-eighth of a mile wide were counted. Counts were made June 2.

Table 1. Ptarmigan Census Transects Flown on Coastal Plain - 1976.

Area	Miles	Area Censused
1. Trout Lake - Stokes Point	31	3.88 sq.mi.
2. Stokes Point - Komakuk	36	4.50 sq.mi.
3. Herschel Island	10	1.25 sq.mi.
4. Komakuk - Shingle Point		
(a) Firth River	20	2.50 sq.mi.
(b) Firth - Babbage	34	4.25 sq.mi.
(c) Babbage-Shingle	29	3.63 sq.mi.
TOTAL:	160	20.0 sq.mi.

Figure1. Aerial transects, Northern Yukon 1976
--ptarmigan census



Cocks on territory during May and June are very visible and it is unlikely that a significant proportion was missed. Willow ptarmigan cocks sport a reddish neck and head at this time contrasting with the all white head of Rock ptarmigan.

RESULTS

(a) Coastal Plains

The densities obtained on the various transects are shown in Table 2.

Transect	Cocks Observed		Density (Territories/sq.mi.)	
	Willow	Rock	Willow	Rock
1	8	2	2.1	0.6
2	4	8	0.9	1.8
3	0	22	-	17.6
4 (a)	0	8	-	3.2
(b)	88	23	20.7	5.4
(c)	20	6	5.5	1.7
TOTALS:	120	69	6.4 (Herschel Island excluded)	3.5

An average density of ptarmigan of both species on the coastal plain in 1975 was apparently about 10 territories per square mile. A striking feature of the count was the great differences in density between various areas on the plain. The densest population occurred immediately west of the Babbage River where Willow ptarmigan were encountered for a space of about 5 miles at a density in excess of 120 territories per square mile. On the other hand adjacent areas, notably the Firth Valley, were apparently devoid of ptarmigan.

In future years transects will be established to give an annual count over an extensive area of the North Slope. These will include

transects on Herschel Island, the various segments of the coastal plain and the major river valleys of the British and Barn Mountains.

Of special interest is the increasing phase of population change. The localized dense populations observed may be nuclei from which numbers will spread in future years. The effect this increase will have on large falcons and other predators can be monitored through our raptor productivity studies.

(b) Old Crow Flats

Transect No.	Cocks		Density		Whole Flats	
	1975	1976	1975	1975	1975	1976
1	0	2				
2	1	1				
3	0	1				
4	1	0				
5	0	4				
6	1	2				
7	0	5				
8	0	2				
TOTALS:	3	17	0.2	0.5	142	802

The water area of the Old Crow Flats has not been accurately assessed as yet. These densities are not comparable to those from the coastal plain. They represent an estimated 2 territories per square mile about 1/5 the density further north. The increase for 1975 to 1976 is about 400% and would indicate a sharply increasing population.

Platt, J. 1976. A study of wintering and nesting gyrfalcons on the Yukon North Slope during 1975 with emphasis on their behaviour during experimental over-flights by helicopter.

L.G.L. Environmental Research Associates - mimeo.

ORNITHOLOGICAL DATA FROM NORTHERN YUKON - 1976

D. Mossop

A. OLD CROW FLATS

The following list of birds are all species which we have recorded on the Old Crow Flats since 1974. Only new information gained in the 1976 field season is here added. All nesting records are in Game Branch Files. (See 1975 report p. 62).

Common Loon -

Arctic Loon - earliest record May 23

Red-throated Loon - earliest record May 30

Red-necked Grebe -

Horned Grebe -

Whistling Swan -

Canada Goose -

Black Brant - First record by Game Branch personnel for this species on the Flats. June 14. Bird was alone and flying due north. Locals report these birds are seen on the Flats infrequently during spring.

White-fronted Goose -

Snow Goose - Were seen on May 20, 23, migrating north and were not seen again.

Mallard -

Pintail -

American Wigeon -

N. Shoveler -

A. Green-winged Teal -

Blue-winged Teal - A lone adult male was captured and banded at the Pintail Slough study area by B. Hayes on August 22. This was the only specimen seen and is our first authenticated record for the Flats. Bird was photographed; photo on file, Game Branch, Whitehorse.

Garganey - This European Teal was observed by D. Mossop at the Pintail Slough study area on May 27. It was an adult male and was observed at 60 yards for a period of about 20 minutes. Its distinctive calling was heard at some distance and subsequent observation left no doubt of the identity. No photograph was possible.

Canvasback -

Redhead - A lone adult male was captured and banded at Schaeffer Lake on August 7. The bird was flightless in a large group of Barrow's Goldeneye, Scaup and Canvasback. Photograph on file, Game Branch, Whitehorse.

Ring-necked Duck -

Greater Scaup -

Lesser Scaup -

Common Goldeneye - arrival date on Schaeffer Lake May 25.

B. Goldeneye - arrival date June 12.

Bufflehead - First sighting for the Flats, July 3. A lone male was seen with a group of Barrow's and Common Goldeneye on Schaeffer Lake.

Oldsquaw -

White-winged Scoter -

Surf Scoter - earliest record May 23.

Red-breasted Merganser -

Goshawk -

Sharp-skinned Hawk -

Marsh Hawk -

Rough-legged Hawk -

Golden Eagle -

Bald Eagle -

Osprey -

Gyrfalcon -

Merlin -

American Kestrel -

Willow Ptarmigan -

Rock Ptarmigan -

Sandhill Crane - earliest record May 24.

Am. Golden Plover - Present on May 22.

Black-bellied Plover - First sighting for Flats. Were seen May 24 - 31 in small migrant groups.

Whimbrel -

Upland Sandpiper - Single sighting on May 22.

Solitary Sandpiper -

Spotted Sandpiper -

Lesser Yellowlegs -

Long-billed Dowitcher - earliest record on May 23.

Pectoral Sandpiper - Seen from May 24 - June 6.

Least Sandpiper - Present on May 22.

Semi-palmated Sandpiper - Seen on two occasions - May 25, May 31.

Northern Phalarope - Present on May 22.

Red Phalarope - First sighting for Flats. Seen twice, June 4,5.

Common Snipe - Present on May 22.

Hudsonian Godwit - First sighting for Flats. May 22 and June 14.

Parasitic Jaeger - First sighting May 26.

Long-tailed Jaeger - First sighting for Flats. Seen May 23 - June 3.

Glaucous Gull - Present May 22.

Mew Gull - Present May 22.

Bonapart's Gull - Present May 22.

Arctic Tern - earliest record May 24.

Great-horned Owl -

Short-eared Owl - earliest record May 24.

Belted Kingfisher - earliest record May 22.

Common Flicker - earliest record May 24.

Say's Phoebe - earliest record May 22.

Alder Flycatcher -

Horned Lark -

Barn Swallow - First sighting for Flats June 15.

Cliff Swallow - earliest record May 31.

Bank Swallow -

Tree Swallow - earliest record May 25.

Gray Jay -

Common Raven -

Boreal Chickadee -

Dipper - On sighting June 15.

Robin -

Varied Thrush - Present on May 22.

Townsend's Solitaire -

Swainson's Thrush -

Gray-cheeked Thrush -

Water Pipit - Observed during spring migration, May 22 - June 2.

Bohemian Waxwing -

Yellow Warbler - earliest record May 25.

Yellow-rumped Warbler- Present on May 22.

Blackpoll Warbler - earliest record May 25.

Northern Waterthrush - Present May 22.

Rusty Blackbird -

White-winged Crossbill- Two records - June 5 and 9.

Pine Grosbeak -

Common Redpoll - Present on May 22.

Savannah Sparrow - Present on May 22.

Dark-eyed Junco - Present on May 22.

Tree Sparrow - Present on May 22.

White-crowned Sparrow- Present on May 22.

Fox Sparrow - Present on May 22.

Lapland Longspur - Seen during spring migration only; May 25 - June 5.

Smith's Longspur - First seen May 28.

B. NORTH SLOPE

Notes were taken of bird life during all flights to the North Slope area. Stops were made commonly at Komakuk Beach, Herschel Island, the Firth Valley (various locations), and Shingle Point.

Only bird records of significance are here recorded. They should be added to the information given in the 1974 and 1975 Game Branch reports.

Red-breasted Merganser -	June 3/76. A dead specimen was found on beach at Herschel Island.
Marsh Hawk -	June 3/76. Two adults were observed hunting on the peninsula at Herschel. These are the first records we have of this species on the Island.
Herring Gull -	June 3. Herschel Island. These are first seen on Island by Game Branch staff.
Robin -	June 3. One adult was seen. B. Mackenzie reports has been around for "few days".
White Wagtail -	On June 3, B. Mackenzie reported having seen a bird of this description in vicinity of Herschel during late winter - early spring.

1976

BUDGET

GAME BRANCH PROGRAM

NORTHERN YUKON

D. Mossop

Helicopter Time (Old Crow Program - 1976)

Date	Old Crow Flats (771)	Enforcement (770)	Total
May 20 (ferry)	8.0		
May 21	5.9 (13.9)		
May 22	4.8 (18.7)		
May 23	3.9 (22.6)		
May 24	1.2 (23.8)		
May 25	0.9 (24.7)		
May 26		7.7	
May 27	1.5 (26.2)		
May 28		4.6 (12.3)	
May 29	1.5 (27.7)		
May 30	3.5 (31.2)		
May 31	5.2 (36.4)		
June 1	1.8 (38.2)		
June 2		6.0 (18.3)	
June 3		4.4 (22.7)	
June 4	1.4 (39.6)		
June 5	1.8 (41.4)	1.5 (24.2)	
June 6	1.4 (42.8)		
June 7	0.5 (43.3)		
June 8	1.6 (44.9)		
June 9	0.5 (45.4)		
June 10	3.5 (48.9)	3.0 (27.2)	
June 11	3.3 (52.2)	3.0 (30.2)	
June 12	0.5 (52.7)		
June 13	-		
June 14	1.3 (54.0)		
June 15	3.9 (57.9)		
June 16	1.5 (59.4)		
June 17	3.5 (62.9)		
June 18	1.6 (64.5)		
June 19	1.6 (66.1)		
June 20	2.8 (68.9)	1.5 (31.7)	(100.6)
August 1(ferry)	10.6 (79.5)		
August 2	1.4 (80.9)		
August 3	5.7 (86.6)		
August 4	2.1 (88.7)		
August 5	1.2 (89.9)		
August 6	1.1 (91.0)		
August 7	1.7 (92.7)		
August 8	2.4 (95.1)		
August 9		6.3 (38.0)	
August 10		5.9 (43.9)	
August 11	3.0 (98.1)		
August 12	1.4 (99.5)		

..2

Date	Old Crow Flats (771)	Enforcement (770)	Total
August 13	5.0 (104.5)		
August 14	1.2 (105.7)		
August 15		5.9 (49.8)	
August 16		6.3 (56.1)	
August 17	2.1 (107.8)		
August 18	2.3 (110.1)		
August 19	1.9 (112.0)		
August 20	3.1 (115.1)		
August 21	3.4 (118.5)		
August 22		2.7 (58.8)	
August 23		5.6 (64.4)	
August 24	2.1 (120.6)		
August 25	2.3 (122.9)		
August 26	3.6 (126.5)		
August 27	2.2 (128.7)		
August 28	2.4 (131.1)		
August 29		5.5 (69.9)	
August 30		5.9 (75.8)	
August 31	2.5 (133.6)		
September 1	3.2 (136.8)		
September 2	2.0 (138.8)		
September 3	3.3 (142.1)		
September 4		2.9 (78.7)	
September 5		6.0 (84.7)	
September 6	7.0 (149.1)		
September 7	6.0 (155.1)		
September 8	4.0 (159.1)		
September 9	2.1 (161.2)		
September 10	3.3 (164.5)	3.3 (88.0)	252.5

1976

DETAILED

FLIGHT REPORTS

NORTHERN YUKON TERRITORY

Flight Report

May 23, 1976

Old Crow Flats

D. Mossop
R. Hayes, additional observers
W. Josie

Pilot: Lorne Osburn
Aircraft: Helicopter VUB (47)

Purpose of flight is to do high level reconnaissance of Old Crow Flats in search of open water area and to census waterfowl staging on them. Height above ground of flight: 500 feet.

09:00 - Off from Schaeffer Camp. Flight line is north, Schaeffer Lake is frozen solid from shore to shore. Small bay in the north bay area has about 1 acre of open water. There are 1 pr. wigeon these open water areas.

Dry Lake area is mapped. Open water is 500-800 acres. Ducks: 1600, Swans 2, Sandhill Crane 2.

2 moose (antlerless) near the mouth of Suprise Creek on the Old Crow River.

16 caribou,

1 moose (antlerless), Flightline is N.W. from Whitefish Lake then south across the Old Crow River.

Large N.W. corner Dry Lake is mapped. Scattered dabblers are throughout. About 500 ducks, 2 caribou, 2 swans, pr. surf scoters.

5 caribou (bulls)

9:35 - 2 moose on the furthest N.W. lake on Flats. (antleless) Flightline now turns south toward mouth of Surprise Creek.

Open area along Old Crow River caused by overflow from ice jamming is being used by about 150 dabblers..area is about 1000 acres, mostly flooded willow.

Large area between Crow and Potato Creek (mapped). This is a very extensive area with well developed sedge mat vegetation. About 2,000 dabblers (mostly pintail), 60 geese. An extension of this area toward the west is a very good area with 100 geese, 500 scaup, 75 pintail, pr. swans, 1,000 bonapart gulls, 700 wigeon, 500 G.W.T., 25 swans, Moose (mostly bulls, some unident.) 2, 4, 3, 3, 1, 1, 2, 1, 3, Swans 4.

10:00: We're headed south toward the area between Surprise and Potato Creeks.
Pair swans on next minor mapped area.

Large area between Potato and Surprise (mapped)- a good-sized lake and no ice on it at all. Scaup 250, 150, 25, 75, Canvasback 10, Scaup 10, 75.

This open water area continues on the other side of Potato Creek into an area with more sedge mat and shallower water. Fewer divers here, few scoters here (these are first seen in any numbers this year), Arctic tern, 50; Dabblers are scattered over whole area, C. goose 10, Scaup 15, Geese 15, Scaupt Swan 2, Pintail 75. (These are all W.F. geese) Geese 15, Scaup 75, Bon. Gull 75, Scaup 50. (The pushups on these lakes in W. vary, the area between Potato and the Crow is especially good, area between Potato and Surprise is slightly less productive and as we move south across Sunrise they dropped off to almost nil).

On return flight between Willow Lake and Fish, number of pushups picks up. Enoch Lake and the small lakes north of it are fairly good. A small lake of about 50 acres has 150 pushups on it.

Big Moose Lake is open almost all the way around the edge.

1 swan, 10 geese, 8 sandhill cranes; Schaeffer Lake looks fairly good for pushups especially in south.

10:30: Down at Schaeffer Camp.

10:55: Off from Schaeffer after refuel. Flight is southwest to check area west of Schaeffer Creek.

Willow Lakes area seems to be about medium for pushups.

2 moose (antlerless) at the head of Schaeffer Creek on the Flats.

2 swans on furthest area. 2 swans, 25 geese, 75 pintail, 100 pintail, 2 geese, 100 wigeon, 75 pintail.

Next area mapped has no waterfowl.

Due west of Selma Lake pushups look medium to good. 1000 acre lake as about 5,000 pushups.

25 caribou.

11:19: Over ringneck slough. Open water area is in periphery-the pond itself is frozen. 20 geese, few dabblers, 2 swans.

11:26: Approaching Pintail slough. 2 swans, 15 scoter, scaup 2, Pintail 15, Wigeon 25, 15, Goose 2, Scaup 25, 25, 25, Scoter 15, Pintail 75, Scaup 75, Pintail 15, Swan 10, Geese 15, Pintail 10, Scaup 25, Wigeon 10, Scaup 5, Pintail 15.

11:30: Down at bait station.

11:55: Off from Pintail slough. Pintail point area is frozen solid.

12:10: Down at Schaeffer Camp.

13:45: Off from Schaeffer. Heading northeast toward timber hill. Area first searched is north and west of Timber Hill. Then David Lord Lake, south and then east up the big lakes.

At the river 25 scoter, 25 geese.

13:58: At Timber Hill. Area is mapped just west of the hill. Scaup 150, 75, Caribou (bulls) 15-20, Geese 10, 150, Pr. of snowgeese. (This area is a dry lake rolling wet area with poorly developed emergents). Lots of pushups in some of these lakes. 2 swans.

2 moose. 3/4 way to Grayling Lake. Small area in far north (mapped) 100 wigeon, 75 scaup, 100 pintail, pushups are not very dense.

Due north of Timber Hill, good area for pushups. South of Timber Ck. Old Crow River area is next.

Melt water between lakes is fairly extensive but doesn't seem to be used very extensively.

Sow grizzly and 2 cubs.

Lots of pushups in this area. Pr. swans. Area is frozen solid except for melt water between lakes. In the river valley itself extensive ponds which are being used by dabblers.

Big Lakes segment: 25 caribou between Blackfox and Johnson. First open water area is just west of the very first big lake. 2 swans, 5 geese, 1 can. goose, very, very few pushups.

On straight line flight back to Schaeffer Camp: (After aborting rest of big lakes area because of lack of open water and sickness aboard):

100 caribou at crossing, yn bald eagle.

Flight Report

May 26,1976.

D. Mossop — Pilot Lorne Osburn
R. Hayes - observer — Aircraft - helicopter V.U.B.

Patrol flight, Old Crow, Herschel Island, Komakuk via Blow River.

08:20 - Off from Schaeffer camp. Weather high, scattered wind, v. light, temp. 49.

Flock of 25 swans just north of Timber Hill. Couple of caribou on a lake about half way from Timber to the edge of the Flats.

There was only one area of open water on that straight line flight with the exception of the river valley.

Herd of 14 caribou west of Black Fox. 5 caribou on first hill, mostly bulls. 3,4

The Blow River is full of fog so flight line is altered to the west toward Fiton Mtn. area. Caribou are encountered in small bands throughout the southern Barn Mountains. 10, 25

10:10 - On the Blow River below the mouth of Fitton Creek. One set of bear tracks.

Grizzly sighting: Midway between mouth of Fitton Ck. and the mouth of the Blow. Med. size, med. lt., no tags.

Ptarmigan appear to be scattered on Territory on the coastal plain. They are obviously far more plentiful than last year.

10:15 - Down at Shingle Point. Personnel informed that drill rig and cat train were in the area of Kay Point about 3 weeks ago and possibly moved the drill up the Babbage River someplace within a few days ago.

Flock of 25 snowgeese flew over while we were on the ground..flying east.

Willow ptarmigan are especially abundant on the coastal plain as they are even on territory within 100 yards of the ocean.

In flight down the coastline:

W. ptarmigan	2
R. ptarmigan	11

(flight down the coastline) Swans 2
Snowgeese
Rough-legged hawk 7 (2 nests)
C. goose 1

11:11 - Camp at Kay Point. The garbage dump is in incredible disarray. Appears to be unoccupied. Flight continues westward along spit.

An adult ringed seal is encountered on the spit just east of the main channel of the Babbage. One eye is missing and the animal is obviously in poor shape. We photographed and then dispatched the animal and are taking the carcass to Herschel Island.

Glaucous gull, pair of whistling swans. Gyrfalcon just east of Stokes Point. Pr. swans at Stokes Point. 6 pintail.

12:00 - Down at Herschel. The vessl, Canmar, is in port and the crew appears to be aboard.
Weather at Herschel is poor so outside reconnaissance is impossible. A snow drift to the east of MacKenzie's house is higher than his roof. Bird list made. Give seal to MacKenzie who is out of dog food because bears apparently ate it all last fall. He has killed half his dog team. N.R.C. wind generator is on beach.

13:30 - Off from Herschel. Pr. swans in Firth delta. Pr. Sandhill cranes.

MacKenzie reports possible white wagtail at Herschel in last week. No caribou were seen all winter, with the appearance of cows on the coast he has been over and shot several. A lead is apparently open about 1 - 2 miles off Herschel.

2 female caribou about 2 miles east of Komakuk. One mile east of Komakuk, 10 female caribou.

14:20 - Down at Komakuk.

16:10 - Off from Komakuk. Laughingwell has apparently shot at least one caribou. A relative of his was reported to have chased a wolf that had been hanging around..with skidoo for 5 miles across the tundra and then shot it. Personnel report seeing a grizzly near the site in the last week.

On straight line flight to the entrance of the Firth Valley:
Rock ptarmigan 1, 1
Caribou 2, 15, 5, 1, 5, 1, 1, 8, 1, 2, 1, 22, 2, 6, 10, 4
Raven 1
W.F. goose 1

At Parkes camp things are as he left them last fall.

17:20 - Approaching the overflow are of the Firth. Gulls on the cliff at the fish hole are incubating.

4 caribou on divide into Thomas Creek.

17:45 - Over Thomas Ck. caribou fence. 4 caribou on creek. 15 male caribou.

Old Crow River at this point is free of ice. 1 moose.

18:17 - Down at Schaeffer Lake.

Flight Report

May 28, 1976

Purpose of flight is to do a check of the ratting camps of the Old Crow Flats with Peter Benjamin of the R.C.M.P., Old Crow.

On board: Mossop, Osburn (pilot), Peter Benjamin.

13:00 - Off from Schaeffer camp.

(1) First camp is Peter Josie and George Moses. Map location: 3853 (Schaeffer Lake) There are 2 remains of caribou carcasses on the ice opposite this camp. Have 300 rats in camp to date.

(2) Grafton Njootli, Andrew Tizya, Don Frost's boy, Grafton's mother, his wife and a small child. Map location 3657. Drying moose which was taken a few days earlier. A couple of dead caribou are on ice. Over 300 rats are in camp. 3 dogs, 2 pups.

13:45 - (3) Peter Tizya: map location is 3764. He has with him two sons. He has a dog team. Evidence of 2 caribou kills are on ice in front of camp. He is not in camp at present, we locate him at the next camp. Has 400 rats.

(4) Alfred Charlie, his wife, several kids, Stringer Charlie. A fresh caribou is on the beach, another is drying. Alfred reports about 300 rats in camp. Map location is 3567. 2 dog teams.

(5) Charlie Thomas and 3 of his brothers. They are in the area between The Crow and Potato Creek. Map location is 1760. Report 200 rats since the 28th of April. A moose is in camp and a couple of caribou.

(6) Clara Frost, Bertha Frost, Dennis Frost and one of Peter Benjamin's boys: north of timber hill. Map location is 4673. They report rather poor ratting. Number taken unknown. Have 2 caribou in camp. 3 dogs.

(7) Charlie Abel, Johnny Abel and families. A large camp with 3 tents and many kids. Location 5562. Approximately 1,000 rats are in camp. Dog teams.

(8) Phillip Joseph, alone. Map location 5058.

(9) Abraham Bruce, Peter Bruce, south of David Lord Lake. Map location 5253. 800 rats reported in camp. 3 dogs.

(10) Lazarus Charlie, 2 sons. South east of the junction of Black Fox and the Old Crow River. Map location is 5648. 400 rats are in camp.

(11) Johnny Rose Tizya, his wife and kids, and Mary Kassi, her son and daughter who are all camped together. 2 dog teams. Map location 4037. Report poor ratting. Couple of caribou are in camp.

19:00 - Return Direct to Old Crow.
3 moose are right in the middle of Ringneck Slough.

Flight Report
June 2, 1976

D. Mossop

Pilot: Osburn Aircraft: Bell 47 (V.U.B.)
Additional observer: E. Russell

Purpose of flight is to patrol north drainages and make incidental wildlife observations. Intended route: Babbage River, Stokes Point, Komakuk, Hershel Island, Firth Valley, return.

10:20 - Off from Schaeffer camp.

On straight line flight from Schaeffer to the Babbage valley, following observations: W. ptarmigan, 2, Moose female and calf, grizzly - med. lg. med. dark, on last lake of flats before hills. Caribou in groups of 4-25 (4, 4, 5, 10, 10, 15, 25, 10) beginning at timber creek and the Barn Mountains. These are apparently all antlerless females.

In the Babbage valley: Caribou (20, 15) all antlerless females. Grizzly: med. size, med. lt., at overflow area, tagged: blue, blue?? W. ptarmigan on territory: 5.

11:30 - Golden eagle incubating in large stick nest at the Babbage Falls. Grizzly: med. small, light, tagged.?? 5 miles below falls. Wolf den: 2 adults, 3 young, approx. 2 weeks old. Opposite trout lake in the Babbage valley on the west bank.

11:35 - Down at Trout Lake to examine debris of former camps and determine possible Game Branch ownership of drums here.
mt drums (marked G.L.S.) 100
stove pipe, 5 gal. pails, 1 table

On the west shore of the main lake a fueld cache of 13 drums (mt) JP-4 drums, is stacked apparently from several years previous. One drum is marked Game Branch. Suggests one of our old drums that has been refilled. 21 other drums are along shores of lake.

Wolf kill: On the eastern shore of Trout Lake. A female caribou, antlerless and 80% eaten.

Moose: About 10 miles downstream from Trout Lake: 3 bulls, 2 cows.

Caribou: No caribou were encountered after the divide between Timber Creek until the coastal plain where 2 were seen just below the above moose.

On straight line flight from the Babbage about 10 miles below Trout Lake to Stokes Point:

Canada goose 2, 50, 3
Caribou 10 (f) 2 (f) 15 (f)
R. ptarm. 2 (m)
B. brant 35
Pintail 100
W. frnt. goose 2
W. swan 1
Wigeon 50
W. Ptarm. 10 (♂)

Lagoons between Phillip's Bay and Stokes Point are full of ducks, primarily dabblers.
P. jaeger

Ocean ice is frozen solid to shore ice.

On direct flight from Stokes to Komakuk:

Caribou 4f, 1c, 6f, 2f, 7f, 1c, 6f, 3f, 2f -
Pomarine jaeger (common)
Long-tailed jaeger 1
Scaup are common in all larger areas of open water.

14:30 - Off from Komakuk for direct flight across coastal plain to Shingle point in order to observe calving caribou herd, census willow ptarmigan and to issue licences at Shingle Point D.E.W. site.

Caribou: 2f, 1f1c, 12f4c, 1f1c,1f, 1f1c, 2f,2c,1f1c,1f1c, 1f1c,2f1c, 8f4c, 5f3c, 5f1c.
R. ptarmigan 1, 7
Grizzly: 2 adults, med.lge., med.lt..between the Malcolm and Firth.
Grizzly: 1 lg. med.lt.,no tags (with caribou calf in mouth) 1/4 way across Malcolm delta.
W. swan 1

15:55 - Cross the Firth River:
Caribou: 1f1c, 4f1c, 4f, 4f, 3f1c, 3f 1f, 3f2c,3f,10f 1f1c, 2f2c, 1f, 3f2c, 2f, 1f, 1f1c
Rock ptarmigan: (cocks on territory) 18
W. ptarmigan (cocks on territory) 10
Old squaw, W. swan 2

16:10 - Opposite Roland Bay
Caribou 2f, 2f
W. ptarmigan 58, 20, R. ptarmigan 4, 1
The chief W. ptarmigan concentration is in the area immediately east of the Babbage River valley.
W. swan 2
S.E. owl 3

17:15 - Arrive Shingle Point. Talk with personnel and issue fishing licences. Receive complaint that dog belonging to Eskimo employee at Komakuk DEW site has reportedly been killing young caribou (2 are known). Also expressed concern that dogs (about 6) running loose in the vicinity of the Shingle Point site may be killing wildlife.

18:50 - Return to Kay Point camp along the beach.

W. swan 7	Gyrfalcon 1
Pintail 15	S.E. owl 1
Wigeon 10	King eider 1

An adult wolf is encountered on the sea ice about 5 miles from Kay Point. Specimen is black; ran toward shore on approach of helicopter.

19:55 - Off from Kay Point. Impressed with messy state of garbage pit. No personnel are in this camp at present. The camp is spread over about 15 acres at present. A target with several bullet holes in it is situated 100 yards east of the main building. Two all-terrain vehicles are in camp plus at least one snowmachine. Equipment is lying about in a considerable state of disarray.

20:00 - Land at a camp on the west side of Phillip's Bay. Dan Forbes (a Ph.D. student at U.B.C.) is in camp with an assistant. This camp consists of one large tent and two smaller ones plus a considerable amount of material. They said they moved here from the camp at Kay Point because the delta was too hard to cross. He is working with 3 assistants from this camp and one up the Babbage on stream flow and sediment load, etc. One gun is in camp, a 30:06 rifle. They report seeing a female grizzly and 2 cubs (this female is believed to be same one seen in area last year with 3 cubs...a dead cub was found by Forbes last year in the delta area.)... This camp is supported by a Bell 205 out of Inuvik plus a power boat.

Lewis and are to arrive at the Kay Point camp in mid-July to continue their work on the sand spits.

Continue flight to Komakuk over the coastal plain to avoid accum ulating coastal fog. Snowy owl 1
Grizzly (female) and 2 cubs (2-3 yr.) med.lt. colour, one light cub. Stokes Point.
Wolf (2 adults) about 5 miles S.W. of Stokes Point, both gray.

21:50 - Down at Komakuk.

June 3, 1976

10:30 - Off from Komakuk for flight to Herschel Island. Scattered fog is lying at about 500 feet. 0°C. Flight line is along spit.

Glaucous gull 15, W. swan 1, S.E. owl 1, Old Squaw, Com. Eider. Snow bunting.

Lagoons are frozen solid to the first goose blinds. Then narrow band is open along the sough shore.

Crossing Herschel Island: Rock ptarmigan cocks on territory: 22
Rough-legged hawk 3

At Herschel: Marsh hawk 2 (first seen here)
Rock ptarmigan (approx. density near the peninsula is 5 acres per pair)
Redbreasted merganser wing found on shore.
G.W.T. 3, Pintail 5, Wigeon 5
Lapland Longspur
Snowbunting (carrying nesting material)
Least sandpiper
Pectoral sandpiper
Long-tailed jaeger
Pomarine jaeger
Herring gull (1)
Glaucous gull (com.)

15:00 - Leave Herschel for flight up Firth valley.

Dall sheep (9 rams) about half a mile north of Philpot's camp; female and 1 lamb on same slope.

16:00 - Down at Parke's camp. No personnel are in camp.

Dall sheep south of Sheep Creek on single fly past:
12 nursery adults, 3 lambs.
Caribou are first encountered near Sheep Mountain, a group of 10.

16:30 - Aspen Creek camp is checked and found to be abandoned.

The fish hole is checked and found unoccupied; ice encroaches almost to the edge of the water which is silt laden. We land and fire gun 3 times to try to flush peregrine falcon from this site, no success.

S/pal. plover
Cliff swallows (nests complete)
Harlequin
Herring gull
s.pal. sandpiper
yellow rumped warbler
W. tattler
G.c. thrush
Say's phoebe

Small group of bull caribou was encountered on the divide to Thomas Creek. These are the first bulls seen on the flight. 2 bull moose in this same area.

17:30 - Down at Schaeffer Camp.

Flight Report

D. Mossop

June 10, 1976

Pilot: L. Osburn Aircraft: Bell 47G (V.U.B.)
Additional observer: R. Hayes

Purpose of trip is to visit active gyrfalcon aeries in the coastal drainages of the Yukon, check of occupancy, band any young and observe evidence of human activity in the general area.

09:55 - Off from Schaeffer Camp. Flight line is up Timber Creek to the Babbage River.

High overcast, with light south east winds on flats, quite warm.

A scattered herd of bull caribou is encountered at the north end of the flats.
1 moose in timber creek (f).
1 fox (coloured) near the head of Timber Creek on the east slope

At the top of the pass there is a scattered group of caribou of mixed sex. All females appear antlerless. About 50 seen.

Whimbrel.

At the top of the pass the flight line turns east toward the canoe river. The gyrfalcon site at the head of Canoe River is checked.

There are a pair of rough-legs at the lower site, female is incubating. At the upper site upstream about ½ miles, a female gyrfalcon flushed from the cliff. 4 young are in the nest, 3 were banded. (Raptor cards made out for both nests).

11:40 - Next site is Babbage Falls. A golden eagle is occupying the best nest in this area. There is a herd of 2-300 caribou scattered throughout the area of the Babbage Falls.

12:00 - Gyrfalcon next on huge cliff, a new site, not approachable, 2 young. Just downstream from this site an active Golden eagle aerie .

12:12 - Mouth of Canoe River gyrfalcon site is occupied.

12:35 - The Trout Lake wolf den is still occupied. Upon approach a sow grizzly and two large cubs were seen at the den mouth apparently trying to dig out the young. Four adult wolves were harassing the bears but giving them much respect. Bear was tagged, med. lt. colour, young are 2 - 3 yrs. med. lt.

Peregrine site at Trout Lake is unoccupied. A golden eagle is at this cliff.
Large bull moose in river valley at this point.
Herd of 15 caribou, mixed sex.

About 4 miles downstream from Trout Lake, a new occupied gyrfalcon nest, 5 young.

Small bull moose at the base of the next cliff, 15 bull caribou. A large male grizzly apparently hidden in the willows in the path of the above-mentioned. He ambled from the willows as we approached.

Golden eagle incubating on this cliff.

Trail River pipeline peregrine site is next. Swan next 1 mile due south of biggest lake east of the peregrine site. FG 0557. 50-60 caribou encountred in this general area..all bull.

Cow moose at the base of the cliff. There is an occupied Golden eagle nest on the upstream end of cliff, an unoccupied R.L. hawk nest about the middle and an occupied peregrine nest toward the downstream end.

On straight line flight to Komakuk from this point: Willow ptarmigan are encountered on territory about 1 per 5 acres. Caribou are scattered along route, apparently mostly antleress females.

Caribou 25, 100 scattered groups increase in number as approach opposite Herschel.
Long-tailed jaeger 1
Opposite Herschel encounter first calves with cows. Increasing altitude this machine apparently has no effect on cows with calves if flown over 600 feet.

14:00 - Down at Komakuk for lunch.

15:40 - Off from Komakuk to continue raptor check of Firth and Malcolm drainages.

Grizzly bear, v. dark, large, no tags at mouth of this creek on the Firth.
Northern flanks of the British Mountains have caribou scattered throughout them. All females, some with calves.

Dall sheep (4 ewes) just above water of Firth on a little side gully about 5 miles upstream from the water resources cabin.

Dall sheep (3 males 3/4 curl plus) 4 miles downstream from Philpot's camp.

19:00 - Down at Parkes camp. One person is in camp, he has shot one caribou at least (fresh legs are under trailer). His name is Billy, from Inuvik. Parkes is expected that day.

Return to Komakuk is via Parke's cattrail. One ewe and lamb is encountered just over the first pass (this is the furthest N.W. I have encountered sheep in the British Mountains).

There are two 45 gallon drums and 2 kegs just south of EH 4003 on the Malcolm River.

Not a single ptarmigan was noted on this loop up the Firth and down the Malcolm River. This may have had its effect on the nesting success of the falcons in these drainages.

19:55 - Down at Komakuk for overnight.

June 11, 1976 (continue raptor check)

10:30 - Off from Komakuk. Fog bank is just lifting along the coast. E. wind 5-10 m.p.h. Passing over herd of scattered caribou calves and cows, between Komakuk and Malcolm.
Grizzly bear between the Malcolm and the Firth. V. light colour, med. large, no tags seen .

Fuel drums at the old Williams' brothers' camp near the Firth number 22. The garbage at this site is all cleaned up.

Grizzly bear, large size, medium light colour, on Okpiouiak Creek.

To the Rolling River area - we were encountering scattered groups of caribou. All are female, very few with calves. 2c, 2yn, 4c, 6c, 8c. On the Trail River 2 large bull moose are encountered in the open tundra just downstream from the Trail 'loop'.

Grizzly bear about 3 miles downstream from Trial Loop. The two bull moose seen above are now within a quarter miles of this bear. Bear is med.sized, med. dark, no tags.

W. swan on a nest just off the lake with big point that drains into Deep Creek. Another pair is about 1 mile further east.

Flock of 50 ptarmigan (willow cocks) are encountered on open tundra area east of Deep Creek...possibly a surplus non-breeding flock.

The odd female willow ptarmigan are still accompanying the cocks on territory.

15:20 - Down at Shingle Point to refuel.

16:30 - Off from Shingle Point. Issue 2 fishing licences to personnel at Bar 2.

Group of 15 bull caribou between Shingle Point and the mouth of Rapid Creek.

R.B. mergansers 2

17:40 - Two cow moose in Anker Creek.
Finish raptor checks, Anker Ck. Boldes Ck., Blow River.
Direct flight line from head of Blow River to the Old Crow Flats: 45 caribou at the Black Fox crossing.

19:55 - Check Timber Hill peregrine site. Goose nest across the river has eggs, female incubating.
Bull moose at Crow River crossing.

20:00 - Down at Schaeffer camp.

Flight Report
August 9, 1976

D.H. Mossop; Additional observer: R. Hayes

Aircraft: Bell 47, TNB Pilot: L. Osburn

Purpose of trip is to visit gyrfalcon aeries in the eastern portion of the coastal drainages, checking for 1976 occupancy, and to do general patrol of the coastal area, observing the progress of the Porcupine caribou herd.

09:30 Off from Schaeffer camp.

Near timber hill, a pair of swans (no young) are encountered - both of which can fly.

10:25 Approaching the overflow ice of the Babbage.
Glaucous gull 2. No caribou were encountered on the pass.

11:50 Off from Babbage Falls. No evidence of use of the area by fishermen in the recent past. Very few char are in the pool at the base of the falls although a large number of smaller class grayling are present.

A small crevice across the canyon from the active golden eagle nest has been used..perhaps a perch.

The wolf den at Trout Lake is unoccupied. Land and inspect site: Droppings suggest that young were successfully raised; there is no evidence that young were dug from den as suspected. Remains of prey near the den were very scarce..one caribou femur.

12:10 Down at Trout Lake. Inspect fuel cache reportedly with Game Branch marking. The cache contains 14 drums situated on the western shore of the main lake. One of the drums is marked Game Branch in black paint in the manner our cache at Komakuk was marked in 1974. Another drum is marked C.W.S. The rest are unmarked. It is evident that the marked drums are returned drums of other users which were not repainted before being used again.

There is a new water survey building at the mouth of Caribou Creek, on the Babbage.

Cow moose 1 calf.
Cow moose 1 calf.

12:30 Talk to Shingle Point radio re: overnight accommodation.

Pair of swans: 5 miles downstream from the Mouth of Ladas Creek on the Babbage. 3 young, 1-b
Arctic loon 1 young.

(flight line will be along the Babbage valley to the mouth of Deep Creek and eastward toward Shingle Point)

W. swan 2 (+4y), 4 nonbreeders, 6 adults,
R.B. merganser brood of 10, 1a.

Camp at the mouth of the Crow River on the Babbage River is unoccupied. (GSC) A quonset tent, several drums, small white tent.

13:40 Down at Shingle Point.

16:25 Off from Shingle Point. Flight continues up the Blow River toward the mouth of Rapid Creek.

All the aeries of Rapid Creek are checked. Return is back down Rapid Creek.

Golden eagle MM2326 has been occupied and probably raised young by the amount of wash visible. One youngster is at site.

Gyr site MM 2809 has lots of wash and probably raised young. No falcons seen.

Gyr site MM2100 (Meeting Creeks Gyr) has lots of wash with a good perch across the creek. Probably raised young here.

Perch Point Gyr site is checked. (ML 1396) Near Site MM 2806 (mapped) another good aerie is found which probably raised young. This creek will have to be done with greater detail next year.

(Most of data from Rapid Creek is lost due to tape recorder malfunction).

A pair of wolves is seen in Rapid Creek near Mt. Davies Gilbert.

All peregrine sites along this river are checked, none raised young apparently. There is some wash at a couple. Data lost.

A sizeable number of caribou are encountered along Rapid Creek starting at about Mt. Davies Gilbert and extending in scattered large and small groups to at least the head land between Rapid and the Blow. At least 10,000 caribou of mixed sex are seen.

16:25 (cont'd) Flight continues from area of Rapid Creek to the Mackenzie delta area. There are approximately 1,500 swans in the area of Tent Island.

(Data from waterfowl count on delta area is lost).

Stop at several whaling camps in the area of Moose Channel.

Photograph two stranded barges in the Yukon section of the Delta.

Flight continues on the 10th to Herschel Island, (collect castings at Twin Falcon Peregrine site). Return flight is via Firth River after refuel at Komakuk.

Flight Report

August 15-16, 1976

Observers: D. Mossop, D. Russell

Pilot: L. Osburn Aircraft: Bell 47 (TNB)

Purpose of flight is to check occupancy of gyrfalcon aeries in the Bonnet Lake area, to observe the position of the Porcupine caribou herd and carry out patrol on the north slope area collecting vegetation samples.

10:00 Off from Schaeffer Camp.
Weather is clear with very light wind from the east.
Flight line for first leg is direct to Bonnet Lake area with a stop at David Lord Lake.

10:10 Check Timber Hill peregrine aerie.

10:20 Pick up small axe from ratting camp for C. Abel in Old Crow.
Large bull moose and cow on the eastern shore of D. Lord Lake.
Marsh hawk.

10:40 Off the flats.
Check roughleg nest west of Bonnet Lake.
Small bull moose in Johnson Creek. Good numbers of ptarmigan are flushing from this upper tributary of Johnson Creek.
Check Bonnet Lake gyr site.

11:55 Down at Bonnet Lake. A mining exploration camp is situated at the southern end of the lake owned by Eastern Associates, a small outfit from Whitehorse. They have been in the area since last Tuesday (Aug.10). Jet Ranger is in camp (Associated Helicopters) Roger Voisine is in charge. They have 13 people at the camp including a cook. They are apparently staking claims all over the place primarily up Fiton Creek and toward Rapid Creek. Fuel drums are littered about, primarily from former operators. A Twin Otter from Inuvik is supplying the camp along with a Cessna 185.

Note: The pilot of the Associated Helicopter flew for Aquatain doing mineral exploration in the earlier part of July. They worked out of Shingle Point and had a fly camp at Sheep Mountain on the Firth for about a week.

Check driftwood hills aeries and then continue flight over first range to the head of Rapid Creek.

From this point toward the Rapid Creek headwater a few scattered caribou are encountered.

11:55 (contd) They are approximately 1 - 2 miles apart, singles and groups of 2 - 3. At the headwaters of the Rapid Creek a fairly large group of 300 - 500 is encountered.

Land at aircraft wreck on Rapid Creek near the headwaters: Cessna 140.

Flight line continued north east over the ranges south of Mount Davies Gilbert and east of that mountain. No caribou were encountered in that area at all. Flight continued north of Davies Gilbert back toward Rapid Creek.

Grizzly bear: On Rapid Creek opposite Davies Gilbert. Medium-sized, medium-light in colour. Digging out a groundsquirrel.

(Much of the remaining data from this flight is lost due to tape recorder malfunction.)

After rations at Shingle Point, the flight continues up the Blow River to Fitton Creek, up that creek to its head waters, return east to the Blow valley, check peregrine aeries in the upper Blow drainage and return the Blow valley to Shingle Point for overnight.

In the upper Fitton Creek area scattered caribou are encountered. In passing over the ridge between Fitton and the Blow a number of groups of caribou totalling about 1,000 animals are encountered.. mixed sex.

Peregrine site LM 8512 is checked.

Crossing the plateau between the Blow and the east fork of the Blow a scattering of caribou is working its way slowly southward. (max.50)

In the east fork of the Blow a roughlegged hawk is discovered at about LL 8995. No birds present.

1 moose (bull)

Peregrine site 118601 is checked.

Gyr site LM 8503

Gyr site LM 8707. No activity at either of these sites.

Overnight is at Shingle Point.

August 16

10:30 Off from Shingle Point
High scattered cloud, bright.

Stop is made at camp at small lake about 5 miles west of Shingle. It is found unoccupied and in same condition as last visit.

Flight continues down the valley of Deep Creek. Several stops are made to collect plants.

(most data is lost this date due to tape recorder malfunction)

11:00 Plant collecting stop on Deep Creek.
C. Snipe, there are lots of ptarmigan broods in the willows of Deep Creek. Pectoral sandpiper, marsh hawk, rough leg.

Spring river gyr site EG 6465 is checked.

11:15 Stop is made at DC-3 crash site on the Spring River for plant collection and general inspection.

Flight continues direct to Stokes Point:
1 bull moose
1 bull moose
1 cow moose
2 swan, 2 swans, 4 swans.

The campsite that had been reported on the lake immediately inland from Stokes Point is checked and found deserted. 3 Gas Arctic tent trailers are still at site. No evidence of recent occupation.

14:00 Off from Stokes Point after refueling.

14:35 Down at 3-tent encampment of Eskimo people on sand bar near Ptarmigan Bay. 3 men 2 women and assorted children. They report shooting a few caribou. They are from Aklavik except for one man who is from Barter Island. Have been catching fish primarily. They have been visiting MacKenzies on Herscel Island.

14:45 Down at Herschel.
Ram Air 206 is on the beach.

16:00 Off from Herschel. N.W.T. conservation officer HUNTER and family is on the island apparently just holidaying. Another family of Eskimo from Inuvik is also visiting.

MacKenzie is catching a few fish but reports sealing is poorer than in past years. He has about 60 now.

16:00 (cont'd)

Down at C.W.S. camp on Avadiak Spit. M. Dennington and K Veemeers in camp. They have been collecting sea ducks. Have quite a few oldswuaw but have not got very many scoters.

Report seeing a peregrine falcon apparently hunting along the coastal area of Herschel Island. They will be in area about 10 days. They came to camp from Inuvik by Twin Otter. They have a canova boat in camp which consists of 2 tents.

Mobil 205 helicopter on floats passes along the coastline at this time.

17:45 Down at Komakuk for refuel.

Flight continues up the Firth Valley. Gyr site EG 5084 is rechecked and found indeed active but moved downstream a couple of hundred yards.

EG 2870 is apparently active.

Muskeg mouth aeries is covered with was..site is upstream from old site. Can't tell if is gryfalcon or peregrine.

At Fish Hole the peregrine site is rechecked. The site marked is definitely not active but there looks like there may have been a site used a little way upstream.

Return directly to the Flats.

22:20 Down at Schaeffer Camp.

Flight Report August 29/30, 1976.

Coastal Trip

Pilot: L. Osburn with Cst. D. McFadyen and C.O. Harvey Jessup

29/8/76

We left at 11:40 a.m. and headed for Shingle Point via the Babbage River. We saw two swan broods at the far end of the Flats and made note of them so that we could band the young on our return from the coast. Approximately 2 miles from the Babbage Falls we flew over a young grizzly bear. As we were running out of time we did not stay at the Falls very long. The fishing was pretty poor.

About 20 - 30 miles west from Shingle Point and the same distance from the coast we notice large flocks of snow geese. The geese were banding together all the way to Shingle Point.

We landed at Shingle Point at 2:10 p.m., fueled up and had lunch. From the Flats to Shingle Point we only saw 3 caribou and they were just out of the Flats.

After lunch we flew east over the delta. There were numerous waterfowl present, including swans with their cygnets, white-fronted geese, ducks, gulls, shore birds, jaegers and gyrfalcons. We noticed a float plane flying east with registration CF-AMH; presumably out of Inuvik. We flew down the Blow River and then cut across country to John Dillinger's camp.

We stopped at a camp on a lake about 4-6 miles west of Shingle Point and 2 miles off the coast. There was no one home but it appeared to be a white person's camp. There were signs of a recent caribou kill as well as 2 snow geese remains.

We flew to Dillinger's but due to the fog moving in we had to leave in a hurry. We returned to Shingle Point for the night.

While at Shingle Point, I spoke with some of the Northern Engineering crew. When I enquired about the fishing, they said they weren't and that their company wouldn't allow them to even have fishing rods for fear the men would be fishing on company time. One of the crew requested an export permit for a set of antlers he had picked up

off the tundra. As I didn't have any permits, I took his name and address down and Cst. McFadyen will send him one.

The pilot, flying for United,as well as one of the Northern Engineering crew told me that they had seen a red and white Cessna 170 on wheels, registration #CF-WYR, land at the Water Surveyor's building on the Firth and fish for Arctic char. Apparently there is a boat there and they feel that these people are using nets. The pilot thinks this plane is out of Aklavik. Cst. McFadyen is aware of this and will be looking into it as I will be leaving this week.

30/8/76

At 8:10 a.m. we left Shingle Point after Cst. McFadyen spoke with Mrs. D. Gordon about truancy. Her daughter is going on nine years old and hasn't been to school yet. Mrs. Gordon told Cst. McFadyen that she needed the girl at home to help scrub floors, etc.

We checked the camp at the lake again but no one was there. An address in the tent was Bill Koski, c/o Pts. North, Inuvik, N.W.T. This matter will also be checked out by Cst. McFadyen.

We landed at Dillinger's again and stayed for coffee. He told us that his company has put a similar station with 2 fellows on the Yukon/Alaska border.

The fog continued getting thicker so we turned around and returned to Shingle Point. We saw 3 caribou about 2 miles south of Dillinger's camp.

After fueling up we left cross country to the Firth River arriving at 1:10 p.m. After fishing for awhile we returned to Schaeffer Lake camp. Cst. McFadyen continued on into Old Crow. No game spotted.

Harvey Jessup