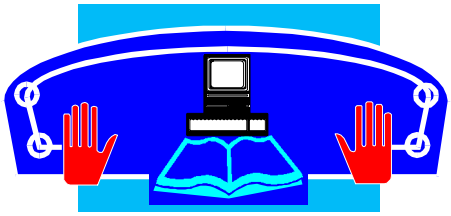

Tourist And Recreation Attributes Of Marine Mammals Of The N.w.t.
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TOURIST AND RECREATION ATTRIBUTES OF THE MARINE MAMMALS OF THE N. W. T.

W. E. BAKER

TOURIST, PARK AND RECREATION PLANNER TORONTO

TOURIST AND RECREATION ATTRIBUTES OF THE MARINE MAMMALS OF THE N. W. T.

Prepared For:

Division of Tourism & Outdoor Recreation
Department of Industry & Development
Government of N. W. T.

By

W. M. Baker,
Tourist, Park and Recreation Consultant,
62 Sloley Road,
Scarborough, Ontario.

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CONTENTS

1. INTRODUCTION

This report is based essentially upon information obtained in general discussions with members of the staff of the Arctic Biological Station of the Fisheries Research Board at Ste. Anne De Bellevue, Quebec, and data recorded by that group in a format prepared by W. M. Baker, Park, Tourist & Recreation Consultant to the Northwest Territories. The data sheets and accompanying maps prepared by the Fisheries Research Board are incorporated into the body of the report in the rough form presented. A limited supplementary analysis and text have been added.

Information contained in the Arctic Ecology Map Series, prepared for the Canadian Wildlife Service, relative to marine mammals was incorporated into the study at some points. The factual input from this source, however, was decidedly limited.

II. AN OVERALL PERSPECTIVE

1. Some Macro Regional Productive Relationships

An analysis of the maps and data sheets prepared for the various marine mammals reveals macro regional productive patterns that are of interest to tourist and recreation planners. On the basis of variety and abundance of mammals present three gross regional units can be readily distinguished in terms of productivity.

The Rich Eastern Arctic Area that encompasses the waters surrounding the southern portion of Ellesmere, Cornwall is, Devon, Baffin and Southampton islands, together with Hudson Bay, is readi l y defined. Every species considered in this study is found here. Moreover, the harp seal, narwhal and walrus are present only in this area. Of fourteen areas of Class I abundance for seals of all types, ten, or 71 %, are found here. Of the twenty-nine Class I viewing and hunting areas for these species, twenty-four, or 83%, are situated in this area. Al I Class 1 areas of abundance and Class I areas for viewing and hunting of Beluga whales are in the Rich Eastern Arctic Area. Only the bowhead whales are somewhat more strongly represented outside the area in the Amundsen Gulf. Since one can never be assured of seeing this species anywhere in the Canadian Arctic the significance of this exception is somewhat limited.

The Southwestern Arctic Area, which is comprised essentially of the linear reach of straits and gulfs from the Boothia Peninsula in the east to Amundsen Gulf and southerly portions of the Beaufort Sea off the Mackenzie Del ta in the west represents a second distinct marine mammal production region. Here, there is less variety of species and fewer outstanding areas from a tourist and recreation standpoint.

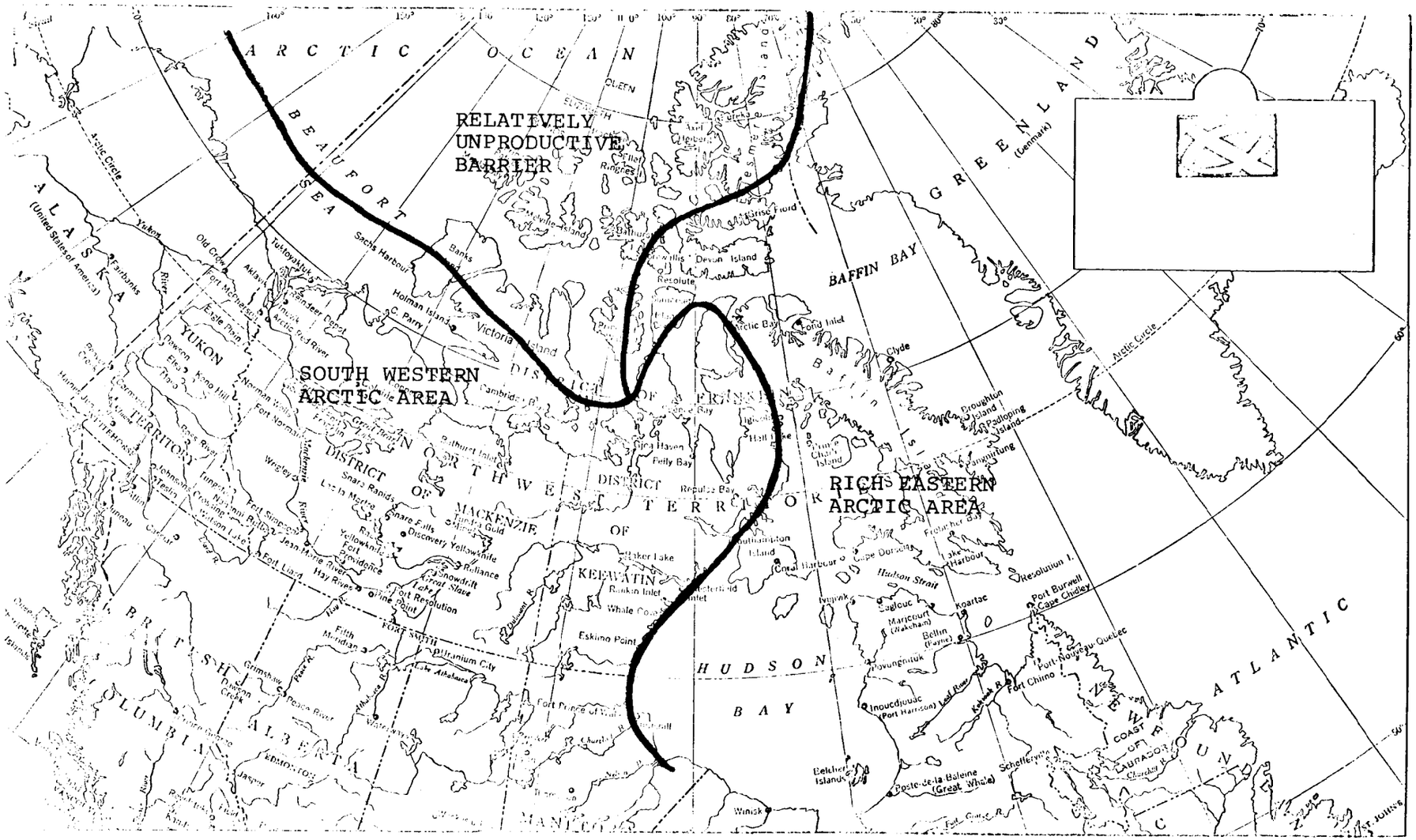
An enormous wedge or barrier of relatively unproductive ice and water between the aforementioned units represents the thi rd region. It serves to separate marine mammal populations of the east and west Arctic Oceans, and perhaps has given rise to distinctive sub-species. Only ringed seals are found in this region. The adults remain under the ice all winter while the young probably migrate out.

From a tourist and recreation standpoint the Rich Eastern Arctic Area possesses the prime development potential. There are possibilities in the southwestern Arctic Area, but they are decidedly of a secondary order. The prime seal and walrus areas in this western part of the Arctic are off the West Coast of Alaska where there is exceptionally good hunting and viewing each spring. This is a point of major significance from a tourist development standpoint.

2. Some General Time Relationships for Viewing and Hunting

Considering walrus and the various species of whales and seals in total, the prime viewing and hunting season for the Northwest Territories covers a six-week period from mid-July to the end of August. This is the time span during which the tourist and recreation values associated with marine mammals are most varied and prolific.

The seals provide the most noticeable variations in the previous generalization. The prime hunting and viewing season for the ringed seal is in May and June when it is on the fast ice. Secondly, the bearded seal offers prime viewing and hunting in most places in the Territories from the beginning of June to the end of August, and at Jones Sound, Coral Harbour and the West Coast of Hudson Bay during June and July. The prime viewing and hunting season for the harp seal is essentially July and August.



GENERAL PRODUCTIVITY
RELATIONSHIPS

The more spectacular marine mammals, including the whales and walrus, have prime viewing and hunt ing seasons that conform reasonably closely with the previously noted six-week span for al l species considered in combination. The longer hunting season for the walrus in the general vicinity of Southampton Island that extends from mid-August to mid-September is a notable exception.

It can be stated, therefore, that those wishing to sample the full range of marine mammals of the Northwest Territories have their best opportunity from mid-July until the end of August. Prime periods for various locations in the Territories, however, vary considerably. This aspect will be noted in a subsequent section of the report.

During the aforementioned six-week period weather conditions in the Arctic, particularly in coastline areas, are at best only generally satisfactory, and often generally highly unsatisfactory. Fog and drizzling rain are common as in most northern maritime climates. For the avid observer of marine mammals the discomfiture factor would not be a deterrent. Moreover, the quality of the experience readily offset discomfiture considerations for the general tourist with a "yen" to see marine animals. The major handicap is related to air transportation. Travel schedules can be radically disrupted by the inability of planes to land in fogbound settlements for several successive days. This presents significant difficulties for the exploitation of tourist potentials. Those undertaking specifically to view and study marine mammals must be prepared to be detained from their prearranged travel schedule and probably would not find this limitation to be a deterrent. The problem of increased costs to an operator conducting a specific marine mammal tour or integrating this feature into a more general landscape tour could be onerous if not ruinous in a cost structure as high as that prevalent in the Arctic.

3. Some General Aspects of Local Mode of Transport Risk and Strenuousness of Effort

There are four distinct natural situations or environments in which marine mammals are found during prime hunting and viewing times including fast ice, moving pack, open water and land. Fast ice is related solely to

the ringed seal and land to the viewing opportunities associated with wal rus in four separate areas. Moving pack is the locale for hunting the walrus, and viewing and hunting the bearded seal. Open water is the locale for the harp seal and for all whales with beluga being particularly spectacular in estuaries and river mouths.

A variety of local transport is required to exploit tourist and recreation opportunities. Ski-doo or dog teams are requi red for the ringed seal and these in combination with smal l boats or canoes for the bearded seal. Large boats of the Peterhead type are requi red to reach beluga, narwhal and walrus in many locations. Small boats and large canoes are sufficient at other points.

The location of the marine mammal resources relative to settlement patterns or local organizational centres is generally favorable. Some twenty-eight of the areas noted in the accompanying maps, or 32 %, require travel only in the immediate vicinity of settlements. In effect, only short distance trips are necessary. Another forty-eight areas, or 56%, involve considerable travel from the nearest settlements but operations can be fairly readily organized. Only ten areas, or 12%, are isolated locations that require traveling and quartering with native populations outside a main settlement. These present some organizational difficul ties, but no insurmountable handicaps appear to exist. Of the ten areas involving isolated locations, one is related to a first class beluga whale area, three to second class seal resources and six to third class seal and walrus areas. Five of the latter group of six represent third class walrus areas in Hudson Bay and off the north-east coast of Baffin Island.

Of fifty-two seal areas, twenty-five, or 48%, involve only local travel. Another twenty-three, or 44%, require considerable t ravel but are readily exploitable. Four, or 8%, are in isolated locations. Of twenty whale areas, two, or 10%, involve local travel. Another seventeen, or 85%, require travel over some distance. One, or 5?'0, is in an isolated spot. Of fourteen walrus areas, one, or 7%, involve only local travel. Eight, or 57%, requi re t ravel over some di stance. Five, or 36 %, necessitate travel to a somewhat isolated spot. Seal hunting and viewing require the least travel from settlements and that for wal rus the most.

The risk factor for a person desiring to exploit the tourist and recreation potentials associated with marine mammals presents no serious handicap. Of eighty-six marine mammal areas of all types, fifty six, or 65%, involve no personal risk that is abnormal for northern regions. Another thirty, or 35%, present a moderate degree of risk compared with northern travel in general, and reasonable experience in the outdoors is necessary. None involve a high or prohibitive degree of risk.

The r sk factor is least in seal viewing and hunting. Of fifty-two areas ident fied in this study, forty-six, or 88%, involve nothing abnormal for the regi on. All moderate risk situations are associated with bearded seals in the moving pack. In the case of whales, two of twenty areas noted, or 10%, involve no abnormal risk, and eighteen, or 90%, a moderate risk. Of fourteen walrus areas, eight, or 57%, involve no abnormal risk, and six, or 43%, moderate hazards.

Northern travel always involves some risks and a requisite degree of caution and judgement backed by experience is necessary. Accidents over a period of time are inevitable and those organ izing trips for tourists and sportsmen should be covered by adequate insurance.

The physical effort involved in the pursuit of the tourist and recreation potentials of the marine mammals as a group is not of such a high order as to exert inhibiting effect. Of eighty-six areas identified, forty-nine, or 57%, involve exertion that could be handled by the average tourist in reasonable physical condition. For thirty-seven areas, or 43%, strenuous efforts, requi ring good physical condition and experience, are necessary. The strenuousness of the effort in the latter case could be considered dangerous or undesirable for elderly or physically limited persons.

Seal hunting and viewing i s the least strenuous activity in an overall sense. Of the fifty-two areas involved, forty-six, or 88%, could be handled by the average tourist in reasonable condition. Another six areas, all associated with bearded seals, necessitate strenuous activity, good physical condition and experience. Of twenty whale areas, eighteen, or 90%, are in the latter category of strenuous activity and 43 "/o, or six of fourteen walrus areas.

4. supply Prospects for Hunting

There is an adequate SUPPI y of all types of seals to meet sport hunting requirements in all areas.

it is felt that the supply factor is adequate in the case of the beluga whale and narwhal. No bowhead whales can be taken.

It is indicated in data provided by the Fisheries Research Board that perhaps 150 wal rus can be harvested by hunters. About thirty would come from the moving pack in the vicinity of Coats and Southampton Islands, 100 from the Upper Foxe Basin and 20 from the Jones Sound area.

The foregoing remarks simply indicate supply conditions in relation to sport hunting. Supply however is not the sole determinant in any consideration of the total problem of sport hunting.

III. AN EVALUATION OF THE TOURIST AND RECREAT ION ATTRIBUTES OF THE SIGNIFICANT MARINE MAMMALS OF THE N. W. T.

An outline of a two stage method for the recording of the critical information by the staff of the Fisheries Research Board at Ste. Anne De Bel levue relative to tourist and recreation values associated with the marine mammals was prepared by the writer. The document is presented in its entirely in the appendix to this report. The reader wi l l gain a background understanding that should improve his application of the results. Secondly, and of major importance, the information contained therein provides a key to the interpretation of the symbols presented on the maps and Master Recording Sheets that fol low.

The data recorded by the Fisheries Research Board within the format is now presented in a series of Master Recording Sheets and Distribution Maps.

Three species of seals, including the ringed, bearded and harp are reviewed. This is followed by data for three species of whales, namely the beluga, narwhal and bowhead. Finally, information is given for the walrus.

RINGED SEAL (1)

MASTER RECORDING SHEET

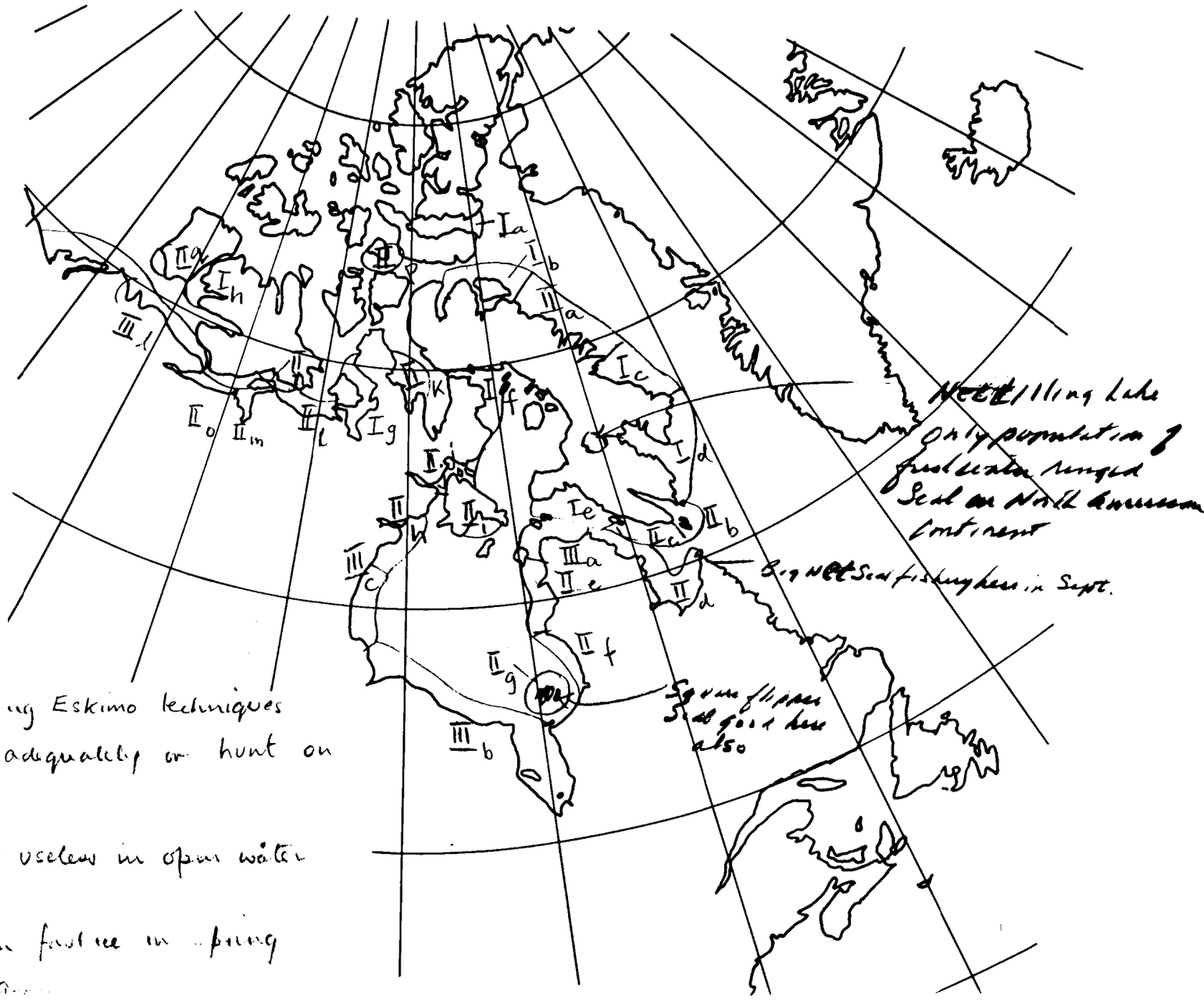
Regional Abundance Class Mapped	Seasonal Presence & Locale of Species					Significant Determinants of Tourist & Recreation Potential							Tourist & Recreation Potential	
	In Region	Local When In Region				Prime Viewing and Hunting Times	Travel Factors			Sustained Yield of Mammals			V Viewing Class / Rate	H Hunting Class / Rate
		Land	Fast Ice	Moving Pack	Open Water		Mode & distance	Risk	Strenuousness	Total	Domestic Quota	Hunter Residue		
I_a	J - D		O - J		J - O	M - J	S 0	0	0			adequate	I	
I_b	"		"		"	"	" "	"	"			"	"	
I_c	"		"		"	"	" "	"	"			"	"	
I_d	"		"		"	"	" 1	"	1			"	"	
I_e	"		"		"	"	" 0	"	0			"	"	
I_f	"		"		"	"	" "	"	"			"	"	
I_g	"		"		"	"	" "	"	"			"	"	
I_h	"		"		"	"	" "	"	"			"	"	
II_a	"		"		"	"	" 1	"	1			"	"	
II_b	"		"		"	"	" "	"	"			"	"	
II_c	"		"		"	"	" "	"	"			"	"	
II_d	"		"		"	"	" "	"	"			"	"	
II_e	"		"		"	"	" 0	"	0			"	"	
II_f	"		N - J		J - N	"	" "	"	"			"	"	
II_g	"		"		"	"	" 2	"	1			"	II	
II_h	"		O - J		J - O	"	" 1	"	"				I	

RINGED SEAL (2)

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Season In Region	Presence & Locale of Species Local When In Region: and	Fast Ice	Moving Pack	Open Water	Significant Determinants of Tourist & Recreation Potential: Prime Viewing and Hunting Times	Travel Factors: Mode & Distance	Risk	Strenuousness	Sustained Yield of Mammals: Total	Domestic Quota	Hunter Residue	Tourist & Recreation Potential: V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
II i	Ja - D		O - Ju		Ju - O	12H M - J4	80	o	O			adequate	I			
II j	"		"		"	"	" "	"	"			"	"			
II k	"		"		"	"	" "	"	"			"	"			
II l	"		"		"	"	" 2	"	1			"	II			
II m	"		"		"	"	" "	"	"			"	"			
II n	"		"		"	"	" 1	"	1			"	"			
II o	"		"		"	"	" 0	"	0			"	I			
II p	"		"		"	"	" 1	"	1			.	II			
II q	"		"		"	"	" C	"	O			"	I			
III a	"		"		"	"	" 1	"	I			"	II			
III b	"		N - Ju		Ju - N	"	" 2	"	"			"	"			
III c	"		O - Ju		Ju - O	"	" 1	"	1			"	"			
III d	"		"		"	"	" "	"	"			"	"			
		19														

RINGED SEAL



Must be stalked using Eskimo techniques to photograph adequately or hunt on ice.

Photography useless in open water season.

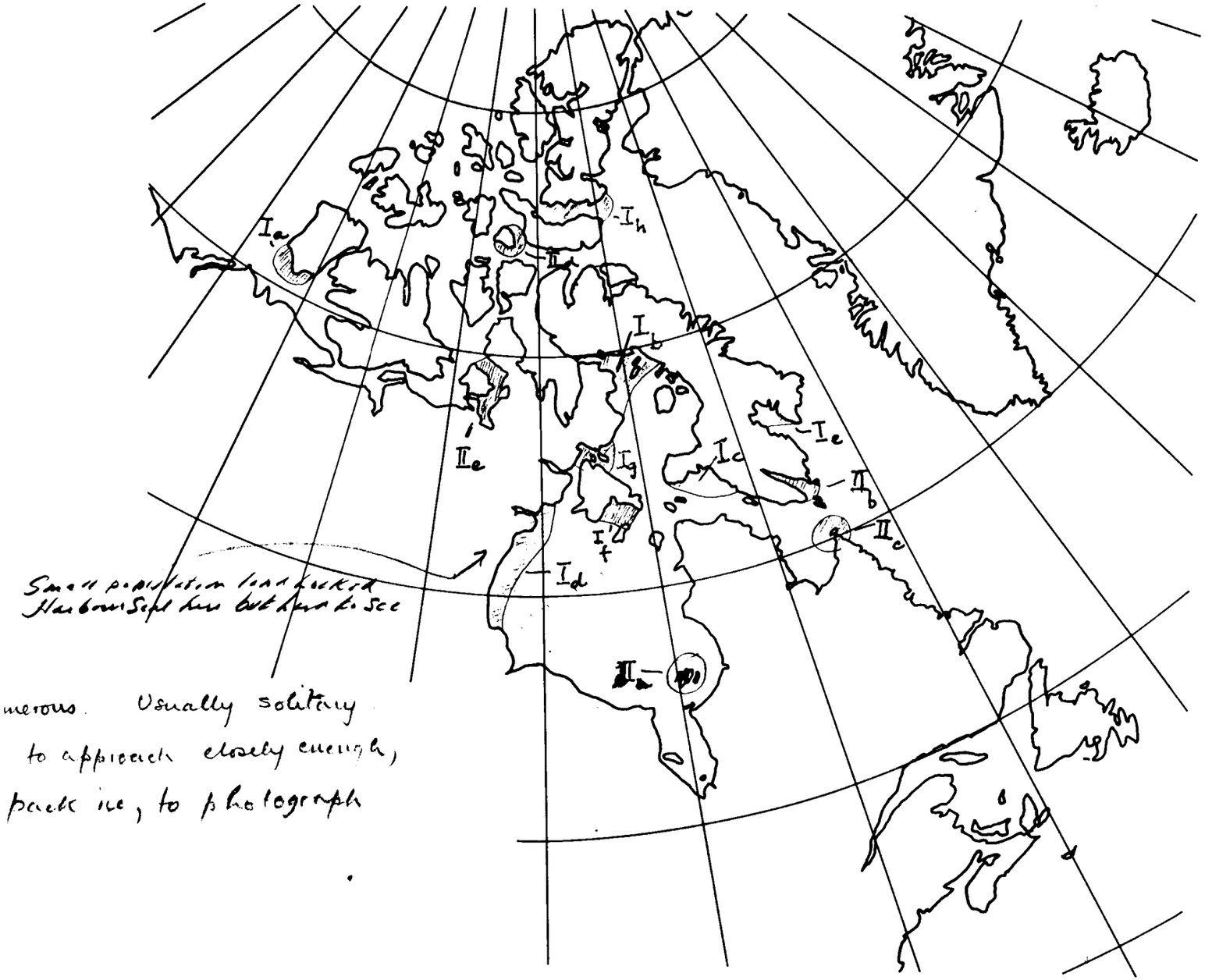
Best time on fast ice in spring when [illegible]

BEARDED SEAL

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Seasonal Presence & Locale of Species: In Region	Local When In Region: and	Fast Ice	Moving Pack	Open Water	Significant Determinants of Tourist & Recreation Potential: Prime Viewing and Hunting Times	Travel Factors: Mode & distance	Risk	Strenuousness	Sustained Yield of Mammals: Total	Domestic Quota	Hunter Residue	Tourist & Recreation Potential: V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
I_a	Ja - D			Ja - D		V&H J - A_4	SC 0	1	1			inadequate	I			
I_b	"			"		"	" 0	0	0			"	I			
I_c	"			"		"	" 0	0	0			"	I			
I_d	"			J	J_c - N	J, J_c	" 0	1	1			"	II			
I_e	"			"	"	J - A_4	" 1	1	1			"	I			
I_f	"			"	"	J_a, J_c	" 1	0	0			"	I			
I_g	"			"	"	J, J_c	" 1	0	0			"	I			
I_h	"			"	"	J, J_c	" 1	1	1			"	I			
II_a	"			"	"	J - A_4	" 2	1	1			"	II			
II_b	"			"	"	J - A_4	" 1	0	0			"	II			
II_c	"			"	"	J - A_4	" 1	0	0			"	II			
II_d	J - N			J - N		J - A_4	" 1	1	1			"	II			
II_e	"			J - N		J - A_4	" 1	0	0			"	II			
												"	II			

BEARDED SEAL



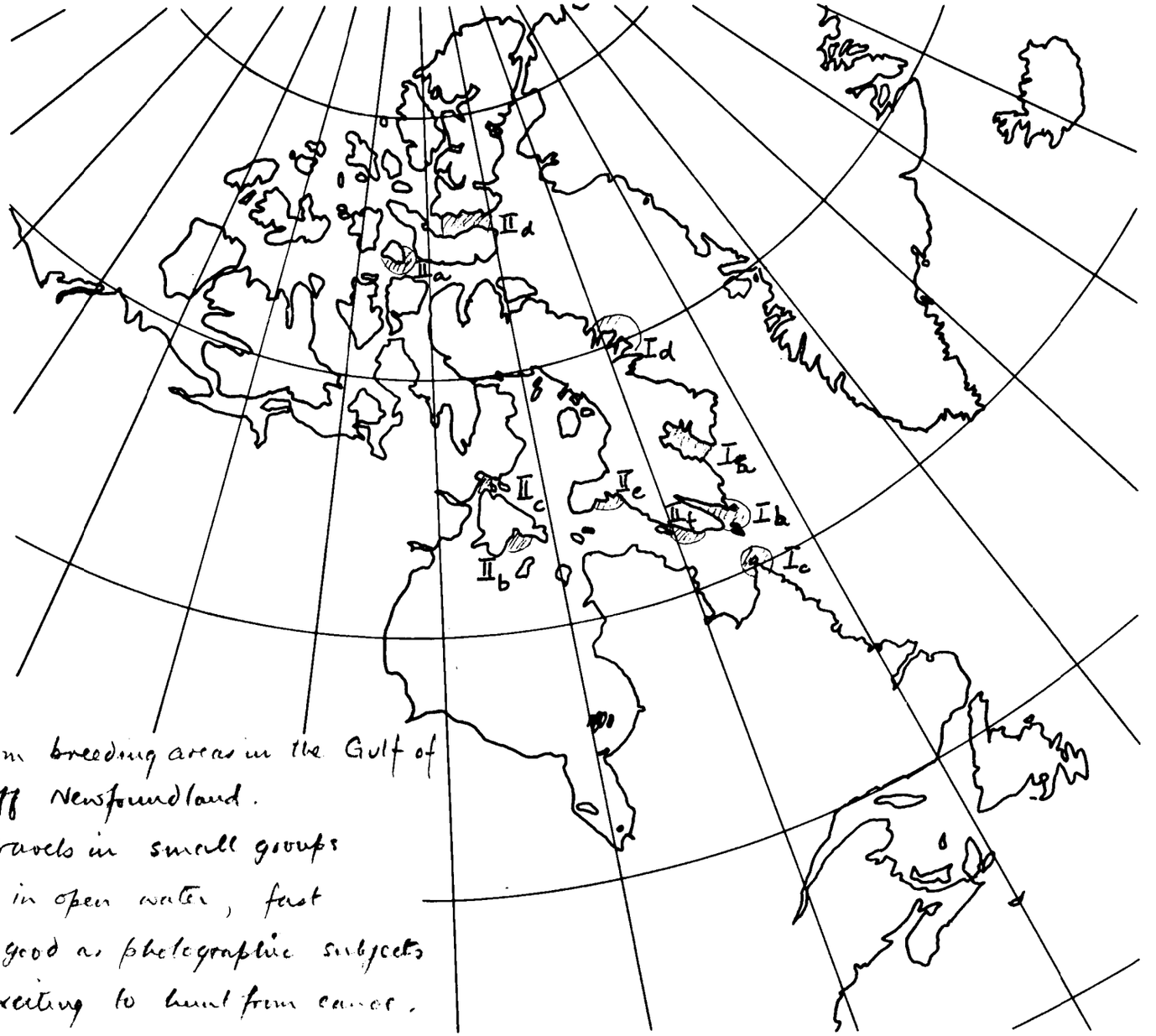
Never numerous. Usually solitary
Difficult to approach closely enough,
when in pack ice, to photograph

HARP SEAL

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Significant Determinants of Tourist & Recreation Potential											Tourist & Recreation Potentia			
	In Region	Local When In Region				Prime View- and Hunting Times	Travel Factors			Sustained Yield of Mammals			V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
		and	Fast Ice	Moving Pack	Open Water		Mode & distances	Risk	Strenuousness	Total	Domestic Quota	Hunter Residue				
I_a	Ju - O				Ju - O	½H Ju-A_4	C	O	O			inadequate	I			
I_b	"				"	"	" O	"	"				II			
I_c	O-N				O-N	—	" O	"	"				"			
I_d	Ju - O				Ju - O	Ju A_4	"	"	"				II			
II_a	Ju - S				Ju - S	"	"	"	"				"			
II_b	"				"	"	"	"	"				"			
II_c	"				"	"	"	"	"				"			
II_d	"				"	"	"	"	"				"			
II_e	"				"	"	"	"	"				"			
II_f	"				"	"	"	"	"				"			

HARP SEAL



A migrant from breeding areas in the Gulf of St Lawrence and off Newfoundland.

Gregarious, travels in small groups - always moving in open water, fast swimmers. No good as photographic subjects but would be exciting to hunt from canoe.

BELUGA

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Presence of Species				Significant Determinants of Tourist & Recreation Potential						Tourist & Recreation Potential			
	In Region	Local When In Region			Prime Viewing and Hunting Times	Travel Factors			Sustained Yield of Mammals			V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
		Land	Fast Ice	Moving Pack	Open Water		Mode & distance	Risk	Strenuousness	Total	Domestic Quota	Hunter Residue				
I_a	J_a-D				J_U-O	V:H J_{U_2}-A_4	Bt C 2	1	1				I	York		
I_b	"				"	"	C Φ	0	0		800		I	Clinic		
I_c	"				"	"	" 0	0	0		500		I			
I_d	J-O				"	"	" 1	1	1				I			
I_e	J_U-S				"	"	" 1	1	1				II			
I_f	"				"	"	" 1	1	1				II			
I_g	J-O				"	"	" 1	1	1				II			

B UGA

Excellent photographic subject when concentrated Hauls in river mouths in summer. Good hunting in same areas.

NA W :IL

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Seasonal Presence & [illegible] of Species: In Region	Local When In Region: Land	Local When In Region: Fast Ice	Local When In Region: Moving Pack	Local When In Region: Open Water	Significant Determinants of Tourist & Recreation Potential: Prime Viewing and Hunting Times	Travel Factors: Mode & distance	Travel Factors: Risk	Travel Factors: Strenuousness	Sustained Yield of Mammals: Total	Sustained Yield of Mammals: Domestic Quota	Sustained Yield of Mammals: Hunter Residue	Tourist & Recreation Potential: V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
I	Ju - O				Ju - O	V & H Ju₁ - A₄	1	1	0			adequate	I	{ [illegible] for 6 weeks of year the Prime areas of Arctic		
II a	"				"	"	"	"	1			"	II			
II b	"				"	"	"					"	I			
II c	"				"	"	"	"	1			"	II			
II d	"				"	"	"	"	1			"	I			
II e	"				"	"	"	"	1			"	II			

R HA

Hunted from fast ice in spring in Pond Inlet area. Elsewhere difficult to hunt (in open water) since very elusive.

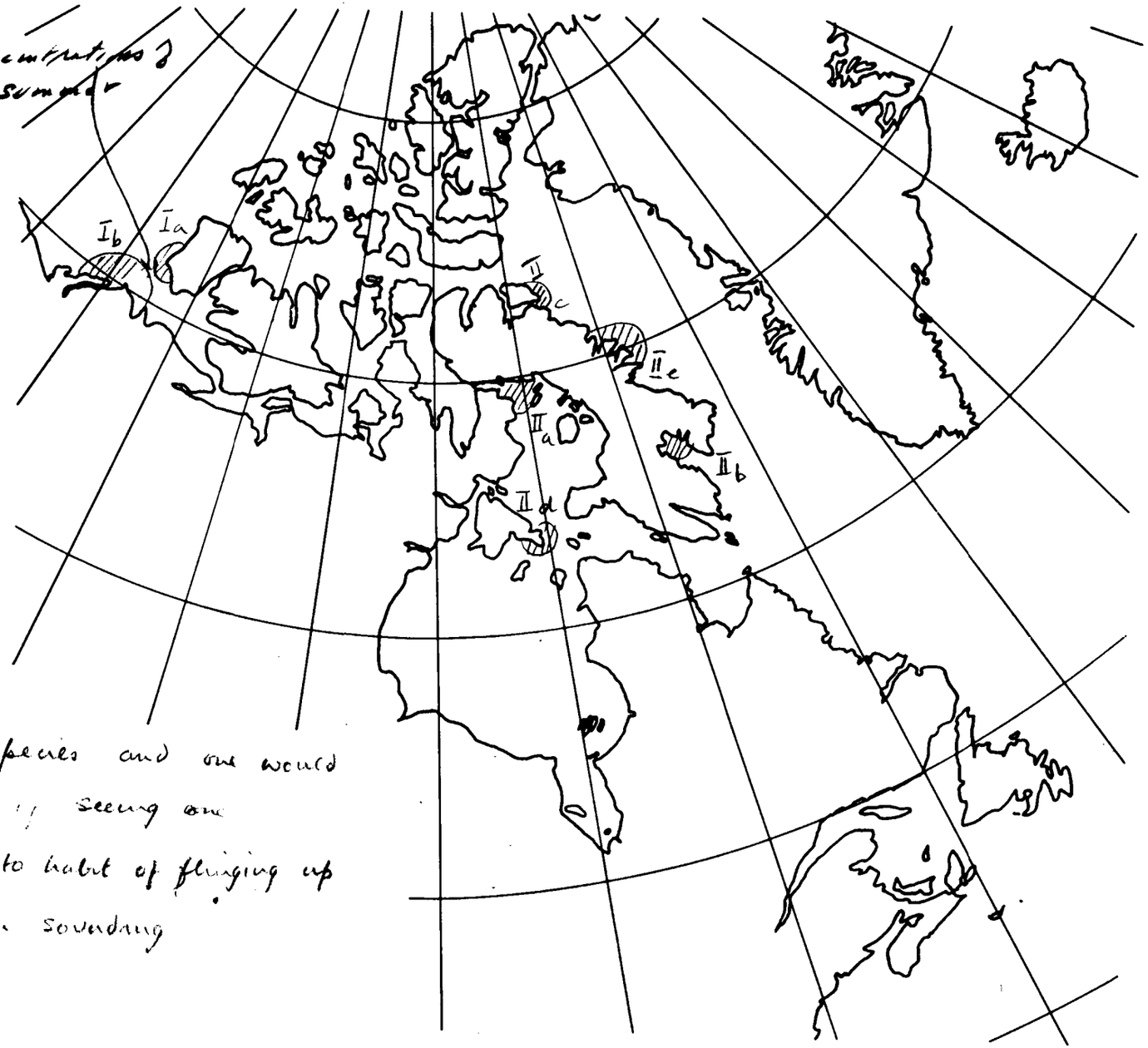
Bowfeld

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Seasonal Presence & Locale of Species: In Region	Local When In Region: Land	Fast Ice	Moving Pack	Open Water	Significant Determinants of Tourist & Recreation Potential: Prime View-[illegible] ing Times	Travel Factors: Mode & distance	Risk	Strenuousness	Sustained Yield of Mammals: Total	Domestic Quota	Hunter Residue	Tourist & Recreation Potential: V Viewing Class	V Viewing Rate	H Hunting Class	H Hunting Rate
Ia	M-O				M-O	J-A	B	|	|		NIL	NIL	I			
Ib	"				"	"	" "	|	|		"	"	II	[illegible]		
IIa	Ja-D	Winter [illegible]			Ju-O	Ju₂-A	BC "	|	|		"	"	II			
IIb	J-O				"	"	"	|	|		"	"	II			
IIc	Ju-O				"	"	" "	|	|		"	"	II			
IId	Ju-O				"	"	" "	|	|		"	"	II			
IIe	Ju-O				"	"	" "	|	|		"	"	I			

BOWHEAD

Large Concentrations of Bowhead in summer off Ellesmere



Still a very rare species and one would never be certain of seeing one

Spectacular owing to habit of flinging up tail flukes when sounding

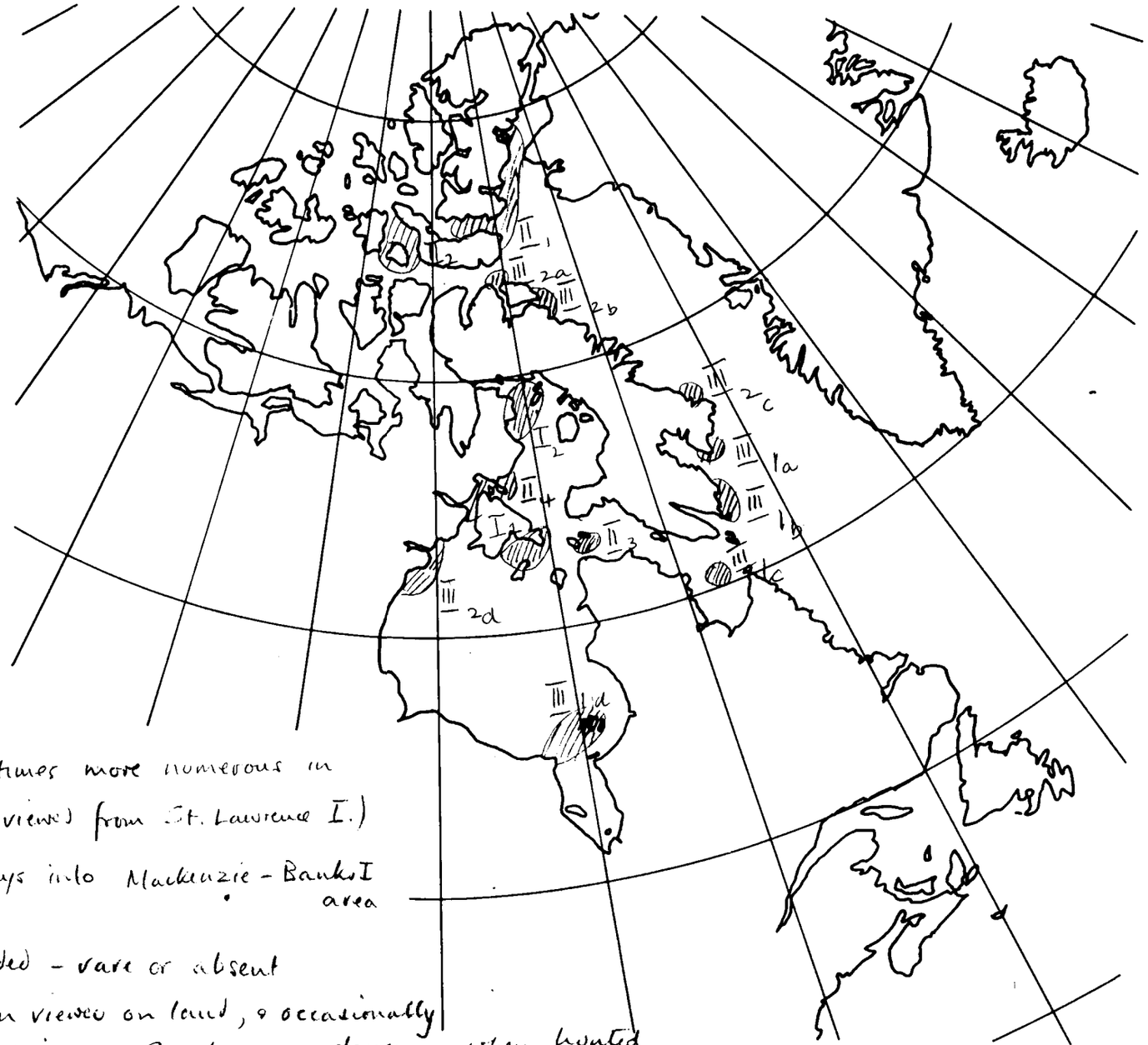
WALRUS

MASTER RECORDING SHEET

Regional Abundance Class Mapped	Season In Region	Presence & Locale of Species: Local When In Region: and	Fast Ice	Moving Pack	Open Water	Significant Determinants of Tourist & Recreation Potential: Prime Viewing and Hunting Times	Travel Factors: Mode & Distance	Risk	Strenuousness	Sustained Yield of Mammals: Total	Domestic Quota (Catch / Average)	Hunter Residue	Tourist & Recreation Potential: Viewing Class	Viewing Rate	Hunting Class	Hunting Rate
✓ I_1	$J_a - D$	$A_1 - O_3$		$O_4 - J_{v4}$	✓	V $A_1 - A_4$ H $A_2 - O_1$	B 1	1	7	180	150 average	30	I		I	
✓ I_2	$J_a - D$			$J_a - D$	✓	V $J_{v2} - A_4$ H $J_{v1} - S_2$	B 1 C 1	1	1	300+	ca 200	100+	I		I	
✓ II_1	$J_3 - S_3$			$J_3 - S_3$	✓	V+H $J_{v2} - A_4$	C 0	0	0	ca 50	30	20	I		I	
✓ II_2^v	$J_3 - S_3$			$J_3 - S_3$		V+H $J_{v2} - A_{41}$	C 1	0	0	—	ca 10	—				
✓ II_3	$S_3 - O_4$	$S_3 - u+$				V+H S_3	B 1	1	1	—	ca 20	—				
✓ II_4 ✓	$J_{v2} - O_2$	$A_1 - O_2$		$J_{v2} - A_1$		V+H $J_{v2} - A_4$	C 1	0	0	—	ca 10	—				
✓ III_{1a} ✓	$J_1 - N_2$			$J_1 - N_2$	✓	H $J_{v2} - A_4$	B 1	1	1	—	ca 10	—				
✓ III_{1b} ✓	$J_1 - N_2$			$J_1 - N_2$	✓	H $J_{v2} - A_4$	B 1	1	1	—	<10	—				
✓ III_{1c} ✓	$J_1 - N_2$			$J_1 - N_2$	✓	H $J_{v2} - A_4$	B 1	1	1	—	<10	—				
✓ III_{1d} ✓	$J_{v1} - N_1$	$A_2 - N_1$		$J_1 - A_1$	✓	H $A_1 - A_4$	C 2	0	0	—	ca 10	—				
✓ III_{2a} ✓	$J_{v1} - S_2$			$J_{v1} - S_2$	✓	H $J_{v2} - A_4$	C 2	0	0	—	<10	—				
✓ III_{2b} ✓	$J_{v1} - S_2$			$J_{v1} - S_2$	✓	H $J_{v2} - A_4$	C 2	0	0		<10	—				
✓ III_{2c}	$J_{v2} - S_2$			$J_{v2} - S_2$	✓	H $J_{v2} - A_4$	C 2	0	0	—	<10	—				
III_{2d}	$J_{v1} - A_1$			$J_{v1} - A_1$	✓	H $J_{v2} - A_1$	C 2	0	0	—	<10	..				

Walrus - spectacular when viewed on land in summer (I_1).
good viewing on moving pack (I_2 & II_1)

WALRUS



Walruses several times more numerous in Alaska (best viewed from St. Lawrence I.)

Occasional rare strays into Mackenzie - Banks I area

Areas not shaded - rare or absent

Spectacular when viewed on land, & occasionally so on pack ice. Can be very dangerous when hunted.

IV. A TOURIST AND Recreation USE CAPABILITY CLASSIFICATION FOR MARINE MAMMALS OF THE N. W. T.

1. General Approach and Method of Classification

On the basis of the data provided by the Fisheries Research Board in map and table form, the distribution of each of the species by abundance and viewing and hunting class was compiled in a series of overlays. This procedure immediately revealed the areas or regions possessing a variety of species and the general quality of the resource present in terms of abundance and viewing and hunting opportunity.

A rating system was then established by which the quality of each of the regional assemblages could be compared and contrasted. The following procedure was adopted.

(a) Each species present in an area or region assemblage was accorded from 1 to 3 points on the basis of its abundance class rating as follows: Class 1 - 3 points; Class II - 2 points; Class III - 1 point. This procedure recognized the variety of species present in a region and the abundance of each mammal. Both factors are obviously significant for tourist and recreation planning.

(b) The viewing and hunting capability for each species in a regional assemblage was noted and points accorded as follows: Class I - 2 points; Class II - 1 point. In this step the tourist and recreation use capability was evaluated on the basis of conditions for the species throughout the Territories.

Generally, only two hunting and viewing classes were identified in the work submitted by the Fisheries Research Board. This determined the range of point values adopted. In the case of the walrus, however, a different system was employed since only three regions were rated for viewing and hunting and all were

accorded a Class I status. In this instance a Class I viewing and hunting opportunity for walrus was accorded 3 points. The remainder of the areas were given points according to the abundance rating as follows: Abundance Class II - 2 points; Abundance Class III -1 point .

(c) Bonus points were given for certain special situations but they never exceeded a value of 2.

(d) Points recorded under the various species in a regional assemblage were then totalled.

The results of the foregoing process are presented in tabular form. It is possible that some improvement can be made on the basis of local expert knowledge.

It will be noted that the analysis did not take the accessibility risk and strenuous activity aspects recorded in the forms prepared by the Fisheries Research Board into account. It was not felt necessary to introduce these aspects into the rating process for several reasons.

Personal risk and strenuousness of activity were never rated as inhibiting for the physically conditioned person and often presented no problem whatever. Each individual species seemed to present a roughly similar set of conditions in whatever region it occurred. Where differences did occur they were rarely of major significance. Finally, most people desiring to view and hunt marine mammals desire some degree of adventure.

The required travel distance from a settlement also showed variation by species. Perhaps differences in this case are most important with respect to seals, particularly the ringed seal. Since this mammal is widespread, areas that offer access limitations are decidedly at a disadvantage. For the more spectacular mammals travel for some distance outside the settlement generally seems to be necessary. Any significant advantages or limitations possessed by a region in relation to these factors will be noted in the subsequent summary discussion of each.

	Main Centre	Species Present	Abundance class	View/Hunt Class	Points
Off Mackenzie Delta	Tuktoyaktuk	Ringed Seal	IIId	II	2
		Bowhead Whale	Ib	II	4
		Beluga Whale	Ig	II	4
					10
Amundsen Gulf	Sachs Harbour	Ringed Seal	IIg	I	5
		Harp Seal	Ia	I	5
		Bowhead Whale	Ia	I	5
					15
James Ross & Rae Straits	Gjoa Haven	Ringed Seal	Ig	I	5
	Spence Bay	Bearded Seal	IIc	II	3
					8
Southwest Hudson Bay	Eskimo Point	Ringed Seal	IIIc	II	2
		Bearded Seal	Id	II	4
		Beluga Whale	Ic	I	5
					11
North Central Hudson Bay	Chesterfield Inlet	Ringed Seal	IIh	I	4
	Rankin Inlet	Walrus	III2d		2
	Whale Cove				
					6
Repulse Bay	Repulse Bay	Ringed Seal	IIj	I	4
		Harp Seal	IIa	II	3
		Bearded Seal	I g	I	5
		Narwhal	IIb	I	4
		Walrus	II4		4
					20
Fisher & Evans Straits and Coats Island	Coral Harbour	Ringed Seal	IIi	I	4
		Harp Seal	IIb	II	3
		Bearded Seal	If	I	5
		Bowhead Whale	IId	II	3
		Walrus	I	I	7 1/
					2 2
South East Hudson Bay	Belcher Islands	Ringed Seal	IIg	II	3
		Bearded Seal	IId	II	3
		Walrus	III1d		2
					8
Upper Foxe Basin	Igloolik	Ringed Seal	If	I	5
		Bearded Seal	Ib	I	5
		Bowhead Whale	IIa	II	3
		Walrus	I2	I	7 2/
					20
South West Baffin Island Coast	Cape Dorset	Ringed Seal	Ie	I	5
		Harp Seal	IIc	II	3
		Bearded Seal	Ic	I	5
		Walrus	II 3		3
					16
South East Baffin Island Coast	Lake Ha rbou r	Ringed Seal	IIc	I	4
		Harp Seal	IIf	II	3
					7
Entrance Hudson Strait	Port Burwell	Harp Seal	Ic	I	5
		Bearded Seal	IIe	II	3
					8
Frobisher Bay	Frobi sher Bay	Ringed Seal	IIb	I	4
		Bearded Seal	IIb	II	3
		Harp Seal	Ib	I	5
		Walrus	III 1b		2
					14
Cumberland Sound	Pangnirtung	Ringed Seal	Id	I	5
		Harp Seal	Ia	I	5
		Bearded Seal	Ie	II	4
		Bowhead Whale	IIb	II	3
		Narwhal	IIa	II	3
		Beluga Whale	Id	I	5
		Walrus	III1a		2
					2 7
Broughton Island Waters	Broughton Island	Ringed Seal	Ic	I	5
		Walrus	III 2c		_.2_

					7
Cape Christian Area	Clyde River	**Ringed Seal**	**Ia**	I	5
		Harp Seal	**Id**	II	4
		Bowhead Whale	**IIc**	**II**	3
		Narwhal	**IIc**	**II**	3
					15
Bylot Island Waters	Pond Inlet	**Ringed Seal**	**Ib**	**I**	5
		Walrus	**III 2cb**		2
		Narwhal	**I**	I	5
					12
Cornwallis Island Waters	Resolute	Ringed Seal	**IIp**	II	3
		Bearded Seal	**IId**	**II**	3
		Harp Seal	**IIa**	II	3
		Beluga Whale	**Ie**	**II**	4
		Narwhal	**IIe**	II	3
		Walrus	**II 2**		4
					20
Jones Sound, NorthEast Baffin Bay	Grise Fiord	Ringed Seal	Ia	I	5
		Harp Seal	**IId**	**II**	3
		Beluga Whale	If	**I**	5
		Narwhal	**IId**	I	4
		Walrus	**II 1**	**1**	4
					21

1/ Two bonus points for spectacular viewing when animals on land on Coats Island, and for a possible hunter take of perhaps 30 walrus.

2/ Two bonus points for possible hunter take of up to 100 animals.

The information contained in the base data table was analysed carefully. The distributional pattern of the point ratings was observed and the noticeable groupings identified. One group of six regions displayed values emerging from 20 to 27 points. A second group of four showed a marked concentration of point values between 14 and 16. At the lower end of the scale there were nine regions with values ranging from 6 to 12 points. Three regions in this distribution with 10 to 12 points were clearly at the top of the lower grouping. It was decided arbitrarily to place them in the lower rather than the middle group.

The regions and their clearly definable groupings then were defined according to tourist and recreation use capability. There are many ways in which this could have been achieved. The base data presented in this report will permit the reader to develop additional capability classes that may prove to be more useful in relation to particular problems. That presented appears to be most useful for tourist and recreation policy and program planning.

Areas with a Class I capability possess a variety and abundance of marine mammals with associated hunting and viewing opportunities, sufficient to support a rewarding tourist and recreation experience in themselves, or to provide a primary component of a general landscape tour. These areas offer the prime assemblages of marine mammals in the Territories. They can satisfy the requirements of visitors primarily or largely interested in this type of biological phenomena.

While Class 1 areas have the resources to support a specialized marine mammal tour within their confines, it is obvious that several could be combined into a more extensive tour. The visitor would focus attention primarily on a single species for which each area or region offers outstanding opportunities. The point to note, however, is that each Class I area can support a tour in itself based upon its major organization centre.

Areas with a Class II capability designation possess an assembly of marine mammals that could represent a significant or major input to a general landscape touring experience. Some hunting and interesting

TOURIST AND RECREATION USE CAPABILITY CLASSIFICATION AND RATING FOR MARINE MAMMALS IN THE NORTHWEST TERRITORIES 1/

Areas	Rating	Marine Area	Organization Centre	Total Points
Class 1: Possess variety, abundance and qual ity marine mammal resources to support a tour based essentially upon the viewing and hunting of marine mammals or to represent a primary component of a general landscape tour.	1	Cumberland Sound	Pangnirtung	27
	2	Fisher/Evans Straits, Coats Is.	Cora l Ha rbou r	22
	3	Repulse Bay	Repulse Bay	20
	3	Upper Foxe Basin	Igloolik	20
	3	Cornwallis Island waters	Resolute	20
	3	Jones Sound, North Baffin Bay	Grise Fiord	21
Class II: Possess marine mammal resources capable of making a significant or major input to a general landscape tour, but not sufficient to support a tour in themselves.	1	Amundsen Gulf	Sachs Harbour	15
	1	SW Baffin Island waters	Cape Dorset	16
	1	Frobisher Bay	Frobisher Bay	14
	1	Cape Christian waters	Clyde River	15
Class III: Possess marine mammal resources capable of providing only tertiary support to a landscape tour.	1	Beaufort Sea off Mackenzie Delta	Tuktoyaktuk	10
	1	SW Hudson Bay	Eskimo Point	11
	1	Bylot Island waters	Pond Inlet	12
	2	James Ross/Rae Straits	Spence Bay, Gjoa Haven	8
	2	North Central Hudson Bay	Chesterfield Inlet, Rankin Inlet	6
	2	South Hudson Bay	Belcher Island	8
	2	SE Baffin Island waters	Lake Harbour	7
	2	Entrance Hudson Strait	Port Burwell	8
•	2	Broughton Island waters	Broughton Island	7

1/ Areas are shown on Map in pocket of report.

viewing experiences are present, but the resources are not of sufficent calibre in themselves to justify visitation. They can provide a major " secondary support to a broader based tourist and recreation experience.

Areas with a Class III capability possess marine mammal resources capable of providing meaningful but tertiary support to a general landscape touring experience that would rest essential I y upon other resource foundations. Opportunities are present that could be effectively exploited , but in comparison with Class I and Class II areas they are decidedly of a lesser order of significance.

The various areas included within the broad capability classes have been rated 1 to 3 to reflect secondary variations in quality. This secondary rating is, admittedly, somewhat subjective.

The foregoing table summarizes the results of the classification and rating process previously described. The accompanying map indicates their geographic distribution of the areas, or regional assemblages.

2. Some General Observations with respect to the Use Capability Classification

The prime marine mammal resources are focused essentially upon the eastern half of the Arctic Archipelago, and particularly upon the waters surrounding Southampton, Baffin, Cornwallis and south-east Ellesmere Islands. Thirteen of nineteen, or 68% of all Class I to III areas are found here and 100'10 of the Class I areas. This is the prime general geographic region of the Northwest Territories for the marine mammals. It is here that the Class 1 resources possess the variety, abundance and quality to compete effectively in a tourist and recreation sense from a continental or global market perspective.

Only three areas are found along the Arctic shore of the Territories westward from Boothia Peninsula to the Mackenzie Delta and Banks Island. Two of this group are Class III areas and one, namely, Amundsen Gulf, has received Class II status. This region actually represents the easterly extremity of a larger northern marine mammal population that is

much more strongly represented in Alaskan Arctic and Bering Sea waters, where prime tourist and recreation opportunities are present.

Three Class III areas are found in the waters surrounding the Belcher Islands and off the west coast of Hudson Bay from Chesterfield Inlet southward. The occurrence of the beluga whale in the mouth of the Seal River probably represents the prime resource in all three areas. General I y speaking, al I marine mammals of importance found in these regions can be dupl icated off the coast of Manitoba and Ontario, and sometimes in an equal or more spectacular form. In effect, these areas possess no comparative advantage over opportunities located to the south in Hudson and James Bays.

It will be noted from the map that three Class I regions, including Upper Foxe Basin, Repulse Bay and the waters between Southampton and Coats Island, display a tendency to clustering. Obviously the resources of the three regions could be exploited jointly from a tourist and recreation standpoint. This would obviously increase their attract ivity. The same opportunity exists in the case of the two northerly Class 1 areas, including the waters off Cornwallis Island and those of southwestern El lesmere Island.

It is of interest to note that the integration of either of these groupings into single marine mammal viewing and hunting experience probably would match the opportunities of Cumberland Sound.

3. Detailed Examination of Specific Class I Areas

In this section of the report the various Class I areas previously outlined are examined in greater detail. Some new relationships emerge from this consolidation of information.

(a) Cumberland Sound I 1 - Organizat ion Cent re Pangnirtung

The area has been accorded a total of 27 points, the highest for any in the Territories, on the basis of the presence of seven species. This is the only region in which all of the marine mammals covered in this study are present. It is this variety, frequently coupled with high quality, that lifts the standing of the area.

SPECIES PRESENT AND RATING

Species	Abundance Class	View/Hunt Class	Total Points
Ringed Seal	I	I	5
Harp Seal	I	I	5
Bearded Seal	I	II	4
Bowhead Whale	II	II	3
Narwhal	II	II	3
Beluga Whale	I	I	5
Walrus	III		2
			27

Seals are strongly represented. All three species are present and have a Class 1 abundance rating. Two species offer Class I and one Class II hunting and viewing conditions.

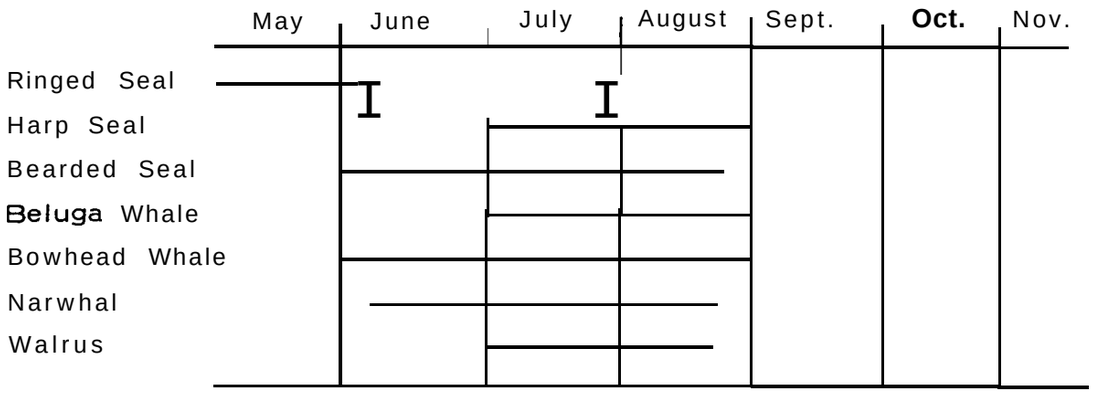
All three whale species are present. Class I beluga whale opportunities are found here. Millut Bay, at the upper extremity of Cumberland Sound, is a calving area for this species, and they are plentiful in Nettilling Fiord in the summer months. The areas' narwhal resources are only Class II. Pond Inlet and Grise Fiord are better endowed with this interesting and somewhat spectacular species. The giant bowhead whale that appears and often calves in Millut Bay are spectacular.

The walrus resources have been rated Class III in terms of abundance. No sport-hunter quota was given for this area by the Fisheries Research Board. There is a good population of walrus, in the hundreds, in the Lemieux Islands and in Abraham Bay at the south and north entrances to Cumberland Sound respectively.

The only population of freshwater ringed seal on the North American continent is to be found in the Nettilling Lake to the west of the upper reaches of Cumberland Sound. This is an added attraction for the region not recorded in the point al I ocat ion.

The prime hunting and viewing season from a tourist and recreation standpoint appears to run from about mid-July to the beginning of the fourth week in August.

PRIME VIEWING AND HUNTING SEASON



During this time span all seven mammals of the region are present. The prime hunting season for the ringed seal on its fast ice locale, during May and June, is over. During these summer months this mammal spends its time in open water.

The climatic classification for tourism and recreation shows that conditions are general l y favorable around Cumberland Sound from July 15th to early August. From August 15th through to September 1 st, Pangnirtung appears to enjoy satisfactory weather; however, conditions are generally unsatisfactory around the outer or eastern one half to one thi rd of the Sound. By September 15th weather conditions are generally unsatisfactory throughout the enti re region.

To exploit the marine mammal resources to any extent, travel for considerable distances away from Pangnirtung is always necessary. Invariably travel is by boat and usually of the large Peterhead type. Rough water conditions in Cumberland Sound are frequent at this time of year.

The personal risk factor associated with al l mammals except the ringed and harp seals is rated as 1. [n effect, a moderated degree of risk is present, and reasonable outdoor experience is necessary. The risk factor for the two aforementioned seals is O.

Hunting and viewing for all species except harp seal involves

strenuous effort, requiring good physical condition and some experience. The activity can be dangerous or undesirable for the elderly or physically limited.

It is clear that the exploitation of the full tourist and recreation potentials of the marine mammals of this area will require considerable organization. Visitors must be transported great distances. Adequate boats and skills to handle their basic food, accommodation and trip logistics are required. The resources cannot be exploited on a haphazard basis.

As previously noted, the point rating system adopted in this study has accorded Cumberland Sound the highest value, namely, 27 points. This is five points, or nearly 22'%0, above the rating for the Coral Habour region, its closest rival. Admittedly, the Sound is very rich in marine mammal resources, but the rating system may have tended to over-emphasize the merits of the area. It is assuredly a Class I area, but perhaps not as superior to other Class 1 areas in the Territories as suggested. Moreover, its resources cannot match those of Repulse Bay, Coral Harbour and Igloolik when combined in a single travel experience.

(b) Fisher/Evans Straits and Coats Island Waters - Organization Centre Coral Harbour

This Class I area received 22 points in the classification process, the second highest value recorded. The pattern is summarized below.

SPECIES PRESENT AND RATING

Species	Abundance Class	View/Hunt Class	Total Points
Ringed Seal	II	I	4
Harp Seal	II	II	3
Bearded Seal	I	I	5
Bowhead Whale	II	II	3
Walrus	I	I	7
			22

All three seal species are present in the area. Hunting and viewing possibilities are Class I for the bearded and ringed seals, but only Class II for the harp seal. The seal foundations of the marine mammal assemblage are good, but not exceptional.

Only one of three whales, namely the bowhead, is present and in particular in the waters off Seahorse Point. Its abundance, and viewing and hunting condition, is Class II. The whale populations are, therefore, somewhat weak. The Arctic Ecology Map Series records that 100-200 beluga whales are found in Native Bay on Southampton Island, but this is a limited resource for the Hudson Bay area.

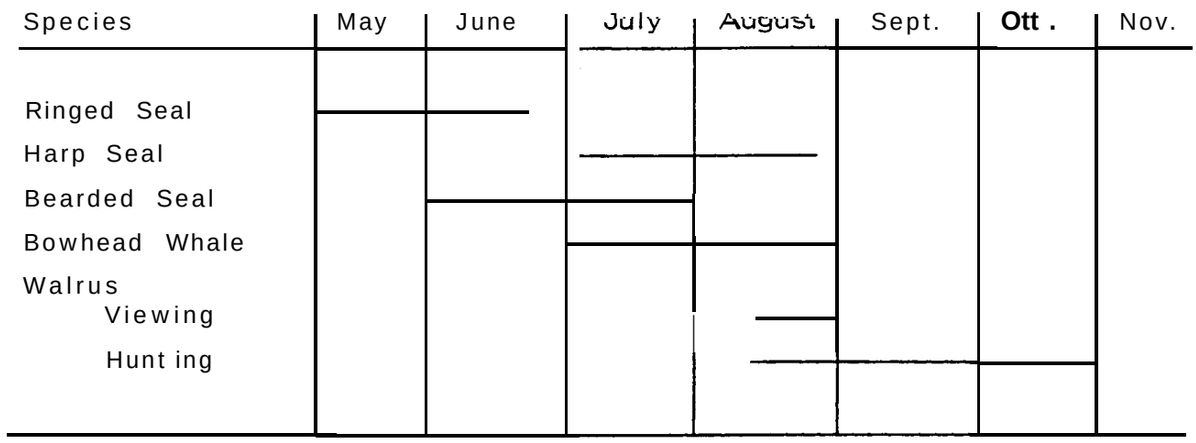
It is the walrus population that represents the strong foundation of the tourist and recreation potential of the marine mammals of the area. This spectacular animal, in an overall sense, is perhaps at its best in the Northwest Territories. it is important to note, however, that the mammal is several times more numerous in Alaska.

The native hunting quota for the year is 180 animals with the average annual domestic take being about 150 animals. There appears to be a sport hunting potential of about 30 animals annually.

About 2, 000 walrus have been observed in the area south of Cape Pembroke. When the herds assemble on Coats Island the tourist would be presented with a spectacular viewing prospect that cannot be duplicated on such a scale anywhere in the Northwest Territories. They are reported common at Seahorse Point on Southampton Island. It appears that walrus move from Walrus Island to Bencas Island and Cape Pembroke during August and September. From these points they generally move to Seahorse Point and Gorden Bay in October, with some moving west again in the late fall.

On the basis of its strong walrus resources the area received two bonus points. Its walrus population, with a hunter residue of thirty animals and a spectacular viewing possibility on Coats Island, accounted for seven or 32% of its 22 points.

PRIME VIEWING AND HUNTING SEASONS



The prime tourist and recreation season for the area appears to be from about mid-July to the end of August. In this period four or five animals offer thei r best viewing and hunting prospects. The ringed seal, which is hunted on the fast ice in May and June, has returned to the open waters of the region by this time.

It is important to note that the prime viewing for walrus on Coats Island covers only a two-week span from mid-August unt i l the end of that month. Prime walrus hunting in the region, however, extends from mid-August unti l the end of October. When the walrus viewing on Coats Island is over," the area has lost its most unique marine mammal tourist attraction.

The tourist and recreation climate classification for this part of the Territories reveals general ly unsatisfactory conditions in the south-eastern part of Southampton and Coats Islands from August 1 st to September 1 st. Conditions become highly unsatisfactory after that date. In effect, there is a serious climatic limitation associated with the exploitation of this regional assemblage of marine mammals.

The tourist and recreation utilization of al l resources, except the ringed seal, requires travel outside the community. The accessibility factor was rated 1. Large Peterhead Boats are necessary for t ravel in most cases.

The risk and strenuous factor for all forms of hunting in the area is

negligible with the rating scale being O in every case. Walrus and bowhead whale have a risk and strenuous factor of 1 in each case. Hence, there is - no serious handicap of this nature associated with the marine mammal tourist and recreation resources of the area.

(c) Repulse Bay I_3 - Organization Centre Repulse Bay

This area has been accorded a total of 20 points on the basis of the abundance and tourist and recreation values associated with five marine mammals. All the seals and walrus are present as in the Fisher and Evans Straits area. In effect, the region differs in species composition from the Coral Harbour centred area in its whalepopulation.

SPECIES PRESENT AND RATING

Species	Abundance Class	Viewing and Hunting Class	Total Points
Ringed Seal	II	1	4
Harp Seal	II	II	3
Bearded Seal	1	1	5
Narwhal	II	1	4
Walrus	II		4
			20

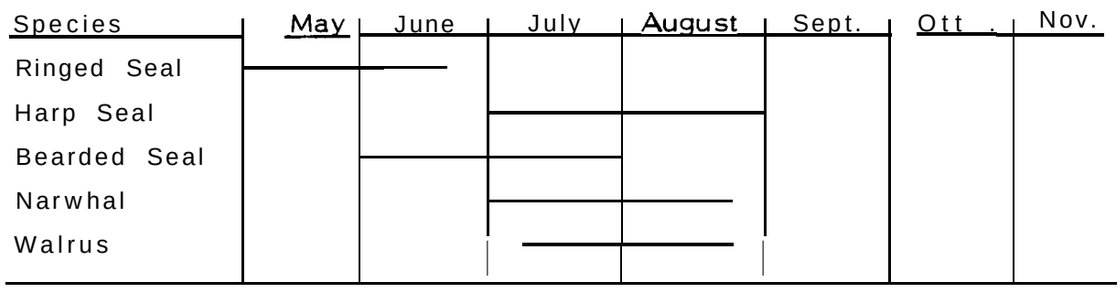
All three seal species are present as in the case of the Fisher and Evans Straits and Coats Island area, and the abundance and viewing and hunting classes are identical with those of Coral Harbour. The areas, therefore, possess similar strength in this respect.

The narwhal is an extremely interesting marine mammal. While having only a Class II abundance rating in this area, it nevertheless has a Class I tourist and recreation hunting and viewing potential. Resources in this instance, however, are decidedly of a lower scale than those present at Pond Inlet on Baffin Island.

The walrus resources from a tourist and recreation standpoint are decidedly inferior to those encountered in the Evans Strait/Coats Island area. The species is present in considerable quantities, however, but no hunter residue is indicated.

It is the variety of species present and their generally high quality in terms of abundance and hunting and viewing opportunity that establishes the high point total for the area. No unique resource for the Territories as a whole is present.

PRIME VIEWING AND HUNTING SEASONS



During the last two weeks in July, viewing and hunting conditions are prime for al I species except the ringed seal which is in the open water at this time. From the first week in June to the last week in July, conditions are prime only for the bearded seal. The narwhal and harp seal come in force about the first week in July but remain wel I into August. There is only a very short period of about three weeks in July in which the prime tourist and recreational values of the four marine mammals coincide.

Weather conditions are general ly satisfactory through July to mid-August. By September 1 st, they become generally unsatisfactory. Overall the Repulse Bay area appears to have better climatic conditions during its prime viewing and hunting tourist season for marine mammals than does the area to the south centred on Coral Harbour.

The travel distance factor for all species, except the ringed seal, is 1 denoting the need for the tourist to be transported some distance from the settlement. Conditions in this respect are identical with those of the area centred on Coral Harbour.

All three seal populations present minimum problems of risk and strenuous activity, and the same is true for the walrus. These factors have the normal value of 1 for the bowhead whale. In effect, these aspects are roughly similar to the situation at Coral Harbour.

(d) Upper Foxe Basin 13 - Organization Centre Igloolik

Four species are present in this region which was accorded a total of *20* points. Its seal resources are somewhat weaker than those of Coral Harbour and Repulse Bay centred areas due to the absence of the harp seal. Its whale resources are roughly equivalent to those of Coral Harbour.

The walrus populat ion is very strong and the area was accorded 2 bonus points on the basis of a residue of 100 animals that could be taken annually by hunters in addition to the average domestic ki I I of 200 per year. Walrus are found in the thousands in the Foxe Basin all year, particularly in the ice floes and edges of ice sheets. North and South Igloolik Islands, together with Manning Island, are notable haul ing-out grounds.

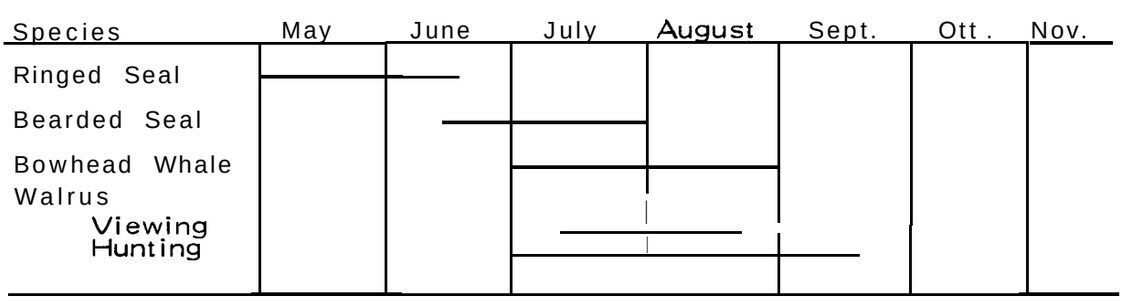
SPECIES PRESENT AND RAT ING

Species	Abundance Class	Viewing and Hunting Class	Total Points
Ringed Seal	1	I	5
Bearded Seal	I	I	5
Bowhead Whale	II	II	3
Walrus	1	I	7
			20

The area lacks the beluga and narwhal, two of the more spectacular marine mammals. This represents a serious limitation that tends to be masked to some extent by its high quality walrus resource.

All species, with the exception of the ringed seal, offer prime viewing and hunting from mid-July to the end of that month. Conditions are prime for bow-head whale unti I the end of August.

PRIME VIEWING AND HUNTING SEASONS



Weather conditions in this area are somewhat complicated and defintely represent a handicap to tourist and recreation use. During the last two weeks of July there is a transition from winter conditions to the summer climate. By August 1st summer climate prevails in the area around Igloolik but there is generally unsatisfactory weather due to fog and drizzle. On the opposite coast of the Foxe Basin on Baffin Island weather conditions are good. By August 15th, the pattern is roughly similar but conditions around Igloolik itself have become highly unsatisfactory mainly due to fog. By September 1 st, the whole of Upper, Foxe Basin has unsatisfactory to highly unsatisfactory weather.

Travel distance, risks and degree of strenuous effort are normal for the various species present in the area. In effect, no abnormal limitations are present.

(e) Considering the Coral Harbour, Repulse Bay and Igloolik Centred Regions in Combination

The geographic distribution of these areas leads almost automatically to an evaluation of the tourist and recreation potential of their combined marine mammal resources. This aspect is now examined in some detai 1.

SPECIES PRESENT AND RATING

Species	Abundance Class			Hunting & Viewing			Point Rating		
	C. H.	R. B.	Igl.	C. H.	R. B.	Igl.	C. H.	R. B.	Igl.
Ringed Seal	II	II	I	I	I	I	4	4	5
Harp Seal	II	II		II	II		3	3	
Bearded Seal	I	I	I	I	I	I	5	5	5
Narwhal		II			I			4	
Nowhead Whale	II		II	II		II	3		3
Walrus	I	II	I	I		I	7	4	7
							22	20	20

C. H. - Coral Harbour
R. B. - Repulse Bay
Igl. - Igloolik

As previously noted, here are significant gaps in each individual area in terms of the species present, and the beluga whale is absent or weakly represented in all areas. The harp seal is absent at Igloolik, the narwhal at Coral Harbour and Igloolik, and the bowhead whale at Repulse Bay. Any visitor coming to the Territories primarily to view marine mammals or to engage in a landscape tour in which marine mammals are required to provide a major role, therefore cannot completely satisfy his requirements by a visit solely to one of these areas.

When the resources of the three areas are combined the pattern is radically altered. All species, except the beluga whale, are present. Either the abundance or the viewing and hunting ratings are Class 1 for ringed seals, bearded seals, narwhal and walrus. Ratings are Class II for the harp seal and bowhead whale. Viewing conditions for the walrus on Coats Island are exceptional and good when the mammal is in the moving pack. Moreover, there are sport hunting possibilities in the Coral Harbour and Igloolik centred areas and particularly in the latter. Only Cumberland Sound offers a wider range of species. It does not, however, offer a land viewing opportunity for walrus comparable with Coats Island.

It is obvious from the foregoing discussion that the three areas considered individual ly have substantial weaknesses from the point of view of species composition. Considered in combination they possess one of the strongest marine mammal assemblages of the Northwest Territories.

The prime hunting and viewing times for the various species in each area is shown in the accompanying table. There are several interesting aspects associated with this table.

The prime hunting and viewing time for the ringed seal extends from May until about the third week in June , which is found in the open waters of the area. Hence, its prime viewing and hunting time is over before that of other marine mammals begins, with the exception of the bearded seal, which has a prime time beginning about the end of the first week in June and extending until the end of July. This earlier prime season for the ringed seal is common throughout the north.

During the final two weeks in July all marine mammals associated with the various areas are in some stage of their prime viewing and hunting time. This is obviously a critical period in any tourist and recreation planning involving a substantive input from marine mammals.

It will be noted that prime times for three mammals, i nc l u di ng the harp seal, narwhal and w a l rus, extend to the end of the third week in August . The bowhead whale offers prime conditions until the end of August.

Prime viewing times for walrus on Coats Island occur about the middle two weeks in August. This spectacular scene is almost an indispensable input to any tourist trip focused essentially upon the viewing of marine mammals. This time span , therefore, occupies a critical position in tourist and recreation planning in which the marine mammals occupy a cardinal position.

It should be noted that the spectacular occurence of beluga whales in the mouth of the Seal River, just north of Churchil 1, from June through to August would have a strong appeal for those interested in marine mammals. The three areas under consideration are deficient in this species as noted. The long time span for the prime viewing time for the mammal in the Seal River

and the reasonably close location of the resource to Churchill suggest that it might be incorporated in tourist and recreation plans for these three areas...

It is clear that the marine mammal resources of the three areas possess the variety, abundance and viewing and hunting opportunities required to support a first class touring and recreation experience. The walrus opportunities are among the very best, if not the best, in the Territories.

The pivotal or crucial time span centres around the middle two weeks of August when the walrus that can be reached by Peterhead boat from Coral Harbour are on Coats Island. All tourists involved in a trip of this type, of which there could be several trips in a summer season, must reach Coral Harbour and thence Coats Island at this time.

All tourists must arrive at Repulse Bay sometime from mid-July to the end of the third week in August to see the narwhal.

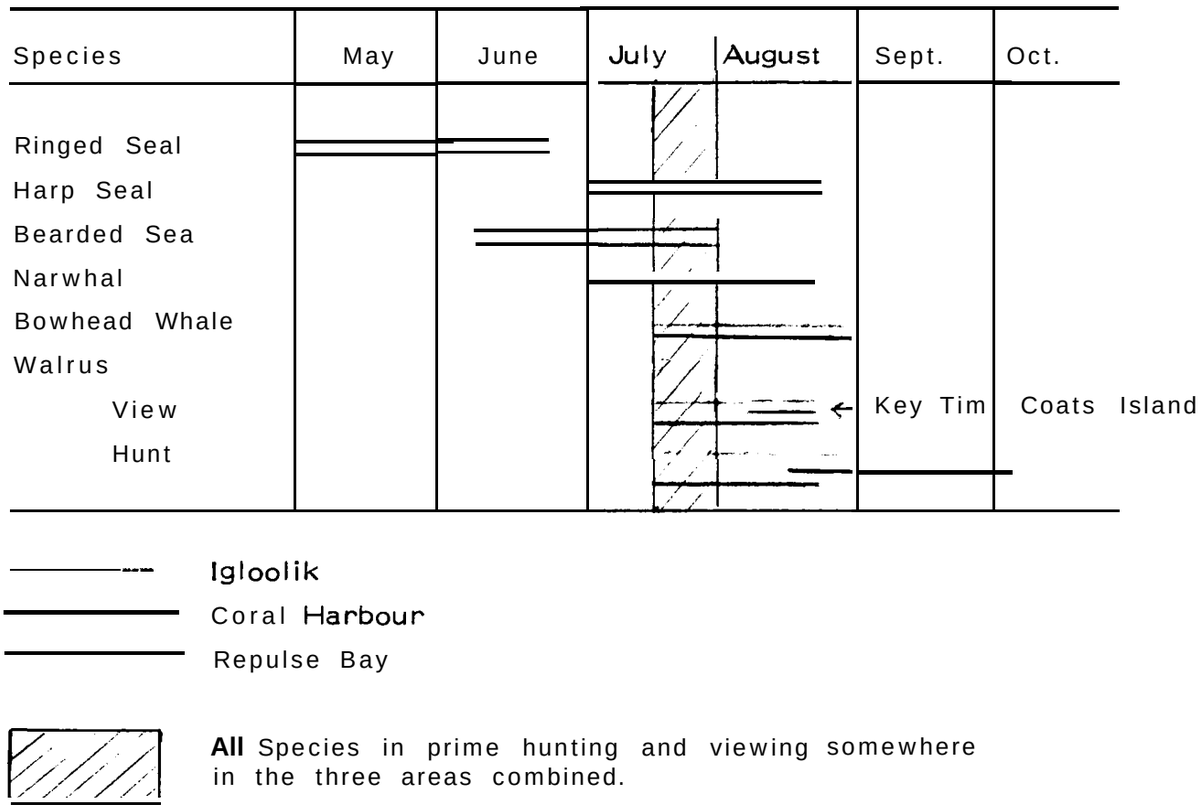
The best walrus hunting opportunity for the sportsman in all the Territories appears to be found in the Igloolik area where perhaps 100 animals could be taken annually.

Having met the requirements of the tourist for a visit to Coats Island and the viewing of narwhals in Repulse Bay, there are numerous possibilities for the distribution of trip time in various centres.

The beluga whales at Seal River could perhaps be best visited on the way out of the Territories. They might represent an added bonus, time permitting.

The biggest handicap in the development of a flow of tourists into the region over the summer period is climate. A large portion of the area has, at best, generally satisfactory weather and often generally to highly unsatisfactory weather prevails. Fog and drizzle, particularly with respect to its restricting effect upon air travel, is the principle difficulty. This obviously makes the execution of a trip of the type envisaged somewhat hazardous from the standpoint of timing. The combined use of the three areas, however, might make matters somewhat easier in that each area has the resources to interest the tourist. The two-week period in August for prime walrus viewing on Coats Island

PRIME VIEWING AND HUNTING TIMES



does present a compel ling demand upon the organizat on of visitor travel schedules.

(f) Cornwallis Island Waters 1 3 - Organizational Cent re Resolute

This area that contains six species as indicated in the chart below received a total of 20 points in the rating system. Only the great bowhead whale is absent and this is an elusive species from a tourist viewing standpoint.

With the exception of the beluga whale the rating for abundance is Class II in every case. Viewing and hunting opportunities also are rated Class II in

SPECIES PRESENT AND RATING

Species	Abundance Class	Viewing and Hunting Class	Total Points
Ringed Seal	II	II	3
Bearded Seal	II	II	3
Harp Seal	II	II	3
Beluga Whale	I	II	4
Narwhal	II	II	3
Walrus	II		4
			20

every case. It is really the variety of species present rather than the quantity and quality that builds up the point total for the area. It is also important to note that no species presents any special qualities or attributes. The resources of the area are clearly not as strong as those of Cumberland Sound or the waters of Igloolik, Repulse Bay and Coral Harbour considered in combination.

PRIME VIEWING AND HUNTING TIMES

Species	May	June	July	August	Sept.	Ott.
Ringed Seal						
Bearded Seal						
Harp Seal						
Beluga Whale						
Narwhal						
Walrus						

As in other areas, the prime viewing and hunting time when the ringed seal is in the fast ice is over before the main marine mammal season begins. After the middle of June the animal is in the open water.

From mid-July to the beginning of the fourth week in August, all other marine mammals of the area are in their prime hunting and viewing time. Interestingly there is a sharp cut-off in the prime time factor for all mammals about the

beginning of the fourth week in August.

The area faces a severe weather handicap. Conditions are generally unsatisfactory in July and early August. They become highly unsatisfactory from mid-August through to early September.

There is considerable travel away from the community required to exploit al l mammal resources, the travel distance factor being one in every case. The risk and strenuous activity aspects are not abnormal, but good physical condition is usually necessary.

(9) Jones Sound & NE Baffin Bay - Organization Centre-Grise Fiord

The area was accorded a total of 21 points on the basis of five species of marine mammals present. Class I viewing and hunting opportunities are associated with the ringed seal, beluga whale, narwhal and walrus. The area appears to be superior to the waters around Resolute Island.

SPECIES PRESENT AND RATING

Species	Abundance Class	Viewing and Hunting Class	Total Points
Ringed Seal	I	I	5
Harp Seal	II	II	3
Beluga Whale	I	I	5
Narwhal	II	I	4
Walrus	II	I	4
			21

Two species are absent from this area, namely, the bearded seal and the bowhead whale. The variety of mammals is sufficient, however, for a good tourist and recreation experience. There is an estimated annual residue of twenty walrus available to sport hunters in this area.

PRIME VIEWING AND HUNTING TIMES

Species	May	June	July	August	Sept.	Oct.
Ringed Seal	———	———				
Harp Seal			———	———	———	
Beluga Whale			———	———		
Narwhal			———	———		
Walrus						

From mid-July to the beginning of the fourth week in August all species , except the ringed seal, are simultaneously in their prime viewing and hunting period. The season for harp seal begins about two weeks earl ier and extends unti l the end of September. The prime time for the beluga whale, narwhal and walrus term nates about the beginning of the fourth week in August in each case.

Walrus are plentiful throughout Jones Sound. The animals are present in the hundreds around Cobourg Island. The waters between North Kent Island and the southwestern tip of Ellesmere Island are open in winter and represent an important wintering area for walrus. Belugas and narwhals may also winter here, but this remains uncertain. Glacier Strait off the southeastern tip of Ellesmere Island is an important summering and migration area for hundreds of beluga whales.

Weather conditions are highly to generally unsatisfactory around Grise Fiord during mid-July and August. Fog and rain are the major problem.

T ravel distance, risk and strenuous activity factors are reasonable for the area. Interestingly, wal rus are present around the community, and the rating for the three aforementioned factors for this mammal at Grise Fiord is O in every case.

4. Notes Related to Class II and Class III Areas

The pertinent data for each of these areas are contained in the information recorded by the Fisheries Research Board for individual marine mammals presented in a previous section of this report. Some additional notes gleaned from data presented in the Wildlife Ecology Map Series, prepared for the Canadian Wildlife Service, are summarized in this final section of the report.

(a) Waters of Beaufort Sea adjacent to Mackenzie Delta - Organization Centre Tuktoyaktuk - Class III 1.

(1) Mackenzie Bay from Herschel Island eastward is an important late June pupping area for whales. In late August staging thousands are in the area. The estuaries of the entire Mackenzie Delta eastward to Cape Dalhousie are a summer pupping area of major Beluga populations. They migrate westward in late fall to winter in the Bering Sea. Kugmallit Bay is reported to contain strong Beluga concentrations from July 1st to August 15th.

(b) Peel Sound - Franklin Strait between Prince of Wales Island, Somerset Island and Boothia Peninsula.

While this area did not stand out in data provided by the Fisheries Research Board, its marine mammals received considerable attention in the Wildlife Ecology Map Series.

(1) Beluga whales are reported to be in the hundreds in Peel Sound off the west coast of Somerset Island in the summer, with marked concentrations in Aston Bay and the 'vicinity of Bellot Strait.

(2) Narwhals are reported in Franklin Strait and Peel Sound generally, with marked concentrations at times near Bellot Strait. In addition, Creswell Bay on the east side of Somerset

Island, the eastern entrance of Bellot Strait and Brentford Bay are said to contain noticeable narwhal concentrations.

(c) Navy Board Inlet - Eclipse Sound and Pond Inlet - Bylot Island Waters - Organization Centre Pond Inlet - Class III 1.

(1) The Narwhal is the strongest marine mammal of this area. There are concentrations in Navy Board Inlet in July. They are present in the thousands in Eclipse Sound and Pond Inlet in June and July. Milne Bay is a reported calving area with several thousand narwhal present at certain times.

(2) Wollaston island off the northwest tip of Bylot Island is occasionally used by walrus as a hauling-out ground.

(d) West Coast of Hudson Bay, Rankin Inlet to 60th Parallel

(1) Beluga whales are a prime resource of this area being in the thousands along this coast. The Seal River estuary is particularly noted for its concentrations. It is important to note, however, that major concentrations of belugas are reported along the entire coast from James Bay to Repulse Bay. Apart from the estuary of the Seal River, the area does not possess comparative advantages for this species.

(2) Walrus are said to occur from Rankin Inlet to Dawson Inlet.

APPENDIX

THE DEVELOPMENT OF AN APPROACH AND METHOD FOR THE RECORDING OF BASIC DATA RELATIVE TO THE TOURIST AND RE-CREATION POTENTIALS OF THE MARINE MAMMALS OF THE NORTHWEST TERRITORIES.

Stage 1. - Preparation of a Natural Biological Productivity or Density and Abundance Classification and Map for Marine Mammals.

A. Two Distinct Steps are involved in Stage 1, namely:-

(1. Preparation of a Classification,

(2. The Mapping of the Data.

B. The Preparation of the Classification

(a) An Approach

1. I believe that it is essential to approach initially on the basis or individual species, such as walrus, ringed seal, etc. As a final step, it will probably prove useful to combine the maps for each species into a single map so as to portray the total marine mammal pattern. This would be in addition to preparing and presenting the data on an individual species basis. I do not know how this could be done until the work for the individual species has been completed. You might find it of interest to attempt this exercise yourself, or you may prefer to leave it to me. If the latter is your choice, 1 would certainly present my work to you for comment.

2. The task must be completed on the basis of existing information. No new field work is envisaged. It is a summation

of existing knowledge by professional people that is sought.

3. It would appear from our discussions and an examination of your publication; Seals of Arctic and Eastern Canada, that you have the necessary basic data for this biological classification, namely: -

(i) The range of the animals by season.

(ii) The density of distribution within the range. The dots on your maps that represent 100 animals, etc., could be translated to number values.

(b) A Suggested Method

Step 1. Using the dot distribution maps in the aforementioned report, together with any additional data that you may feel useful, prepare a regional classification and map on the basis of relative densities by visual inspection. The following classes might be used.

Regional Relative Density or Abundance Classes

(I. Dense concentration
(II. Moderate concentration
(III. Light concentration
(IV. Rare
(V. Generally absent

Notes

1. If we assume that current distribution truely reflects natural environmental capacity then the relative density or abundance classes and the resulting map represent natural biological productivity classes and regions. This aspect could be circumvented if we

called the groupings regional relative density or abundance classes. You may prefer these designations.

2. I do not think that we need to consider any classification based on the number of animals per square mile of water or land area. The suggested approach tells us all that we need to know. It probably will be necessary, however, to define what is meant by dense, moderate, light or rare for each mammal. I would suggest the following approach: -

   (i) When you have information simply include as estimate the number of animals on the mapped classes as shown below.

   (ii) If you do not have this type of data for a mammal, use a verbal definition in the description of the classes.

3. You may not require five classes for each mammal. There is no need to adopt the same number in each case. Simply use as many classes as suit the situation for a particular species.

Step 2. - Establishment of a rating or ranking of the classes

It is possible that you will have several areas of a similar Abundance or Relative Density Class. It is probable that

they can be rated or ranked as relatively superior or inferior to each other. It is also possible that two areas of a similar class would be equal in ranking or rating.

To handle this situation the classes would be ranked or rated as 1, 2, 3, etc. , up to any number required. Suppose that you had three Class II areas. They would then be ranked by a subscript Arabic numeral Class II 1, Class II 2, Class III 3.

It is possible that two areas of a similar class, say Class III, might be equal in rank. Suppose that you had five areas -

Class I 1
Class I 2
Class II 1)
Class II 1) These are equal class and rank.
Class H 2

From the classification standpoint there would be no problem with Class II area above. When you establish the table in Stage II, however, you would have trouble differentiating between the two. You could label these Class II 1(a), Class 11 1 (b) on the map. The (a) and (b) simply show which data in the table prepared in Stage II refers to them. The (a) and (b) would have no meaning in the productivity classification.

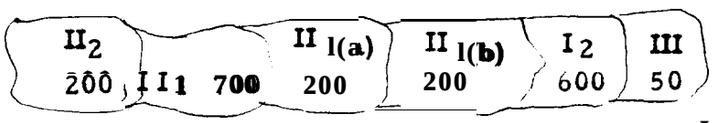
It is possible that you will have only *one* member area in each class. *No* rating is then necessary.

The rating step has two advantages -

(a) It permits differentiation between two areas of equal class value. This could be important.

(b) It should make it easier to establish general classes and reduce the number of classes necessary. You can generalize easily and make fine divisions later if necessary.

The final map might look something like this for particular species.



Where map i blank, it cou mean animal absent as a r or you could label map Cl v.

Step 3. - (Optional, but probably desirable.)

You may feel that it would be desirable to prepare some brief comments relative to each species at the completion of Stage I. The following aspects might be profitably dealt with.

1. T ethnical comments about the classification and its reliability.

2. Notes about the future of the species and its environment.

3. The need for additional research.

4. The abundance and quality of the species in this area as compared with areas outside the Northwest Territories. In effect, the abundance and quality of the species in the Northwest Territories might be viewed in comparative terms. The species may be better represented elsewhere and we should know this.

Stage II. - Recording of Natural Recro-Tourist Use Capability Factors

1. From a tourist and recreation standpoint the mammals can be considered from two aspects.

((a) Viewing (Camera
((Binoculars
((b) Hunting

Over the long haul the viewing or visual contribution of animal life to the general landscape touring experience in the N. W. T. may be of far more consequence than hunting. In the short term, hunting opportunity probably dominates.

2. It appears that the best way to handle the recording of data is in tabular form. You can list each area designated on the map and record the information in the table in the appropriate place.

Step 1. - Identification of the major factors governing or determining the Tourist and Recreation Use Capability of each of. the classes and areas established in Stage I. It seems to me that the following factors are important or diagnostic for Tourism and Recreation.

(a) Presence of species in the region by season or what might be termed seasonal availability of supply for tourist and

recreation exploitation. Many species are only in the region for part of the year. When not in the region they obviously have no tourist and recreational potential.

(b) Locale or location of supply within the region. Thin obviously affects the opportunity to view or hunt. Mammals may be on land, pack ice, etc. This aspect should be recorded.

(c) The recording of other major factors determining tourist and recreation potential, such as the prime times for Viewing and hunting, means of travel, risk and strenuousness of travel and the volume of animals available to hunters.

Step 2. - Devising a set of methods and procedures for recording the determinant factors identified under Step 1.

(a) Recording presence of the species in the region and their locale at various times of the year. There are two situations to note.

(i) The months of the year that the species is in the region. This can be shown in the appropriate column by using symbols for months as shown below and Arabic numerals for quarters.

January	Ja	July	Ju			
February	F	August	A			
March	Ma	September	S	Approx.		
April	Ap	October	o	Quarters	First	1
May	M	November	N		Second	2
June	J	December	D		Third	3
					Fourth	4

Examples - Ja-D = species in region all year.
J 1-S 1 = species in region approx. 1st quarter of June to 1st quarter of September.

It may be that your information is not adequate to record data by quarters or there may be such variation each year that such a procedure is impractical If this is the case, then omit the use of Arabic numerals. It is understood, of course, that quarterly designations would be only rough approximations.

(ii) The locale of the species when in the region by month and quarter. There are probably a maximum of four possible situations with respect to locale.

Land
Fast Ice
Moving Pack
Open Water

Columns could be provided for each of the above and dates recorded in each using the symbols shown in (i) above.

Examples of Columns and Recording of data for presence of species in regions and locales.

Regional Abundance Class Mapped	Seasonal Presence and Locale of Species				
	In Region	In Locale When In Region 3/			
		Land	Fast Ice	Moving Pack	Open Wat
I 1	Ja-D 2/	Ju_1-A_1	(M (A 2-N 4	D 2-M 1	J 1-J 4
12					
II i(a) 1/					
II l(b) 1/					
112					
III					
I v					

Footnotes

1/ This provides an example of where the use of the letters (a), (b), etc. , is of value. It is postulated that two Class II areas of equal rating 1 would exist. With the use of letters (a), (b), on the map and in the table, it would be possible to distinguish between them.

2/ If a species were in the region all year as indicated, there would be no need to use Arabic numerals to distinguish quarters.

3/ For some species, not all of the locales shown are applicable. I have developed a fictitous and impossible situation here that does not fit any species *or* climatic situations, but permits me to illustrate the notation system. The fictitous mammal would be: -

On land - lst quarter of July to 1st quarter of August.
In fast ice - lst quarter of March to 4th quarter of May and also 2nd quarter of August to 4th quarter of November.
In Moving Pack - 2nd quarter of December to lst quarter of March.
In Open Water - lst quarter of June to 4th quarter of June.

It is possible that the locale may vary by several weeks or months for various regional abundance clsses by virtue of their location. I do not know if this is so.

(b) Recording other significant factors for determination of tourist and recreational potential. There are several additional basic factors or aspects to consider insofar as tourist and recreation potential is concerned.

1. The best or prime times for hunting and viewing should be indicated. In effect, when is the tourist likely to find reasonably satisfactory hunting and viewing considering the total time when the mammal is in the region and in its various locales ? As you noted in discussions with *me,* walrus are hunted by the Eskimos from the moving pack ice in extremely cold weather. Hunting" at this time *is* too risky and uncomfortable for the tourist. It is possible that there would be two distinct seasons, each in different locales, with tourist hunting and viewing prospects. In effect, we will concentrate here only on the times when the mammal offers its best viewing or hunting prospects for the tourist.

   This factor could be indicated in a separate column using the month and quarter symbols previous ly presented. Incidentally, the locale of the animal at these hunting and viewing times can be readily determined from the adjacent column to the left.

2. The distance to be travelled from the nearest settlement viewing opportunity is an important factor to note. Here, you could ' simply record the approximate distance in miles, or you could

simply record the approximate distance in males, or you could use a set of numeral symbols to indicate situations as for example: -

0 - Local travel in and immediately around settlement - opportunity by a short trip from settlement.

1 - Considerable travel from settlement required, but operation readily organized and exploited from settlement.

2 - Opportunity is in isolated location and requires distant travel and quartering with native populations outside main centres. This situation is more difficult to organize in a tourist and recreation sense.

3. One or more modes of travel may be required to reach the locale of the mammal during its most suitable hunting and viewing times or times. Moreover, the various modes of travel may involve varying degrees of personal risk and strenuousness of effort. The degree of risk and strenuousness of effort are aspects of major interest to tourist and recreation planning.

It seems as if all these aspects, namely, mode of travel, risk and strenuousness could be recorded in the table.

The coding system might be as follows: -

For type of travel - - (B = Boat- large, peterhead type
(S = Ski-doo or dog team
(C = Canoe or small boat

For degree of risk - (assumes experienced guide present)

0 - nothing abnormal for region. There is risk involved in all northern travel and this is part of the overall adventure.

1 - moderate degree of risk compared with northern conditions. Requires reasonable experience in outdoors.

2 - a high degree of risk due to vulnerability to changing weather when on open water, dangerous ice, etc. Suitable only for most avid and experienced viewers and hunters.

3 - risk factor too high for tourist and recreation development.

For degree of strenuousness of effort (assumes experienced guide present)

0 could be handled by the average tourist in reasonable physical condition.

1. strenuous and requires good physical condition and experience - dangerous or undesirable for the elderly or phycially limited.

2 very strenuous and attractive only to a-vial viewer or hunter in good physical condition and considerably experienced.

The columnar arrangement and recording will be illustrated subsequently in subsection.

4. The probable sustained yield of mammals is of major importance to the evaluation of hunting potentials. There are several aspects to be considered in this case.

1. Total sustained yield of mammals available for hunting by both the natives and tourists.

2. Total domestic take. You might wish to add an estimate of animals killed but not retrieved. This may be equal to sustained yield, above or below, leaving a residue for hunters.

3. Tourist/hunter supply. I think we should consider this to be the residue after domestic take. If this value for any species is zero, then it will be understood that tourist hunting would be possible only if the meat were turned over to the natives.

Estimates of total sustained yield, such as 100, 200, 600, etc., could be indicated in the table. No symbolism would be required. From our discuss ions, I realize that you may not be able *to* provide total numbers for *every* species. In such cases, it would be sufficient to make an estimate of the number of mammals poss ibly available to hunt era, leaving the other columns blank. You could probably indicate that it was a crude estimate by using a number followed by E (i. e., 15E).

A format for recording these data might be as follows: -

Regional Abundance Clams	Season Presence & Locale of Species	Significant Determinants of Tourist & Recreation Potential					
		Prime Viewing & Hunting Times	Travel Factors			Sustained Yield of Mammals	
			Mode	Risk	Strenuousness	Total	Domestic Quota	Hunter Residue
11	Previously Out lined	V&H Ju 1-S 1 1/	s c	0 3/) 1)	) 0	600	400	200 4/
II 1		V Ju 1-A 1 2/ \ 1-s 1	B S C	2 1	0) 1)	400	300	100

Footnotes

1/ Indicates that best viewing and hunting seasons from July 1st quarter to September 1st quarter coincide.

2/ Best viewing and hunting seasons differ. I do not know if this situation will occur.

3/ Travel by dog team or ski-doo and canoe is necessary. The risk is associated with conoe operations, but is only moderate and the overall experience is not strenuous.

4/ Total sustained yield is about 600 animals. The natives now take about 400, leaving a residue of ZOO for hunters. You may wish to handle this aspect differently as previously noted.

Step 3 - The Determination of Recro-Tourist Use Capability

This step in a large part represents the ultimate summation of all that has gone before. Here, we will attempt to identify and rate tourist prospects for the hunting and viewing of mammals. In effect, we are attempting to classify marine mammals in terms of tourist and recreation values.

At our last meeting we tentatively agreed that I would complete this part of the classification on the basis of the informational inputs in

previous stages and steps completed by you. I, then suggested that it would be best if you reviewed *my* work to ensure that the classification did not omit significant considerations or transgress important biological realities. While I am still willing to proceed in this manner, I would have no objection to any attempt at the exe cution of this step by you.

It is obviously somewhat difficult to determine precisely how I will proceed with this task until I see the informational input that precedes it. I will, however, summarize my general thoughts at this point. Perhaps you will be able to detect some significant changes in basic thinking that are necessary.

1. I propose to approach initially on the basis of individual species, such as walrus, whales, seals, etc. , from the standpoint of viewing and hunting.

2. The evaluation of viewing might pro teed as follows: -

   (a) In a brief written text, which incidentally you are undoubtedly more qualified to prepare than 1, the general quality and problems of viewing would be set. In particular, you noted the following points in our discussion.

      (i) For many species the opportunity to view dead animals at close range far exceeds that for live animals - seals in particular,

(ii) Spectacular viewing is associated essentially with walrus when on land. All other specie. are likely to prove disappointing for the casual or pass ing landscape tourist.

(iii) Binocular and telephoto camera work necessitates stalking seals just the same as hunting.

(b) Relative to the limitations and conditions set forth in (a) above for the species and considering all the factors recorded in *your* work, I would then classify *and* rank the viewing opportunities along the following lines:-

Viewing Tourist and Recreation Potential - V .

Class - established *on* comparative bas is with conditions throughout the N. W. T. for the species revealed in the table.

I = among the best tourist and recreation opportunities in the North all factors considered.

II = the opportunities *are* considerably below Glass I for one *or* more reasons, namely, scarcity of mammals, difficulty *of* access, risk, etc. The reason for this rating would be revealed in your tabular data. I could perhaps summarize the salient factors establishing the rating in a brief text.

I do not believe that I would attempt to establish any more than two classes, three at the moat. Perhaps, I will have to.

Rank - I may find it desirable to rank the classes using Arabic numerals - 1, 2, 3, etc.

For viewing tourist and recreation potential, I would then use symbols, such a. (VI 1 - First Class potential raak 1 - the be

(VI 2 - First Class potential rank 2- 2nd be

(VII 1

(VII 2

3. The evaluation of hunting potentials would be prepared in much the same manner as that for viewing.

4. A map would be prepared for the data recorded in the tables under Tourist and Recreation Capability.

Hunting Potential - H.

Class - established for comparison with conditions prevailing throughout the N. W. T.

I - among the best opportunities available.
II - opportunities considerably below Class I but still exploitable.

Again, perhaps two classes will be sufficient, maybe three will be needed.

Rank - I may again find it desirable to rank the classes.

From the hunting standpoint, I would then have symbols as follows: -

HI 1)
HI 2)
HII 1) etc.
HII 2)

5. It is likely that I would then combine the results for individual species into a single marine mammal classification for viewing and hunting. Here, I can introduce concepts of variety of species, extent of season based on a combination of mammals, etc. I will be interested here in indicating tourist and recreation development potential relative to marine mammals in an overall sense. I would probably end up with: -

(D- Development Potential *or* Prospects.
(Class 1, II, *etc.*
(Ranking 1, 2, 3, if necessary.

6. *For* each individual species, I would record data in columns opposite your information as follows: -

Tourist and Recreation Potential

V Viewing Class	Rate	H Hunting Class	Rate
I	1	I	1
I	3	I	2

In order to clarify the format for the recording of data, I have prepared the attached summary. This is simply an aggregation of information previously presented to illustrate how the total fits together in table.

W. M. Baker.

SUGGESTED LAYOUT FOR MASTER RECORDING SHEET

Regional Abundance Class Mapped	Seaso In Regior	.l Presence & Locale of Species				significant De	rminants of Touris			& Recreation Potential			Tourist & Recreation Potential			
		Local When In Region				Prime View-	Travel Factors			Susta ed Yi d of						
		and	Fast Ice	Moving Pack	Open Water	ng and Hunt-, ng Times	Mode	Risk	Strenu- usness	Total	Dom - estic Quota	Hunter Residue	V Viewing class	Rate	H Hunt ing Class	Rate
11	Ja-D	u 1-A 1	M A 2-N 4	D2-M	J 1-J 4	V&H Ju1-S1	S C	)) l)	0	600	400	200	I	1	I	1