

NUNAVUT COASTAL RESOURCE INVENTORY



Chesterfield Inlet



ᐱᓄᐱᓕᓂᓴᓄᓐ
Avatiliqiyikkut
Department of Environment
Ministère de l'Environnement

Nunavut Coastal Resource Inventory
September 2010



Department of Environment
Fisheries and Sealing Division
Box 1000 Station 1310
Iqaluit, Nunavut, X0A 0H0

ISBN: 978-1-55325-172-9



EXECUTIVE SUMMARY

This report is derived from the Hamlet of Chesterfield Inlet, and represents one component of the second phase of the Nunavut Coastal Resource Inventory (NCRI). The term “coastal inventory”, as used here, refers to the collection of information on coastal resources and activities, gained from community interviews, research, reports, maps, and any other available resources, presented in map format.

Coastal resource inventories have been conducted in many jurisdictions throughout Canada, notably along our Atlantic and Pacific coasts. These inventories have been used as a means of gathering reliable information on coastal resources to permit their strategic assessment, leading to the promotion of economic development, coastal management, and conservation opportunities. In Nunavut, the coastal resource inventory has two additional applications: the preservation of traditional knowledge (Inuit Qaujimagatunqangit, or IQ), and the anticipation of forthcoming environmental changes, particularly those driven by climate change.

The Fisheries and Sealing Division, Department of the Environment, initiated this inventory by conducting a feasibility study, followed by a pilot project, in Iglulik, Nunavut. Upon completion of the pilot project (Phase I), four additional communities (Kugluktuk, Chesterfield Inlet, Arctic Bay and Kimmirut) were approached to assess their interest in participating in the inventory (Phase II). All four agreed, and interviews for Chesterfield Inlet were completed in November 2008.

Inventory deliverables include the:

- provision of a final report that provides coastal resource data in a GIS database;
- provision of resource inventory maps for each community;
- provision of all documents used, and methodology employed, throughout the coastal inventory process; and,
- thorough evaluation of the methodology and supporting materials that were used to carry out the entire inventory process.

The interview team was made up of five individuals: the interviewer, a translator, a recorder, an oceanographer, and a student observer. The interviews lasted between two to six hours, depending on the amount of detail elicited in the responses, and the amount of clarification required during the interview. The entire interview followed a predefined survey, where the first round of questions elicited information on the interviewee’s early life history. These questions were followed by resource-based topics, in a specific order, that were directly tied to photographs of species. Responses were documented in real-time, with data amenable to mapping drawn on the charts provided, and all proceedings were recorded using audio and video equipment. Upon completion of the interviews, data was compiled into spreadsheets, and the map information was scanned, digitized, and prepared for analysis.

An array of maps, aggregated into categories (Archaeological Sites, Mammals, Fish, Birds, Invertebrates, Marine Plants, Areas of High Diversity and Other), are provided in this report. Additional maps illustrate Nunavut, the extent of the interview area, a reproduction of the study area extracted from the Nunavut Atlas, and the survey area with place names in Inuktitut (both syllabics and transliteration). The map format was chosen, given the broad geographic reach of the interviewee’s responses, to provide a synoptic view of the collected data. Every effort was made to keep the scale of the maps the same and with the same extent in order to permit convenient comparisons to be made from one map to another. In addition, the maps are complemented by extensive tabular information.



TABLE OF CONTENTS

EXECUTIVE SUMMARY	1	APPENDIX 1 INTERVIEWEE BIOGRAPHIES	86
TABLE OF FIGURES	4	APPENDIX 2 ACRONYMS AND ABBREVIATIONS	87
INTRODUCTION	6	APPENDIX 3 BIRD SIGHTINGS COMMENTARY	88
METHODOLOGY	8	APPENDIX 4 FIELD GUIDE.....	95
PHYSICAL SETTING	11	APPENDIX 5 SURVEY	103
RESOURCE INVENTORY	14	APPENDIX 6 SPECIES LIST AND MAPPING CODES	
MAPS AND TABLES	17	FISH.....	115
FINAL THOUGHTS.....	80	INVERTEBRATES	124
ACKNOWLEDGMENTS.....	82	MARINE MAMMALS.....	126
COLLECTED REFERENCES	83	SEAWEED AND MARINE PLANTS	128
		BIRDS.....	129
		TERRESTRIAL ANIMALS	150
		APPENDIX 7 SPECIES PHOTOS	
		FISH.....	151
		INVERTEBRATES	153
		MARINE MAMMALS.....	154
		SEAWEED AND MARINE PLANTS	154
		BIRDS.....	155
		APPENDIX 8 SAMPLE CONTACT CALLING PROTOCOL.....	159
		APPENDIX 9 HANDOUT ON COASTAL INVENTORIES	160
		APPENDIX 10 PARTICIPANT CONSENT FORM	162
		APPENDIX 11 DATA RELEASE FORM	163

TABLE OF FIGURES

Contextual Maps

Figure 1. Map of Nunavut.....	6
Figure 2. Extent of study area with selected place names.....	9
Figure 3. Map of known polynas in the Canadian Arctic (Hannah et al 2009).....	12
Figure 4. Travel routes and areas of greatest familiarity.....	20
Figure 5. Archaeological sites and areas of cultural significance.....	22
Figure 6. Areas with significant diversity and areas important for other reasons.....	24

Fish

Figure 7. Areas of occupation for Arctic Char.....	26
Figure 8. Areas of occupation for Land Locked Char.....	28
Figure 9. Areas of occupation for Arctic Cod.....	30
Figure 10. Areas of occupation for Lake, Round and Broad Whitefish.....	32
Figure 11. Areas of occupation for Lake and Brook Trout.....	34
Figure 12. Areas of occupation for Arctic Eelpout, Arctic Staghorn Sculpin, Spoonhead Sculpin, Greenland Halibut, Winter Flounder, Capelin and Wolfish.....	36
Figure 13. Areas of occupation for Arctic Grayling, Trout Perch, Walleye, Burbot, Ninespine Stickleback and Threespine Stickleback.....	38

Invertebrates

Figure 14. Areas of occupation for Clam and Mussel.....	40
Figure 15. Areas of occupation for Cockle, Scallop, Basket Star, Jellyfish, Naked Sea Butterfly, Northern Shrimp, Polar Sea Star, Sea Urchin, and Toad Crab.....	42

Plants

Figure 16. Areas of occupation for Bladder Wrack, Sea Colander, Edible Kelp and Hollow Stemmed Kelp.....	44
--	----

Marine Mammals

Figure 17. Areas of occupation for Polar Bear.....	46
Figure 18. Areas of occupation for Walrus.....	48
Figure 19. Areas of occupation for Ringed Seal and Bearded Seal.....	50
Figure 20. Areas of occupation for Spotted Seal and Hooded Seal.....	52
Figure 21. Areas of occupation for Harp Seal.....	54
Figure 22. Areas of occupation for Bowhead and Beluga.....	56
Figure 23. Areas of occupation for Narwhal.....	58

Birds

Figure 24. Areas of occupation for American Golden Plover, Arctic Tern, Black Guillemot, Common Eider, Common Merganser, Common-ringed Plover, Iceland Gull, King Eider, Northern Fulmar, Sandhill Crane, Snow Goose, and White Fronted Goose.....	60
Figure 25. Areas of occupation for Bald Eagle, Eskimo Curlew, Fox Sparrow, Gyrfalcon, Horned Lark, Lapland Longspur, Peregrine Falcon, Red Phalarope, and Whimbrel.....	62



Unmapped Data

Table 24. Everywhere Only coded data for which no points were mapped..... 64

Historic Areas

Figure 27. Nunavut Atlas: Chesterfield Inlet 66

Figure 28. Nunavut Atlas: Southampton Island North 68

Figure 29. Nunavut Atlas: Southampton Island South..... 74

INTRODUCTION

This document is one in a series of reports produced by the Nunavut Coastal Resource Inventory (NCRI). The overall goal of this initiative is to conduct inventories in all 26 of Nunavut’s coastal communities. Even though interviews with elders have become commonplace throughout the Territory, community differences are sufficiently important to warrant a focused approach in the manner in which this information is elicited. Each community is unique in terms of its physical environment, oceanographic setting, the organisms present and the interests and approaches of its hunters and trappers. One might even suggest that each community has been treated as one in a series of “pilot projects”. This approach significantly limits those things that can be “taken for granted” and simultaneously encourages a continuous process of refinement in interview materials and methodologies.

THE COASTAL RESOURCE INVENTORY

“Coastal Resource Inventory”, as used in this report, is an information compendium on coastal resources and activities, gained principally from interviews with elders in each community. Coastal resources are defined as the animals and plants that live near the coast, on the beaches, on and around islands, above and below the surface of the ocean, above and below sea ice, and on the sea floor. Consequently, the extent of the survey varied by community, and “near the coast” can include species and activities up to 50 and sometimes 100 miles inland (mainly lakes and river systems).

The information obtained was then augmented with additional data obtained from scientific articles, unpublished reports, government documents, environmental assessments, maps, etc. All of the community-specific data was then digitized and spatially mapped using a Geographic Information System (GIS). This approach can be an effective tool to assist with management, development and conservation of coastal areas.

Resource inventories have been conducted along Canada’s margins, notably on our Atlantic and western coasts, where the information gained from this approach provided: the foundation for integrated coastal management plans; essential insights to protect important coastal areas; and, information facilitating environmental impact assessments, sensitivity mapping, and community planning. Coastal resource inventories have also provided different levels of government with the tools to engage in strategic assessments, informed development and enlightened stewardship.

The principle source of information for community-based coastal inventories is traditional knowledge (Inuit

Qaujimajatuqangit in Inuktitut, or IQ) gathered through interviews. Over the past fifty years, the Inuit have gone from a resource-based nomadic life style to a wage-based

economy. Nevertheless, coastal and land-based activities are still extremely important, contributing to Inuit quality of life, providing income and food, and as a significant part

Figure 1 Map of Nunavut





of Inuit culture. To ensure that we retain this traditional understanding and the above associated benefits, knowledgeable individuals (usually community elders) were engaged using a defined survey that addresses the presence, distribution and characteristics of various coastal resources. In addition, visual surveys of the coastline and the community provide diverse information on important coastal features, including the types and condition of infrastructure such as wharves and fish plants, as well as the location of different coastal activities or impacts, such as town dumps or sewage sites.

Such information may provide insights regarding the potential for future fisheries development. Given the high unemployment rates in many of Nunavut's communities, it is increasingly important to identify areas for potential economic development. Establishing a new fishery requires reliable species-specific information on the size and location of fish stocks, to determine the feasibility of the initiative as well as its long-term sustainability. Having community resource information gathered in one central location could be an important first step towards fishery commercialization; or could lead to the identification and eventual development of coastal parks and related tourism opportunities, related to sensitive coastal areas, breeding grounds, species locations and populations, and unique habitats.

Fundamental to this process is the recognition that traditional knowledge (IQ) embodies both historical and contemporary information that might help with future decision-making, as well as having importance in its own right. Some communities have expressed interest in exploring development options using an information database that has its origins in the living memories, experience, history and skills of the people who live there. Other communities have opted for a continuation of existing practices; the gathering together of extant knowledge into a form that could assist informed decision-making. There is thus an increasing urgency throughout

the Territory to identify, record, and conserve traditional biological, cultural, and ecological knowledge about Nunavut's coastal areas.

Another factor is the growing concern over the potential impacts of climate change on the Arctic environment. From February to November 2007, the Intergovernmental Panel on Climate Change released four reports, in which they reinforced and extended all of their earlier predictions regarding both the potential for change and the impacts expected when those changes occur (IPCC 2007 a, b, c, and d). Conclusions drawn from these documents indicate that the Inuit can expect significant environmental changes in sea ice, fast ice, coastal erosion, animal behaviour and population abundances, to mention but a few. For instance, apparent changes in polar bear health and abundance have been linked to shifts in sea ice formation and movement, which in turn have been tied to global warming.

ORIGIN OF THE COASTAL INVENTORY

The Fisheries and Sealing Division of the Nunavut Department of Environment initiated the development and implementation of a community-based coastal zone inventory for Nunavut. In their April 2007 report, "Nunavut Coastal Resource Inventory: Assessment and Planning", a consulting team from Dalhousie University recommended that the Nunavut Coastal Resource Inventory Project begin with a pilot project in order to define, test and document methodologies, primarily those dealing with the critical process of documenting IQ.

During community consultations in Iglulik in February 2007, community members, including the local Hunters and Trappers Organization, met with the NCRI staff and consultants to discuss the potential of this initiative for the community. The outcome of that meeting, supported by

additional later communications, was keen interest in, and support for, the pilot project.

Iglulik was chosen as the pilot community as it possesses resources that supported the project's success, including the satellite office of the Nunavut Research Institute (NRI) that runs the IQ and Oral History project, which has been underway for more than two decades. The staff in this remarkable unit has extensive experience in the collection of Inuit Qaujimagatunqangit, which is stored in an extensive computer-accessible database. Collaboration with NRI, especially the opportunity to learn from their extensive experience, was an important initial benefit. In addition, officials of the Hamlet of Iglulik were very positive about the potential benefits to their community, as well as providing important administrative support.

The pilot project was an intense learning process that had the dual goals of a database with depth and breadth, and a well-vetted process for the interviews, data recording, topic choice, data reduction, digitization, analysis, GIS integration, and presentation. Although the pilot project was successful, Phase II inventories have demonstrated the need for continuous adjustment and adaptation of the process, in order to improve its efficiency and better adhere to the project's goals. The four communities interviewed during Phase II were Kugluktuk (Kitikmeot region) in October 2008, Chesterfield Inlet (Kivalliq region) in November 2008, Arctic Bay (Qikiqtaaluk region) in February 2009, and Kimmirut (Qikiqtaaluk region) in March 2009.

FUNDING, PERSONNEL AND PROJECT DELIVERABLES

The second phase of the Nunavut Coastal Resource Inventory received primary financial support from Indian and Northern Affairs (Government of Canada), the Departments of Environment (DoE) and Economic Development and Transportation (EDT) (Government of Nunavut), and secondary funding from the Department of Fisheries and Oceans (Government of Canada). The Nunavut Research Institute generously gave in-kind GIS support services to the project team.

Overall project leadership was provided by Wayne Lynch, Director, Fisheries and Sealing Division, and his staff, Janelle Kennedy, Project Coordinator, and Corenna Nuyalia Community Liaison. Consulting on the project, and participating in all interviews, was Dr. Robert Fournier, Marine Affairs Program and Department of Oceanography, Dalhousie University.

Project deliverables include the:

- provision of a final report;
- provision of the coastal resource inventory in a GIS database;
- provision of a series of resource-inventory maps for each community;
- provision of all documents used in the interviews, along with the methodology employed throughout the coastal inventory process; and,
- thorough evaluation of the methodology and supporting materials used to carry out the entire inventory process.

METHODOLOGY

This section is composed of two parts: a broad introductory overview of the philosophy, approach and execution of the interview process, followed by a more detailed examination of the methodology. Refer to the appendices for an in-depth Field Guide of all the methods employed.

AN OVERVIEW OF THE PROCESS

The process began with the selection of a community that would be prepared to participate in the interview process. Criteria to assist in this selection were devised early in the development of the project and, as one might expect, have since undergone continuous revision. Once a provisional choice was made each community was visited with the purpose of determining whether it wished to participate in the inventory, and if so, then who were the individuals that would be most appropriate for the interviews. The above questions were directed principally at the local Hunter-Trapper Organization (HTO), where agreement was quickly reached and an annotated list of potential candidates was provided. Further, queries were made and discussions held with individuals who might serve as interpreters and translators, in conjunction with the interview process. Suitable dates and venues were then selected for the interviews.

The interview team was made up of five individuals: the interviewer, a translator, a recorder, a science consultant, and a student observer. The process varied from 2-6 hours, depending on the amount of detail elicited in the response and the amount of clarification required during the interview. Each interview followed the same format (refer to Survey in appendices). The first round of questions requested information about the interviewee's early life history and general knowledge and familiarity of the local area. These were followed by questions that referred to specific animals in a set order. Responses were documented using maps prepared in advance that could be annotated by the interviewee. The entire proceedings, with permission, were recorded using audio and video equipment. Upon completion of all the interviews planned for the community, data was compiled into spreadsheets, and the map information was scanned, digitized and prepared for data analysis.

DETAILS OF THE PROCESS

Community Selection

Criteria to guide community selection were established prior to the start of the interview process and were based on a series of interviews with a broad range of individuals, all of whom had some prior experience working with traditional knowledge and/or communities. Criteria underwent continuous refinement as knowledge and insights improved. Community selection did not depend on a suitable response to every single criterion, but rather on the general picture conveyed by the responses to these queries. The present criteria are as follows:

- Is the selected community willing to participate in the project?
- Is the community considered to be an important source of data on coastal resources?
- Are any other projects underway in the community that might be considered to be complementary to the coastal inventory?
- Does the community possess an existing repository of oral history that could be made available to the project?
- Does the community have a strong but under-utilized or under-managed connection with a particular resource animal, such that inventory data could prove to be useful?
- Does the community wish to acquire or use any of the coastal inventory data produced by the project?
- Is the community presently involved in a commercial fishery?
- Is the community currently seeking infrastructure for which the coastal inventory study might prove supportive?

- Does the community have a strong and broadly acceptable leadership available to the project?
- Does the community have a close association with a park or a protected area?

Initial Community Visit

Communities are visited on three occasions; an initial scoping/consultation meeting, followed by a visit of 7-10 days during which interviews are conducted and finally a follow-up trip to present the finished report and support materials to the community. The scoping session was designed to put in place the elements that would be required to conduct the planned interviews. This process depended on the support and participation of the Hunter-Trapper Organizations (HTOs) and the Hamlet office. Both the HTO and the Hamlet were asked at the outset to formally support this initiative through the provision of names of potential interviewees. They provided annotated lists of local Inuit hunters and trappers which, in their opinion, were among the most knowledgeable and accomplished members of the community and could best satisfy the requirements of the interview process. The final selection was made by NCRI project personnel. These individuals were contacted and tentative interview schedules were established. In addition, HTO and Hamlet personnel also provided the names of individuals who could act as student observers and be used as translators. The final order of business was to select a venue that would accommodate the interview process.

Interview Preparation

Preparations for the planned interviews were focused on the definition and acquisition of all the information that was necessary to compile the resource inventory. This ranged from digital voice and video recorders to coloured pencils. The latter would be used by both interviewees and project personnel to draw and code information directly on prepared maps. It also involved the definition of the



subject matter that would be addressed in the interviews, including: contextual material such as early life history or the location of camp sites, the geographic extent of the maps, the species of interest (animal and plant), and supporting environmental information such as time of occurrence, condition on occurrence (breeding, migrating, feeding etc). Once these decisions were made the results were translated into maps that covered the area normally used by hunters and fishers (Fig. 2), into photos of the target species and into questions that would later be posed (refer to appendices for photos and species list).

Interview Strategy

The manner in which the interviews were to be conducted was repeatedly discussed over a considerable period, and ultimately reflected the advice that NCRI personnel received from many different sources. The goal of this process is to allow Inuit hunters to speak in comfortable surroundings on the subject of living coastal resources, based on their life experiences. Recording this information recognizes the finite nature of human life, the wealth of information that is contained within individuals, and the importance of that information from both cultural and management standpoints. With this in mind considerable attention was devoted to the realization of these goals. Two related issues are worthy of some comment: Inuit hunters have often been interviewed over the years but they were pleased to learn that for the first time the process would comprehensively embrace a broad range of living marine resources; and, in addition, a promise by NCRI staff to provide each HTO with a copy of all data collected from the interviews in its community was viewed as a very positive contribution.

The Interviews

Six persons were present during each interview: the interviewee, interviewer, translator, recorder, science consultant, and student observer. The interviewer followed

Figure 2: Image depicting the full extent of the study area used in interviews.

Extent of study area with selected place names.



a defined protocol that placed a strong emphasis on: a series of predetermined questions and photographs of various living resources known to occur in the area. Maps, covering the area of interest, were provided in order to allow the interviewees to write directly on them and thereby to annotate their verbal remarks. Questions were asked and the interviewees responded both verbally and by drawing on the maps before them. Specific categories addressed in the interviews included: interviewee life-history information; location of outpost camps; archaeological sites; travel routes; hunting/fishing areas frequented; the geographic occurrence of mammals, fish, birds, invertebrates and plants; and finally, some discussion about the linkages between coastal resources, present and future environmental changes and potential economic development (e.g. the possibility of an emergent fishery).

Because of the fundamental importance to the interview process of the annotated maps every annotation to those documents was accompanied by the immediate application of a code that would enable future identification and reference. Follow-up questions were asked of the interviewee, clarifications were elicited and, if appropriate, discussion ensued about the information presented. The entire process was recorded using audio and video equipment, while selective portions were immediately recorded manually. Manual recording was used to maintain a running record of all map annotations and codes. This permitted work to proceed with the maps without the need for transcription of the audio tapes. The interview process varied from 2-6 hours, depending on the individual being interviewed.

Post-Interview Methodology

During and immediately following each interview rigorous file management protocols were employed. All recording modes (Audio, Video and Manual) were carefully synchronized with the information noted on the maps. All of the manually recorded data was entered on a spreadsheet

which was updated as information became available. The maps used in the interviews were scanned and the hand-drawn data was digitized. The end result was the creation of a coherent and workable database, which when used with the maps provides a complementary visualization of that data. The maps were planned from the outset as the cornerstone of the interview process and the resulting community reports.

Non-Interview Data Acquisition

Data on marine resources can be found scattered throughout many different sources that range from scientific papers, government reports, environmental impact assessments and maps. However, three surveys exist, with similar geographic breadth and goals, have proven to be especially useful. There is the three-volume “Inuit Land Use and Occupancy Study”, which was undertaken in the early 70’s and published in 1976 by Indian and Northern Affairs. It grew out of the documentation required by the land claim process and was used to substantiate Inuit claims as to residency and land use. The resulting study contains detailed information on traditional land use up to that time. It focused on hunting, trapping and fishing and used topographic maps to outline fishing, hunting and trap line regions associated with each community in Nunavut over three periods: pre-contact, the trading period up to the 1950s, and the present (early 1970s). One of the volumes is an atlas that maps the results, based on interviews with Inuit in each community. The original research is available in Ottawa at the National Archives. A copy of the three volume report is also available in the Legislative Library in Iqaluit.

A second document is the one volume Nunavut Atlas co-published in 1992 by the Canadian Circumpolar Institute and the Tungavik Federation of Nunavut. This atlas relies largely on data collected for the Inuit Land Use and Occupancy Study and although the presentation of resource data and maps is reasonably accessible the information

provided is approximately 35 years old. Relevant maps from this volume are presented in this report (refer to the Resource Inventory – end of this section).

The third document is the Nunavut Wildlife Harvest Study produced by the Nunavut Wildlife Management Board in August 2004. This study was mandated by the Nunavut Land Claim Agreement. Harvest data was collected monthly from Inuit hunters for a total of five years from 1996 to 2001. The purpose of the study was “to determine (the then) current harvesting levels and patterns of Inuit use of wildlife resources.” Once completed this information was to be used to manage wildlife resources in Nunavut.

Data Management and Analysis

Data collected through interviews and research were plotted, when appropriate, on working maps, while the final representations occur on all inventory maps. The scale is large, in keeping with the size of the geographic area under discussion. Keeping a scale common to all maps was done to permit relatively easy inter-comparability. Also, on the inventory maps information was separated according to resource categories, and all information associated with a specific geographic location was entered into a tabular database. The development, care and maintenance of this tabular database are extremely important, not only as a storage facility for information, but as an active repository that will be effectively accessed by users with diverse interests.

Data management also includes protecting the confidentiality of the data. Each interviewee provided their consent to be interviewed, as well as audio and video taped (see Appendix 10 – for consent form used). Post interview, if any person or organization wishes to access the data collected they must provide written justification to the NCRI Steering Committee and agree to the terms outlined in the Data Release Form (see Appendix 11 – for sample of data release form).

GIS Interface

Once the inventory maps and database are complete they are entered into a Geographic Information System (GIS), leading to the creation of computer-generated maps. It also links information to the geographic locations contained in the database. Attributes associated with each piece of data include information such as species name, source, population level, etc. Mapped data are linked to additional information in the corresponding database. Photos accompany the data where applicable.



MARINE RESOURCES IN AN OCEANOGRAPHIC CONTEXT (Chesterfield Inlet)

INTRODUCTION

The coastal communities of Nunavut are diverse. They extend over 27° of latitude and 60° of longitude. In addition to different geomorphologies, climates, and wildlife they also experience widely different ocean environments. There are significant differences in residual circulation, tidal range, tidal currents, tidal mixing, shore-fast leads, ice-edge upwelling, topographic upwelling, and polynyas, all of which influence the abundance, diversity, and concentration of marine animals and plants. The oceanographic context in which these organisms occur, especially the causal mechanisms that contribute to population dynamics, is essential to understanding changes that occur over time. One of the stated goals of this initiative is to develop the capacity to monitor Nunavut's marine resources within the context of impending climate change. Organisms will experience global warming directly, through changes in their physiology, but many others will also receive indirect impacts from their surrounding physical and biological environments. Responsible monitoring of marine resources will require more than just a quantitative assessment of certain species; it will require an ecosystem approach that, by definition, includes the physical factors at play in that system.

RECURRENT OPEN WATER AND ARCTIC BIOLOGY

The presence of open water in winter can be a chance occurrence that reflects ephemeral conditions. Sites formed in this manner are largely unpredictable and are of limited use to animals and humans. On the other hand, recurrent open water sites are the physical manifestation of one or several predictable physical processes that result in spatial and temporal reliability. These processes are reviewed below.

The formation of recurring open water (including large polynyas, pack ice edges, shore-fast leads, and smaller polynyas) in ice-covered seas reflects local geography and ice conditions, as well as water movements such as upwelling and tidal mixing. There is a positive correlation between open water and an increased abundance of marine organisms. In fact, Stirling (1980, 1997) has specifically identified increases in the abundance of birds, seals, and whales with proximity to ice edges, polynyas, and pack ice. The reasons for this observed correlation are many, varied, and not mutually exclusive. For instance, animals use these sites as breathing holes or platforms to haul out and rest, to avoid predators, and for pupping, moulting, etc. (Stirling 1997). What all these forces have in common is that they encourage a non-homogeneous distribution of animals that is ultimately linked to greater biological productivity.

Ultimately, the availability of food, the product of primary production by phytoplankton, ice algae, or marine plants, is a major contributing force. Both algal groups are important, although their relative contributions can vary depending on ice conditions and available light. In some locations, ice algae represent 5% of the total primary production while in others it can be as high as 30% (Alexander 1974, Harrison and Cota 1991, Legendre et al. 1992). Bradstreet and Cross (1982) believe that

the aggregation, on the ice under-surface, of food items acceptable to invertebrates and vertebrates is significant. This plant material is grazed, and enters into the food web, supplying energy to invertebrates (e.g. copepods, amphipods, and shellfish), fish (e.g. arctic cod), mammals (e.g. seals, narwhal, walrus and polar bears) and birds (e.g. thick-billed murres, northern fulmars, black legged kittiwakes and black guillemots). With the thinning of ice around open water sites in the spring, sunlight sufficient to drive photosynthesis, especially of ice algae, is available sooner, thereby extending both the growing and grazing seasons, in some cases by as much as two months. This results in a form of "oasis" or "hotspot" in an otherwise ice-covered area.

In addition, these open water sites appear to have been important to the native peoples that have occupied the Arctic for several thousand years. Zooarchaeological data obtained from historic Inuit habitation sites, coupled with modern sea-ice extremes, has been used to infer a strong causal relationship between polynyas and historic Inuit settlement patterns (Henshaw 2003). Schledermann (1980) drew attention to the fact that the early settlers of present-day Nunavut did not create settlements in random fashion. Since they depended almost entirely on food resources obtained through hunting, a close association usually existed between the location of settlements and the reasonable proximity of game, which often meant areas of recurrent open water. Schledermann also correlated the distribution of recurring polynyas in the eastern Canadian high Arctic and the abundance of archaeological sites from the Thule culture, which specialized in hunting marine mammals.

OCEANOGRAPHIC FACTORS THAT CONTRIBUTE TO OPEN WATER

Hudson Bay

The community of Chesterfield Inlet is located on a small bay on the southern shore of the estuary of Chesterfield Inlet, which lies on the western shore of Hudson Bay. The community is located immediately south of the largest polynya in Hudson Bay, in Roes Welcome Channel. Judging from local archaeological sites, which extend back to the Thule culture, it has a long history as a traditional hunting, fishing and camping location.

Hudson Bay is part of a large inland Arctic sea that connects to the Arctic Ocean through Foxe Basin, and to the Atlantic via Hudson Strait. The Bay has several openings at the northern end - one in the northwest, between the mainland and Southampton Island (Roes Welcome Channel), and two channels in the northeast created by Coats and Mansel islands. Hudson Bay is broadly shallow coastal region, with an average depth of 125 m. Water properties depend mainly on exchanges with Foxe Basin and Hudson Strait plus a large input of fresh water from melting sea ice and river outflows around the Bay (Ingram and Prinsenber 1998).

According to Prinsenber (1988a), fresh water input is distinctly seasonal, and as such plays an important role in ice conditions in winter, as well as affecting stratification and general circulation during summer. Maximum runoff occurs from late May to early June, and delivers a volume equivalent to a layer of 64 cm over the entire marine surface of Hudson/James Bay (Prinsenber 1988). During summer, sunshine and river runoff cause considerable stratification, such that vertical mixing and productivity are reduced offshore, relative to inshore areas.

In general, productivity is lower in Hudson Bay than in other oceans at the same latitude (Stewart and Lockhart

2004). In addition, the Hudson Bay ecosystem is unusual among the world's oceans, in that it is completely covered with ice in winter and is 100% ice-free in summer (Stewart and Lockhart 2004). Hudson Bay is normally ice-free from September to November, while Foxe Basin is ice-free only in September. In the Bay, ice thickness in winter varies from one to two metres, increasing with latitude; and in winter and early spring, the ice floes are in constant motion, driven principally by wind.

Residual Circulation

The net flow of water, minus any tidal currents, is generally cyclonic (anti-clockwise) beginning with inflow into Hudson Bay from Foxe Basin, through the Roes Welcome Channel. This coastal current follows the western boundaries of the Bay, enters and leaves James Bay, then continues along the Bay's eastern boundaries until it exits in the northeast through channels between Coats and Mansel islands and between the latter and the mainland, to Hudson Strait and eventually the Atlantic. This open water circulation is driven primarily by wind and buoyancy, created by a continuous influx of fresh water (Csanady 1982).

Tidal Range and Currents

The incoming tide enters Hudson Bay from the Atlantic, through Hudson Strait. This tide, mainly in semidiurnal mode, carries a maximum amplitude of three metres into Hudson Strait, which declines to a maximum of 1.25 metres along the west coast of the Bay (Prinsenber and Freeman 1986). The entrances of Hudson and James Bay have the greatest tidal currents, which can reach almost two knots at the former location, but eventually diminish to approximately 0.5 knots within the Bay proper (Ingram and Prinsenber 1998).

Polynyas

If the Arctic were covered with a thick, seamless layer of sea-ice, many of the organisms that currently exist there,

and contribute to the region's productivity, would find it impossible to survive. Polynyas and leads provide the necessary breaks in the ice that permit sunlight to penetrate and photosynthesis to proceed (in both planktonic

and ice-based algae), allow mammals to breathe, and permit over-wintering birds to feed. Wind, water movement, and heat transfer are among the primary factors that

contribute to the establishment and maintenance of these open water sites.

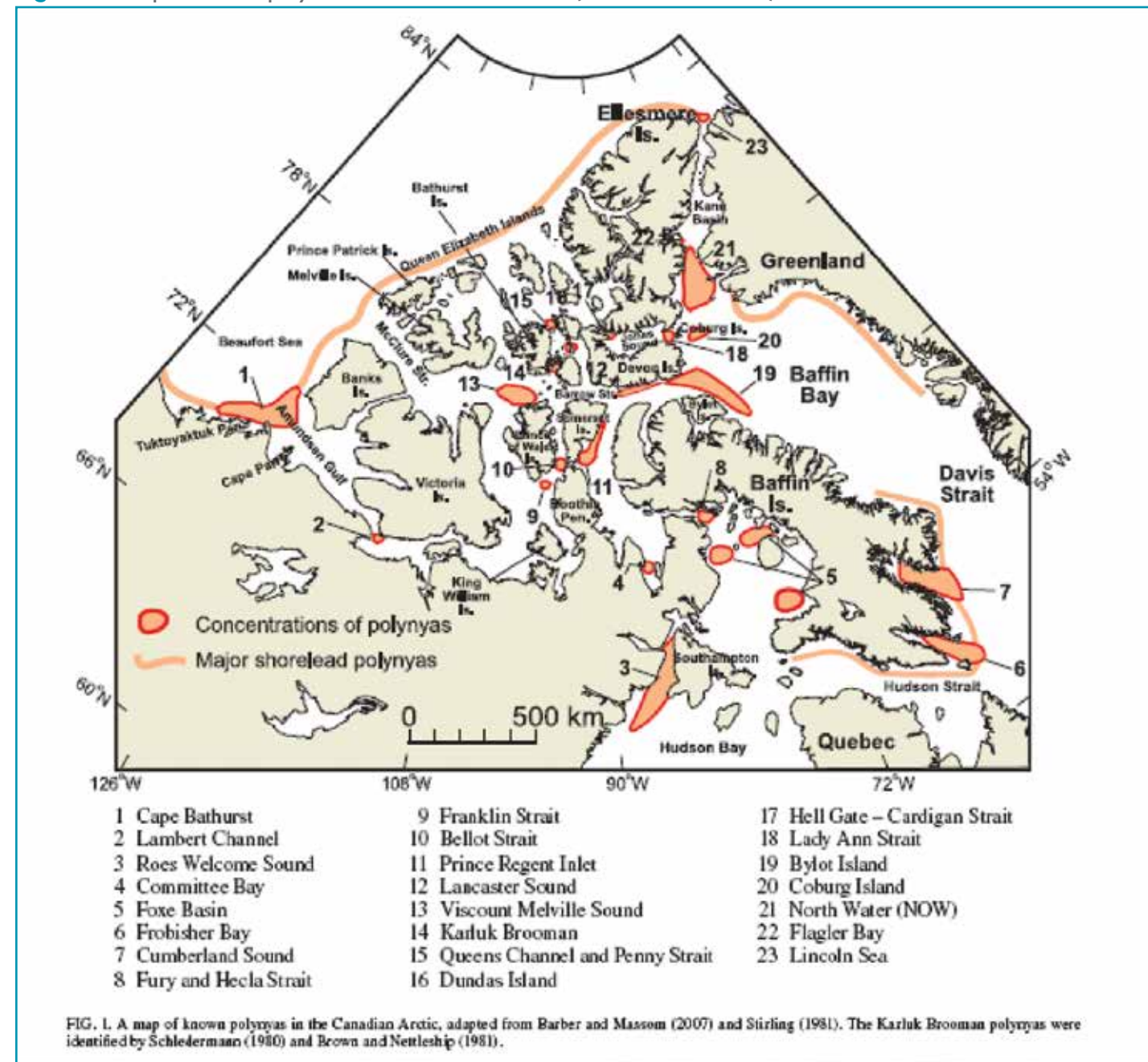
Polynyas have long been viewed as extraordinary because of the obvious contradiction of open water occurring in conditions that promote ice. The explanation for this phenomenon is twofold: in some cases the introduction of heat forestalls ice formation, while in others any newly formed ice is rapidly removed. These mechanisms are not mutually exclusive and sometimes work in concert. The first process involves a continuous transfer of warmer, deeper waters to the surface, which slow or eliminate ice formation. In the second, wind and/or ocean currents remove any ice that forms from the site. Additionally, the ice formation process gives off some heat, which further slows subsequent ice development. Hannah et al. (2009) review these mechanisms and point out several additional factors, such as turbulence from surface waves or currents that can inhibit ice formation, and adjacent coastlines, shore-fast ice or ice bridges that may prevent ice from drifting into the polynya site.

Recurring polynyas in Hudson Bay have been identified off the Belcher Islands, the northern tip of Coats Island, and near Diggs Island (off the southwestern tip of Akimski Island) - but the largest and most prominent is found in the Roes Welcome Channel, just north of Chesterfield Inlet (Stirling and Cleator 1981, Smith and Rigby 1981, Stewart and Lockhart 2004).

Tidal Mixing

Even at somewhat limited velocities, tidal currents can produce sufficient turbulence to generate the vertical mixing capable of forming, and maintaining, a polynya. A slow-moving tidal current that encounters a shallow and/or narrow strait increases in velocity and, in turn, promotes increased mixing. Mixing moves warmer subsurface waters to the surface, slowing or eliminating the formation of ice. It also delivers nutrients, which allows plant growth when

Figure 3: Map of known polynyas in the Canadian Arctic (Hannah et al 2009).





adequate light is available, especially in summer months. An example of this phenomenon is the well-known polynya in Fury and Hecla Strait at the head of Foxe Basin (Hannah et al 2009).

The Roes Welcome Channel appears to be important for winter surface transport into Hudson Bay, as indicated by ice drift patterns and the presence of a polynya (Prinsenbergh 1986a). It is narrow (10 – 30 kilometres wide) and shallow (50 metres deep), which constricts the passage of both the tidal currents and the residual circulation that regularly move through the passage. This constriction increases current velocity, and secondarily produces turbulence that extends to a considerable depth. This drives warmer water upwards from depth, and these physical forces maintain the Roes Welcome polynya throughout each winter (Greenberg 2009). This, in turn, has a strong positive impact on the biology of the region.

Landfast Leads (or Flaw Leads)

Stirling (1981) nicely summarizes the many characteristics of the extensive systems of landfast leads occur throughout the Arctic. Landfast ice generally comprises first-year ice, possibly mixed with multi-year remnants, that is fixed to the coast. This ice platform extends outward, eventually merging with offshore pack ice. George (2004) suggests that the physical presence of this ice cover modifies tidal and wind energy, dramatically changing circulation. At some point, a fracture or crack may develop between the attached ice and the free-floating pack due to offshore winds, or to a lesser extent through the actions of coastal currents. These leads are normally linear in shape and run parallel to shorelines. They are recurrent and predictable in their location, and are among the areas where open water is found most consistently during winter and early spring. Because of these factors, landfast lead systems are of enormous biological importance.

The boundary between the ice-edge and the beginning of the lead is an ecosystem that is very important and has been identified as biologically rich and diverse by many of the elders and previous research. For instance:

- The land-fast ice-edge is an important Inuit hunting site (Crawford and Jorgenson 1990)
- In late spring and early summer, large numbers of sea birds and marine mammals congregate at the edges of land-fast ice (McLaughlin et al. 2005)
- Ringed seals and polar bears are the only marine animals that regularly occupy extensive land-fast coastal ice (Tynan and DeMaster 1997)
- Bearded seals prefer relatively shallow water (depths of less than 150 metres) with thin, shifting ice, and leads kept open by strong currents (Tynan and DeMaster 1997)
- Along with polynyas, landfast leads and ice edges play key roles in influencing the abundance and distribution of marine mammals and sea birds (McLaughlin et al 2005)
- Near the ice edge, the diet of adult ringed seals and narwhal was composed primarily of Arctic cod, while amphipods and copepods were consumed in smaller numbers (Bradstreet and Cross 1982)
- Satellite observations of polar bears show that when present in areas with multi-year ice, they are often associated with leads (Stirling 1997)
- In Admiralty Inlet, the highest densities of Arctic cod are found immediately below the edge of landfast sea ice, apparently due to the availability of high concentrations of copepod prey (Crawford and Jorgenson 1990)

The reasons for greater biological abundance and diversity associated with shore-fast leads and ice edges are largely the

same as those outlined above when discussing recurrent open water. In addition, however, upwelling (discussed below) appears to operate at shore fast and pack ice edges.

Smith and Rigby (1981; Fig. 1) and Stewart and Lockhart (2004; Figs. 13 and 15) provide evidence of an extensive landfast lead system between ten and twenty kilometres off the west coast of Hudson Bay. Although they disagree in some details, both agree that a continuous lead extends from Churchill (Manitoba) to Roes Welcome Channel, along the western side of the Bay. Unlike other locations, where this is often the boundary between landfast first-year ice and moving multi-year pack ice, Hudson Bay ice is of uniform age, and the offshore component is not highly mobile. In this case, the leads may be partially influenced by river runoff plumes, which move in an anti-clockwise direction around the bay (Cota et al 1991)

Upwelling: Topographic and Ice-Edge

Upwelling moves warmer, deeper water to the surface, creating and/or maintaining ice-free open water. Topographic upwelling occurs when a current moving through warmer subsurface water is deflected (“welled upward”) by an undersea geographic feature toward the surface, where it can contribute to ice melting or the maintenance of an ice-free area (Tee et al 1993). Deflection may be caused by various bottom structures, such as sills, banks, or ridges that alters path of the current.

Ice-edge upwelling has been observed in the Bering Sea (Alexander and Niebauer 1981), the Arctic Ocean (Buckley et al 1979; Johannesen et al 1983), and off the coast of Newfoundland (Tang and Ikeda 1989). This occurs when wind blows parallel to the ice edge, and causes surface water to move away from the edge. Water moving up from below replaces this displaced surface water (Tang and Ikeda 1989). The upwelling zone can be several kilometres wide and draw subsurface water from depths of up to 100 metres.

In addition to a greater heat flux to the surface, upwelling water usually carries nutrients into the upper layer where, with sufficient light, both phytoplankton and ice algae can grow and provide a strong stimulus to the local food web. This is one explanation for why polynyas and shore-fast leads are so productive. This condition almost certainly exists in the Roes Welcome Channel in both winter and summer.

MARINE RESOURCES IN THE CONTEXT OF GLOBAL WARMING

Many Arctic researchers over the past 20 years have commented on the impending probability of global warming, with its expected impact on the marine environment, as well as the abundance, diversity, and well-being of marine organisms (Tynan and DeMaster 1997; Michel, Ingram and Harris 2006; Moore and Huntington 2008). Many changes will occur, both positive and negative, that directly affect the role that recurrent open water sites play in the overall success of marine coastal resources. Changes are expected to affect water stratification and its role in nutrient renewal, the balance between multi-year and annual ice, the relative importance of ice algae, the timing and magnitude of primary and secondary production, and the distribution of traditional species and hunting sites, amongst others. Each of these changes could exert some influence on the food web and the state of the resources as they are presently defined. In other words, we can expect change to occur in our physical world that will in turn, alter the biological system, including the human component.

RESOURCE INVENTORY

The community interviews contain two kinds of information: that elicited from direct questions, and additional anecdotal context, which provides additional depth or breadth, “colours” a response, or offers an interpretation of the species under discussion. The first type has specific geographic coordinates, or involves quantitative estimates that lend themselves to eventual representation within a GIS format. The second, in the form of individual opinions, assumptions and conclusions, offers qualitative information that helps to humanize the responses and mappings. These observations were generally made without any additional information or corroboration, and sometimes suggested a correlation to some other environmental change. However, a correlation does not necessarily signify causality, despite the convictions of the interviewee. Nevertheless, the observations below provide highly personal and sometimes very useful insights that could be worthy of additional investigation.

MARINE ENVIRONMENT/ AREAL EXTENT

The geographic area identified by Chesterfield Inlet interviewees as the normal range of their hunting and fishing activities was significantly smaller than that recorded for other communities. When asked about this discrepancy, respondents offered two explanations: first, that the marine and terrestrial areas adjacent to Chesterfield Inlet contained abundant, productive wildlife populations and hence travel far afield was unnecessary; and secondly, that the winter leads between land-fast ice and pack ice restrict eastward travel, providing a significant areal constraint.

ARCHAEOLOGICAL REMAINS

Interviewees indicated the presence of a large number of traditional habitations, meeting places, burial sites, etc. along the coastline near Chesterfield Inlet. These sites contain both intact and remnant remains, including tent rings, graves, stone houses, stone weirs, and animal traps. Although similar sites were noted near other communities, attention was drawn for the first time to remnants of the Thule culture, the immediate precursors of the Inuit.

HUNTING/FISHING

- Belugas were reported to occur in two distinct populations: the first off Churchill (Manitoba) and the second near Repulse Bay. Hunters suggested that the southern population routinely migrates north, where they are intercepted by hunters from Arviat, Whale Cove, and Rankin Inlet. Belugas also migrate southward from Repulse Bay and are primarily responsible for any that are caught by the community of Chesterfield Inlet.
- Grizzly bears are definitely more abundant and have become a genuine nuisance. It was assumed that

habitat changes due to climate warming have forced these animals to move further north in order to survive.

- Polar bears were very abundant at Chesterfield Inlet in mid-November 2008. This aggregation was apparently due to incomplete freezing of the Inlet and lack of sea ice, which inhibited the bears’ northern migration.
- A clear consensus exists that, within the area frequented by Chesterfield Inlet hunters, trappers and fishers, some animals are increasing in number, in particular wolverines, grizzly bears, and polar bears. According to the interviewees, these increases can be explained by higher levels of reproduction, feeding on Arctic Char, changes in climate and greater in-migration.

PRODUCTIVITY/DIVERSITY

Implicit in the responses of all interviewees was the view that the area, circumscribed by a circle extending from the mouth of Chesterfield Inlet, north to Cape Fuller and inland to Robin Hood Bay, provided for all the hunting, fishing, and trapping needs of the community. This suggests that this is an area of relatively high productivity capable of supporting sustainable populations of both marine and terrestrial species. The Inlet is an estuary, a coastal ecotone normally associated with high productivity due to associated wetlands, runoff from the land, strong tidal fluxes, and a pronounced coastal current. It was suggested that this abundance of wildlife might explain both the early settlement and the longevity of this community.

HEALTH, SIZE AND PRESENCE

- Many conflicting opinions were received regarding the abundance of individual species, the softness/compactness of fish tissue, and whether or not the tissue showed evidence of disease. Some interviewees

were categorical that fish numbers had decreased, while others were equally convinced that, aside from some year-to-year variability, no trend was visible. This dichotomy was equally true for the integrity of the flesh and the presence/absence of disease. A general conclusion cannot be drawn, as these views are anecdotal, based on opinions formed from personal observations that usually reflect events at specific places on specific occasions, rather than an integrated array of temporal and spatial observations.

- When attempting to make the case for changes in specific species, interviewees often invoked some causal influence such as reduced rainfall (leading to lower water levels in lakes and rivers), anthropogenic pollution, higher temperatures due to global warming, or the presence of more and different predators in the area. These correlations suggest causality but do not substantiate it. Notably, the possible impact of greater human hunting or fishing activity was rarely offered as an explanation, and was usually rejected when suggested.
- The colour of char flesh is thought to vary depending on the river system from which it is caught.

CHANGES REPORTED/ANTICIPATED

- Some hunters believe that many of the larger marine mammals are moving away from the coast, and out of reach of hunters, due to noise, pollution and turbulence related to increased shipping activity through the inlet toward Baker Lake. Ringed Seal and Beluga were both reported as decreasing in number. Ringed Seal in particular was reported to have poor body condition and not as tasty as in the past. Beluga decreases were thought to be related to shipping noise and near-shore blasting.
- Caribou meat was reported to be changing in colour, becoming pinker. This was attributed to the animals



moving closer to the coast and apparently eating seaweed.

- Ptarmigan were reported to be less abundant. The actual phrase was “they are disappearing”. Tundra Swans are also reported to be decreasing in number; however, Snow Geese seem to be increasing greatly.
- Some interviewees consider it unhealthy to eat walrus killed in the vicinity of Rankin Inlet, due to runoff from mining activities in that area.
- Changes are expected to occur around Baker Lake in the future, as a result of the current gold mining at Meliadine and the potential exploitation of uranium between the Thelon and Kazan rivers.
- Summer 2008 was considered to have been relatively dry, which resulted in lower water levels in lakes and rivers, and even in the Inlet. This caused some warming in lake temperatures, considered unhealthy for cold-adapted fish; while lower river levels reduced spawning by limiting upstream migration. There have been reports in recent years that some rivers dry up to the point that fish are caught in pools that continue to dry up. People get together to harvest fish from these spots so they are not wasted.

COMMUNITY ECONOMIC DEVELOPMENT AND TRANSPORTATION

- An experimental fishery for scallops was reportedly carried out in the vicinity of Chesterfield Inlet, approximately 10 years ago. Supporting surveys showed a fan-shaped distribution radiating out from the community, with higher numbers of this mollusc in deeper water. Information from this earlier study should be reviewed and revisited.

- One potential tourist site suggested during the interviews was Marble Island, which lies south of Southampton Island in Hudson Bay. Local myths and anecdotes surrounding this site raise its interest beyond that of natural beauty alone.
- Tourism is seen as a welcome and needed industry in the community; providing encouragement to outfitters and possibly bringing people in for sport fishing.
- Many discussed the need for more programs for youth related to job training, mentoring programs and job creation.
- Several mentioned the need for greater preparedness to deal with oil spills and other potential contaminants related to shipping in the area. It is felt that even a small spill could be catastrophic for the species in the area and that the community was not well prepared for such an incident. The same concern was expressed for search and rescue at sea, particularly if cruise ships come to the area.
- Some interviewees were concerned that the funding programs available to people were not being clearly explained or advertised. People need one on one help with the forms and what funding programs are available.
- The community freezer is too small; however, there are plans to build a new one.
- Interviewees with access to larger boats find that the dock is located in a very rocky area and this causes problems when winds are high.

PROCESS

Species abundance estimates were sometimes provided from indirect information (or from what might be considered to be secondary sources). Cockles and clams

were reported as present and abundant, based on evidence contained in the stomachs of walrus, from siphon holes noted on the sea floor, and from the presence of empty shells in the intertidal zone or washed up on beaches. This was also true for sea cucumbers, which were recorded in the stomachs of bearded seals. The nature of these indirect observations makes the conclusion that “shellfish are becoming more abundant”, somewhat problematic.



MAPS AND TABLES

The following group of maps brings together geographic context, species locations, and a brief look at some earlier studies (derived from the Nunavut Atlas). The following maps are numbered sequentially. Each map is accompanied by data in tabular form that provides additional detail as well as descriptive information, when available. Captions below each map provide a description as well. All historic data is presented at the end of this section. Use Table 1 to interpret Map Codes provided in the tables accompanying the maps.

Table 1: Guide to map codes

MAPPING CODES GUIDE	
Anything unsure or unreliable	Appended with a lower case 'u'
Changes from one spot to another (same group of animals)	Appended with lower case 'c'
Present {since year 2000}	Appended with 'P'
Historic {before year 2000}	Appended with an 'H'
Everywhere (seen all over/no specific place/only where they go)	Appended with a lower case 'e' — Note that an asterisk (*) has been placed after species names in map titles to indicate that the species is also seen 'everywhere'.
High Abundance	Appended with an 'A'
Migration (use arrows to indicate direction)	Appended with an 'M'
Spawning / Nesting / Denning / Calving / Pupping areas	Appended with an 'S'
Nursery Area	Appended with an 'N'
Significant Area of High Diversity	SADP
Significant Unique Area	SAUP
Significant Area for Other Reason	SAOP
Archeological / Historic / Camp Site (old and very old)	ARCH
Other	OTH
Area Known Best (area most familiar with or a travel route)	AKB
Camp / Cabin (typically modern)	CAMP
Example: CHAR_1_AP: First Arctic Char area drawn by interviewee that is also presently (after year 2000) an area of high abundance.	

Generally, maps comprise groupings of several species or a single species as reported in multiple interviews. Species and interviews are normally color-coded and both locations are accompanied by a numeric label. The first number in the label refers to a specific interview while the second is a location identifier. These labels can be used to look-up relevant information in the table associated with each map.

Locations reported by the interviewee as “unsure” have not been included in this report.

In some cases no locations were drawn on a map because one or more interviewees considered the distribution to be classified as “everywhere”. The designation of “Everywhere” was used when interviewees felt that the organism under discussion had been observed everywhere throughout their travels and places they are very familiar with. Giving a species an “everywhere” designation does not confer any information about abundance nor should it be presumed to be ubiquitous; it is only a measure of distribution relative to where the interviewee has been. “Everywhere only” data is not represented on the map, but is provided as a table of data following the map.

In addition to “everywhere only” designations, some species were described by interviewees as being “everywhere” and some interviewees provided locations for them. In these cases, where the species have been drawn on the map by some, but considered “everywhere” by others, an asterisk has been placed after the species name in the title of the map. For example; Arctic Char is written as “Arctic Char*” in the map title because it was reported in specific locations, as well as, being “everywhere”. The asterisk simply provides a visual cue that the species has two designations.

Please note that the data presented on birds has been further qualified in Appendix 3. Of all species presented to an interviewee, those in the bird category present the

greatest challenge in proper identification; a challenge often encountered by even the most keen observer of birds (e.g. sandpipers or gulls). To assist in the interpretation of the data the additional appendix compares observations recorded for the inventory with literature and sightings by other authors. In the future, inventory work will endeavor to qualify all species reported in a similar way.

Note: The asterisk (*) after some species names in the titles of the Maps indicates that the species was “also” considered to be seen Everywhere. Species identified as being “Everywhere Only” are shown by the use of a solid bullet in the Map legend.



Figure 4: Travel routes and areas of greatest familiarity.

Travel Routes and areas of greatest familiarity.

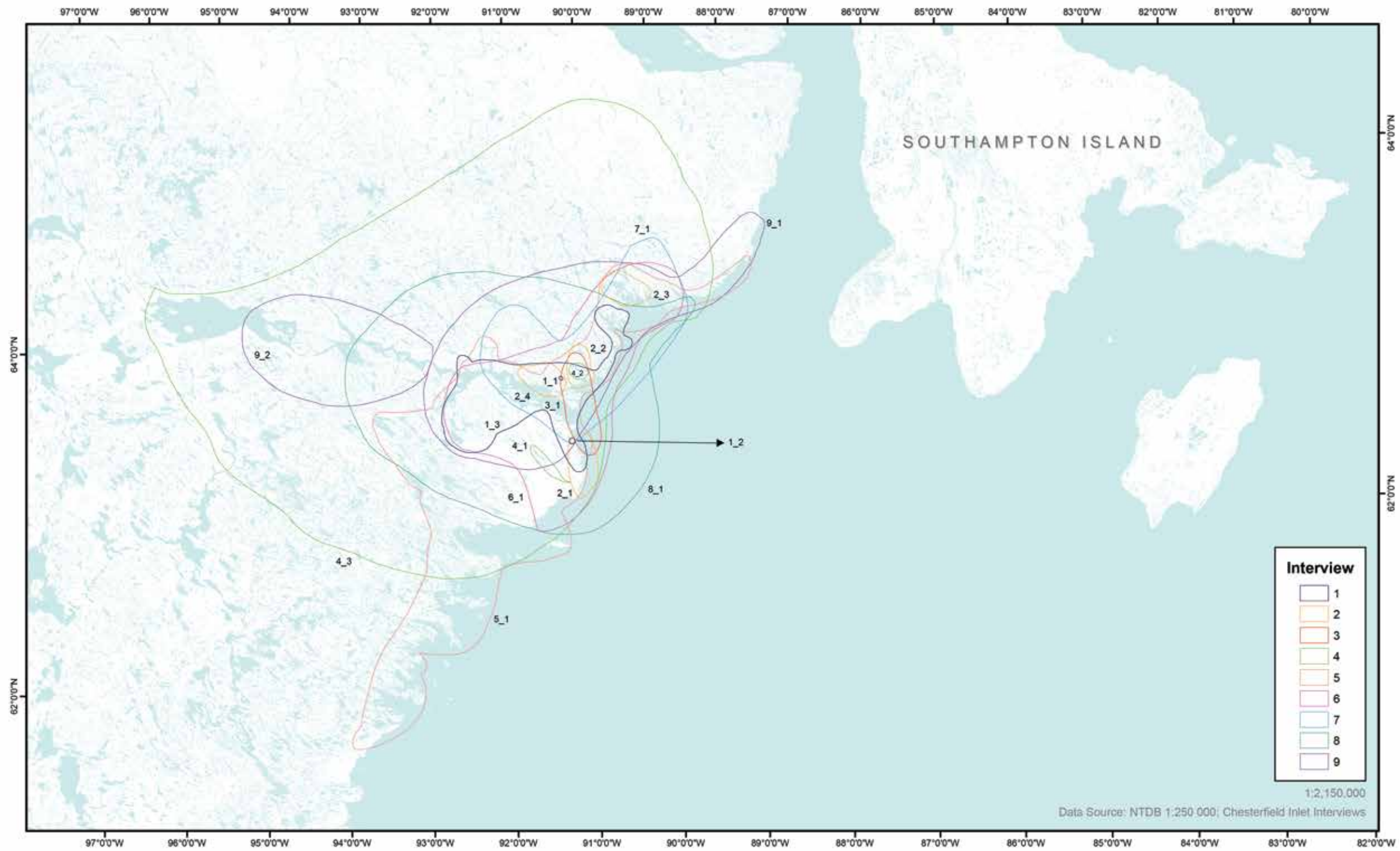




Table 2: Travel routes and areas of greatest familiarity.

Map Code	Map Label	Present – P Historic – H	Comments
AKB_1	9_1	P	Hunting area.
AKB_2	9_2	P	Hunting area.
AKB_1	8_1	P	General hunting area.
AKB_1	7_1	P	Hunted in this area.
AKB_1	6_1	P	Hunting and camping area.
AKB_1	5_1	P	Hunting and camping area.
AKB_2	4_2	P	Hunting area.
AKB_1	4_1	P	Puts out fish nets.
AKB_3	4_3	P	Area for wolf and musk ox hunting.
AKB_1	3_1	P	Where she grew up.
AKB_2	2_2	P	Fishing spot for trout.
AKB_4	2_4	P	Fishing spot.
AKB_1	2_1	P	Hunting area.
AKB_3	2_3	P	Fishing spot.
AKB_2	1_2	P	Fish Bay (place).
AKB_1	1_1	P	Family cabin; Dangerous area because of Polar Bears.
AKB_3	1_3	P	Depot Island; Hunting area for walrus, polar bear and fish.

Figure 5: Archaeological sites and areas of cultural significance.

Archaeological sites and areas of cultural significance.

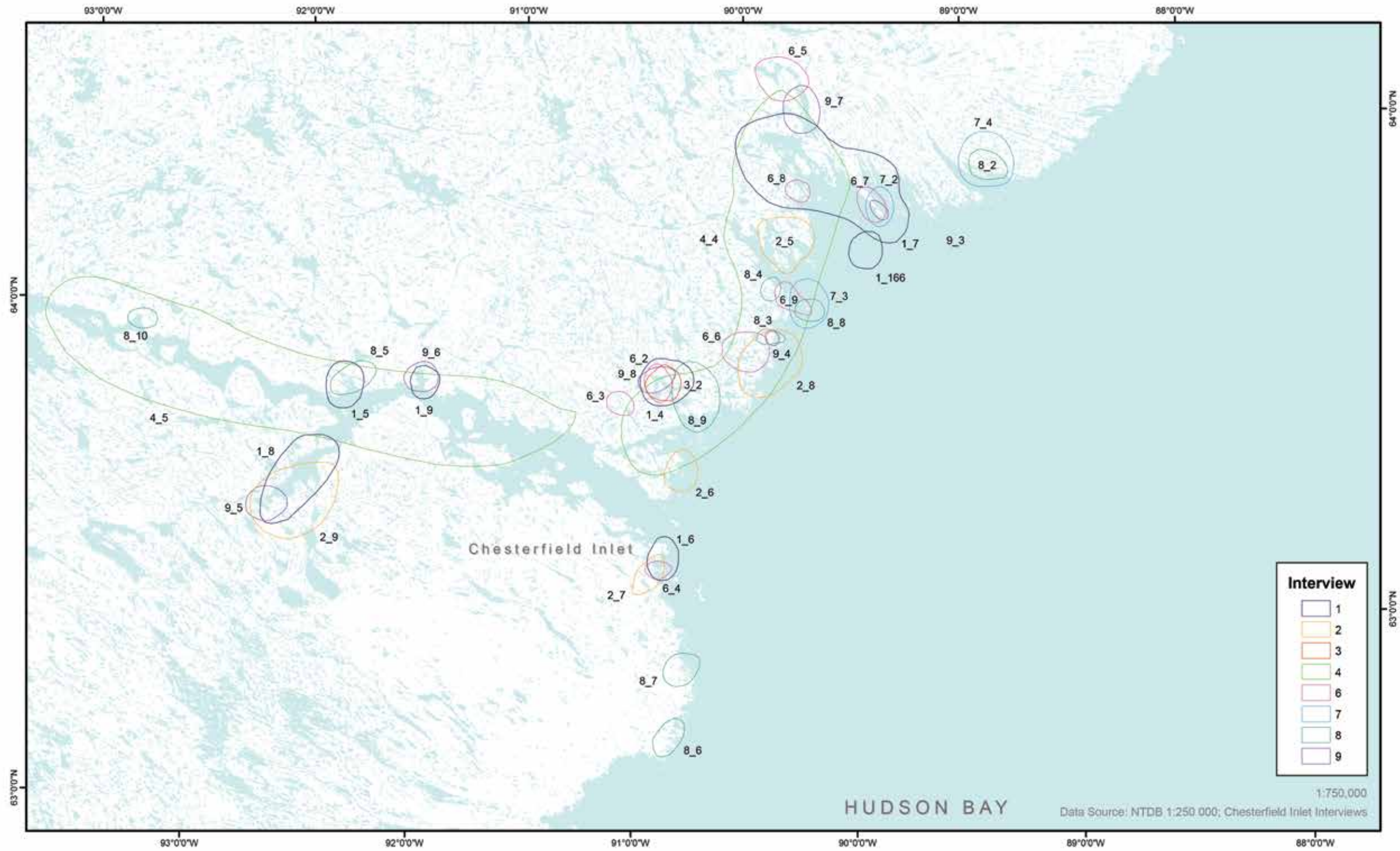




Table 3: Archaeological sites and areas of cultural significance.

Map Code	Map Label	Present – P Historic – H	Comments
Arch_1	9_3	H	Many rock and sod houses at Inuksivik.
Arch_6	9_8	H	Tent rings and inuksugait.
Arch_3	9_5	H	A traditional gathering place.
Arch_4	9_6	H	Ikaaqtuqtavik - caribou crossing; Traditional gathering spot for caribou hunting in the 1950's at Paanaaq (Robinhood Bay).
Arch_2	9_4	H	Rock/sod houses at Cape Silumiut.
Arch_5	9_7	H	Caribou hunting area in the 1950's; migration route for caribou.
Arch_1	8_2	H	Old camp site.
Arch_3	8_4	H	Found an old harpoon head from whalers; old camp site.
Arch_7	8_8	H	Traditional look out spot at Depot Island.
Arch_2	8_3	H	Old camp site at Cape Silumiut.
Arch_6	8_7	H	Qajaq (kayak) rest and tent rings.
Arch_5	8_6	H	Qajaq rest and tent rings.
Arch_9	8_10	H	Old camp; feature called Kappianaqtuq - a massive rock that looks like it's going to fall.
Arch_4	8_5	H	Grave site and old gun at Robinhood Bay.
Arch_8	8_9	H	Camp site, qajaq rest and char area.
Arch_3	7_4	H	Cape Fullerton where the interviewee grew up; family's outpost camp.
Arch_1	7_2	H	Old camp sites at Daly Bay.
Arch_2	7_3	H	Traditional gathering/hunting camp site.
Arch_4	6_5	H	Old camps/traditional fishing spot.
Arch_7	6_8	H	Inuksuit and a traditional gathering site at Tikiraaqjuq.
Arch_6	6_7	H	Thule site, tent rings, and qajaq rest at Inuksivik.
Arch_8	6_9	H	Traditional gathering place and a wintering site for whalers at Ukusialuk.
Arch_5	6_6	H	Traditional fishing and hunting spot.
Arch_1	6_2	H	Rock houses.
Arch_2	6_3	H	Traditional fishing camp site with stone fish weirs.
Arch_3	6_4	H	Thule site right in town.
Arch_1	4_4	H	Traditional rock houses at Saqvaarjuaq (place name).
Arch_2	4_5	H	Summer camps.
Arch_1	3_2	H	Where the interviewee was born; used to fish with fishing weir.
Arch_4	2_8	H	Traditional camp site and qajaq rest.
Arch_2	2_6	H	Sod houses, camp site and qajaq rest.
Arch_3	2_7	H	Thule site.
Arch_1	2_5	H	Traditional camp site.
Arch_5	2_9	H	Traditional camp site at Barbor Bay.
Arch_3	1_6	H	Thule site and campground.
Arch_1	1_4	H	Saqvaaluk (place name) - Sod houses, traditional camp sites.

Map Code	Map Label	Present – P Historic – H	Comments
Arch_5	1_8	H	Walrus Island; Seal and walrus hunting spot.
Arch_6	1_9	H	Barbor Bay.
Arch_7	1_166	H	No information.
Arch_4	1_7	H	Sod houses; traditional camp site.
Arch_2	1_5	H	Traditional site for char run.
Arch_2	1_5	H	Traditional site for char run.

Figure 6: Areas with significant diversity and areas important for other reasons.

Areas with significant diversity and areas important for other reasons.

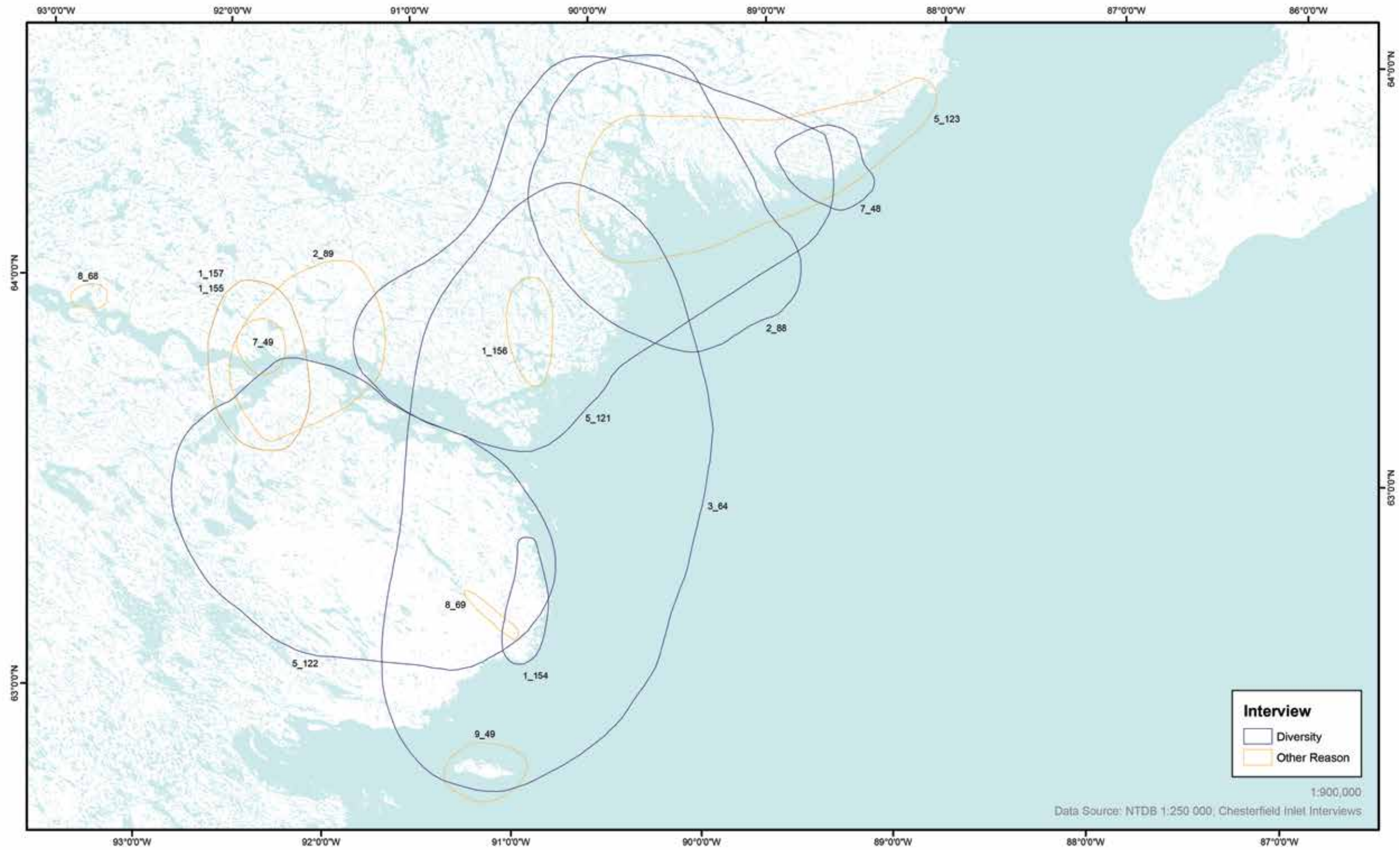




Table 4: Areas with significant diversity and areas important for other reasons.

Map Code	Map Label	Type	Present - P Historic - H	Months	Comments
SAOP_1	9_49	Other Reason	P		Marble Island ; Interesting place to visit, historical site, lots of different rocks and the sand looks like baking powder
SAOP_2	8_69	Other Reason	P		Josephine River ; Beautiful water, the river banks are really high.
SAOP_1	8_68	Other Reason	P		Kappianaqtuq -- beautiful spot with the massive rock.
SADP_1_H	7_48	Diversity	H		Different birds, walrus, ringed seals, spotted seals, bearded seals, fish, caribou, and belugas.
SAOP_1_H	7_49	Other Reason	H		Everywhere you go it is beautiful, especially during the spring.
SADP_2	5_122	Diversity	P		Significant area of diversity.
SAOP_1	5_123	Other Reason	P		Very clean, undisturbed land; Very diverse in animals
SADP_1	5_121	Diversity	P		No information.
SADP_1	3_64	Diversity	P		No information.
SADP_1	2_88	Diversity	P		There are many types of animals in the area.
SAOP_1	2_89	Other Reason	P		There are many types of birds and archeological sites.
SAOP_1	1_156	Other Reason	P		This area is a good fishing spot and has nice scenery.
SADP_1	1_154	Diversity	P	June to September	There are birds, caribou, wolverines, fish, and seals. Possibly because of wetlands and river system in the area.
SADP_2	1_155	Diversity	P	June to September	This place is very warm and has lots of animals.
SAOP_2	1_157	Other Reason	P		Warm spot with lots of animals.
SAOP_2	1_157	Other Reason	P		Warm spot with lots of animals.

Figure 7: Areas of occupation for Arctic Char.





Table 5: Areas of occupation for Arctic Char.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Char_5	9_13	Arctic Char	P		November to April	Drainage of a lake before the river at Qamaniq.
Char_1_SAP	9_9	Arctic Char	P	A, S	November to April	Josephine Lake
Char_2_AP	9_10	Arctic Char	P	A	November to April	Eight to ten years ago (2000-2002).
Char_3_AH	9_11	Arctic Char	H	A	November to April	A feasibility study was done in 1985 for a Char fishery here.
Char_4	9_12	Arctic Char	P		November to April	
Char_6	8_16	Arctic Char	P		May and June	
Char_1_AP	8_11	Arctic Char	P	A	September and October	
Char_5	8_15	Arctic Char	P		September and October	
Char_10	8_20	Arctic Char	P		May and June	
Char_9	8_19	Arctic Char	P		May and June	
Char_8	8_18	Arctic Char	P		May and June	
Char_3_SAP	8_13	Arctic Char	P	A, S	September and October	At Ivitaarulitnaaq.
Char_2	8_12	Arctic Char	P		September and October	Seen going up river.
Char_4_SP	8_14	Arctic Char	P	S	November to April	
Char_7	8_17	Arctic Char	P		September and October	
Char_3_H	7_7	Arctic Char	H		September	
Char_1	7_5	Arctic Char	P		September	
Char_6_AH	7_10	Arctic Char	H	A	June and December	
Char_7	7_11	Arctic Char	P		Year round	
Char_5	7_9	Arctic Char	P		July and August	
Char_2_H	7_6	Arctic Char	H		November to April	
Char_2	6_11	Arctic Char	P		October to April, June, July	
Char_1_SP	5_3	Arctic Char	P	S	Year round	
Char_3_SP	5_5	Arctic Char	P	S	Year round	
Char_2_SP	5_4	Arctic Char	P	S	Year round	
Char_4_SP	5_6	Arctic Char	P	S	Year round	
Char_5_SP	5_7	Arctic Char	P	S	Year round	
Char_13_SP	5_15	Arctic Char	P	S	Year round	
Char_12_SP	5_14	Arctic Char	P	S	Year round	
Char_11_SP	5_13	Arctic Char	P	S	Year round	
Char_7_SP	5_9	Arctic Char	P	S	Year round	
Char_8_SP	5_10	Arctic Char	P	S	Year round	
Char_9_SP	5_11	Arctic Char	P	S	Year round	
Char_10_SP	5_12	Arctic Char	P	S	Year round	
Char_6_SP	5_8	Arctic Char	P	S	Year round	

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Char_3	4_8	Arctic Char	P		Year round	
Char_5	4_10	Arctic Char	P		Year round	
Char_4	4_9	Arctic Char	P		Year round	
Char_1	4_6	Arctic Char	P		Year round	
Char_1	3_3	Arctic Char	P		July, August, September	
Char_8_SP	2_17	Arctic Char	P	S	July to September	
Char_4	2_13	Arctic Char	P		June to September	
Char_2_SP	2_11	Arctic Char	P	S	June to September	
Char_3	2_12	Arctic Char	P		June to September	
Char_5_SP	2_14	Arctic Char	P	S	June to September	
Char_1	2_10	Arctic Char	P		July to September	
Char_6_H	2_15	Arctic Char	H		July to March	Area of occupation in 1949.
Char_7_AP	2_16	Arctic Char	P	A	July to September	
Char_5	1_14	Arctic Char	P		Year round	
Char_9_AP	1_18	Arctic Char	P	A	Year round	
Char_4	1_13	Arctic Char	P		Year round	
Char_10	1_158	Arctic Char	P			
Char_1	1_10	Arctic Char	P		Year round	
Char_3	1_12	Arctic Char	P		Year round	
Char_2	1_11	Arctic Char	P		Year round	
Char_8	1_17	Arctic Char	P		Year round	
Char_7	1_16	Arctic Char	P		Year round	
Char_6	1_15	Arctic Char	P		Year round	
Char_1_H	6_10	Arctic Char	H		Year round	Includes travel route; really important area for Inuit; starts from Uvauk to Robinhood, Barber Bay, Marla's Harbor, out to Baird Bay and also up to Daly Bay.
Char_2	4_7	Arctic Char	P		Year round	

“Everywhere” Coded Data — Arctic Char.

Interview	Map Code	Species	Present – P Historic – H	Months
5	Char_14_e	Arctic Char	P	Year round
7	Char_4_e	Arctic Char	P	Year round

Figure 8: Areas of occupation for Land Locked Char





Table 6: Areas of occupation for Land Locked Char.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
LLC_1	8_21	Land Locked Char	P		Year round	At First Lake.
LLC_3_H	7_14	Land Locked Char	H		September and October	
LLC_1	7_12	Land Locked Char	P		September	
LLC_5	7_16	Land Locked Char	P		July and August	
LLC_2_H	7_13	Land Locked Char	H		September	
LLC_1	5_17	Land Locked Char	P		Year round	
LLC_3	5_19	Land Locked Char	P		Year round	
LLC_2	5_18	Land Locked Char	P		Year round	
LLC_4	5_20	Land Locked Char	P		Year round	
LLC_5	5_21	Land Locked Char	P		Year round	
LLC_13	5_29	Land Locked Char	P		Year round	
LLC_12	5_28	Land Locked Char	P		Year round	
LLC_11	5_27	Land Locked Char	P		Year round	
LLC_7	5_23	Land Locked Char	P		Year round	
LLC_8	5_24	Land Locked Char	P		Year round	
LLC_9	5_25	Land Locked Char	P		Year round	
LLC_10	5_26	Land Locked Char	P		Year round	
LLC_6	5_22	Land Locked Char	P		Year round	
LLC_1	4_11	Land Locked Char	P		Year round	
LLC_3	4_13	Land Locked Char	P		Year round	
LLC_2	4_12	Land Locked Char	P		Year round	
LLC_1	3_4	Land Locked Char	P		July, August, September	
LLC_2_SP	2_90	Land Locked Char	P	S		
LLC_1_SP	2_18	Land Locked Char	P	S	May, June, October, November	

“Everywhere” Coded Data — Land Locked Char.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	LLC_1_e	Land Locked Char	P	Year round	In all lakes.
7	RLT_4_e	Land Locked Char	P	Year round	

Figure 9: Areas of occupation for Arctic Cod.

Arctic Cod*: Present Areas of Occupation

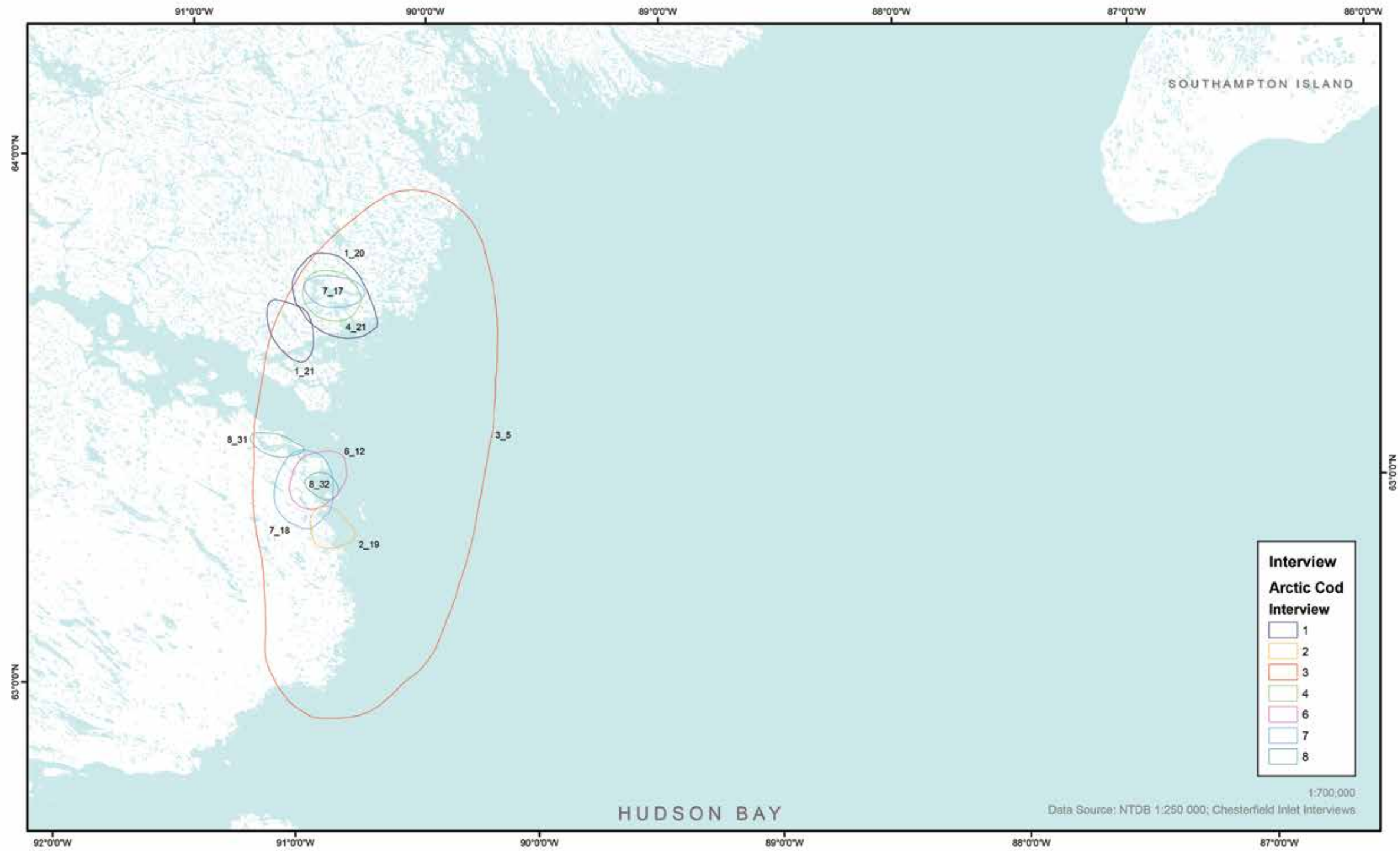




Table 7: Areas of occupation for Arctic Cod.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
Cod_2_AP	8_31	Arctic Cod	P	A	May to September	At False Inlet.
Cod_3_AP	8_32	Arctic Cod	P	A	May to September	At Fox Trap Island.
Cod_1_AP	7_17	Arctic Cod	P	A	May and June	
Cod_2	7_18	Arctic Cod	P		Year round	
Cod_1	6_12	Arctic Cod	P		October to April, June, July	
Cod_1_AP	4_21	Arctic Cod	P	A	June	
Cod_1	3_5	Arctic Cod	P		Year round	
Cod_1	2_19	Arctic Cod	P		June to September	
Cod_2_AP	1_21	Arctic Cod	P	A	Year round	
Cod_1_AP	1_20	Arctic Cod	P	A	Year round	At Saqvaarjuaq (place name).
Cod_1_AP	1_20	Arctic Cod	P	A	Year round	At Saqvaarjuaq (place name).

Figure 10: Areas of occupation for Lake, Round and Broad Whitefish.

Lake*, Round* and Broad* Whitefish: Present and Historic Areas of Occupation

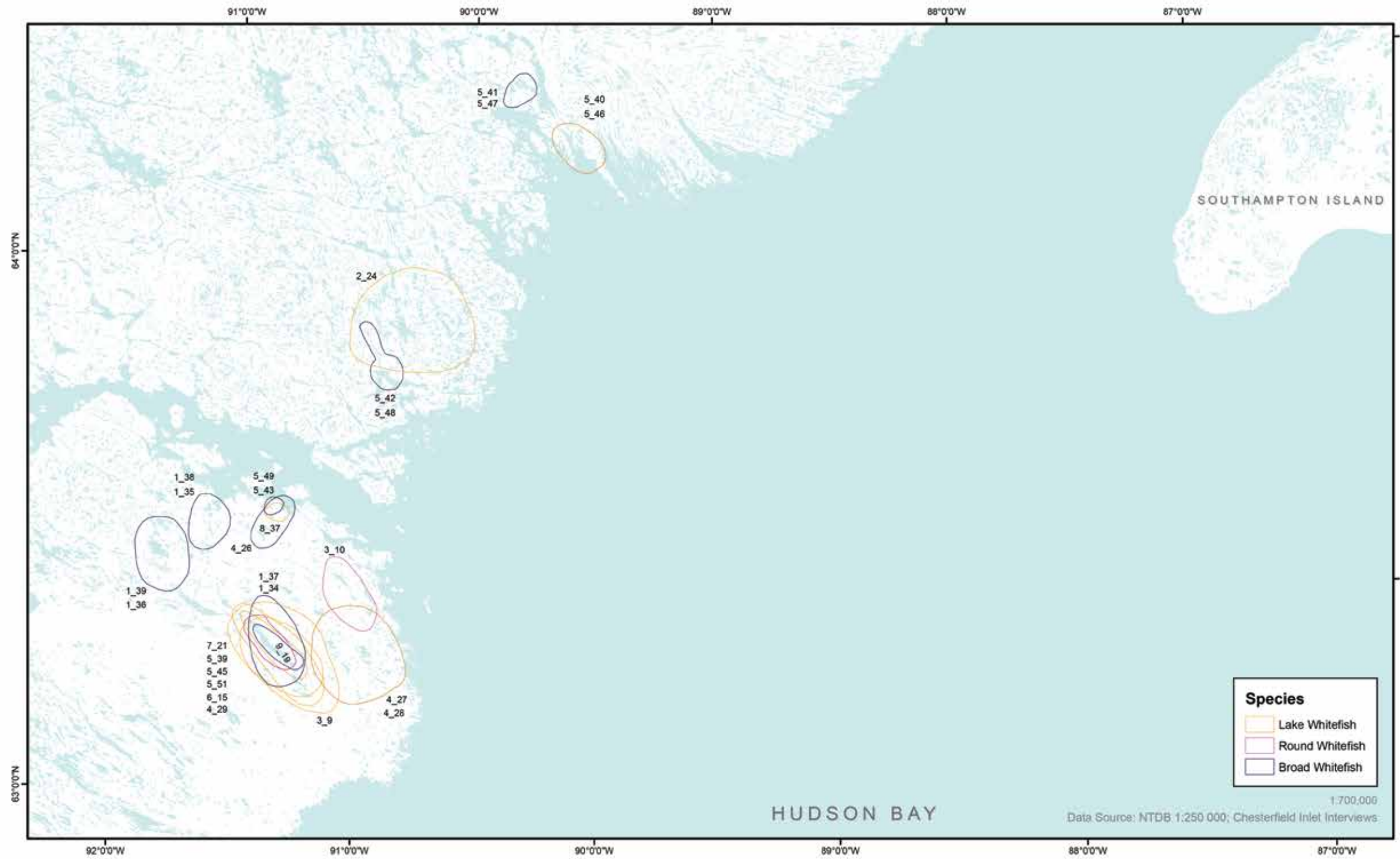




Table 8: Areas of occupation for Lake, Round and Broad Whitefish.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
BWh_1	9_19	Broad Whitefish	P		November to April	Was not sure if it was broad, lake or round whitefish.
BWh_2	5_46	Broad Whitefish	P		Year round	
BWh_3	5_47	Broad Whitefish	P		Year round	
BWh_4	5_48	Broad Whitefish	P		Year round	
BWh_5	5_49	Broad Whitefish	P		Year round	
BWh_1	5_45	Broad Whitefish	P		Year round	
BWh_1_AP	4_26	Broad Whitefish	P	A	December to April	
BWh_2	4_27	Broad Whitefish	P		October to April	Small fish.
Bwh_2_AP	1_38	Broad Whitefish	P	A	December	
Bwh_1	1_37	Broad Whitefish	P		November	
Bwh_3	1_39	Broad Whitefish	P		January	
LWh_1	8_37	Lake Whitefish	P		November and December	Caught with four inch mesh net.
LWh_1_H	7_21	Lake Whitefish	H		November to June	
LWh_1	6_15	Lake Whitefish	P		October to April, June, July	
LWh_2	5_40	Lake Whitefish	P		Year round	
LWh_3	5_41	Lake Whitefish	P		Year round	
LWh_4	5_42	Lake Whitefish	P		Year round	
LWh_5	5_43	Lake Whitefish	P		Year round	
LWh_1	5_39	Lake Whitefish	P		October to June	
LWh_2_AP	4_29	Lake Whitefish	P	A	October to April	Small fish.
LWh_1	4_28	Lake Whitefish	P		October to April	Small fish.
LWh_1	3_9	Lake Whitefish	P		Year round	
Lwh_1	2_24	Lake Whitefish	P		May and June	
Lwh_2_AP	1_35	Lake Whitefish	P	A	November	
Lwh_1	1_34	Lake Whitefish	P		November	
Lwh_3	1_36	Lake Whitefish	P		December	
RWh_1	5_51	Round Whitefish	P		Year round	
RWh_1	3_10	Round Whitefish	P		June	

“Everywhere” Coded Data — Whitefish.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
5	BWh_6_e	Broad Whitefish	P	Year round	
5	RWh_2_e	Round Whitefish	P	Year round	
5	LWh_6_e	Lake Whitefish	P	Year round	

Figure 11: Areas of occupation for Lake and Brook Trout.

Lake* and Brook* Trout

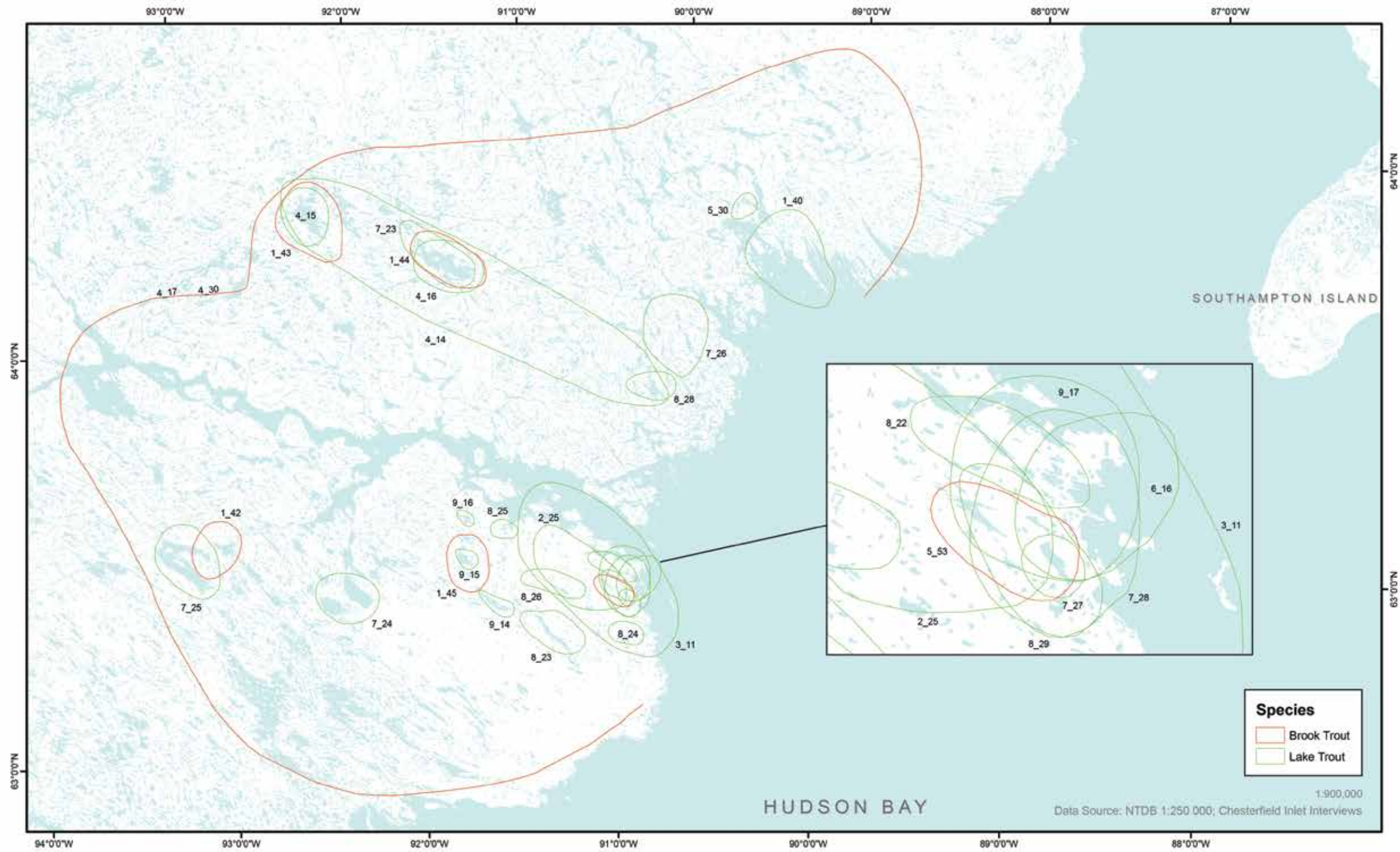




Table 9: Areas of occupation for Lake and Brook Trout.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
BTr_1	5_53	Brook Trout	P		Year round	
BTr_3	1_44	Brook Trout	P		April to December	
BTr_4	1_45	Brook Trout	P		April to December	Kakiatutuaq (place name).
BTr_1	1_42	Brook Trout	P		April to December	
BTr_1	4_30	Brook Trout	P		Year round	
BTr_2_AP	1_43	Brook Trout	P	A	April to December	
LT_4	9_17	Lake Trout	P		June, October, November	
LT_1	9_14	Lake Trout	P		June	
LT_3	9_16	Lake Trout	P		June, October, November	
LT_2	9_15	Lake Trout	P		June, October, November	
LT_7	8_28	Lake Trout	P		Year round	Really big Lake Trout.
LT_5	8_26	Lake Trout	P		Year round	At Pingualuk (place name).
LT_4	8_25	Lake Trout	P		Year round	
LT_1	8_22	Lake Trout	P		Year round	
LT_8	8_29	Lake Trout	P		Year round	
LT_3	8_24	Lake Trout	P		Year round	
LT_2	8_23	Lake Trout	P		Year round	
LT_4_H	7_26	Lake Trout	H		November to April	
LT_1_AH	7_23	Lake Trout	H	A	November to April	In most lakes.
LT_3_H	7_25	Lake Trout	H		November to April	
LT_2_H	7_24	Lake Trout	H		November to April	
LT_5	7_27	Lake Trout	P		Year round	At Ajarakttulik (Checkers Lake)
LT_6	7_28	Lake Trout	P		Year round	
LT_1	6_16	Lake Trout	P		October to April, June, July	In all lakes.
LT_1	5_30	Lake Trout	P		Year round	
LT_2	4_15	Lake Trout	P		Year round	Sees them in most lakes.
LT_3	4_16	Lake Trout	P		Year round	Sees them in most lakes.
LT_1	4_14	Lake Trout	P		Year round	Sees them in most lakes.
LT_1	3_11	Lake Trout	P		Year round	At Amaruqtalik (place name).
LT_1	2_25	Lake Trout	P		May, June, October to December	
LT_1_AP	1_40	Lake Trout	P	A	Year round	
LT_4	4_17	Lake Trout	P		Year round	Seen in most lakes

“Everywhere” Coded Data — Brook and Lake Trout.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	LT_2_e	Lake Trout	P	Year round	
6	LT_2_He	Lake Trout	H	October to April, June and July	
8	LT_6_e	Lake Trout	P	Year round	In most big lakes.
9	LT_5_e	Lake Trout	P	October, November, June	In all lakes; traditionally ice fishing starts in October and November and again in June.
5	BTr_2_e	Brook Trout	P	Year round	

Figure 12: Areas of occupation for Arctic Eelpout, Arctic Staghorn Sculpin, Spoonhead Sculpin, Greenland Halibut, Winter Flounder, Capelin and Wolfish.

Arctic Eelpout*, Arctic Staghorn Sculpin*, Spoonhead Sculpin*, Capelin, Greenland Halibut, Winter Flounder, and Wolfish*





Table 10: Areas of occupation for Arctic Eelpout, Arctic Staghorn Sculpin, Spoonhead Sculpin, Greenland Halibut, Winter Flounder, Capelin and Wolfish.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
AOP_1_AP	1_28	Arctic Eelpout	P	A	Year round	
ASS_1	3_6	Arctic Staghorn Sculpin	P		Year round	
Cape_1	8_36	Capelin	P		May and June	At Pujjuut, North West of Big Willow Bay.
Cape_1	6_14	Capelin	P		October to April, June, July	
Cape_3	5_38	Capelin	P		July to September	
Cape_2_AP	5_37	Capelin	P	A	July to September	
Cape_1_AP	1_32	Capelin	P	A	July, August, September	
Ghal_1	1_31	Greenland Halibut	P		April and May	Caught during fishing derby.
SpScul_1	3_7	Spoonhead Sculpin	P		Year round	
SpScul_1	2_20	Spoonhead Sculpin	P		June to September	
WFl_1_H	9_26	Winter Flounder	H		June	Caught one when he was 15 or 16 years old.
Wolf_1	1_53	Wolfish	P			Saw a dead one in a seal hole.

“Everywhere” Coded Data — Arctic Eelpout, Arctic Staghorn Sculpin, Spoonhead Sculpin, Capelin and Wolfish.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	AOP_2_e	Arctic Eelpout	P	Year round	
4	AOP_1_e	Arctic Eelpout	P	Year round	
1	ASS_1_e	Arctic Staghorn Sculpin	P	Year round	
9	ASS_1_e	Arctic Staghorn Sculpin	P	June to October	
1	SpScul_1_e	Spoonhead Sculpin	P	Year round	
5	SpScul_1_e	Spoonhead Sculpin	P	Year round	
7	SpScul_1_e	Spoonhead Sculpin	P	Year round	
8	SpScul_1_e	Spoonhead Sculpin	P	May to September	
9	SpScul_1_e	Spoonhead Sculpin	P	June to October	
4	SpScul_1_eu	Spoonhead Sculpin	P	Year round	
1	Cape_2_e	Capelin	P	July to September	
4	Cape_1_e	Capelin	P	July to September	
5	Cape_1_e	Capelin	P	July to September	All along coast.
5	Wolf_1_e	Wolfish	P	July to September	Caught in nets along coast.

Figure 13: Areas of occupation for Arctic Grayling, Trout Perch, Walleye, Burbot, Ninespine Stickleback and Threespine Stickleback.

Arctic Grayling, Trout Perch, Walleye, Burbot*, Ninespine Stickleback*, and Threespine Stickleback*

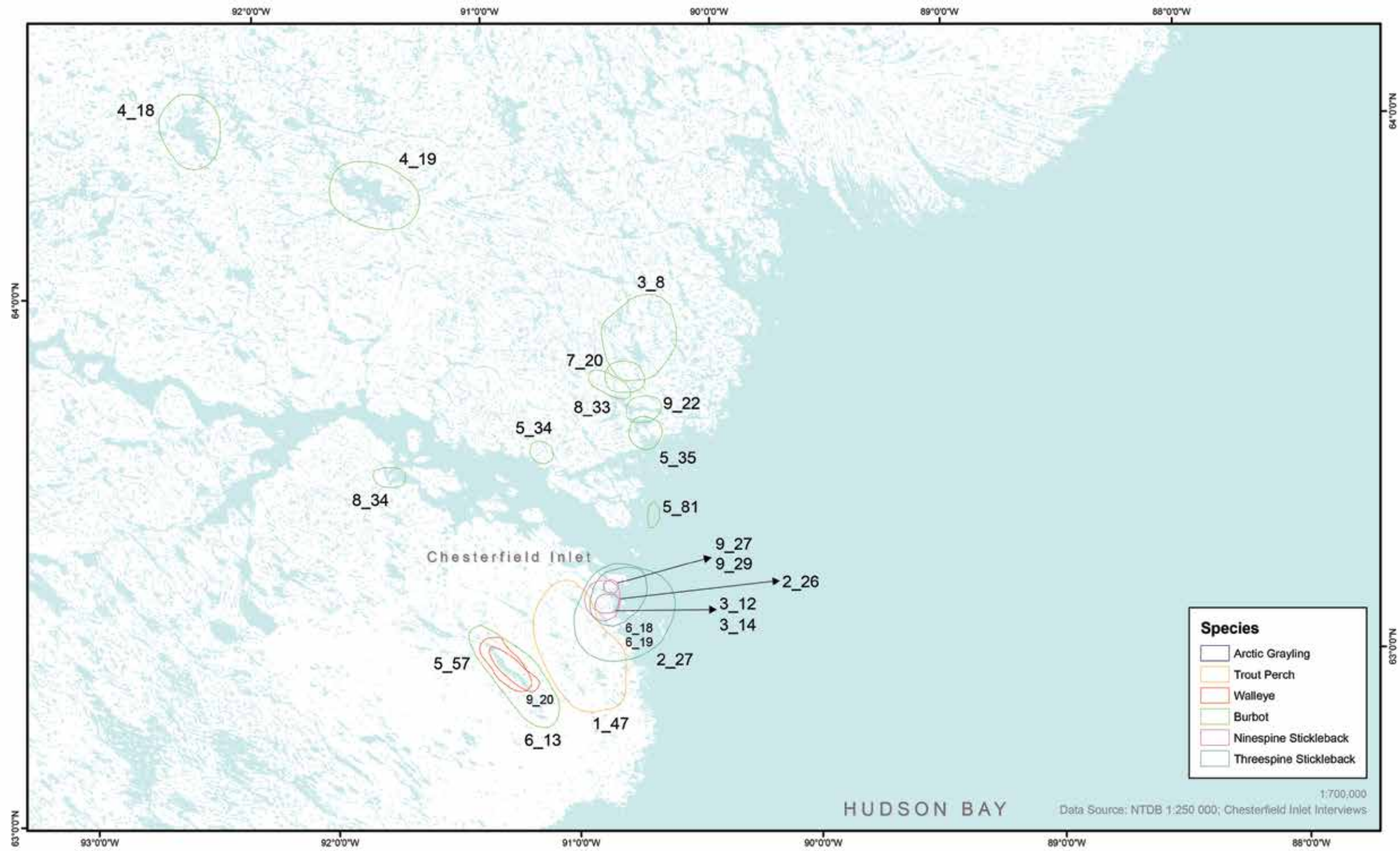




Table 11: Areas of occupation for Arctic Grayling, Trout Perch, Walleye, Burbot, Ninespine Stickleback and Threespine Stickleback.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Bur_1_H	9_22	Burbot	H		April and May	Caught two at Tuugaittuq in 1985.
Bur_1	8_33	Burbot	P		May and June	
Bur_2	8_34	Burbot	P		May and June	Caught one a couple years ago
Bur_1	7_20	Burbot	P		November to June	In most lakes
Bur_1	6_13	Burbot	P		October to April, June, July	
Bur_2	5_35	Burbot	P		May and June	
Bur_1	5_34	Burbot	P		May and June	People say the liver is the best, very tasty.
BW_2	5_81	Burbot	P		June	
Bur_1	4_18	Burbot	P		Year round	
Bur_2	4_19	Burbot	P		Year round	
Bur_1	3_8	Burbot	P		April and May	
NsTb_1	9_29	Ninespine Stickleback	P		July to September	In Mission Lake and other lakes traveled to.
NsTb_1	6_18	Ninespine Stickleback	P		July, August, September	In Mission lake.
NStb_1	3_14	Ninespine Stickleback	P		July, August, September	At Mission Lake and other ponds.
NStb_1	2_26	Ninespine Stickleback	P		July to September	
TsTb_1	9_27	Threespine Stickleback	P		July to September	In Mission Lake and other lakes traveled to.
TsTb_1	6_19	Threespine Stickleback	P		July, August, September	In Mission lake.
TStb_1	3_12	Threespine Stickleback	P		July, August, September	At Mission Lake and other ponds.
TStb_1	2_27	Threespine Stickleback	P		July, August, September	
TP_1	1_47	Trout Perch	P		June to November	At First, Second, and Third lakes.
WE_1	9_20	Walleye	P		November to April	
WE_1	5_57	Walleye	P		October and November	Seen once in awhile.

“Everywhere” Coded Data — Burbot, Ninespine Stickleback and Threespine Stickleback.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	Bur_1_e	Burbot	P	Year round	In all lakes.
1	NStb_1_e	Ninespine Stickleback	P	June to September	
5	NsTb_1_e	Ninespine Stickleback	P	Year round	
9	NsTb_2_e	Ninespine Stickleback	P	July to September	In Mission Lake and other lakes traveled to.
4	NsTb_1_eu	Ninespine Stickleback	P	Year round	In all lakes.
3	NStb_2_e	Ninespine Stickleback	P	July to September	In Mission Lake and other lakes traveled to.
4	TsTb_1_e	Threespine Stickleback	P	Year round	
	TsTb_1_e	Threespine Stickleback	p	Year round	
9	TsTb_2_e	Threespine Stickleback	P	July to September	In Mission Lake and other lakes traveled to.
1	TStb_1_e	Threespine Stickleback	P	June to September	
3	TStb_2_e	Threespine stickleback	P	July to September	In Mission Lake and other lakes traveled to.

Figure 14: Areas of occupation for Clam and Mussel.

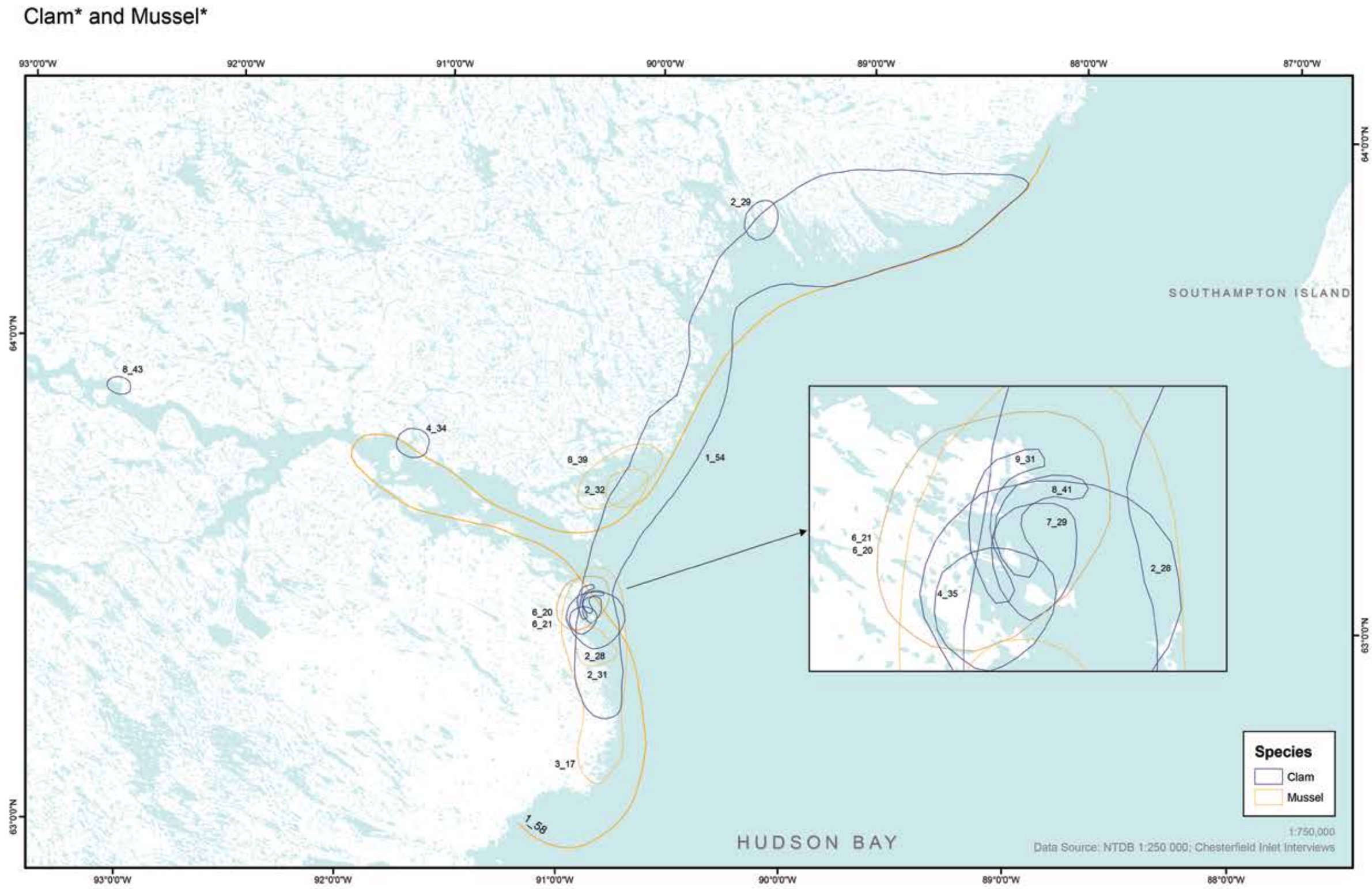




Table 12: Areas of occupation for Clam and Mussel.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Clam_1	9_31	Clam	P		July to September	
Clam_1	8_41	Clam	P		July to September	
Clam_3	8_43	Clam	P		July to September	Just shells.
Clam_1	7_29	Clam	P		July to September	You can harvest them during the lowest low tide mark.
Clam_1	6_20	Clam	P		July, August, September	At the low watermark along the shore.
Clam_1_AP	4_34	Clam	P	A	July to October	
Clam_2	4_35	Clam	P		July to October	
Clam_2	2_29	Clam	P		July to September	
Clam_1	2_28	Clam	P		July to September	
Clam_1	1_54	Clam	P		June to September	Large area of coast at low watermark.
Mus_1_AP	8_39	Mussel	P	A	July to September	
Mus_1	6_21	Mussel	P		July, August, September	Attached to Hollow Stemmed Kelp.
Mus_1	3_17	Mussel	P		July, August, September	
Mus_2_AP	2_32	Mussel	P	A	July to September	
Mus_1	2_31	Mussel	P	A	July to September	
Mus_1_AP	1_58	Mussel	P	A		All along the coast.
Mus_1_AP	1_58	Mussel	P	A		All along the coast.

“Everywhere” Coded Data — Clam and Mussel.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	Clam_2_e	Clam	P	June to September	
5	Clam_1_e	Clam	P	June to September	Seen where rivers discharge and along the shoreline.
8	Clam_2_e	Clam	P	July to September	
4	Mus_1_e	Mussel	P	July to October	Sees just the shells on beaches.
5	Mus_1_e	Mussel	P	June to September	Seen where there is also a lot of seaweed.
7	Mus_1_e	Mussel	P	July to September	
8	Mus_2_e	Mussel	P	July to September	
9	Mus_1_e_u	Mussel	P	July to September	
9	Mus_1_e_u	Mussel	P	July to September	

Figure 15: Areas of occupation for Cockle, Scallop, Basket Star, Jellyfish, Naked Sea Butterfly, Northern Shrimp, Polar Sea Star, Sea Urchin, and Toad Crab.

Cockle*, Scallop*, Basket Star, Jellyfish*, Naked Sea Butterfly, Northern Shrimp, Polar Sea Star*, Sea Urchin*, and Toad Crab*

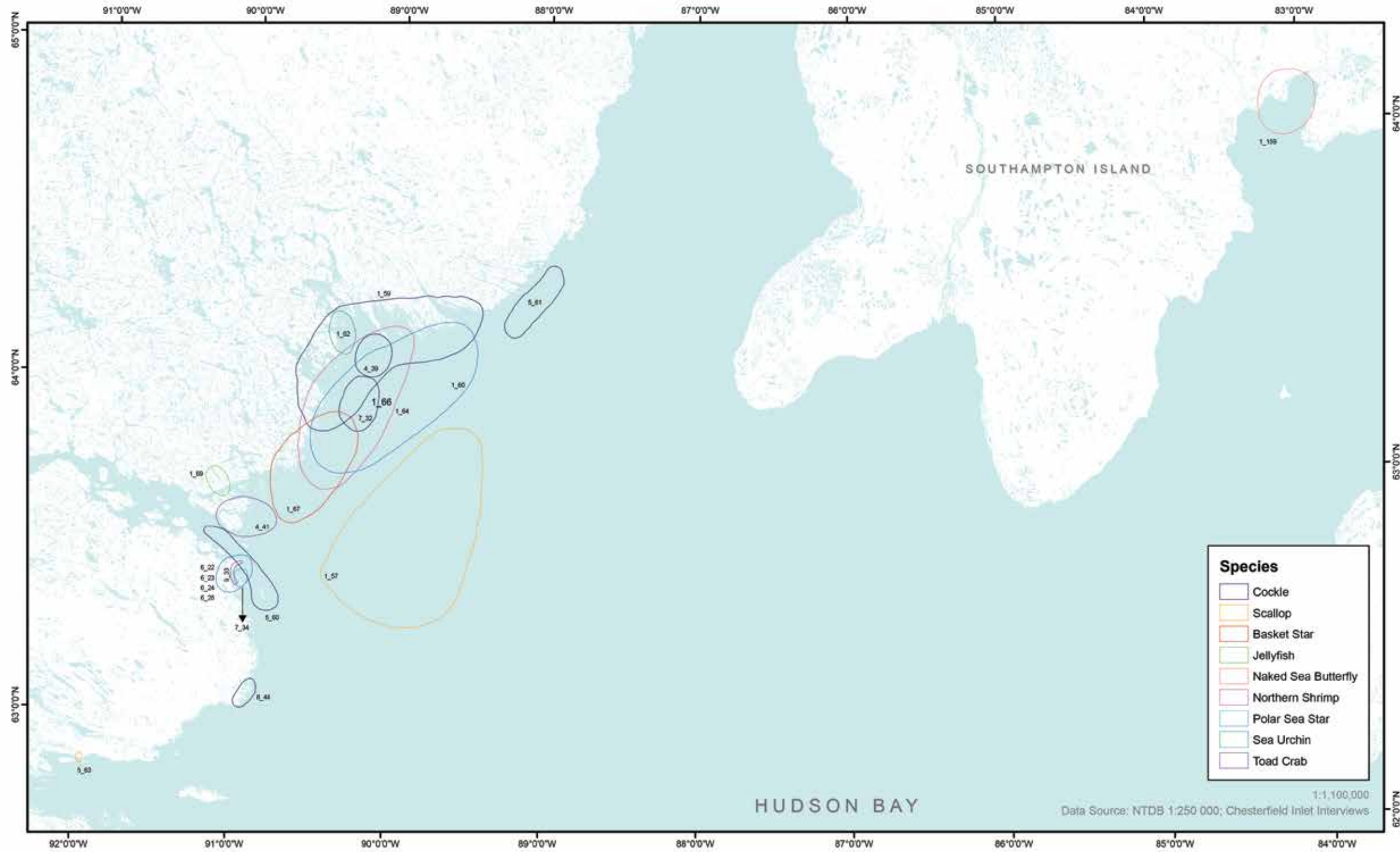




Table 13: Areas of occupation for Cockle, Scallop, Basket Star, Jellyfish, Naked Sea Butterfly, Northern Shrimp, Polar Sea Star, Sea Urchin, and Toad Crab.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
BStar_1	1_67	Basket Star	P		June to September	
Ckl_1	8_44	Cockle	P		July to September	Just shells.
Ckl_1	7_32	Cockle	P		July to September	Walrus feed in the area; also found in Walrus stomach.
Ckl_1	6_22	Cockle	P		July, August, September	Just shells on the shore.
Ckl_2	5_61	Cockle	P		June to September	
Ckl_1	5_60	Cockle	P		June to September	Seen where walrus feed.
Ckl_1	4_39	Cockle	P		November to April	Walrus spat it out on Walrus Island.
Ckl_2	1_60	Cockle	P		June to November	Empty shells along shore and in the stomach contents of walrus.
Ckl_1	1_59	Cockle	P		June to November	Empty shells along shore and in the stomach contents of walrus.
Jelly_2_AP	1_69	Jellyfish	P	A	June	
NSB_1_H	1_159	Naked Sea Butterfly	H			
NS_1_AP	1_64	Northern Shrimp	P	A	Year round	Abundant at Daly Bay.
PStar_1	7_34	Polar Sea Star	P		July to September	Found along the beach.
PStar_1	6_26	Polar Sea Star	P		July, August, September	
PStar_1	1_66	Polar Sea Star	P		June to September	
Scal_2_AP	5_63	Scallop	P	A	June to October	The interviewee has seen a lot of empty shells.
Scal_1_H	1_57	Scallop	H		June to September	Saw scallop for the first time four miles from community during a test fishery ten years ago.
SU_1	6_23	Sea Urchin	P		July, August, September	Saw them along the beach dead.
SU_1	1_62	Sea Urchin	P		June to September	A diver collected sea urchin at Daly Bay seven years ago.
TC_1	9_33	Toad Crab	P		January to September	Found along coast and caught in nets.
TC_1	6_24	Toad Crab	P		July, August, September	The interviewee saw a few while cod fishing.
TC_1_AP	4_41	Toad Crab	P	A	July to September	

“Everywhere” Coded Data — Scallop, Jellyfish, Polar Sea Star, Sea Urchin, and Toad Crab.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
4	Scal_1_e	Scallop	P	July to October	Sees empty shells on shore.
5	Scal_1_e	Scallop	P	June to October	Sees empty shells on shore.
7	Scal_1_e	Scallop	P	July to September	Sees empty shells on shore.
1	Jelly_1_e	Jellyfish	P	June	All along coast.
2	Jelly_1_e	Jellyfish	P	June to September	
3	Jelly_1_e	Jellyfish	P	Year round	
4	Jelly_1_e	Jellyfish	P	Year round	Sees large ones that are reddish pink in color.
5	Jelly_1_e	Jellyfish	P	Year round	
6	Jelly_1_e	Jellyfish	P	July to September	
7	Jelly_1_e	Jellyfish	P	July to September	Everywhere along coast.
8	Jelly_1_e	Jellyfish	P	July to September	
4	Pstar_1_e	Polar Sea Star	P	July to September	All along beaches.
4	SU_1_e	Sea Urchin	P	Year round	
1	TC_1_Ape	Toad Crab	P	June to September	All along coast.
2	TC_1_e	Toad Crab	P	May and June	
3	TC_1_e	Toad Crab	P	June to September	Seen during the spring and summer.
4	TC_2_e	Toad Crab	P	July to September	
5	TC_1_e	Toad Crab	P	June to September	Everywhere on the beach.
8	TC_1_e	Toad Crab	P	May and June	

Figure 16: Areas of occupation for Bladder Wrack, Sea Colander, Edible Kelp and Hollow Stemmed Kelp.

Bladder Wrack, Sea Colander, Edible Kelp, Hollow Stemmed Kelp

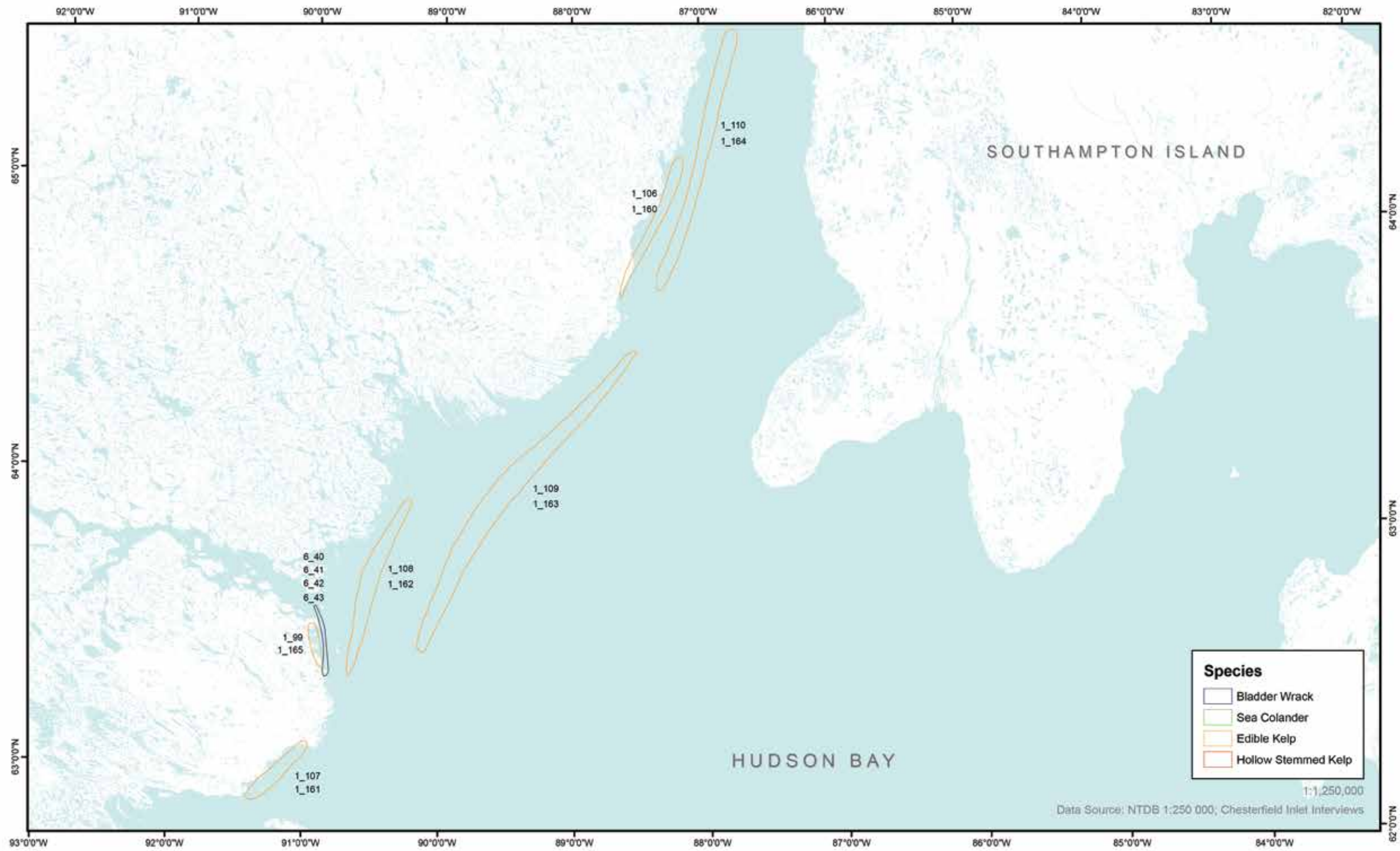




Table 14: Areas of occupation for Bladder Wrack, Sea Colander, Edible Kelp and Hollow Stemmed Kelp.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Bwra_1	6_43	Bladder Wrack	P		July to October	
EK_1	6_41	Edible Kelp	P		July to October	
EK_3_AP	1_107	Edible Kelp	P	A	Year round	
EK_2_AP	1_106	Edible Kelp	P	A	Year round	
EK_6_AP	1_110	Edible Kelp	P	A	Year round	
EK_4_AP	1_108	Edible Kelp	P	A	Year round	
EK_5_AP	1_109	Edible Kelp	P	A	Year round	
EK_1_AP	1_165	Edible Kelp	P	A	Year round	
HSK_1	6_40	Hollow Stemmed Kelp	P		July to October	You can see them after Easterly winds, caught in nets and washed up on shore.
HSK_3_AP	1_161	Hollow Stemmed Kelp	P	A	Year round	
HSK_2_AP	1_160	Hollow Stemmed Kelp	P	A	Year round	
HSK_6_AP	1_164	Hollow Stemmed Kelp	P	A	Year round	
HSK_4_AP	1_162	Hollow Stemmed Kelp	P	A	Year round	
HSK_5_AP	1_163	Hollow Stemmed Kelp	P	A	Year round	
HSK_1_AP	1_99	Hollow Stemmed Kelp	P	A	Year round	
SCol_1	6_42	Sea Colander	P		July to October	

“Everywhere” Coded Data — Bladder Wrack, Sea Colander, Dulse, Edible Kelp and Hollow Stemmed Kelp.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
9	Bwra_1_Ape	Bladder Wrack	P	June to September	
1	Bwra_1_e	Bladder Wrack	P	Year round	
2	Bwra_1_e	Bladder Wrack	P	July to September	All along coast.
3	Bwra_1_e	Bladder Wrack	P	July to September	All along coast.
5	Bwra_1_e	Bladder Wrack	P	July to September	
8	Bwra_1_e	Bladder Wrack	P	July to September	
1	Dul_1_APe	Dulse	P	Year round	
2	EK_1_e	Edible Kelp	P	July to September	Less abundant than other kelp.
5	EK_1_e	Edible Kelp	P	July to September	Lots washed up on shore.
9	HSK_1_Ape	Hollow Stemmed Kelp	P	June to September	There is so much that seal can rest on top of the kelp.
2	HSK_1_e	Hollow Stemmed Kelp	P	July to September	
3	HSK_1_e	Hollow Stemmed Kelp	P	July to September	All along coast.
5	HSK_1_e	Hollow Stemmed Kelp	P	July to September	
7	HSK_1_e	Hollow Stemmed Kelp	P	June to September	
8	HSK_1_e	Hollow Stemmed Kelp	P	July to September	
1	Scol_1_e	Sea Colander	P	Year round	Less abundant than other kelp.
	Scol_1_e	Sea Colander	P	July to September	
3	Scol_1_e	Sea Colander	P	July to September	All along coast.
5	Scol_1_e	Sea Colander	P	July to September	Lots washed up on shore.
8	Scol_1_e	Sea Colander	P	July to September	

Figure 17: Areas of occupation for Polar Bear.

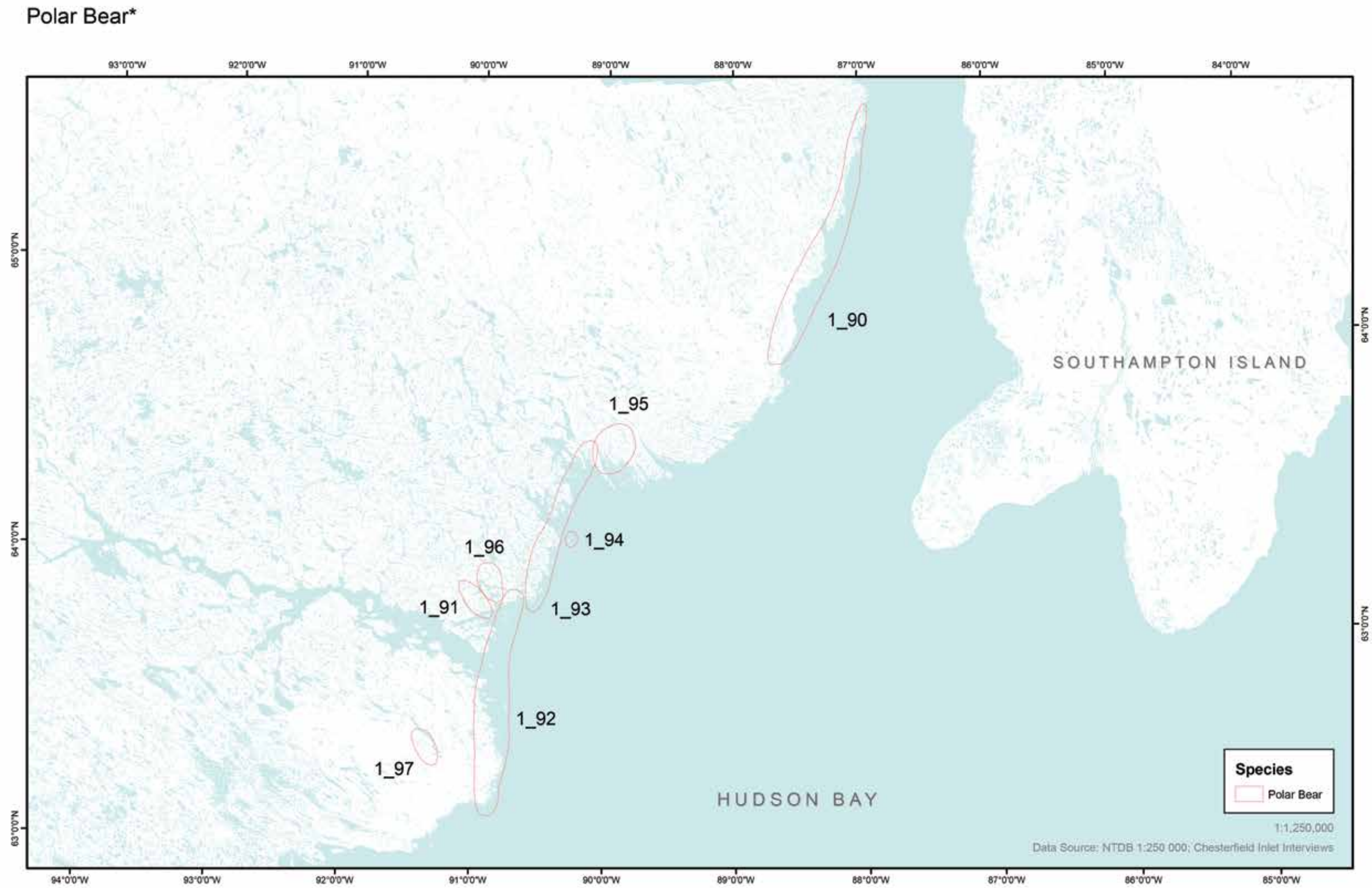




Table 15: Areas of occupation for Polar Bear.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
PB_8_SP	1_97	Polar Bear	P	S	November to March	
PB_2_AP	1_91	Polar Bear	P	A	May, June, November	See some male bears during winter.
PB_7_SP	1_96	Polar Bear	P	S	November to March	
PB_6_SP	1_95	Polar Bear	P	S	November to March	
PB_5_AP	1_94	Polar Bear	P	A	May, June, November	
PB_1_AP	1_90	Polar Bear	P	A	May, June, November	
PB_4_AP	1_93	Polar Bear	P	A	May, June, November	
PB_3_AP	1_92	Polar Bear	P	A	May, June, November	See some male bears during winter.

“Everywhere” Coded Data — Polar Bear.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
3	PB_1_e	Polar Bear	P	Year round	
4	PB_1_e	Polar Bear	P	Year round	
5	PB_1_e	Polar Bear	P	Year round	Seen wherever they travel.
6	PB_1_e	Polar Bear	P	Year round	
7	PB_1_e	Polar Bear	P	Year round	Hears from researchers the polar bears are disappearing, but they see them everyday.
8	PB_1_e	Polar Bear	P	Year round	
9	PB_1_e	Polar Bear	P	Year round	
2	PB_1_e	Polar Bear	P	Year round	

Figure 18: Areas of occupation for Walrus.

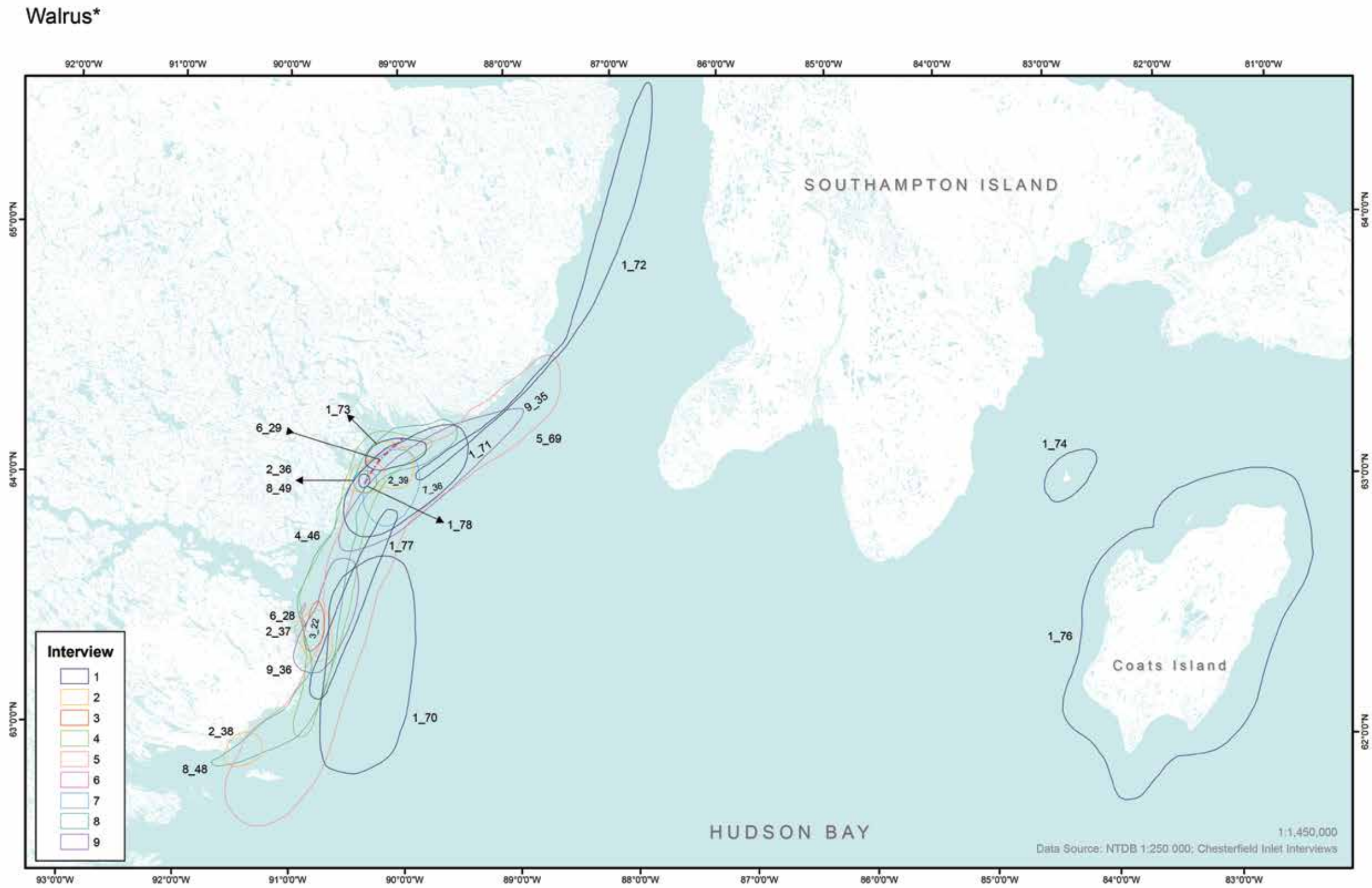




Table 16: Areas of occupation for Walrus.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
Wal_2	9_36	Walrus	P		Year round	June is considered to be walrus hunting season.
Wal_1	9_35	Walrus	P		Year round	June is considered to be walrus hunting season.
Wal_2_AP	8_49	Walrus	P	A	December to March, May and June	
Wal_1	8_48	Walrus	P		February, March, May, June	Along the flow edge during spring.
Wal_1_AH	7_36	Walrus	P	A		
Wal_1	6_28	Walrus	P		October to April	Seen at flow edge.
Wal_1	5_69	Walrus	P		May and June	Whenever there is ice.
Wal_1	4_46	Walrus	P		Year round	
Wal_1	3_22	Walrus	P		May and June	
Wal_4	2_39	Walrus	P		Year round	
Wal_1	2_36	Walrus	P		Year round	Sees them at Pikiuliq (place name) Year round; as long as there is a flow edge.
Wal_2	2_37	Walrus	P		Year round	
Wal_3	2_38	Walrus	P		Year round	Between Marble Island and Rabbit Island.
Wal_2	1_71	Walrus	P		December, May, June	Seen mostly in June.
Wal_1_AP	1_70	Walrus	P	A	May and June	Seen mostly in June at Depot Island.
Wal_4	1_73	Walrus	P		May and June	
Wal_9_AP	1_78	Walrus	P	A	May and June	
Wal_8	1_77	Walrus	P		May and June	
Wal_3	1_72	Walrus	P		May and June	
Wal_5_H	1_74	Walrus	H		May and June	
Wal_7_H	1_76	Walrus	P		May and June	
Wal_2_H	6_29	Walrus	H		December to June	This is where he used to go out walrus hunting before he got sick; about ten years ago.

“Everywhere” Coded Data — Walrus.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
1	Wal_6_e	Walrus	P	May and June	All along coast.

Figure 19: Areas of occupation for Ringed Seal and Bearded Seal.

Ringed* and Bearded* Seal





Table 17: Areas of occupation for Ringed Seal and Bearded Seal.

Map Code	Map Label	Species	Present – P Historic – H	Special Coding	Months	Comments
BS_1	6_33	Bearded Seal	P		Year round	At the flow edge during the winter.
BS_1_AP	1_84	Bearded Seal	P	A	September, October, November	Bearded Seal and Walrus at the mouth of Atanikittuq (False Inlet) where there is a lot of moving pack ice.
BS_3_AP	1_86	Bearded Seal	P	A	September, October, November	
BS_2_AP	1_85	Bearded Seal	P	A	September, October, November	
BS_1	5_72	Bearded Seal	P		Year round	
RS_2_AP	8_51	Ringed Seal	P	A	Year round	
RS_1	6_30	Ringed Seal	P		Year round	
RS_3_AP	4_49	Ringed Seal	P	A	Year round	
RS_1_AP	4_47	Ringed Seal	P	A	Year round	A lot more ringed seal here than other seal areas.
RS_2	2_41	Ringed Seal	P		Year round	
RS_1	2_40	Ringed Seal	P		Year round	
RS_2_AP	1_80	Ringed Seal	P	A	Year round	

“Everywhere” Coded Data — Ringed Seal and Bearded Seal.

Interview	Map Code	Species	Present – P Historic – H	Months	Comments
4	BS_1_e	Bearded Seal	P	Year round	
7	BS_1_e	Bearded Seal	P	December to March, May and June	Seen in the spring and winter.
8	BS_1_e	Bearded Seal	P	Year round	
9	BS_1_e	Bearded Seal	P	Year round	Not abundant and cannot pin point area.
2	BS_1_e	Bearded Seal	P	Year round	All along coast.
1	RS_1_e	Ringed Seal	P	Year round	
3	RS_1_e	Ringed Seal	P	Year round	Especially during spring.
4	RS_2_e	Ringed Seal	P	Year round	
5	RS_1_e	Ringed Seal	P	Year round	Not too many this year.
6	RS_2_He	Ringed Seal	H	Year round	
7	RS_1_e	Ringed Seal	P	Year round	All along coast.
8	RS_1_e	Ringed Seal	P	Year round	
9	RS_1_e	Ringed Seal	P	Year round	

Figure 20: Areas of occupation for Spotted Seal and Hooded Seal.

Spotted* and Hooded Seal





Table 18: Areas of occupation for Spotted Seal and Hooded Seal.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
SpSeal_3_SH	9_43	Spotted Seal	H	S	August to October	1970's
SpSeal_1	9_41	Spotted Seal	P		August to October	
SpSeal_2_AH	9_42	Spotted Seal	H	A	August to October	1986
SpSeal_2_H	7_41	Spotted Seal	H		July to September	At the river system; use the skin and feed the meat to the dogs.
SpSeal_1	7_40	Spotted Seal	P		July to September	At the river system; use the skin and feed the meat to the dogs.
SpSeal_1	6_34	Spotted Seal	P		Year round	Mostly in the summer in shallow water.
SpSeal_2	6_35	Spotted Seal	P		Year round	At the mouth of the river where there are char.
SpSeal_3_H	6_36	Spotted Seal	H		July, August, September	
SpSeal_2	4_53	Spotted Seal	P		July to October	Qasiriaqtuuq (place name).
SpSeal_3	4_54	Spotted Seal	P		July to October	
SpSeal_1	4_52	Spotted Seal	P		July to October	Seen in all river systems hunting for fish during summer.
SpSeal_3	1_89	Spotted Seal	P		May to September	
SpSeal_1	1_87	Spotted Seal	P		May to September	Seen in the river system.
SpSeal_2	1_88	Spotted Seal	P		May to September	At Barbour Bay.
Hos_1_H	9_40	Hooded Seal	H		November to April	Harvested during winter; 1970's.

“Everywhere” Coded Data — Spotted Seal.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
5	SpS_1_e	Spotted Seal	P	Year round	Seen feeding on fish at the shoreline along the mouth of the river.
8	SPS_1_e	Spotted Seal	P	June to September	Not seen as often as the ringed seal.

Figure 21: Areas of occupation for Harp Seal.





Table 19: Areas of occupation for Harp Seal.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
HS_1	9_38	Harp Seal	P		August	Interviewee says seals used to be abundant in the area but he hasn't seen any yet this year [2008].
HS_1	7_38	Harp Seal	P		June, July, August	Most commonly seen in this area.
HS_1	6_32	Harp Seal	P		July and August	
HS_2	6_75	Harp Seal	P			
HS_1	5_71	Harp Seal	P		August and September	There are a lot in August when the fish are going up river.
HS_1	2_42	Harp Seal	P		Year round	
HS_2_AP	1_82	Harp Seal	P	A	Year round	
HS_1_AP	1_81	Harp Seal	P	A	Year round	

"Everywhere" Coded Data — Harp Seal.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
1	HS_3_e	Harp Seal	P	Year round	
4	HS_1_e	Harp Seal	P	July to October	
8	HS_1_e	Harp Seal	P	July and August	Scattered during the summer and leave in late fall.

Figure 22: Areas of occupation for Bowhead and Beluga.

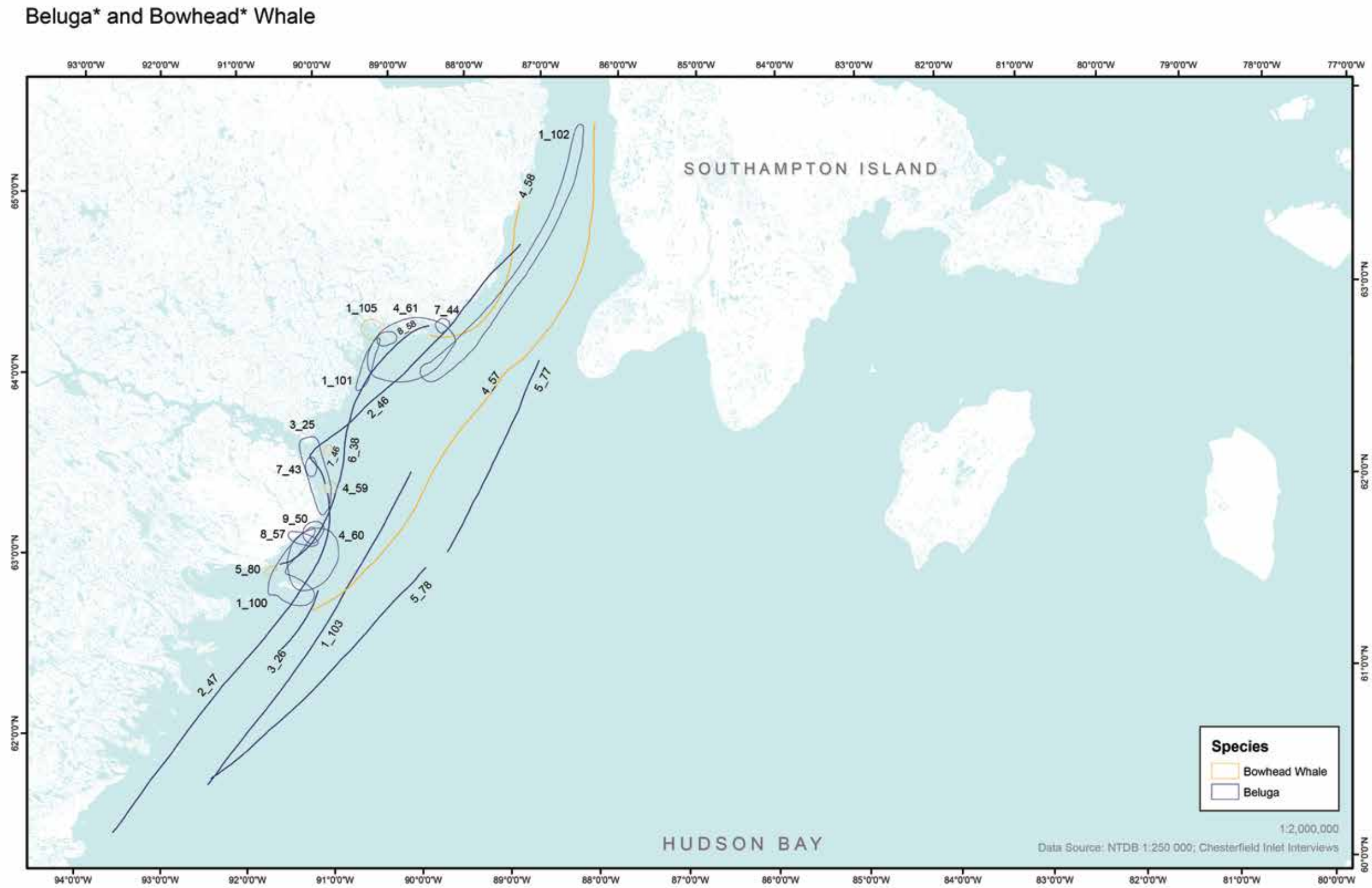




Table 20: Areas of occupation for Bowhead and Beluga.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
Bel_1	9_50	Beluga	P			
Bel_2	8_58	Beluga	P		August and September	
Bel_1	8_57	Beluga	P		August and September	
Bel_2_AH	7_44	Beluga	H	A	July to September	
Bel_1_AP	7_43	Beluga	P	A	July to September	
Bel_2	4_61	Beluga	P		July and August	
Bel_1_AP	4_60	Beluga	P	A	August and September	
Bel_1	3_25	Beluga	P		August and September	
Bel_2_AP	1_100	Beluga	P	A		
Bel_3_AP	1_101	Beluga	P	A		
Bel_4 AMP	1_102	Beluga	P	A, M		
Bel_5 AMP	1_103	Beluga	P	A, M		
Bel_1	6_38	Beluga	P		July to September	All along the coast, more in the past than recently.
Bel_4_MP	5_78	Beluga	P	M	June to October	
Bel_3_MP	5_77	Beluga	P	M	June to October	
Bel_2_MP	3_26	Beluga	P	M	August and September	
Bel_3_MP	2_47	Beluga	P	M	Year round	Migrating from Foxe Basin.
Bel_2_MP	2_46	Beluga	P	M	Year round	Migrate from Western Hudson Bay.
BW_1_H	7_46	Bowhead Whale	H			1970's
BW_1_H	5_80	Bowhead Whale	H		June	Saw about two years ago near Rankin Inlet.
BW_3	4_59	Bowhead Whale	P		July to October	
BW_1_H	1_105	Bowhead Whale	H			
BW_2	4_58	Bowhead Whale	P		July to October	Wintering ground for bowhead whales, also a traditional whaling area.
BW_1	4_57	Bowhead Whale	P		July to October	

“Everywhere” Coded Data — Bowhead and Beluga.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
1	Bel_1_Ap_e	Beluga	P	--	
5	Bel_2_e	Beluga	P	July to September	
8	Bel_3_e	Beluga	P	August, September	All along coast.
2	Bel_1_e	Beluga	P	Year round	All along coast.
8	BW_1_e	Bowhead Whale	P	August, September	Seen outside of Chesterfield Inlet in early fall.

Figure 23: Areas of occupation for Narwhal.

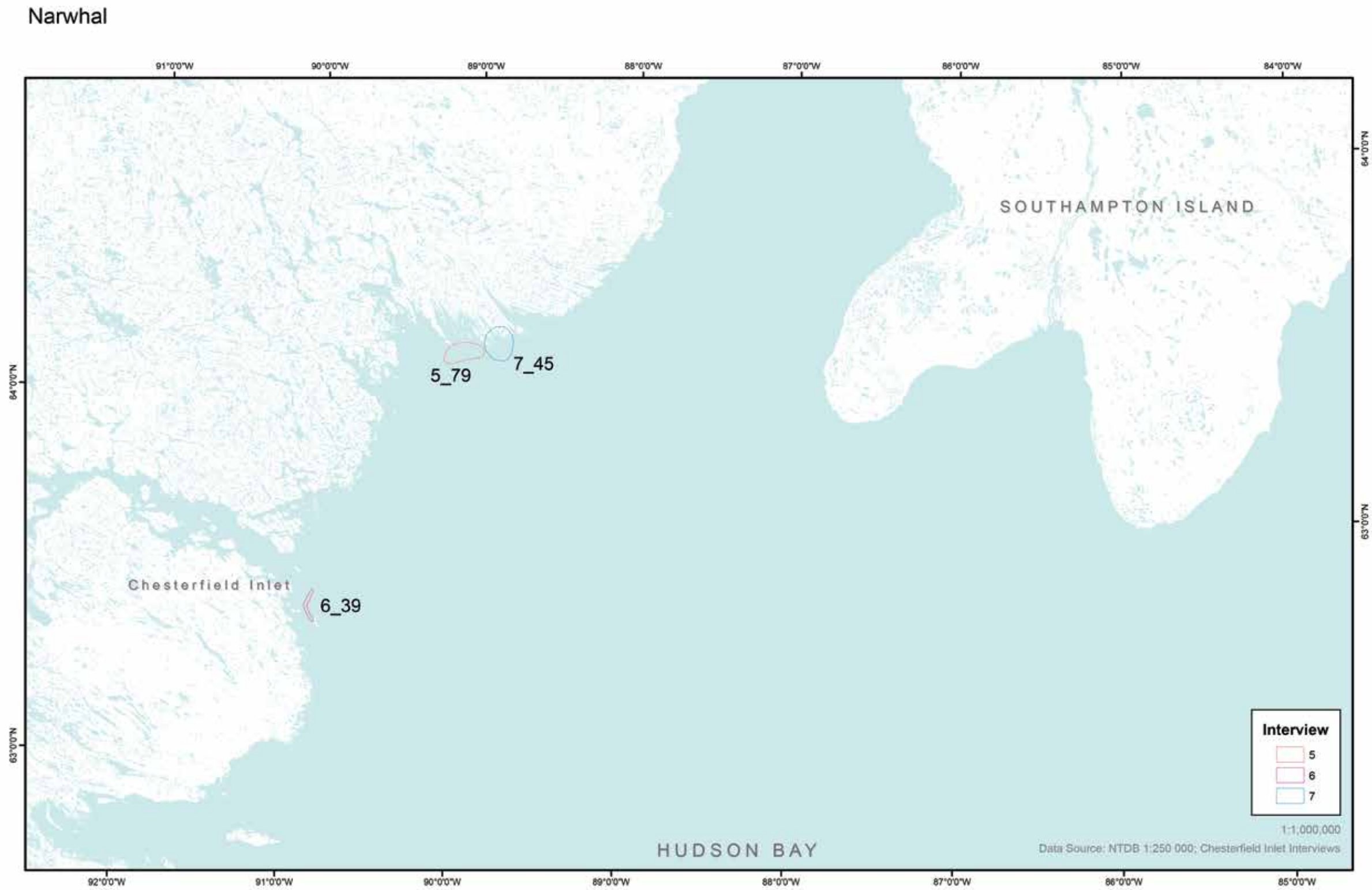




Table 21: Areas of occupation for Narwhal

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
NW_1_H	7_45	Narwhal	H			Between 1949 and 1950.
NW_1_H	6_39	Narwhal	H			Twenty years ago in the inlet.
NW_1_H	5_79	Narwhal	H		May and June	Saw one over 20 years ago.

Figure 24: Areas of occupation for American Golden Plover, Arctic Tern, Black Guillemot, Common Eider, Common Merganser, Common-ringed Plover, Iceland Gull, King Eider, Northern Fulmar, Sandhill Crane, Snow Goose, and White Fronted Goose.

American Golden Plover*, Common-ringed Plover*, Arctic Tern*, Iceland Gull, Black Guillemot*, Common Eider*, King Eider*, Common Merganser*, Snow Goose*, White-Fronted Goose, Northern Fulmar, and Sandhill Crane*

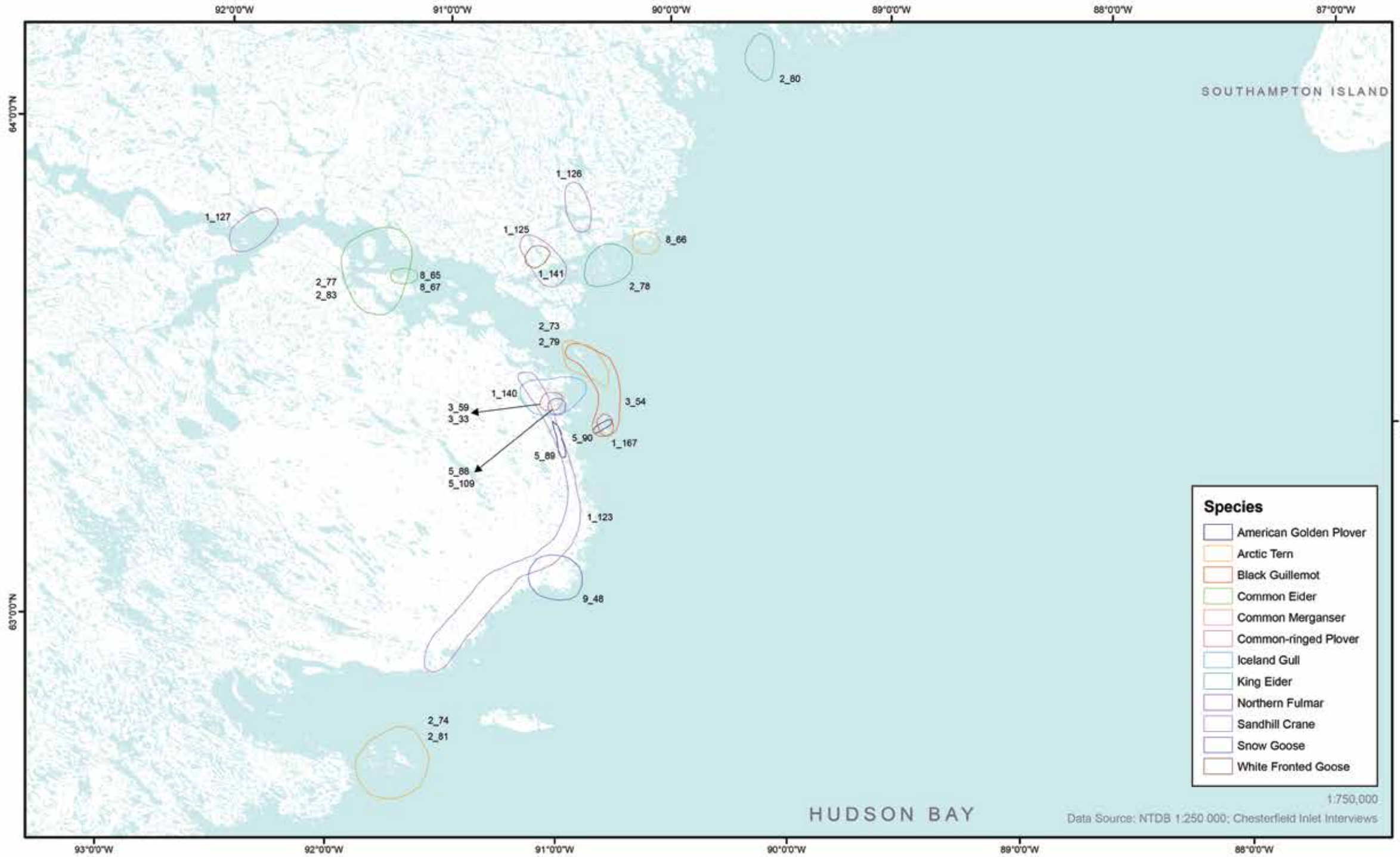




Table 22: American Golden Plover, Arctic Tern, Black Guillemot, Common Eider, Common Merganser, Common-ringed Plover, Iceland Gull, King Eider, Northern Fulmar, Sandhill Crane, Snow Goose, and White Fronted Goose

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
AGP_2	5_90	American Golden Plover	P		June to September	Sees them on islands.
AGP_1	5_89	American Golden Plover	P		June to September	Sees them on islands.
AGP_1	3_33	American Golden Plover	P		June to September	
AT_1_AP	8_66	Arctic Tern	P	A	May and June	Imiqutailaktuq (place name).
AT_2_AP	2_73	Arctic Tern	P	A	June to September	Nesting area.
AT_3	2_74	Arctic Tern	P		June to September	
BG_2_SP	3_54	Black Guillemot	P	S	Year round	Nesting at Pitsiulaaqtuq (place name), Fairway Island and Promise Island.
BG_2_AP	1_167	Black Guillemot	P	A		
CE_1_AP	8_65	Common Eider	P	A	May and June	Nest on Mannikjuaq.
CE_2_AP	2_83	Common Eider	P	A	June to September	Nesting area.
CMer_1_H	3_59	Common Merganser	P		June to September	
CRP_1	5_88	Common-ringed Plover	P		June to September	
IceG_1	1_140	Iceland Gull	P		September and October	Seen in Chesterfield Inlet in October 2008.
KE_1_AP	8_67	King Eider	P	A	May and June	Nest on Mannikjuaq (place name).
KE_5_AP	2_80	King Eider	P	A	June to September	Nesting area.
KE_3_AP	2_78	King Eider	P	A	June to September	Nesting area.
KE_2_AP	2_77	King Eider	P	A	June to September	Nesting area.
KE_4_AP	2_79	King Eider	P	A	June to September	Nesting area.
KE_6	2_81	King Eider	P		June to September	
NF_1	5_109	Northern Fulmar	P		June to September	Saw one six years ago.
SCrn_3_AP	1_125	Sandhill Crane	P	A	June to September	
SCrn_1_AP	1_123	Sandhill Crane	P	A	June to September	
SCrn_5_AP	1_127	Sandhill Crane	P	A	June to September	
SCrn_4_AP	1_126	Sandhill Crane	P	A	June to September	
SG_1_SAP	9_48	Snow Goose	P	S, A	June to September	Nesting area.
WFG_1	1_141	White Fronted Goose	P		June to October	

“Everywhere” Coded Data — American Golden Plover, Arctic Tern, Black Guillemot, Common Eider, Common Merganser, Common-ringed Plover, King Eider, Sandhill Crane, and Snow Goose.

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
1	AGP_1_e	American Golden Plover	P	June to September	
2	AGP_1_e	American Golden Plover	P	June to September	
1	AT_1_e	Arctic Tern	P	June to October	Last birds to arrive; seen on all islands.
2	AT_1_e	Arctic Tern	P	June to September	On all islands where there is sand.
3	AT_1_e	Arctic Tern	P	July, August	Mainly on islands and lakes along the coast, also on cliffs.
6	AT_1_e	Arctic Tern	P	June to September	On all islands.
5	BG_1_APE	Black Guillemot	P	June to September	A lot on islands.
1	BG_1_e	Black Guillemot	P	Year round	At Pitsiulaaqtuq (Fairway Island) near Chesterfield Inlet; they turn white in winter.
2	BG_1_e	Black Guillemot	P	June to September	
3	BG_1_e	Black Guillemot	P	Year round	Common on islands.
6	BG_1_e	Black Guillemot	P	June to September	Can be seen on islands, nesting under rocks.
5	CE_1_APE	Common Eider	P	June to September	
1	CE_1_e	Common Eider	P	Year round	
2	CE_1_e	Common Eider	P	June to September	
3	CE_1_e	Common Eider	P	Year round	
6	CE_1_e	Common Eider	P	Year round	
5	Cmer_1_e	Common Merganser	P	June to September	In every lake.
1	CRP_1_e	Common Ringed Plover	P	June to September	
2	CRP_1_e	Common Ringed Plover	P	June to September	
3	CRP_1_e	Common Ringed Plover	P	June to September	All along coast.
6	CRP_1_e	Common Ringed Plover	P	June to September	Not abundant.
5	KE_1_APE	King Eider	P	June to September	
1	KE_1_e	King Eider	P	June to October	
2	KE_1_e	King Eider	P	June to September	
3	KE_1_e	King Eider	P	June to September	
6	KE_1_e	King Eider	P	June to September	
1	SCrn_2_e	Sandhill Crane	P	June to September	
2	SCrn_1_e	Sandhill Crane	P	May to September	
3	SCrn_1_e	Sandhill Crane	P	Year round	
5	SCrn_1_e	Sandhill Crane	P	June to September	
1	SG_1_e	Snow Goose	P	June to October	
2	SG_1_e	Snow Goose	P	June to September	
3	SG_1_e	Snow Goose	P	June to September	Species increasing in numbers.
5	SG_1_e	Snow Goose	P	June to September	
6	SG_1_e	Snow Goose	P	June to October	

Figure 25: Areas of occupation for Bald Eagle, Eskimo Curlew, Fox Sparrow, Gyrfalcon, Horned Lark, Lapland Longspur, Peregrine Falcon, Red Phalarope, and Whimbrel.

Bald Eagle, Peregrine Falcon*, Gyrfalcon*, Horned Lark*, Lapland Longspur*, Fox Sparrow, Red Phalarope, Eskimo Curlew, Whimbrel

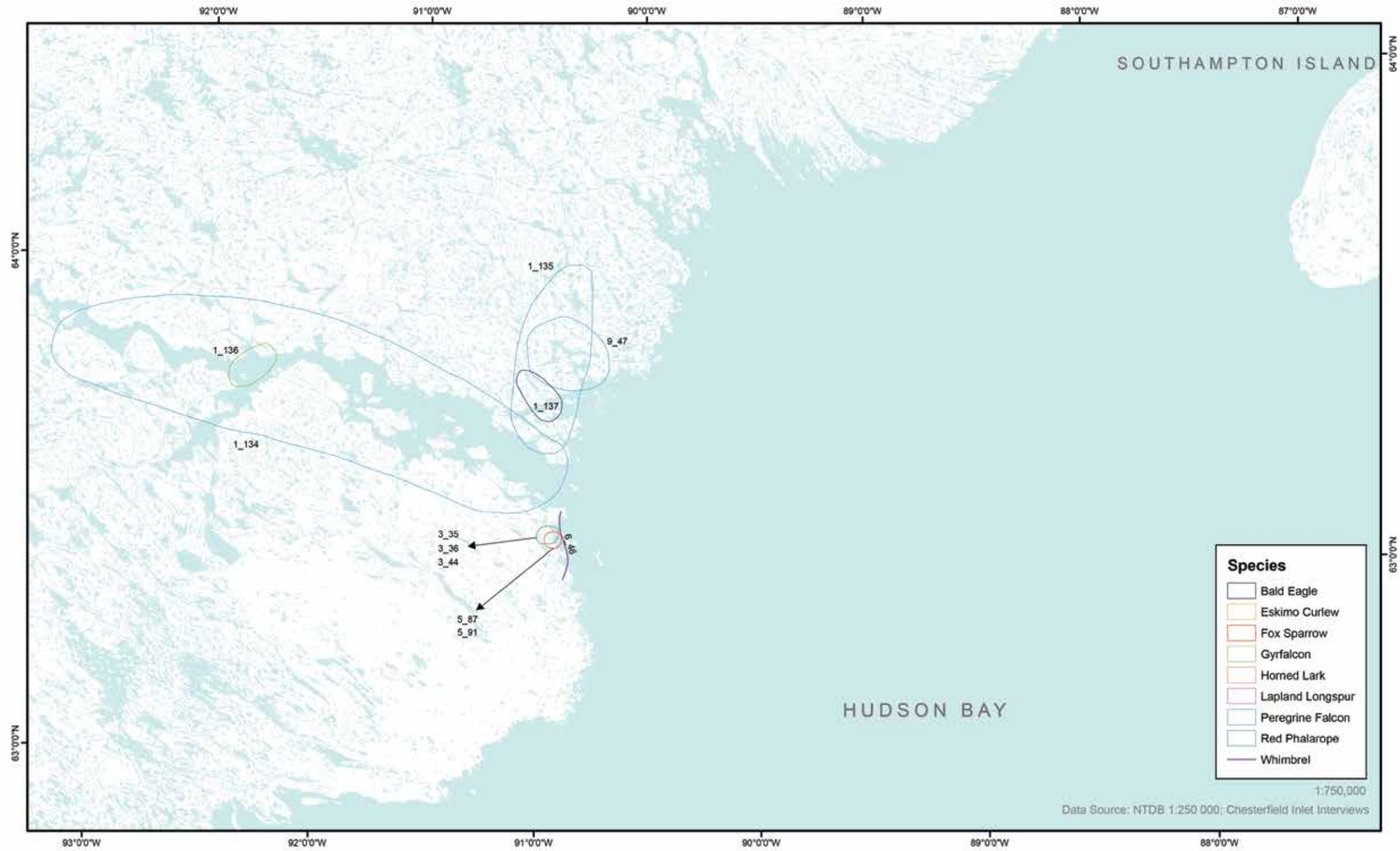




Table 23: Areas of occupation for Bald Eagle, Eskimo Curlew, Fox Sparrow, Gyrfalcon, Horned Lark, Lapland Longspur, Peregrine Falcon, Red Phalarope, and Whimbrel.

Map Code	Map Label	Species	Present - P Historic - H	Special Coding	Months	Comments
BE_1	1_137	Bald Eagle	P		July to October	Saw one last summer (2007).
EC_1	5_87	Eskimo Curlew	P		August	Saw about two (2008).
FSp_1	5_91	Fox Sparrow	P		June to September	
Gyr_1	1_136	Gyrfalcon	P		July to October	Not see often.
HL_1	3_35	Horned Lark	P		June to September	
LL_1	3_36	Lapland Longspur	P		June to September	
PF_1_SAP	9_47	Peregrine Falcon	P	S, A	June to September	Nesting area.
PF_1_SP	1_134	Peregrine Falcon	P	S	July to October	Nesting area.
PF_2_SP	1_135	Peregrine Falcon	P	S	July to October	Nesting area.
RP_1	3_44	Red Phalarope	P		June to September	
Whm_1	6_46	Whimbrel	P		June to September	Not common in the Chesterfield Inlet area.

“Everywhere” Coded Data — Gyrfalcon, Horned Lark, Lapland Longspur, Peregrine Falcon, and Red Phalarope

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
2	Gry_1_e	Gyrfalcon	P	May to October	Arrive end of May; quite common.
3	Gyr_1_e	Gyrfalcon	P	June to September	Not as common.
5	GYR_1_e	Gyrfalcon	P	June to September	
6	GYR_1_e	Gyrfalcon	P	June to September	Seen occasionally all over.
1	HL_1_e	Horned Lark	P	June to September	
2	HL_1_e	Horned Lark	P	June to September	
6	HL_1_e	Horned Lark	P	June to September	
1	LL_1_e	Lapland Longspur	P	June to September	
2	LL_1_e	Lapland Longspur	P	June to September	
6	LL_1_e	Lapland Longspur	P	June to September	
2	PF_1_e	Peregrine Falcon	P	May to October	Arrive end of May.
3	PF_1_e	Peregrine Falcon	P	August and September	Nesting on cliffs at Amarulik (Third Lake).
5	PF_1_e	Peregrine Falcon	P	June to September	
6	PF_1_e	Peregrine Falcon	P	June to September	Seen occasionally.
5	RP_1_e	Red Phalarope	P	June to September	
6	RP_1_e	Red Phalarope	P	June to September	

Table 24: Everywhere Only coded data for which no points were mapped

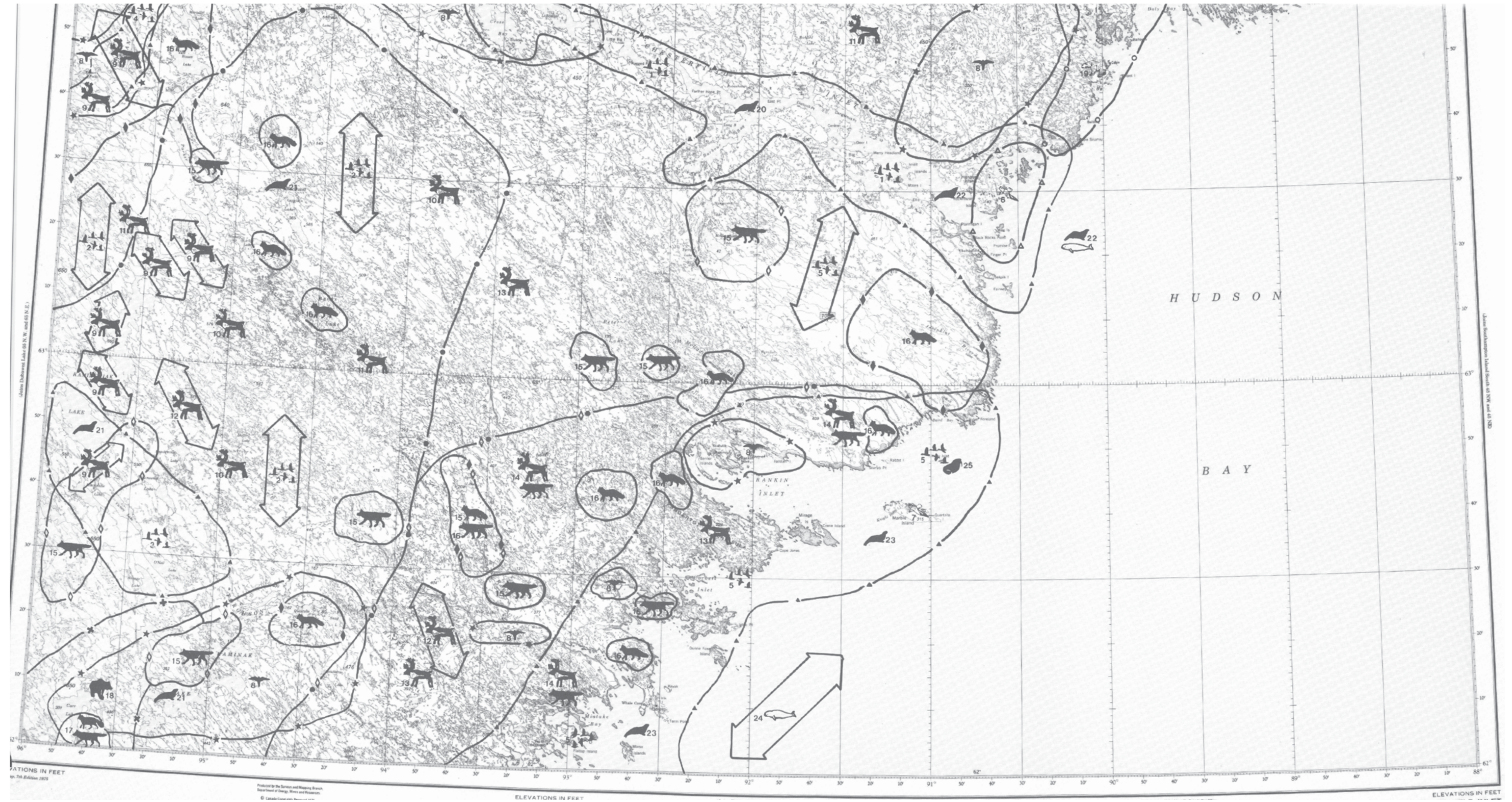
Interview	Map Code	Species	Present - P Historic - H	Months	Comments
Fish					
1	BT_1_e	Bull Trout	P	June to November	All over, but not common.
9	Sscul_1_e	Slimy Sculpin	P	June to October	
Invertebrates					
9	Amph_1_e	Amphipod	P	all year	
1	Amph_1_AP_e	Amphipod	P	all year	Abundant
2	Amph_1_e	Amphipod	P	all year	
3	Amph_1_e	Amphipod	P	all year	
4	Amph_1_e	Amphipod	P	all year	
5	Amph_1_e	Amphipod	P	all year	Seen in fresh and salt water.
6	Amph_1_e	Amphipod	P	July to September	Seen in large and small lakes.
7	Amph_1_e	Amphipod	P	July to September	
8	Amph_1_e	Amphipod	P	July to September	
1	TL_1_e	Tortoishell Limpet	P	June to September	Sees empty shells on shore.
3	TL_1_e	Tortoishell Limpet	P	June to September	Seen along the shore.
5	TL_1_e	Tortoishell Limpet	P	June to October	Seen along the shore.
1	Whe_1_e	Whelk	P	June to September	
2	Whe_1_e	Whelk	P	July to September	The interviewee has seen live whelks.
3	Whe_1_e	Whelk	P	July to September	Sees small ones along coast.
4	Whe_1_e	Whelk	P	July to October	Along the beach on rocks, very small.
Marine Plants					
8	SSW_1_e	Spiny Sour Weed	P	July to September	
Terrestrial Mammals					
1	Gbear_1_e	Grizzly Bear	P	July to September	Bears are coming to the area more often and breaking into cabins; in Chesterfield Inlet, Rankin Inlet, and Arviat.
4	Gbear_1_e	Grizzly Bear	P	July to October	Seen inland.
Birds					
2	AL_1_e	Arctic Loon	P	June to September	
5	AL_1_e	Arctic Loon	P	June to September	
6	AL_1_e	Arctic Loon	P	June to September	
1	Bsand_1_e	Baird's Sandpiper	P	June to September	
2	Bsand_1_e	Baird's Sandpiper	P	June to September	
6	BBS_1_e	Buff-Breasted Sandpiper	P	June to September	
1	CacG_1_e	Cackling Goose	P	June to October	
2	CacG_1_e	Cackling Goose	P	June to September	
3	CacG_1_e	Cackling Goose	P	June to September	
5	CacG_1_e	Cackling Goose	P	June to September	
6	CacG_1_e	Cackling Goose	P	June to September	
1	CG_1_e	Canada Goose	P	June to October	
2	CG_1_e	Canada Goose	P	June to September	
3	CG_1_e	Canada Goose	P	June to September	

Interview	Map Code	Species	Present - P Historic - H	Months	Comments
5	CG_1_e	Canada Goose	P	June to September	
6	CG_1_e	Canada Goose	P	June to October	
2	CL_1_e	Common Loon	P	June to September	
3	CL_1_e	Common Loon	P	June to September	In all lakes.
5	CL_1_e	Common Loon	P	June to September	
6	CL_1_e	Common Loon	P	June to September	
1	CL_1_e_u	Common Loon	P	June to October	Unsure that this is Common Loon; could be another loon.
1	CR_1_e	Common Raven	P	December to May	Gone for the summer months.
2	CR_1_e	Common Raven	P	all year	
3	CR_1_e	Common Raven	P	all year	
5	CR_1_e	Common Raven	P	June to September	
6	CR_1_e	Common Raven	P	all year	
5	CRP_1_e	Common Redpoll	P	June to September	
1	GG_1_e	Glaucous Gull	P	July to October	
2	GG_1_e	Glaucous Gull	P	May to October	Arrive end of May; leave late fall.
5	GG_1_e	Glaucous Gull	P	June to September	
6	GG_1_e	Glaucous Gull	P	June to September	
1	HG_1_e	Herring Gull	P	July to October	
2	HG_1_e	Herring Gull	P	May to October	Arrive end of May; leave late fall.
3	HG_1_e	Herring Gull	P	July to September	
5	HG_1_e	Herring Gull	P	June to September	
6	HG_1_e	Herring Gull	P	June to September	
5	IG_1_e	Ivory Gull	P	June to September	
2	OS_1_e	Long Tailed Duck	P	June to September	
3	OS_1_e	Long tailed Duck	P	June to September	In lakes.
1	LTJ_1_e	Long Tailed Jaeger	P	June to September	Sees them everywhere, even on the ice eating eggs.
3	LTJ_1_e	Long Tailed Jaeger	P	all year	On all islands; seen going after eggs.
5	OS_1_AP_e	Long Tailed Duck	P	June to September	Abundant
6	OS_1_e	Long Tailed Duck	P	June to September	
2	LTJ_1_e	Long Tailed Jaeger	P	June to September	
1	OS_1_e	Long Tailed Duck	P	June to October	
3	Npin_1_e	Northern Pintail	P	June to September	In lakes and on the shore.
5	Npin_1_e	Northern Pintail	P	June to September	All along coast.
6	Npin_1_e	Northern Pintail	P	June to September	In lakes and on the shore.
1	NWT_1_e	Northern Water Thrush	P	June to September	Seen inland in freshwater.
1	Ploon_1_e	Pacific Loon	P	June to October	
2	Ploon_1_e	Pacific Loon	P	June to September	
3	Ploon_1_e	Pacific Loon	P	June to September	In all lakes.
5	Ploon_1_e	Pacific Loon	P	June to September	
6	Ploon_1_e	Pacific Loon	P	June to September	



Interview	Map Code	Species	Present - P Historic - H	Months	Comments
1	RK_1_e	Red Knot	P	June to September	Along coast.
3	RK_1_e	Red Knot	P	June to September	Along coast.
3	RTL_1_e	Red Throated Loon	P	June to September	In all lakes.
5	RTL_1_e	Red-Throated Loon	P	June to September	
6	RTL_1_e	Red-Throated Loon	P	June to September	
1	Rptar_1_e	Rock Ptarmigan	P	all year	
2	Rptar_1_e	Rock Ptarmigan	P	all year	
3	Rptar_1_e	Rock Ptarmigan	P	all year	
5	Rptar_1_e	Rock Ptarmigan	P	all year	
6	Rptar_1_e	Rock Ptarmigan	P	all year	
1	RT_1_e	Ruddy Turnstone	P	June to September	
2	SPP_1_e	Semipalmated Plover	P	June to September	
1	SEO_1_e	Short-Eared Owl	P	all year	
1	SB_1_e	Snow Bunting	P	June to September	
3	SB_1_e	Snow Bunting	P	June to September	
1	Sowl_1_e	Snowy Owl	P	all year	
2	Sowl_1_e	Snowy Owl	P	all year	Not too many.
3	Sowl_1_e	Snowy Owl	P	all year	
5	Sowl_1_e	Snowy Owl	P	all year	
6	Sowl_1_e	Snowy Owl	P	November to May	Around more during the winter.
3	StiS_1_e	Stilt Sandpiper	P	June to September	
6	TBM_1_e	Thick-Billed Murre	P	June to September	Sometimes along the coast.
1	TBM_1_e	Thick-Billed Murre	P	June to October	
1	TS_1_e	Tundra Swan	P	June to October	In all lakes.
2	TS_1_e	Tundra Swan	P	June to September	
3	TS_1_e	Tundra Swan	P	June to September	Seen at Police Lake.
5	TS_1_e	Tundra Swan	P	June to September	
6	TS_1_e	Tundra Swan	P	June to September	
6	WrS_1_e	White Rumped Sandpiper	P	June to September	
5	WRS_1_e	White-Rumped Sandpiper	P	June to September	
3	WRS_1_e	White-Rumped Sandpiper	P	June to September	
1	Wptar_1_e	Willow Ptarmigan	P	all year	
2	Wptar_1_e	Willow Ptarmigan	P	all year	
3	Wptar_1_e	Willow Ptarmigan	P	all year	
5	Wptar_1_e	Willow Ptarmigan	P	all year	
6	Wptar_1_e	Willow Ptarmigan	P	all year	
3	YBL_1_e	Yellow-Billed Loon	P	June to September	In all lakes.
5	YBL_1_e	Yellow-Billed Loon	P	June to September	
6	YBL_1_e	Yellow-Billed Loon	P	June to September	
Archaeological Sites					
5	Arch_1_e		H		Archaeological sites all along the coast.

Figure 27: Nunavut Atlas: Chesterfield Inlet.





Chesterfield Inlet

1. Waterfowl

Chesterfield Inlet, particularly along its south shore, is an important molting area for several thousand Oldsquaw (long-tailed duck). Small coastal ponds along the entire length of the inlet are likely used by lesser numbers of oldsquaw (long-tailed duck) for nesting. Common eiders nest on the mainland and on the islands at the eastern end of this area. During the summer females with their broods disperse throughout Chesterfield Inlet. The south coast is particularly important for brood rearing. Numerous Canada Geese are found throughout the entire inlet which is used predominantly as a staging area prior to, or during migration. A few Canada geese are also thought to nest along the entire length of the inlet. Other species of lesser importance which can be found within this area are snow geese, whistling swans, Arctic terns, and all species of loons. The greatest waterfowl concentrations can be found along the south coast, east and west of Primrose Island and in Barbour Bay.

2. Waterfowl

Many species of waterfowl including thousands of snow geese and lesser numbers of Canada geese, sandhill cranes, and whistling swans, migrate north in spring and south in fall through this area.

3. Waterfowl

Thousands of snow geese and lesser numbers of Canada geese may stage in this area during spring and fall migrations.

4. Waterfowl

This area, which extends north and west into adjacent mapsheets, provide important habitat for several species of birds especially waterfowl. In spring, the shores of the Kazan River are used for staging by numerous ducks, geese, and shorebirds prior to their dispersal to the nesting grounds. A few geese have been reported nesting along this river.

5. Waterfowl

This large area provides important habitat for waterfowl. Thousands of snow geese, lesser numbers of Canada geese, and a few whistling swans and sandhill cranes use the entire area during spring and fall migrations. Canada geese are common nesters throughout. A few swans may also be found nesting. Much of the area particularly the offshore islands is used by numerous ducks, mainly eiders for nesting.

6. Seabirds

Black Guillemots are abundant nesters in the islands at the mouth of Chesterfield Inlet.

7. Seabirds

This area is used by colonies of black guillemots for nesting. The Marble Island colony has been reported as over 2,000 nests.

8. Raptors

Scattered steep cliffs throughout this area are used by rough legged hawks, peregrine falcons, and possibly gyrfalcons for nesting. Nesting areas used by peregrine falcons and gyrfalcons are considered critical to their survival.

18. Grizzly Bears

Barren-ground grizzly bears live and perhaps den in this area.

19. Polar Bears

This area which extends along the coast to the north has been identified as an important summering area for polar bear. During the remainder of the year, polar bear which are not common here, can be found dispersed throughout the coastal area.

20. Seals

Inuit hunters and trappers report the occurrence of harbor seals in the river system emptying into Barbour Bay on Chesterfield Inlet. Harbor and ringed seals have been reported in Chesterfield Inlet.

21. Seals

The harbor or ranger seal is often found in river estuaries and lakes, sometimes far from the sea. It is essentially an animal of open water and is usually found in areas that remain ice-free throughout the winter. It provides some meat for people and dogs, but is prized for its coat which is used for making fur garments. These seals are sometimes found in the Ferguson River system. There is no boundary associated with this symbol.

22. Seals and Belugas

Ringed seals are abundant throughout this area. Harbor seals are not numerous and are most commonly observed within Chesterfield Inlet. Other less-abundant species of seal found here are bearded and occasionally harp seals. Beluga whales are commonly observed throughout the area. Bowhead whales and walrus are seen only on rare occasions.

23. Seals

Numerous ringed and lesser numbers of bearded seals are found in the marine environment off the coast. Harbor seals are most commonly found in the brackish estuaries and have been reported by local Inuit as occurring in the Copperneedle, Ferguson, and Wilson river systems.

24. Belugas

Numerous beluga whales migrate north through this area, following the coast throughout the summer.

25. Walrus

Hazy Islet may be used by a small number of walrus as a haul-out.

Figure 28: Nunavut Atlas: Southampton Island North



Dolphin and Union Strait

1. Waterfowl

Numerous small flocks of Canada geese are found during spring, summer and fall scattered throughout much of the mainland area in this map. Most of these geese belong to a large race of Canada geese that occur in the area only as non-breeding molt migrants from populations that breed in southern Canada. A few other small (Hutchin's) Canada geese may breed in the area.

The coastal area, large lakes and rivers with adjacent lakes and tundra ponds tend to be the favoured molting areas for Canada geese. The water bodies are important in that they provide a refuge for geese from most predators. This is particularly important during the flightless period of the molt when geese are most vulnerable to predators. Lowlands immediately adjacent to these water bodies are important feeding sites. With the completion of the molt by late summer, the geese likely disperse throughout much of the map area.

2. Waterfowl

The coast and adjacent lowlands at the west end of East Bay is a critical nesting area for waterfowl, particularly lesser snow geese and brant. Most of the waterfowl that breed within the East Bay Migratory Bird Sanctuary nest within the area.

Brant generally nest along a narrow coastal strip, just above the high tide mark. Snow and Canada geese tend to nest farther inland.

Waterfowl begin arriving in the area in late May-early June. Nesting is initiated in June with the hatches of all species completed by late July. Many waterfowl begin to depart from the area on their southward migration by late August. Few waterfowl remain in the area mid-September.



3. Waterfowl and Seabirds

The coastal area provides important habitat for a large number and diversity of birds, particularly aquatic species.

Waterfowl are abundant within the area. Canada geese, mostly belonging to a large race which occur in the area only as non-breeding molt migrants are numerous and widespread. A few other Canada geese, likely belonging to the Hutchin's race, probably breed within the area. Oldsquaws are particularly abundant and breed throughout. Other breeders within the area include king eider, common eider, brant and whistling swan. Lesser snow geese occur in the area either as non-breeders or during migration. Pintails and red-breasted mergansers likely breed in the area in small numbers.

Herring gulls are numerous, particularly along the coast and nest throughout the entire area, usually as scattered isolated pairs or occasionally, in small colonies. Favoured nesting sites are usually offshore boulders or small islands along the coast or in tundra lakes and ponds. Many nesting colonies of Arctic terns occur in scattered locations along this coast. In area where colonies occur, such as Kamarvik Harbour and on the islands at the north end of this map area. Arctic terns are locally very abundant. Nesting activity by Arctic terns in this area is generally restricted for the small coastal islands.

Red-throated loons are very common and widespread. Small numbers of sandhill cranes likely nest in the area. Other species that are thought to breed here include Arctic loon, parasitic jaeger, long tailed jaeger and black guillemots.

A large number and variety of shorebirds are likely found in this area, most are associated with localized habitats. Some of the more common species of shorebirds that probably breed here include semipalmated plover, golden plover, ruddy turnstone, white rumped sandpiper, dunlin,

semipalmated plover, sanderling, northern phalarope and red phalarope. The coastal lowlands and adjacent tidal flats may also be important migration staging areas for shorebirds.

4. Waterfowl and Seabirds

This area, which encompasses Frozen Strait and the adjacent coasts, is utilized mainly during spring, summer and fall by significant concentrations of aquatic birds. Frozen Strait, because its waters open up much earlier than any of the adjacent major water bodies, is of particular importance as a spring staging and breeding area for many of the marine or predominantly marine feeding birds in the region. Included are species such as common eider, king eider, oldsquaw, black guillemots, Arctic tern, herring gull, Thayer's gull, glaucous gull, red throated loon, and Arctic loon. Nesting by common eider, black guillemot and Arctic tern, species that are particularly abundant within the area, is mostly restricted to small offshore islands within the strait. Gulls are numerous, particularly along the coasts. They nest throughout the entire area, either as isolated pairs or in colonies. Glaucous and herring gulls generally select small islands or protruding boulders in lakes for nesting sites; however, within this area they are found mostly on coastal cliffs and small offshore islands in the strait. Thayer's gulls are restricted to colonies on coastal cliffs. Nesting by oldsquaw, king eider, Arctic loon, red throated loon, and other aquatic birds such as Canada goose, whistling swan, brant, sandhill crane and shorebirds occur mostly in the well-vegetated coastal lowlands, particularly along the south side of Vansittart Island.

The waters of Frozen Strait remain at least partially open during some winters. These open water areas provide important feeding sites for aquatic birds wintering in the area, which may, on occasion, include black guillemot, common eider, and possibly, king eider, oldsquaw and some gulls.

5. Waterfowl and Seabirds

This small rocky island in East Bay is a very important breeding site for waterfowl, particularly common eiders. In 1983, an estimated 1,000-2,000 pairs of common eiders, 50-100 pairs of Canada geese, 10-20 pairs of brant, 40-60 pairs of snow geese, the occasional pair of king eider and 10-20 pairs of herring gulls nested on this island.

6. Waterfowl and Seabirds

During winter and early spring, the recurring polynya in Roes Welcome Sound, along with the leads and small patches of open water between ice pans in the areas of pack ice, provides important feeding sites for marine birds that winter in the area. The number of birds wintering in the area is unknown, and would vary considerably from year to year, depending upon ice conditions. Species which may winter within the area include black guillemot, common eider, some gulls and possibly, on occasion, king eider and oldsquaw.

7. Waterfowl, Seabirds and Raptors

The numerous cliffs scattered throughout the rugged eastern coast of Southampton Island, provide optimal nesting habitat for raptors. Peregrine falcons, which are relatively common, and the occasional rough legged hawk are the only raptor species known to nest within the area. Gyrfalcons are apparently common along the eastern side of Southampton Island during the fall migration, and occasionally, as winter residents, but have not been documented nesting anywhere on the island. The eastern side of Southampton Island is thought to lie within the normal migrating route of gyrfalcons that breed farther to the north.

Small numbers of Canada geese are found during spring, summer and fall, usually in small scattered flocks, along the eastern coast of Southampton Island. Most of these geese appear to belong to a large race of Canada geese that occur in the area only as non breeding molt migrants from

populations that breed in southern Canada. The coastal area, large lakes and rivers with adjacent lakes and tundra ponds tend to be favoured molting areas for Canada geese from most predators. This is particularly important during the flightless period of the molt when geese are most vulnerable to predators. Lowlands immediately adjacent to these water bodies are important feeding sites for geese. A few small (Hutchin's) Canada geese also breed along the rugged eastern coast of Southampton Island. Cliffs appear to be favoured nesting sites for Canada geese within this area.

Gulls, loons, black guillemots and common eiders breed in scattered locations along the eastern coast of Southampton Island. The nearshore coastal waters are important foraging areas for these marine feeding species.

8. Raptors and Waterfowl

The numerous cliffs throughout White Island and its adjacent small islands provides optimal nesting habitat for raptors. Peregrine falcons and gyrfalcons have been reported to nest on the island; however, small numbers of Canada geese are found during spring, summer and fall, usually in small scattered flocks within the area.

9. Seabirds

Significant breeding colonies of herring gulls and black guillemots are found on these two small rocky islands in the entrance to Wager Bay. Possibly as many as 400-500 pairs of herring gulls and 150-300 pairs of black guillemots nest on these islands.

10. Seabirds

Small nesting colonies of herring gulls are found on some of the islands within these lakes. Approximately 10 breeding pairs occupy the colony on the east side of Hansine Lake. The colony on the northern coast of Southampton Island contains about 10-20 breeding pairs.

Figure 28 (continued): Nunavut Atlas: Southampton Island North.

11. Seabirds

Ivaluarjuk Island is used by several hundred or more nesting Arctic terns. Other species which appear to be on this island in small numbers include black guillemots, common eiders, oldsquaws and brant.

12. Seabirds

These areas support nesting colonies of gulls. One of the small islands near the mouth of the Canyon River is used by one colony of approximately 20 pairs of breeding glaucous gulls. The one small island colony at the north end of this map area is used by about 20 breeding pairs of what are probably herring gulls. The remaining colonies, all of which are on cliffs that are on or near the coast, are predominantly Thayer's gulls. A few glaucous gulls likely nest in association with Thayer's gulls at all or most of these sites. The colonies southeast of Cape Welsford, and the two areas north of Tom's Harbour each contain two cliff nesting sites in close proximity to each other. Nias Island has three cliff nesting sites. Colonies of Thayer's and glaucous gulls range in size from approximately 25-200 breeding pairs at the northern most site in the area of Cape Welsford.

13. Seabirds

These cliffs support nesting colonies of predominantly Thayer's gulls but also Kumlien's and glaucous gulls. The colony to the north is the larger with about 60-70 breeding pairs of gulls. The southern colony supports approximately 450 pairs.

14. Seabirds

These areas support cliff nesting colonies of Thayer's and glaucous gulls. The largest colony, which is on the west side of Smyth Harbour, contains about 75-100 breeding pairs of gulls. Approximately 50-70 breeding pairs of gulls nest at the colony south of Cape Comfort. Both colonies are predominately Thayer's gulls.

15. Seabirds

Each of these small rocky islands is used by up to several hundred Arctic terns for nesting.

16. Seabirds

These cliffs support nesting colonies of Thayer's, Kumlien's and glaucous gulls. The colony at Donovan Beach, which contains approximately 15-20 pairs of breeding gulls, is used mostly by glaucous gulls. A few Thayer's and Kumlien's gulls also nest at this site. The remaining colonies, which range in size from 15-20 breeding pairs at the colony north of Kokumiak Harbour to 75-100 breeding pairs at the colony to the south, are predominantly Thayer's gulls. Small numbers of glaucous and Kumlien's gulls also nest at these sites.

17. Waterfowl

The lowlands adjacent to the eastern and northeastern coast of Ell Bay supports a small nesting colony of approximately 400 breeding pairs (1979) of lesser snow geese. The colony likely has little potential for significant expansion beyond its present size as nesting habitat within the area is considered marginal and consists mainly of wet meadowlands that are subject to flooding. The lowlands adjacent to Ell Bay, also appear to be of some importance for breeding Canada (Hutchin's) geese and to a lesser extent, brant. The importance of the Ell Bay area as a breeding area for brant appears to have declined significantly in recent years. In the past (mid 1950's), the area was estimated to support 3,000-5,000 brant. At present (1983), it probably supports at most a few hundred.

18. Waterfowl, Seabirds and Arctic Foxes

This large area encompasses the coastal waters, tidal flats and generally all of the better vegetated portions of Southampton Island within the Hudson Bay lowlands physiographic province. This extensive area provides important and in some cases, critical habitats for a large number and diversity of birds.

Within the map area, the coast and adjacent well vegetated lowlands generally contain the highest density of birds. Waterfowl are particularly abundant. Scattered breeding pairs of whistling swans occur throughout much of the area, but appear to be most common on the coastal lowlands. Canada (Hutchin's) geese are common breeders along the entire coast. Breeding snow geese are restricted to the colonies at Boas River, Bear Cove and at Ell Bay. Large number of non-breeder and unsuccessful breeders may be found scattered throughout much of this area. With the completion of the hatch by mid-July, may snow geese with young disperse within much of this area, to wherever suitable feeding meadows are found. Other species of waterfowl that breed in the area include brant, king eider, common eider and oldsquaw. Small numbers of pintails, which may breed, also occur in the area.

Arctic terns, Sabine's gulls and herring gulls are very numerous, particularly along the coast. Herring gulls nest throughout the entire area usually as scattered isolated pairs or, occasionally, in small colonies. Favoured nesting sites are usually offshore boulders or small islands along the coast or in tundra lakes and ponds. The nesting distribution of Arctic terns and Sabine's gulls is generally restricted to coastal sites, most often small islands in lakes or coastal waters.

All three species of jaegers occur in the area. Parasitic jaegers are by far the most common. Red throated loon and Arctic loon are common and widespread. Small numbers of sandhill cranes likely nest in the area.

A large number and variety of shorebirds are found in this area; most are associated with localized habitats. Some of the more common species of shorebirds, which are thought to breed within this area, include semipalmated plover, golden plover, black bellied plover, ruddy turnstone, white rumped sandpiper, dunlin, semipalmated sandpiper, and red phalarope. The coastal lowlands and adjacent tidal

flats, particularly in Ell Bay, may be an important staging area for shorebirds during migration.

Arctic fox are reported to be very common at times on Southampton Island. Red (coloured) fox occur in small numbers. Some of the biophysical characteristic of portions of this important wildlife area, such as close proximity to the coast, good vegetative cover, abundance of prey species, and availability of stable sand slit deposits, usually along stream banks, provide optimal denning habitat for foxes.

19. Raptors

The numerous cliffs, throughout this rugged area along the south side of Wager Bay, provide optimal nesting habitat for raptors, which likely includes peregrine falcons and rough legged hawks. The occasional gyrfalcon and golden eagle may also nest in this area. The Wager Bay area has been identified as one of the most productive nesting areas for the endangered peregrine falcon. Because of their relatively small overall population size, nesting success for peregrines and gyrfalcons is particularly critical. On occasion, ravens may also nest in the area.

20. Raptors

Scattered cliff faces throughout Vansittart Island and some of the adjacent smaller islands, provide optimal nesting habitat for raptors. The greatest potential for nesting is in the rugged portions of Vansittart Island, particularly along the north side and on Danish and Opposite islands. Peregrine falcons and rough-legged hawks are the only raptor species known to nest within the area. Gyrfalcons have been observed on occasion during fall migration. These cliffs may also provide suitable nesting sites for ravens on occasion.

21. Raptors

The scattered cliff faces along this portion of the western edge of the Precambrian uplands provides optimal nesting habitat for raptors. Peregrine falcons, which are common



and rough-legged hawks are the only raptors species thought to nest within the area. Because of their relatively small overall population size, nesting success for peregrine is particularly critical. On occasion, ravens may also nest on the cliffs.

22. Raptors

This wildlife unit extends northward where it encompasses waterfowl and shorebird habitat; however, within this area its significance is for raptor nesting and as a migration route. Cliffs scattered along the western edge of this Precambrian upland provide optimal nesting habitat for raptors. The area appears to be used mostly by rough legged hawks and the occasional peregrine falcon. Breeding activity of rough-legging hawks is highly cyclical, and is dependent upon the abundance of its main prey, lemmings. Gyrfalcons have not been documented nesting anywhere on Southampton Island. They likely occur in the area only as fall migrants or occasional winter residents. The eastern side of Southampton Island is thought to lie within the normal migratory route of gyrfalcons, which breed farther to the north. On occasion, ravens may also nest in this area.

23. Seabirds

Some of the islands and peninsulas on this large lake are used by a large colony of approximately 150-200 breeding pairs of herring gulls. The unprecedented large size of this colony relative to other herring gull colonies on Southampton Island is undoubtedly due to a readily available nearby food source, the Coral Harbour dumpsite.

24. Seabirds

Tern Island is reported to be used by a nesting colony of Arctic terns. The size of this colony is unknown.

25. Caribou

The mainland area of this map provides important year-round range for barren-ground caribou of both the Wager

herd and the Lorillard herd. The seasonal distribution of these two caribou herds, particularly during winter, is largely undocumented. Generally, the seasonal ranges of the Wager herd are considered to encompass the region between Wager Bay and the south end of Committee Bay. These caribou have been reported, on a number of occasions to calve in the vicinities of Pearce, Curtis and Stewart lakes, to the northwest of this map area. The overall importance and fidelity of the Wager herd are considered to encompass the region between Wager Bay and Chesterfield Inlet to the south. Calving by the Lorillard herd is believed to be confined mainly to the area of rolling uplands to the south and southwest of Wager Bay and on occasion, may include the extreme southwest corner of this map area. The rugged, windswept uplands on both sides of Wager Bay likely provide important wintering range for caribou. In summer, many caribou concentrate in the coastal lowlands.

26. Caribou

Southampton Island provides year-round range for population for barren-ground caribou.

In the early 1900's, caribou were reported to be abundant on Southampton Island. They were reported to winter in the Precambrian uplands throughout the eastern portion of the island, and in the summer, were found scattered over the entire island, but mostly in association with the costal lowlands. The island's caribou population declined rapidly following the establishment of the Hudson's Bay trading post on Southampton Island in 1924.

Caribou were reintroduced to Southampton Island in June 1967 by the Territorial Game Management Service and Canada Wildlife Service. Forty eight caribou, captured and airlifted from neighboring Coasts Island, were successfully released near Coral Harbour. Following their reintroduction, the caribou population appears to have grown rapidly. An aerial survey in November 1978

indicated approximately 800-1,500 animals on the island. At present (1983), the population likely numbers between 2,000 and 3,000 animals. Range studies carried out during 1970-72 indicated that winter range would ultimately be the limiting factor in the growth of the Southampton Island caribou population. Theoretically, it is believed that the island could support up to 40,000 animals.

The caribou of Southampton Island appear to have a high reproductive potential. Annual growth rates for the population may range as high as 35 percent.

Predation is currently not a significant mortality factor as wolves are either absent or exceedingly rare on the island. This was not always the case. In the early 1900's, wolves were apparently common throughout much of the island – a time when caribou were also very abundant. As caribou numbers declined, so did wolves. By 1937, wolves had been eliminated from the island. Wolves did not reappear on Southampton Island until 1980, when a single wolf was shot and the tracks of other observed. With the present rapid growth and expansion of the island's caribou population, it is probable that wolves will become re-established on Southampton Island.

At present, hunting is a minor mortality factor for Southampton Island caribou. Since 1978, Inuit residents have been permitted a small annual quota. Currently, Inuit harvest 50 male caribou and 20 female caribou annually from the island population.

Caribou presently occupy more than half the island. The bulk of the population is found on seasonal ranges, generally below 300 m in elevation, west of the Boas River and south of the Prosild Mountains, Granite Hills and headwaters of the Kirchoffer River.

Small numbers of caribou are also found along the western edge of the Precambrian uplands as far north as the month

of the Cleveland River. Southampton Island caribou do not appear to undertake significant seasonal movements, although in winter they tend to be concentrated on coastal areas, and in summer many caribou tend to move farther inland. The present pattern of seasonal distribution appears to be a reversal of that displayed by the caribou that previously occupied Southampton Island.

White Island is currently thought to be devoid of caribou, which were known to have ranged on the Island in the past 50 years. Increase and expansion of the Southampton Island caribou population will certainly lead to increased utilization of this area by caribou and likely the eventual reintroduction of caribou to White Island.

27. Caribou

Vansittart Island and many of the adjacent smaller islands provide range for small numbers of barren ground caribou that are likely year-round residents within the area.

28. Walrus, Belugas and Seals

Walrus have been documented to be in East Bay, some remaining there until the ice begins to form, but this has not been confirmed by recent survey data. A concentration of 450 belugas was noted in East Bay in a 1955 survey. Bearded seals have been reported as abundant in East Bay. Ringed seals are also common here.

29. Note

Evidence strongly indicates that muskoxen have never inhabited Southampton Island. However, as early as the 1920's and as recently as 1983, it has been proposed on several occasions, that muskoxen be introduced to the island. It is, therefore, possible that in the future muskoxen will inhabit Southampton Island. In general, the most favourable ranges for muskoxen on the entire island appear to be the well vegetated lowlands which extend from the vicinity of Salmon Pond, north along the western edge of the Precambrian upland to the mouth of the Cleveland River.

Figure 28 (continued): Nunavut Atlas: Southampton Island North.

30. Waterfowl

The 1,142 km² East Bay Migratory Bird Sanctuary is one of the two bird sanctuaries that were established on Southampton Island in June 1959 to protect important waterfowl nesting areas, primarily lesser snow geese. The establishment of the sanctuaries provided the Canadian Wildlife Service with the means to regulate much of the human activities within these areas. It was believed that the creation of the sanctuaries would have little effect on the normal activities of the local Inuit as they rarely visited these areas during the critical breeding season since access was difficult.

East Bay, which is surrounded by flat sedge meadows that are separated by raised beaches, is the dominant feature in the Sanctuary.

The East Bay Migratory Bird Sanctuary is a major nesting area for lesser snow geese, of some importance to breeding Canada (Hutchin's) geese, and an important breeding area for brant. The latest census (1979) estimated the numbers of lesser snow geese in the East Bay area at 8,500 breeding pairs. The colony is thought to have remained stable or declined slightly in size in recent years.

Approximately 35-40 percent of the snow geese in the Sanctuary are blue-phase geese. The numbers of breeding Canada geese within the area is unknown, but has likely increased from the estimated 600 in 1957. At present (1983), probably 5,000-6,000 brant breed in the Sanctuary.

Other species of waterfowl also nest within the Sanctuary. King eiders and oldsquaws, in small numbers are scattered throughout much of the area. Of the two species, oldsquaws are the most widespread. Common eiders are confined mostly to the islands in the middle of East Bay. Ross's geese are reported to be present as breeders, but in very small numbers. A few whistling swans occur in scattered locations throughout. Pintails are present in small numbers.

Other common aquatic species found breeding within the Sanctuary include Arctic tern, Sabine's gull, herring gull, red-throated loon, Arctic loon, ruddy turnstone, white-rumped sandpiper, semipalmated sandpiper, red phalarope, parasitic jaeger, and long-tailed jaeger.

31. Muskox

In the past, muskox have occupied areas in the vicinity of Wager Bay. Hunting likely eradicated this population. The last report of muskoxen in the Wager Bay area was a single bull observed along the Brown River in 1977. The dramatic increase in the muskox population in the Queen Maud Gulf region to the west may result in future re-establishment of muskox within the area.

Within the map area, the well vegetated valley that extends along the lower Piksimanik River appears to be particularly favourable for muskox. They have been reported to occupy this area in the past.

32. Polar Bears

Vansittart Island is a maternity denning area and an important feeding ground for polar bears. The complexity of the coastline delays the breakup of ice and hastens the freezeup, thus prolonging the period during which polar bears are able to hunt seals.

33. Polar Bears

The northeastern coastal area of Southampton Island serves as a maternity denning and feeding area for polar bears. Most of the dens are built in leeward, south-facing slopes where snow accumulates quickly. Polar bears in the denning area or on their journey to the sea feed on vegetation. On Southampton Island, sedges, grasses and Arctic willows are most commonly eaten, followed by moss and lichen. The abundance of seals in Frozen Strait is an important food source for females and cubs emerging from their dens in spring and for pregnant females that

must put on additional fat before giving birth in the coming winter.

34. Polar Bears

Strong northeasterly winds push ice into Foxe Channel in early fall. In years when much of this ice reaches the Southampton coastline, polar bears are common on the island during the denning period. Most of the dens in this area are built on leeward, south facing slopes where snow accumulates quickly. Polar bears in the denning area or on their journey to the sea ice feed on vegetation. On Southampton Island, sedges, grasses and Arctic willows are most commonly eaten, followed by moss and lichens. Inuit believe that polar bears must feed on vegetation for many days after emerging from their dens in spring, before they are fit enough to hunt seals.

35. Seals and Polar Bears

Ringed seals are found year-round on the land fast ice that forms along the coastline of Southampton Island. Bearded seals are found further offshore in the moving pack and pan ice.

During winter and spring, polar bears concentrate on the Foxe Channel ice to hunt seals, particularly at the flow edges and on the unstable offshore ice where the greatest concentrations of subadult ringed seals can be found. The bearded seal is also taken, but less frequently because of its lower abundance.

36. Polar Bears, Seals and Walruses

Polar bears concentrate at the mouth of Wager Bay to hunt ringed seals and bearded seals in spring and early summer.

Small numbers of walruses are present to the mouth of Wager Bay during summer.

37. Walruses and Seals

A small population of walruses lives year round in Roes Welcome Sound. Variable currents usually prevent extensive fast ice formation in winter, and ice floes persist throughout the summer allowing the walruses to haul out during the entire year.

Bearded seals occur sporadically throughout the area.

38. Seals

Ringed seals occur throughout the marine areas of the map, but are most numerous on the land fast ice along the Southampton coastline. Bearded seals are found farther offshore in areas of moving pack and pan ice.

39. Walruses and Seals

Walruses occur in Frozen Strait year-round. In summer, they haul-out on ice pans or rocky shores, and in winter, they are found along the open leads.

Ringed seals are plentiful in Frozen Strait and adjacent area due to the abundance of stable ice habitat. Bearded seals occur sporadically and in low numbers. Bearded seals' diet in Frozen Strait includes shrimps.

40. Walruses and Seals

Variable currents prevent extensive fast ice formation allowing walrus to remain year-round in Roes Welcome Sound.

Ringed seals are plentiful in Frozen Strait and adjacent areas due to the lack of sufficient fast ice. Bearded seals occur sporadically throughout the area.



41. Polar Bears and Seals

Ringed and bearded seals are hunted by polar bears in Duke of York Bay during spring and fall.

42. Walruses

Twenty nine walruses were observed in the entrance to Duke of York Bay and in waters near Cape Deas during an aerial survey conducted in July of 1982.

43. Walruses

These uglits are situated on promontories of the rock or ice which allow the walrus ready access to deep water when disturbed.

44. Walruses

Twelve walrus were observed in the Peterson Bay area during an aerial survey conducted in August of 1981.

45. Walruses

Each uglit is situated on a promontory and the dip of a rock allows the walruses ready access to deep water when disturbed. Uglits in this area are not as frequently occupied as those on Walrus, Bencas and Coats islands because of the regular appearance of ice floes upon which the walruses prefer to haulout.

46. Bowheads, Belugas and Seals

Although there is no direct evidence for such a migration, bowhead whales are believed to pass through Hudson Strait in spring and cross Hudson Bay to the mouth of Roes Welcome Sound. It is thought that as the ice melts in the Sound they move northward to Repulse Bay. Bowhead whales were once numerous in Roes Welcome Sound, but recent sightings are scarce.

White whales reportedly occur in Roes Welcome Sound in small numbers during summer. Belugas tagged as Seal River have been harvested at both Whale Cove and Repulse Bay suggesting that the whales migrate north along the

coast and into Roes Welcome Sound in September and October. Some whales may overwinter in the Sound in years when there is plenty of open water, but recent data suggests that the bulk of the western Hudson Bay population overwinters in Hudson Strait and Ungava Bay. Recent surveys recorded 14 belugas near Karmarvik Harbour and 47 north of Whale Point.

Small numbers of harp seals move westward through Hudson Strait into Hudson Bay reaching Roes Welcome Sound. Inuit sometimes encountered large numbers of harp seals toward the south end of the Sound.

47. Belugas, Narwhals and Seals

Belugas are frequent in South Bay in July or August, shortly after the ice clears, and remain there until the bay begins to freeze over.

Although narwhals are rare on the south side of Southampton Island, they occur occasionally in South Bay.

Large herds of harp seals are occasionally present in South Bay. Ringed and bearded seals are fairly common here.

48. Bowheads, Narwhals and Seals

Based on whaling records and sightings it is postulated that bowheads migrate westwards out of Hudson Strait in spring and return again in fall.

Narwhals have historically been reported in the waters of Foxe Channel.

Most harp seals migrating northward from Newfoundland and Labrador continue from Davis Strait to Baffin Bay, but small numbers move westward through Hudson Strait and then northwest through Foxe Channel.

49. Bowheads

A number of twentieth century bowhead sightings have been recorded for this area during summer. It is not known whether the whales arrive at this area via Roes Welcome Sound from Hudson Bay or via Frozen Strait from Foxe Basin.

50. Belugas, Narwhals and Walruses

Belugas and narwhals have been observed in Duke of York Bay in summer and fall. Freezeup in winter could force them to retreat to the open leads in Frozen Strait around White and Vansittart islands.

51. Narwhals and Belugas

A 1982 aerial survey sighted 50 narwhals and 66 belugas in the southern half of Frozen Strait.

52. Narwhals

A 1981 aerial survey counted four narwhals on the northeast side of Vansittart Island.

53. Narwhals

Narwhals are known to summer in northern Roes Welcome Sound. Repulse Bay hunters have encountered narwhals off the northwest coast of the Sound.

54. Belugas

White whales have been reported year-round in the open waters around Southampton Island. They are especially abundant off the north and west coasts of Bell Peninsula.

55. Narwhals

Narwhals have historically been reported in the waters of Foxe Channel.

Figure 29: Nunavut Atlas: Southampton Island South.



Southampton Island South

1. Waterfowl

The coast and adjacent lowlands at the west end of East Bay is a critical nesting area for waterfowl, particularly lesser snow geese and brant. Most of the waterfowl that breed within the East Bay Migratory Bird Sanctuary nest within this area.

Brant generally nest along a narrow coastal strip, just about the high tide mark. Snow geese and Canada geese tend to nest farther inland.

Waterfowl begin arriving in the area in late May-early June. Nesting is initiated in June with the hatches of all species completed by late July. Many waterfowl begin to depart from the area on their southward migration by late August. Few waterfowl remain in the area after mid-September.

2. Waterfowl

The area encompassing the mouth of the Boas River and adjacent lowlands is a critical nesting area for waterfowl, particularly lesser snow geese. Most of the lesser snow geese, Ross's geese, brant, Canada geese, common eider and likely, king eiders that breed within the Harry Gibbons Migratory Bird Sanctuary, nest within this area.

The islands of the Boas River delta, the valley of Unhealing Brook and the unnamed river delta to the west of Boas River support the highest densities of nesting snow geese. Brant nest on the island in the river deltas and along a narrow coastal strip, just above the high tide mark. Canada (Hutchin's) geese tend to nest somewhat further inland.

3. Waterfowl

This area along Bursting Brook supports approximately 600 breeding pairs (1979) of lesser snow geese. The colony, which is believed to have been established in the mid-1930s, appears to have remained relatively stable. It likely



has little potential for significant expansion since the nesting habitat within the area is considered marginal.

4. Waterfowl

A small island in one of these shallow coastal lakes supports a small nesting colony of approximately 25 pairs of common eiders.

5. Waterfowl

This area of lakes, with their generally well-vegetated margins, provides the only habitat of any significance for birds within the entire central upland portion of Coats Island.

Small numbers of Canada geese, likely Hutchin's or lesser, occur in this area. These birds, which appear to be mostly non-breeders, likely remain in the area for the duration of their molt. Some breeding activity may also occur.

Small numbers of herring gulls, Arctic terns, jaegers, and loons also occur in the area.

Rock ptarmigan were observed to be very common within this area in late June 1983. The area may be an important breeding site for rock ptarmigans that are residents on the island.

6. Seabirds

Two thick-billed murre colonies, totaling approximately 25,000 breeding pairs, are located on the steep granitic coastal cliffs in this area. This is one of only two known breeding locations for murre in the entire region, which encompasses Hudson Bay, Foxe Basin and western Hudson Strait, and is therefore considered critical. Peregrine falcons, glaucous gulls and herring gulls have also been reported nesting on these cliffs.

7. Seabirds

A total of approximately 75-100 breeding pairs of gulls nest at three cliff sites within this area. Most of the breeding gulls in this area are Kumlien's gulls. Small numbers of glaucous gulls and Thayer's gulls also nest here.

8. Seabirds

Herring gulls nest on some of the small islands within these lakes. Colonies range in size from approximately 10 to 20 breeding pairs.

9. Seabirds

A mixed colony totaling 50-60 breeding pairs of Thayer's and Kumlien's gulls are found on two adjacent cliffs in this area. In 1983, approximately 35 per cent of the gulls at the colony were Kumlien's, 60 per cent Thayer's, and two pairs of glaucous gulls also nested at this colony.

10. Seabirds and Waterfowl

Fisher Strait and Evans Strait are important for many marine breeding birds that breed and molt in the region, such as thick-billed murre, black guillemot, king eider, common eiders, oldsquaw, Arctic tern, Arctic loon, red-throated loon, and gulls. Except for late summer and fall, these straits are largely covered by consolidated pack ice. In winter, the leads that form in the pack ice and the small patches of open water that occur between ice pans provide important breeding sites for marine birds wintering in the area, such as thick-billed murre, black guillemots, common eider, some gulls, and possibly on occasion king eider and oldsquaw. Although most of the thick-billed murre associated with the breeding colonies on Coats Island are thought to leave in the fall for wintering areas in Newfoundland, some murre stay in the area year-round. They remain in the immediate vicinity of the colonies as long as open water is available. As winter progresses and ice packs in close to the colony, the birds are forced out to the open channels. However, they quickly return to the

area whenever wind or mild weather results in open water at or near the nesting cliffs.

11. Seabirds

Some of the small islands in these lakes support small nesting colonies of herring gulls. Approximately 25 breeding pairs are found within the area on Bencas Island and 30-50 breeding pairs within this area on Coats Island.

12. Waterfowl and Seabirds

The 1,142 km² East Bay Migratory Bird Sanctuary is one of two birds sanctuaries that were established on Southampton Island on June 1959 to protect important waterfowl nesting areas, primarily lesser snow geese. The establishment of the sanctuaries provided the Canadian Wildlife Service with the means to regulate much of the human activities with these areas. It was believed that the creation of the sanctuaries would have little effect on the normal activities of the local Inuit as they rarely visited these areas during the critical breeding season as access was difficult.

East Bay, which is surrounded by flat sedge meadows that are separated by raised beaches, is the dominant feature in the sanctuary. This area is a major nesting site for lesser snow geese; of some importance to breeding Canada (Hutchin's) geese; and an important breeding area for brant. The latest census (1979) estimated the numbers of lesser snow geese in the East Bay area at 8,500 breeding pairs. The colony is thought to have remained stable or declined slightly in size in recent years. Approximately 35-40 per cent of the snow geese in the sanctuary are blue-phase geese. The numbers of breeding Canada geese within the area is unknown, but has likely increased from the estimated 600 in 1957. At present (1983) probably 5,000-6,000 brant breed in the sanctuary.

Other species of waterfowl also nest within the sanctuary, king eiders and oldsquaws, in small numbers, are scattered

throughout much of the area. Of the two species, oldsquaws are the most widespread. Common eiders are confined mostly to the islands in the middle of East Bay. Ross's geese are reported to be present as breeders, but in very small numbers. A few whistling swans occur in scattered location throughout. Pintails are present in small numbers.

Other common aquatic species found breeding within the sanctuary include Arctic tern, Sabine's gull, herring gull, red-throated loon, Arctic loon, ruddy turnstone, white-rumped sandpiper, semipalmated sandpiper, red phalarope, parasitic jaeger, and long-tailed jaeger.

13. Waterfowl and Seabirds

The 1270 km² Harry Gibbons Migratory Bird Sanctuary was named after a prominent Inuit guide and interpreter who was well known to many of the scientists that had worked in the area. When the sanctuary was proposed in 1957, the Boas River colony had been studied more extensively than any other northern goose colony.

The Harry Gibbons Migratory Bird Sanctuary, which is dominated by the Boas River, its delta and associated sedge wetland tundra, is a major nesting area for lesser snow geese. In 1957 the area supported an estimated 14,000 breeding pairs of lesser snow geese. Since that time, the population has grown dramatically. The latest census (1979) estimated the numbers of lesser snow geese in the Boas River area at 97,500 breeding pairs. Approximately 35 percent of the snow geese in the sanctuary are blue-phase geese.

The sanctuary is also of some importance to Canada (Hutchin's) geese, and of significantly declining importance to brant. The numbers of breeding geese within the sanctuary appear to have increased markedly from the 1950's; today (1983) it likely supports between 500-750 breeding pairs. The brant breeding population appears to have declined significantly in recent years. In

Figure 29 (continued): Nunavut Atlas: Southampton Island South.

1957, the area was estimated to support 6,000 brant. At present (1983), the area likely does not support more than 1,000.

Other species of waterfowl also nest within the sanctuary. King eiders and oldsquaws in small numbers are scattered throughout much of the sanctuary area. Of the two species, oldsquaws are the most widespread. Common eiders occur in small numbers, and are confined mostly to the islands at the mouth of the Boas River. Ross's geese are present as breeders, but in very small numbers. A few whistling swans occur in scattered locations throughout. Pintails are present in small numbers.

At least 30 avian species have been reported from the area. Some of the more common non-waterfowl species found breeding with the sanctuary include Arctic tern, Sabine's and herring gulls, red-throated loon, ruddy turnstone, red phalarope and parasitic jaeger.

14. Waterfowl and Seabirds

During winter, the recurring polynya that forms in Roes Welcome Sound, along with the leads and small patches of open water between ice pans that occurs in the consolidated pack ice, provides important feeding sites for marine birds that winter in the area. The number of birds wintering in the area is unknown and would vary considerably from year to year, depending upon ice conditions. Species that may winter within the area include black guillemot, common eider, some gulls, and on occasion, king eiders and oldsquaws.

15. Waterfowl, Seabirds and Foxes

This large area, which extends onto the adjacent mapsheets, encompasses the nearshore coastal waters, tidal flats and generally, all of the better vegetated portions of that segment of Southampton Island which lies within the Hudson Bay lowlands physiographic province. This extensive area provides important and, in some cases,

critical habitats for a large number and diversity of birds. Within this map-area, the coast and adjacent well-vegetated lowlands generally contain the highest densities of birds.

Waterfowl are particularly abundant within portions of this area. Whistling swans occur throughout much of the area, but appear to be most common on the coastal lowlands from Gibbons Point to Bear Cove. Canada (Hutchin's) geese are common along the entire coast. Breeding snow geese are restricted to the colonies at Boas River and Bear Cove, however large numbers of unsuccessful and non-breeding snow geese may be found scattered over the entire area. With the completion of the hatch by mid-July, many snow geese with young likely disperse throughout much of this area, to wherever suitable feeding meadows are found. Other species of waterfowl that breed in the area include brant, king eider, common eider and oldsquaw. Small numbers of pintails, which may breed, also occur in the area.

Arctic terns, Sabine's gulls and herring gulls are very numerous, particularly along the coast. Herring gulls nest throughout the entire area, usually as scattered isolated pairs, or occasionally as small colonies. Favoured nesting sites are usually offshore boulders or small islands, along the coast or in tundra lakes and ponds. The nesting distribution of Arctic terns and Sabine's gulls is generally restricted to coastal areas, most often small numbers of sandhill cranes nest in the area.

All three species of jaegers occur in the area. Parasitic jaeger, followed by long-tailed jaegers, are by far the most common species. Red-throated loons and Arctic loons are common and widespread. Small numbers of sandhill cranes nest in the area.

A large number and variety of shorebirds are found in this area, most associated with localized habitats. Some of the

more common species of shorebirds that are thought to breed within this area include semipalmated plover, golden plover, black-bellied plover, ruddy turnstone, white-rumped sandpiper, dunlin, semipalmated sandpiper and red phalarope. The coastal lowlands and adjacent tidal flats, particularly in the Bay of Gods Mercy, may be an important staging area for shorebirds during migration.

Arctic fox is reported to be very common at times on Southampton Island. Red (coloured) fox occur in small numbers. Some of the biophysical characteristics of portions of this important wildlife area, such as close proximity to the coasts, good vegetative cover, abundance of prey species, and availability of stable sand-silt deposits, usually along stream banks, provide for optimal denning habitat for foxes.

16. Waterfowl, Seabirds and Foxes

This large area, which encompasses the nearshore coastal waters, tidal flats, and most of the better vegetated portions of Coats Island, in particular the well-vegetated lowlands with their numerous small, shallow tundra ponds that occur around the periphery of the southwestern half of the island, provides important habitats for a large number and diversity of birds. Upwards of 60 species are thought to occur in the area. Approximately 35-45 of these species breed within the area. The highest densities of birds occur on or in close proximity to the coast.

Coats Island appears to be a particularly productive breeding area for a small race (Hutchin's and/or lesser) of Canada geese. The lowlands may support up to several thousands nesting Canada geese. Other species of waterfowl which commonly breed within this area include whistling swan, brant, king eider, common eider and oldsquaw. Small numbers of lesser snow geese and pintails also occur in the area, but likely do not breed. A few sandhill cranes nest within this area.

This area may be an important staging area, particularly during fall, for significant numbers of lesser snow geese and Canada geese that breed on Southampton Island and throughout the Foxe Basin region. Small numbers of white-fronted geese have been observed in the area during spring migration.

Arctic terns, Sabine's gulls and herring gulls are very common and nest throughout much of the area. All three species of jaegers occur in the area with long-tailed and parasitic jaegers bring by far the most common. Red-throated and Arctic loons are abundant and widespread.

A large number and variety of shorebirds are found in this area; most are associated with localized habitats. Some of the more common species of shorebirds that are thought to breed with this area include semipalmated plover, black-bellied plover, ruddy turnstone, white-rumped sandpiper, dunlin, semipalmated sandpiper, and red phalarope. Coats Island particularly the coastal lowlands and adjacent tidal flats, may be an important staging area for shorebirds during the late summer and fall southward migration. The rocky coastal portion of northwestern Coats Island that lies to the south of Cairn Cove likely provides nesting habitat for black guillemots.

Arctic fox have been reported to be common, at all times, on Coats Island. Red (coloured) fox have been observed on the island on at least one occasion. During winter, as lemmings are apparently absent from the island, foxes on Coats Island likely subsist by scavenging on the carcasses of winter-killed caribou or by moving out on the sea ice to scavenge on polar bear kills. Some of the biophysical characteristics of portions of this important wildlife area, such as close proximity to the coast, good vegetative cover, abundance of avian prey species, and availability of suitable, stable sand-silt deposits, usually along stream banks, provides optimal denning habitat for foxes.



17. Raptors

Scattered cliff faces that occur throughout this area of elevated rolling upland on northern Coats Island provide optimal nesting habitat for raptors. These cliffs also provide suitable nesting sites for ravens, which may on occasion nest in the area.

Peregrines are the only raptors that have been documented nesting within this area. They have been reported nesting at several sites, but have been observed most frequently nesting in association with the murre colonies west of Cape Pembroke. Because of their relatively small population size, nesting success for peregrines is particularly critical.

Gyrfalcons do not appear to nest on Coats Island. They are, however, fairly common fall migrants and, on occasion, winter residents on the north end of the island. Here, they have frequently been seen in the vicinity of Cape Pembroke where they prey upon the murre and probably guillemots and Arctic hares, which are likely also abundant in the area.

Rough-legged hawks and snowy owls likely occur only as migrants, since their primary prey species, the lemming, has been reported to be currently absent. This was not always the case, as lemmings were present during 1919-24, the period when the Hudson Bay Company operated a trading post on the island. At that time, rough-legged hawks were reported to be present, although rare. Snowy owls were also present and known to nest on the island.

Small numbers of Canada geese, likely Hutchin's type, nest along some of the cliffs adjacent to the coast. Rugged and bouldery sites within the area that are adjacent to the coast provide optimal nesting habitat for black guillemots.

18. Waterfowl, Seabirds and Raptors

The numerous cliffs scattered throughout the rugged eastern coast of Island provide optimal nesting habitat for raptors. Peregrine falcons, which are relatively common,

and the occasional rough-legged hawk are the only raptor species known to nest within the area. Gyrfalcons are common along the eastern side of Southampton Island during the fall migration and occasionally as winter residents, particularly in the vicinity of Seahorse Point. They have not been documented to nest anywhere on the island. The eastern side of Southampton Island is thought to lie within the normal migratory route of gyrfalcons which breed farther to the north. On occasion, ravens may also nest on the cliffs.

Small numbers of Canada geese are found during spring, summer and fall, usually in small scattered flocks, along the eastern coast of Southampton Island. Most of these geese appear to belong to a large race of Canada geese that occur in the area only as non-breeding molt migrants from populations that breed in southern Canada. The coastal area, large lakes and rivers with adjacent lakes and tundra ponds tend to be the favoured molting area for Canada geese. The water bodies are important in that they provide a refuge for geese from most predators. This is particularly important during the flightless period of the molt when geese are most vulnerable to predators. Lowlands immediately adjacent to these water bodies are important feeding sites for geese. A few small (Hutchin's) Canada geese also breed along the rugged eastern coasts of Southampton Island. Cliffs appears to be favoured nesting sites for Canada geese within this area. Other species of waterfowl which breed within the area include common eider, oldsquaw, king eider, whistling swan, and brant. Small numbers of unsuccessful or non-breeding snow geese also occur here.

19. Caribou

Southampton Island provides year-round range for a population of barren-ground caribou.

In the early 1900's, caribou were reported to be abundant on Southampton Island, wintering in the Precambrian

uplands throughout the eastern portion of the island. In summer, caribou could be found scattered over the entire island, but were mostly associated with the coastal lowlands. The island's caribou population declined rapidly following the establishment of the Hudson's bay trading post on Southampton Island in 1924. Increasing hunting activity coinciding with the introduction of a readily available supply of ammunition to the island's inhabitants reduced the population to the extent that by 1930, the local Inuit were having difficulty securing enough caribou for clothing. By the late 1930's the few caribou that remained were confined mainly to White Island and the rugged uplands of the eastern coast. Occasionally, small herds would wander down from the hills, but these were promptly shot. By 1950, caribou on the island were reported to be nearing extinction, and became extinct in 1957 when the last caribou was shot.

Caribou were reintroduced to Southampton Island in June 1967 by the Territorial Game Management Service and Canadian Wildlife Service. Forty-eight caribou, captured and airlifted from neighbouring Coats Island, were successfully released near Coral Harbour. Following their introduction, the caribou population appears to have grown rapidly. An aerial survey in November 1978 indicated approximately 800-1500 animals on the island. At present (1983), the caribou population likely numbers between 2,000 and 3,000 animals. Range studies carried out during 1970-72 indicated that winter range would ultimately be the limiting factor in the growth of the Southampton Island caribou population. Theoretically, it is believed that the island could support up to 40,000 caribou.

The caribou of Southampton Island appear to have a high reproductive potential. Annual growth rates for the population may range as high as 35 percent.

Predation is currently not a significant mortality factor in the Southampton Island caribou population as wolves are either absent or exceedingly rare on the island. This was not always the case. In the early 1900's wolves were apparently common throughout much of the island – a time when caribou were also very abundant. As caribou numbers declined, so did the wolves. By 1937, wolves had been eliminated from the island. Wolves did not reappear on Southampton Island until 1980, when a single wolf was shot and the tracks of others observed. With the present rapid growth and expansion of the island's caribou population, it is probable that wolves will again become re-established on Southampton Island.

At present, hunting is a minor mortality factor for Southampton Island caribou. Since 1978, Inuit residents have been permitted a small annual quota. Currently, Inuit harvest 50 male caribou and 20 female caribou annually from the island population.

Caribou presently occupy more than half the island. The bulk of the caribou population are found on seasonal ranges, generally below 300 m in elevation, west of the Boas River and south of the Porsild Mountains, and in the Granite Hills and headwaters of the Kirchoffer River. Small numbers of caribou are also found along the western edge of the Precambrian uplands, as far north as the mouth of the Cleveland River. Southampton Island caribou do not appear to undertake significant seasonal movements. In the winter, they tend to be concentrated in coastal areas. In summer, the caribou tend to move further inland. The present pattern of seasonal distribution appears to be a reversal of that displayed by the caribou that previously occupied Southampton Island.

20. Caribou

Coats Island and Bencas Island provide year-round range for a population of barren-ground caribou that are indigenous to Coats Island.

Figure 29 (continued): Nunavut Atlas: Southampton Island South.

Following the extirpation of the local Sadlermuit inhabitants in the late 1800's by disease but prior to the establishment of the Hudson Bay trading post on the island, in 1919, and subsequent arrival of new residents armed with rifles, caribou were apparently quite abundant. Wolves, the major natural predator of caribou, were also relatively abundant on the Island at that time. By 1924, the year the trading post was relocated to Coral Harbour on Southampton Island, the Coats Island caribou population had been reduced to a remnant few, for the next period of almost four decades the status of this island population was largely unknown. Following the drastic decline of caribou on Southampton Island by the early 1930's Inuit hunters from Southampton Island would periodically visit Coats Island by whale boat in late summer or early fall to secure as many caribou as possible to augment their supply of skins for clothing. In 1961 the first comprehensive aerial survey was carried out and yielded an estimate of 500-600 caribou on Coats Island. Periodic surveys indicated a rapid growth in this island population which peaked at over 6,000 caribou in 1974. During the severe winter in 1974-75, unusually deep snow that reduced forage availability resulted in the starvation deaths of over 70 percent of the caribou. Since then the population appears to have fluctuated, having likely experienced a similar though not nearly as catastrophic decline during the winter of 1979-80. The most recent estimate (1980) placed the caribou population of the island at approximately 2,300.

The caribou of Coats Island have a high reproductive potential. Annual growth rates, during years of normal climatic conditions appear to have ranged from 22 percent to possibly as high as 38 percent. This is due largely to natural mortality from predation no longer being an important factor in this population as wolves are currently absent from the island. During favourable years, Coats Island caribou are reputed to be of exceptional condition. The fall weights and antler growth of bulls sampled in 1970 far exceeded those of their counterparts of comparable age

from the mainland Kaminuriak barren-ground caribou herd. This has been attributed to the lack of natural predators, minimal insect harassment during the summer months and lack of extensive seasonal movements by these island caribou.

At present, caribou numbers on Coats Island are likely regulated by winter forage availability, and to a lesser extent, hunting mortality. Currently Inuit hunters from Coral Harbour are permitted an annual quota of 300 caribou from the island. The actual harvest seldom approaches this figure.

Coats Island caribou do not undertake significant seasonal movements. Caribou make little use, at anytime, of the largely barren central interior upland. Generally, they occur throughout the year in the coastal areas surrounding the island. Areas of raised beaches along the coast are favoured by caribou during winter. The exposed beach ridges are windswept, and are either bare or have thin snow cover that allows the animals to forage efficiently. These areas are particularly critical during those occasional winters when snow conditions prevent caribou from feeding in other sites. Raised beaches also appear to be favoured travel routes for moving caribou. In summer, caribou are generally concentrated along the well-vegetated coastal lowlands. Female caribou, throughout much of the year appear to be concentrated on the southwestern half of the island, particularly the southern coasts. It is likely that most calving activity takes place in this area. Males are usually more common in the northeastern half.

Caribou have commonly been observed on Bencas Island in winter and are thought to cross over on the ice from northern Coats Island. Caribou are reported to occupy Bencas Island occasionally during summer.

21. Polar Bears

The north end of Coats Island may be a maternity denning area. Large snow drifts which accumulate amongst the high outcrops of Precambrian rock provide suitable sites for the construction of dens.

22. Polar Bears

Polar bears are found inland between South Bay and Bay of Gods Mercy during fall and spring.

23. Polar Bears and Seals

Native hunters reported that Seahorse Point is a favourite gathering place for polar bears in the fall, where they feed on ringed and bearded seals before denning. Numerous sightings of harp seals have been made at Seahorse Point in the past summers, but have not been confirmed by recent data.

24. Seals

Ringed seals are uncommon in the waters off Southampton Island due to the lack of fast ice along the simple coastline. Bearded seals are seen more frequently, and are especially abundant amongst the offshore ice pack.

25. Belugas and Seals

During summer beluga whales occur in small numbers along the south, east and west coasts of Coats Island.

Ringed seals occur only occasionally in the waters around Coats Island, but bearded seals are seen frequently.

26. Bowheads, Belugas and Seals

Although there is no direct evidence, bowhead whales are thought to migrate through Hudson Strait in spring and cross Hudson Bay to the mouth of Roes Welcome Sound.

Large numbers of belugas move westward along the south coast of Southampton Island in May and June, and eastward again in September.

Most harp seals migrating northward from Newfoundland and Labrador continue from Davis Strait to Baffin Bay, but small numbers move westward into Hudson Bay along the south coast of Southampton Island.

27. Belugas and Walruses

Belugas are abundant off the north and east coasts of Bell Peninsula. They may occur year round in the open waters off Southampton Island.

Large numbers of walruses are found perennially off the coast of Bell Peninsula, and have been observed in 50 to 75% ice cover during surveys in March of 1981 and 1982.

28. Walruses

These traditional hauling out areas or uglits are situated on Precambrian crystalline rocks of northeast Coats Island and Bencas Island, which rise to heights exceeding 500 feet. Walruses haul out on the rocks in late July when most of the ice has left the area between Southampton and Coats Island. In late July and August of 1981, walruses were observed hauled out on land. Numbers ranged up to 1,500 depending upon the availability of sea ice suitable for haulout. Food types found in samples taken from this area include mollusks such as *Mya truncate* and *Saxicava arctica* sp. and echinoderms such as *Cucumaria* sp. Inuit hunters report that most of the walruses leave Coats and Bencas Islands in late August and early September and swim across to Seahorse Point.

29. Walruses

Ice in Foxe Channel usually arrives at Native Point in late August and early September, bringing with it large numbers of walruses.

30. Walruses

The steep coastline of Walrus Island and Bencas Island are favoured hauling out grounds for as many as 2,000 walruses in some years. Walruses do not haul out on the land until



most of the ice has left the area between Southampton and Coats Islands. Herds of 1,000 animals have been reported on Walrus Island in the fall.

31. Walruses

A 1954 aerial survey counted 2,000 walruses at Seahorse Point. Uglits in this area are not occupied as frequently as those on Walrus, Bencas and Coats islands, because of the recurrent appearance of ice floes upon which the walruses prefer to haul-out. Food items in this area include mollusks and marine worms such as *Mya truncate* and *Saxicava arctica* sp. and annelids.

32. Walruses

Walruses cross Evan Strait in September from Coats Island to the eastern tip of Bell Peninsula.

FINAL THOUGHTS

INTERVIEW PROCESS

The interview process was judged to be reasonably effective, even though both format and execution were quite relaxed. The process was well defined, and the use of photos and maps ensured that the same material was considered from one interview to the next. This provided a solid, reproducible structure that encouraged rigor, permitted immediate interviewee inter-comparisons, and allowed for future community assessments. Interviews took from 2-6 hours, depending on a number of factors, such as the depth of the individual's knowledge, or the amount of marine-specific information they possessed, and the extent to which responses prompted supplementary questions. Since the process was focused on coastal resources, it generally excluded mammals considered primarily terrestrial, such as, Caribou, Muskoxen or Arctic Fox, while embracing Polar Bears and a broad array of birds that range widely over both.

Despite general satisfaction with the process, some prior reservations warrant comment. First, the interview process initially was conducted in the present tense, with the implicit assumption that all responses were addressing contemporary, immediate or very recent experience with the organism under discussion. However, unless explicitly excluded, there can be some question as to whether the information offered represents temporal integration over some indeterminate period. Hunters who have traveled and hunted these areas for decades could provide responses drawn from observations made indiscriminately from the short, medium or long term. For these reasons, interviewees were routinely informed that contemporary data was that collected since 2000, and data offered from observations before that date should be accompanied with an indication of the observation date. These latter

observations were analyzed, identified, and archived independently of contemporary data.

A second issue was whether the geographic location presented for an organism represents the place at which it was caught or collected or whether it was intended to indicate a much broader range. The former case could lead to an overestimate of abundance and locations while the latter could underestimate the areal coverage. Both ambiguities have subsequently been corrected through adjustments to the survey document and more specifically through the questions addressed to the interviewee.

The final issue addresses the designation "everywhere". Sometimes an interviewee, in response to a question about an animal's distribution, indicated that they were observed to be present "everywhere". Everywhere is a very subjective descriptor that, without additional qualifiers, is not very useful. Essentially, it refers to the geographic extent of the respondent's knowledge, and unless that knowledge is further defined, its utility is limited. Consequently, all interviewees were asked at some point to delineate the extent of their travels. That information was recorded and subsequently displayed (see Figure 4) where it can be located and used to identify what is meant by "everywhere" for a specific interviewee.

MAPS AND DATA

The map format was chosen, given the broad geographic reach of the interviewee's responses, to provide a synoptic view of the collected data. Every effort was made to keep a common scale for all maps in this document, in order to permit comparisons between maps. For some species, the scale showed the breadth of the distribution and the interconnectedness of seeming disparate locations. While for others, especially where distributions were modest or localized, the advantages were less obvious.

The scale used on maps obtained from the Nunavut Atlas (1992) is smaller because the geographic area of interest is also smaller. In addition, one must keep in mind that the data collected for the Nunavut Atlas was actually collected in the early 70's and so it represents conditions that were extant 35 years ago. Some comparisons are possible but they must be handled with caution.

Harvest data available from the Nunavut Wildlife Management Board (NWMB) Study (2004) is not represented in this report. The difference between these two studies is that the Coastal Inventory was attempting to ascertain the qualitative geographic distribution of species while the NWMB's primary concern was harvest statistics. Additional inventories conducted in the future, should, where possible, document harvest data from any fishery in the study area.

The present data set was never conceived as a stand-alone product. It represents a snapshot in time drawn from observations made by individuals within a community who have considerable experience hunting, fishing and trapping in the region surrounding that community. These data have been considered within the comparative context provided by other studies but it has limitations, just as with those that preceded it. For a fully rounded picture it would be necessary to view these findings as one data set of many, all of which are mutually complementary.

GOVERNANCE

Collection of resource information through the process of IQ interviews can have many different values to a community such as cultural, social, historical and economic values. All of these, with the exception of the economic value, are more or less self evident. However, translating a living marine resource into an economic benefit, while simultaneously addressing the issue of

sustainability, requires some thought given to the subject of resource governance.

Acquiring knowledge about available resources can be empowering, and the acquisition of those resources could lead to prosperity and well being. The NCRI is attempting to identify the location and abundance of mammals, fish, birds, invertebrates and plants so that this information can be used for a number of reasons, among them economic development. However, the exploitation of a resource requires important decision-making, a reasonable definition of expectations and limits, empowerment of individuals and accountability. In other words, a sustainable approach to resource utilization requires a vision or goals, coupled with an implementation plan. The resource should be thoughtfully governed from the outset.

One example of the need for governance emerged from earlier interviews. Shallow areas off Iglulik are known to contain clams in some abundance, which are known to be an important source of food for walrus. Inuit hunters are aware of their presence but acknowledge that they are difficult to obtain because of their inhospitable location on/in sea floor sediment under cold water. Each interviewee was initially asked about their distribution and abundance, then later about whether this was a resource that might be harvested for commercial purposes. Most of the responses supported the concept of a commercial clam fishery, even though almost no information was available on the total size of the resource, its detailed distribution, reproductive capacity, or growth rates. In addition, one must also consider the importance of clams to the walrus and what impact the depletion of clams might have on the distribution and well-being of this large, highly prized mammal. A sustainable approach would ensure a balance between these two apparently competing interests such that both resources would be governed using reliable knowledge about these organisms, an accepted plan and clear responsibilities for all parties.



CLIMATE CHANGE

Over the past 20 years, a growing chorus of arctic researchers has commented on the looming possibility of climate change and global warming, and their expected impacts on the marine environment (Tynan and DeMaster 1997; Michel, C., R. Ingram and L.R. Harris 2006; Ford et al 2008a, 2008b, Moore and Huntington 2008). Many positive and negative changes will occur in recurrent open water sites, undoubtedly influencing many coastal resources. Specific impacts can be expected on water stratification and its role in nutrient renewal, the balance between multi-year and annual ice, the duration and location of open water, the impacts of tidal mixing and topographic upwelling. The impact of these physical changes could then influence some facet of the marine food web, such as, the relative importance of ice algae, the timing, and magnitude of primary and secondary production, changes in the distribution, abundance, and success of traditional species. In other words, we can expect change to occur in our physical world that will, in turn, alter the biological system, including the human component.

The Nunavut Coastal Resource Inventory initiative was undertaken to provide information that could inform decision-making in the areas of resource management, economic development, conservation, environmental assessment, and the mitigation of anticipated climate change effects. In order to be effective, each intervention will require baseline resource information plus knowledge about the factors that are driving change. Change will be divided between direct human (resource extraction) and significant systemic changes (climate change). Climate change will exert its influence through warmer average temperatures, altered wind patterns, changes in precipitation, increasing fresh water input, and modified ocean circulation. These will, in turn, directly affect the physical marine environment which will then influence coastal marine resources. In order to mitigate,

ameliorate, or influence these anticipated changes, a considerable amount of information about the factors that drive both the physical and biological environments, as well as their interconnectedness is required. There are two immediate sources for that information, traditional ecological knowledge and scientific knowledge.

COMBINING TRADITIONAL ECOLOGICAL KNOWLEDGE (IQ) AND SCIENTIFIC KNOWLEDGE

Inuit Qaujimagatuqangit or Traditional Inuit Ecological Knowledge is unique in that it is qualitative, intuitive, holistic, spiritual, empirical, personal, and often based on long time series of observations (Berkes 2002). Some of these characteristics are sometimes cited as limitations, such as a reliance on long-term memory or the fact that it is qualitative and subjective. Conversely, they also qualify as positive since they represent a long time-series unattainable in any other manner. Perhaps as the sole device to fully understand and manage coastal resources traditional knowledge might be found lacking, while a complementary coupling with western science could produce important synergies resulting in a very powerful tool.

The scientific approach embraces all available evidence and postulates a theory that attempts to predict future changes. The correctness of the prediction is a measure of the completeness of scientific understanding. Understanding the reasons for change is important because that information is central to any attempt to mitigate or influence long term effects, such as climate change. Addressing the root cause is a more certain approach than attempting to influence symptoms. A critical factor in the scientific method is the availability and reliability of data available for analysis. The arctic, because of size, complexity and manpower limitations, does not

often have a plentiful supply of scientific observations. However, one underutilized data source is in the form of traditional knowledge where species, locations, processes and events have been monitored, sometimes for decades. Bringing traditional knowledge and science together into a complementary working relationship could provide significant benefits for all parties.

ACKNOWLEDGEMENTS

The NCRI research team received assistance from many sources, both institutional and individual, throughout this initiative through the provision of advice, technical assistance and documentation, review of project materials, essential services and interviews. We thank all for their very generous support.

Community of Chesterfield Inlet

Hamlet of Chesterfield Inlet

Rene Tautu, HTO Manager and Interpreter

HTO Board Members and Chairpersons

David Kattegatsiak, Community Economic Development Officer

Andre Tautu, Interpreter

Rita Kadluk, Interpreter

Jaquanita Sammurtok, Student Intern

Dalhousie University, Halifax, Nova Scotia

Department of Culture, Language, Elders and Youth,
Government of Nunavut

Department of Environment, Government of Nunavut

Department of Economic Development and
Transportation, Government of Nunavut

Environment Canada

Fisheries and Oceans Canada

Interviewees – Chesterfield Inlet

Andre and Elizabeth Tautu, Titi Kadluk, Rosalie

Sammurtok, Joe Issaluk, Casimir and Sidonie Kriterdluk,

Leonard and Leonie Putulik, Louie Autut, Paul and

Marjorie Autut, and Eli Kimmaliardjuk.

Indian and Northern Affairs Canada, Iqaluit

Inuit Heritage Trust (IHT), Iqaluit

Jim Richards

Arctic Bird Specialist, Ontario, Canada

Jim is credited with providing valuable advice as well as most of the photos of birds in Appendix 7.

Legislative Library, Iqaluit

NOAA/NMFS Auke Bay Laboratory, Juneau, Alaska

Nunavut Research Institute, Iqaluit

Nunavut Tunngavik Incorporated, Iqaluit

Nunavut Wildlife Management Board, Iqaluit

Parks Canada, Iqaluit

Qikiqtani Inuit Association



COLLECTED REFERENCES

Species Photo references are available upon request. They have been excluded from this list due to length and issues with keeping links updated. All document references are listed in this section.

- Ainley, G.A., C.T. Tynan and I. Stirling. 2003. Sea Ice: A Critical Habitat for Polar Marine Mammals and Birds. In: *Sea Ice: an Introduction to its Physics, Chemistry and Geology*, Thomas, D.N. and G.S. Dieckmann (eds.), Blackwell Publishers, 240-266.
- Alexander, V. 1974. Primary productivity regimes of the nearshore Beaufort Sea, with reference to the potential role of ice biota. In: J.C. Reed and J.E. Sater (Editors), *The Coast and Shelf of the Beaufort Sea*. Arctic Institute of North America, Arlington, Va. Pp. 604-635.
- Alexander, V. and H.J. Niebauer. 1981. Oceanography of the eastern Bering Sea ice edge zone in spring. *Limnology and Oceanography* 26: 1111-1125.
- American Ornithologists Union. 1998. *The A.O.U. Checklist of North American Birds (Seventh Edition)*. Washington, D.C. and supplements thereto through the 49th supplement, 2008.
- Ashkui Project. Combining Traditional Ecological Knowledge and Western Science: URL: http://www.ec.gc.ca/EnviroZine/english/issues/26/print_version_e.cfm
- Berkes, F. 1993. Traditional Ecological Knowledge in Perspective. Pp 1-10, In: Inglis, J.T. (ed.) *Traditional Ecological Knowledge: Concepts and Cases*. International Program on Traditional Ecological Knowledge, Canadian Museum of Nature, Ottawa and International Development Research Centre, Ottawa. 150 pp.

Berkes, F, R., Huebert, H. Fast, M. Manseau and A. Diduck. 2005. *Breaking Ice: Renewable Resource and Ocean Management in the Canadian North*. University of Calgary Press, 396 pp.

Bradstreet, M.S.W. and W.E. Cross. 1982. Trophic Relationships at High Arctic Edges. *Arctic* 35: 1-12.

Bray, R. 1943. Notes on the Birds of Southampton Island, Baffin Island and Meleville Peninsula. *Auk* 60:504-536

Brook, R., M. M'Lot and S. McLachlan. 2006. Pitfalls to avoid when linking traditional and scientific knowledge. pp 13-20 In : (Riewe, R. and J. Oakes, eds.) *Climate Change: linking traditional and scientific knowledge*. Aboriginal Issues Press.

Buckley, J.R., T. Gammelsrod, J.A. Johannessen, O.M. Johannessen 1979 and L.P. Roed. 1979. *Science* 203: 165-167.

Canadian Wildlife Service, 2007. Northwest Territories/ Nunavut Bird Checklist Survey program data. Available online at <http://www.pnr-rpn.gc.ca/checklist>

Committee on the Status of Endangered Wildlife in Canada (COSEWIC). *Wildlife Species Search*. Available online: http://www.cosewic.gc.ca/eng/sct1/searchform_e.cfm Accessed online: 28/06/2011. Last updated:01/06/2011

Crawford, R. and J.Jorgenson. 1990. Density Distribution of Fish in the Presence of Whales at the Admiralty Inlet Landfast Ice Edge. *Arctic* 43: 215-222.

Csanady, G.T. 1982. *Circulation in the coastal ocean*. D. Reidel, Dordrecht, The Netherlands, 279 pp.

Department of Fisheries and Oceans. Aquatic Species at Risk. Accessed online at: <http://www.dfo-mpo.gc.ca/species-especes/search-location-recherche-endroit-eng.htm>. Last updated; 02/06/2011.

DFO 2009. Web Tide Model http://www.mar.dfo-mpo.gc.ca/science/ocean/coastal_hydrodynamics/WebTide/webtide.html

Dyke, A.S., J. Hooper and J.M. Savalle. 1996. A History of sea ice in the Canadian Arctic Archipelago based on post-glacial remains of the bowhead whale (*Balaena mysticetus*). *Arctic* 49: 235-255.

Dyke, A.S. and J.M. Savalle. 2001. Holocene History of the Bering Sea Bowhead Whale (*Balaena mysticetus*) in its Beaufort Sea Summer Grounds off Southwestern Victoria Island, Western Canadian Arctic. *Quaaterney Research* 55: 371-379.

Ellis, D. V. 1956. Observations on the migration, distribution and breeding of birds in the Canadian Arctic during 1954 and 1955. *Dansk Ornithologisk Forenings Tidsskrift* 50:207-230

Ford, J.D., B. Smit, J. Wandel, M. Allurut, K. Shappa, H. Ittusarjuat, and K. Qrunnut. 2008a. Climate change in the Arctic: current and future vulnerability in two Inuit communities in Canada. *Geographical Journal* 174: 45 – 62.

Ford, J.D., T. Pearce, J. Gilligan, B. Smit and J. Oakes. 2008b. Climate change and hazards associated with ice use in northern Canada. *Arctic, Antarctic and Alpine Research* 40: 647- 659.

George, J.C.C., H.P. Huntington, K. Brewster, H. Eicken, D.W. Norton and R. Glenn. 2004. Observations on Shorefast Ice Dynamics in Arctic Alaska and the Responses

of the Inupiat Hunting Community. *Arctic* 57(4): 363-374.

Gilligan, J., J. Clifford-Pena, J. Edey-Rowntree, K. Johannsson, R. Gislason, T. Green and G. Arnold with J. Heath and R. Brook. 2006. The value of integrating traditional, local and scientific knowledge. pp 3-12 In: Riewe, R. and J. Oakes, (eds.) *Climate Change: linking traditional and scientific knowledge*. Aboriginal Issues Press.

Godfrey, W. Earle. 1986. *The Birds of Canada (Revised Edition)*. National Museum of Natural Sciences, Ottawa, Canada.

Hannah, C.G., F. Dupont and M. Dunphy. 2009. Polynyas and Tidal Currents in the Canadian Arctic Archipelago. *Arctic* 62 (1): 83-95.

Harrison, W.G. and G.F. Cota 1991. Primary production in polar waters: relation to nutrient availability, In: E. Sakshaug, C.C.E. Hopkins and N.A. Oritsland (Editors), *Proc. Pro Mare Symp. On Polar Marine Ecology (Trondheim, 12-16 May 1990)*. *Polar Res.* 10(1): 87-104.

Hay, K. 2000. Final Report of the Inuit Bowhead Knowledge Study. 2000. Nunavut Wildlife Management Board.

Henshaw, A. 2003. Polynyas and Ice Edge Habitats in Cultural Context: Archaeological Perspectives from Southeast Baffin Island. *Arctic* 56 (1): 1-13.

Hohn, E. Otto. 1968. *The Birds of Chesterfield Inlet, District of Keewatin, NWT, Canada*. *Canadian Field Naturalist* 82(4):224-262.

- Huntington, H.P. 2000. Using traditional Ecological knowledge in science: methods and applications. *Ecological Applications* 10(5): 1270-1274.
- Ingram, R.G., J. Bacle, D.G. Barber, Y. Gratton, and H. Melling. 2002. An overview of physical processes in the North Water. *Deep Sea Research II*, 49: 4893-4906.
- Ingram, R.G., E. Carmack, F. McLaughlin and S. Nicol. 2005. Polar Ocean Coastal Boundaries Pan-Regional Overview. In: Robinson, A.R., Brink, K.H. (Eds.) *The Sea, Vol. 14: The Global Coastal Ocean, Regional Studies and Syntheses*, Wiley, New York, pp 61-81.
- Ingram, R.G. and S. Prinsenber. 1998. Coastal Oceanography of Hudson Bay and Surrounding Eastern Canadian Arctic Waters. In: Robinson, A.R., Brink, K.H. (eds.) *The Sea, Vol. 11: The Global Coastal Ocean, Regional Studies and Syntheses*, Wiley, New York, pp 835 -862.
- Inuit Land Use and Occupancy Project (1976), Volumes 1-3; Indian and Northern Affairs ISBN 0-660-00-401-1
- Inuit Qaujimagatuqangit of Climate Change in Nunavut. 2005. (Four Volumes: North Baffin Region; South Baffin Region; Kivalliq Region; and, Kitikmeot Region)
- IPCC 2007a. Summary for Policy Makers. In: *Climate Change 2007: The Physical Science Basis*. (February 2007) Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC Secretariat, c/o WMO 7bis, Avenue de la Paix. C.P. No 2300, 1211 Geneva 2, Switzerland, 18 pp. (www.ipcc.ch/)
- International Union for Conservation of Nature (IUCN). The IUCN red list of endangered species. Available Online at: <http://www.iucnredlist.org/apps/redlist/search> Accessed online; 28/06/2011
- IPCC 2007b. Summary for Policy Makers. In: *Climate Change 2007: Climate Change Impacts, Adaption and Vulnerability*. (April 2007). Working group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC Secretariat, c/o WMO 7bis Avenue de la Paix, C.P. No 2300, 1211 Geneva 2, Switzerland, 23 pp. (www.ipcc.ch/)
- IPCC 2007c. Summary for Policy Makers. In: *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment*. (August 2007) Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York. (www.ipcc.ch/)
- IPCC 2007d. Summary for Policy Makers. In *Climate Change 2007: Synthesis Report*. Approved in detail at IPCC Plenary XXVII (Valencia, Spain 12 – 17 November 2007). (www.ipcc.ch/)
- Johannessen, O.M., J.A. Johannessen, M. Morison, B.A. Farrelly and E.A.S. Svendsen. 1983. The Mesoscale oceanographic conditions in the marginal ice zone north of Svalbard in early fall 1979. *J. Geophysical Research* 88: 2755-2769.
- Legendre, L., S.F. Ackley, G.S. Dieckmann, B. Gulliksen, R. Horner, T. Hoshia, I.A. Melnikov, W.S. Reeburgh, M. Spindler, and C.W. Sullivan. 1992. Ecology of sea ice biota. 2. Global significance. *Polar Biol.* 12: 429-444.
- McGhee, R. 1993. *Ancient Peoples of the Arctic*. UBC Press, in association with the Canadian Museum of Civilization, Vancouver.
- McLaughlin, F.A., E.C. Carmack, R.G. Ingram and W.J. Williams, 2005. Oceanography of the Northwest Passage In *The Sea, Vol. 14: The Global Coastal Ocean, Regional Studies and Syntheses*, A.R. Robinson and K.H. Brink, eds. John Wiley and Sons, Inc., New York, pp 1213-1244.
- Melling, H. 2000. Exchanges of freshwater through the shallow straits of the North American Arctic. In: *The Freshwater Budget of the Arctic Ocean*, E.L. Lewis et al (eds.), Kluwer Academic Publishers, Dordrecht., 479-502.
- Michel, C., R.G. Ingram and L.R. Harris. 2006. Variability in oceanographic and ecological processes in the Canadian Arctic Archipelago. *Progress in Oceanography* 71: 379-401.
- Moller, H., F. Birkes, P. O'Brian Lyver and M. Kislalioglu. 2004. Combining science and traditional ecological knowledge: monitoring populations for co-management. *Ecology and Society* 9(3): [online]. <http://www.ecologyandsociety.org/vol9/iss3/art2>
- Moore, S. and H.P. Huntington. 2008. Arctic marine mammals and climate change: impacts and resilience. *Ecological Applications* 18(2), Supplement: S157-S165.
- O'Brien, J. P., M.D. Bishop, K.S. Regular, F.A. Bowdring, T.C. Anderson. 1998. *Community-Based Coastal Resource Inventories in Newfoundland and Labrador – Procedures Manual*. Fisheries and Oceans, St. John's, Newfoundland
- Priest, H. 2004. *The Nunavut Wildlife Harvest Study*. 2004. Nunavut Wildlife Management Board.
- Prinsenber, S.J. 1986a. The circulation pattern and current structure of Hudson Bay. Pp. 187-204, In: Martin, I.P. (ed.) *Canadian Inland Seas*. Elsevier Oceanography Series.
- Prinsenber, S.J. 1986b. On the physical oceanography of Foxe Basin. Pp. 217-236, In: Martin, I.P. (ed.) *Canadian Inland Seas*. Elsevier Oceanography Series.
- Prinsenber, S. 1988. Ice ridge contributions to the freshwater contents of Hudson Bay and Foxe Basin. *Arctic*, 41:6-11.
- Prinsenber, S.J. and N.G. Freeman. 1986. Tidal heights and currents in Hudson Bay and James Bay. Pp. 205-216, In: Martin, I.P. (ed.) *Canadian Inland Seas*. Elsevier Oceanography Series.
- Pyle, Peter and David F. DeSante. 2006. *English and Scientific Alpha*
- Codes for North American Birds through the 47th AOU Supplement. The Institute for Bird Populations, Pt. Reyes, CA.
- Renaud, Wayne E., Stephen R. Johnson and P. Dianne Hollingdale. 1979. *Breeding Birds of Arctic Bay, Baffin Island, N.W.T., with notes in the Biogeographic Significance of the Avifauna*. *Arctic*. 32(2):122-134
- Richard, Pierre. 2001. *Marine Mammals of Nunavut*. Qikitqani School Operations, Box 1330, Iqaluit, Nunavut, X0A 0H0.
- Richards, Jim, and Tony White. 2008. *Birds of Nunavut: A Checklist* (private publication, sponsored by Environment Canada).
- Riewe, R. 1992. *Nunavut Atlas*. 1992. Canadian Circumpolar Institute (co-published by Tungavik Federation of Nunavut. ISBN 0838-133X



Saville, D.B.O. 1951. Bird Observations at Chesterfield Inlet, Keewatin, in 1950. *Canadian Field Naturalist* 65(4):145-157.

Schledermann, P. 1980. Polynyas and prehistoric settlement patterns. *Arctic* 33 (2): 292-302

Schledermann, P. 1990. *Crossroads to Greenland*, Arctic Institute of North America, Calgary, 364 pp.

Shortt, T. M., and H. S. Peters. 1942. Some recent bird records from Canada's Eastern Arctic. *Canadian Journal of Research* 20:338-348

Sibley, David Allen. 2004. Identification of Canada and Cackling Goose, Updated, October 7, 2004 http://www.sibleyguides.com/canada_cackling.htm

Smith, M. and B. Rigby. 1981. Distribution of polynyas in the Canadian Arctic. Pp. 6-28, In: *Polynyas in the Canadian Arctic*. Stirling, I. and H. Cleator (eds.) Occasional Paper, Number 45, Canadian Wildlife Service.

Soper, J. D. 1928 A faunal investigation of southern Baffin Island. *National Museum of Canada Bulletin* 53: 76-116

Stewart, D.B. and W.L. Lockhart. 2004. Summary of the Hudson Bay Marine Ecosystem Overview. Prepared by Arctic Biological Consultants, Winnipeg, for Canada Department of Fisheries and Oceans, Winnipeg, Mb. Draft vi + 66 pp.

Stirling, I. 1980. The Biological Importance of Polynyas in the Canadian Arctic. *Arctic* 33: 303-315.

Stirling, I. 1997. The importance of polynyas, ice edges, and leads to marine mammals and birds. *J. of Marine Systems* 10: 9-21.

Stirling, I., H. Cleator. And T.G. Smith. 1981. Marine Mammals. pp. 45-58, In: *Polynyas in the Canadian Arctic* (Stirling, I. and H. Cleator (eds.). Occasional Paper, Number 45, Canadian Wildlife Service.

Sutton, George Miksch. 1931. Notes on Birds Observed Along the West Coast of Hudson Bay. *Condor* 33:154-159.

Tang, C.L. and M.Ikeda.1989. Ice-Edge Upwelling off the Newfoundland Coast during LIMEX. *Atmosphere-Ocean* 27: 658-681.

Tee, K.T., P.C. Smith and D. Levaivre. 1993. Topographic Upwelling off the Coast of Nova Scotia. *J. Physical Oceanography* 23(8): 1703-1726.

Tynan, C.T. and D.P. DeMaster. 1997. Observations and Predictions of Arctic Climate Change: Potential Effects on Marine Mammals. *Arctic* 50: 308-322.

Welch, H.E., M.A. Bergmann, T.D. Siferd, K.A. Martin, M.F. Curtis, R.E. Crawford, R.J. Conover, and H. Hop. 1992. Energy flow through the marine ecosystem of the Lancaster Sound region, Arctic Canada. *Arctic*, 45: 343-357.

APPENDIX 1 BIOGRAPHIES OF CHESTERFIELD INLET INTERVIEWEES

Interview Code	Interviewee	Profile
CI_1	Andre and Elizabeth Tautu	Andre was born on Walrus Island and has spent his whole life in Chesterfield Inlet. Elizabeth was born in Aqjarunnaq (Duke of York Bay) on Southampton Island and spent much of her childhood in Coral Harbour. She hunts seasonally with her husband who still goes out year round. They hunt a variety of animals; including: geese, birds, ringed seals, bearded seals, walrus, whales, clams and mussels.
CI_2	Titi Kadluk	Born in Qajakuvuk, farther north, he has lived in Chesterfield Inlet for 38 years. He began hunting at 18 years of age and now hunts mainly lake and sea char, bearded seals, and every spring, swans, geese and ducks.
CI_3	Rosalie Sammurtok	Inuktitut Language Teacher at VSSchool in Chesterfield Inlet. Born in Savajuaq and has lived in Chesterfield since she was 11 years old. Hunts mainly in the summer and early spring for char and some birds.
CI_4	Joe Issaluk	Deputy Mayor of Chesterfield Inlet. Born just outside of Chester and lived in area all his life except for a brief period as a young man when he worked in the Rankin nickel mine. Began hunting at age 10 and remains active, hunting all available game.
CI_5	Casimir and Sidonie Kriterionluk	Casimir has spent his whole life around Chesterfield Inlet and started hunting at 12 years old. His wife Sidonie was born near Repulse Bay and has lived in Chester for the past 44 years. They hunt everything; including, Bearded seals, Harp seals, Ringed seals, Ranger seals, Walrus, birds and Caribou.
CI_6	Leonard and Leonie Putulik	Husband and wife are town Councilors. Leonard was born in Tasttuaq, but grew up moving around a lot until he settled in Chester. He learned to hunt around 7 years of age by dog team, but rarely hunts now because of poor health. Leonie was born in Coral Harbour and began to hunt after she married at age 16. They have a long history of hunting seals, fish, Caribou and Polar Bear.
CI_7	Louie Autut	Born in Coral Harbour and subsequently moved to Chester. He began hunting at 12 years of age but no longer travels long distances due to poor vision. Presently hunts seals and fishes for lake trout and char.
CI_8	Paul and Marjorie Autut	Paul was born in Chester and has remained his whole life there. He began hunting around 10 years of age and remains an active hunter of Caribou, fish, Walrus, Beluga, and seals. Marjorie, who was born in Churchill and raised in Whale Cove, has spent the past 32 years in Chester. She was approximately 19 years old when she started hunting. Today, she routinely hunts with Paul.
CI_9	Eli Kimmaliardjuk	Eli was born just below Barbor Lake in 1936, but has lived the last 60 years in Chester. He started hunting around 14 years of age and though he doesn't go out as often now, he can still hunt Polar Bear, Beluga, fish, Wolverine, Caribou, Fox, Walrus, wolves and birds. He is a local elder.



APPENDIX 2

ACRONYMS AND ABBREVIATIONS

CBCRI - Community-Based Coastal Resource Inventory

CLEY - Department of Culture, Language, Elders and Youth

CWS - Canadian Wildlife Service

DFO - Department of Fisheries and Oceans

DOE - Department of the Environment

DSD - Department of Sustainable Development

ED & T - Department of Economic Development and Transportation

GC - Government of Canada

GN - Government of Nunavut

HTO - Hunter/Trapper Organization

INAC - Indian and Northern Affairs, Government of Canada

IQ - Inuit Qaujimajatuqangit

IPCC - Intergovernmental Panel on Climate Change

NRCan - Natural Resources Canada

NRI - Nunavut Research Institute

NTI - Nunavut Tunngavik Incorporated

NWMB - Nunavut Wildlife Management Board

TK - Traditional Knowledge

TEK - Traditional Ecological Knowledge

APPENDIX 3 CHESTERFIELD INLET – BIRD SIGHTINGS COMMENTARY

The following table stacks the community interview findings with several literary sources and consultant expectations. The list begins with those that interviewees stated seeing and has some additional species that were not mentioned but have been reported by others. These have been graded on their range status according to Godfrey, 1986 and occupancy type by Richards and White, 2008. The following columns provide status from Hohn 1968, Saville, 1931 and Sutton, 1931. The next two columns cover the NWT/NU Checklist Survey databank and various records. The final column gives the reaction of Jim Richards to the interview findings with the other sources in mind. The checklist databank is assumed valid. The miscellaneous literature sources are valid.

Hopefully this comparative chart contextualizes the knowledge gained through the Nunavut Coastal Resource Inventory.

Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Buff-breasted Sandpiper	Yes	Migrant, Breed						was likely seen by # 6.
Stilt Sandpiper	Yes	Migrant, Breed	uncommon migrant					was likely seen by # 3. I would have expected more respondents to have seen this species.
White-Rumped Sandpiper	Yes	Migrant, Breed	common spring and fall migrant	very common	very common			very surprised this species not seen by all. Could be confused with other 'peeps' (see separate discussion)
Baird's Sandpiper	Yes	Migrant, Breed		common migrant	common migrant	2004		unsure why this species was not recorded by all (see separate discussion)
American Golden-Plover	Yes	Migrant, Breed	scarce migrant	regular migrant	uncommon migrant			should have been seen by all. Can't understand why # 6 would not have seen this obvious species
Common Ringed Plover	No							definitely not seen by any of the respondents. They all claim to have seen it but I suggest they were looking at Semipalmated Plover
Semi-palmated Plover	Yes	Migrant, Breed	fairly common. Breeds	common. Breeds		2004		only one respondent reported seeing it; in fact, they all did! They obviously don't distinguish between this and Ringed Plover
Whimbrel	Yes	Migrant, Breed	transient. Possible breeder	common migrant	uncommon migrant			only one respondent reported seeing it; I would have expected it to have been seen by all!
Eskimo Curlew	No	Migrant, possibly breed, historically						three respondents claim to have seen this species. Highly unlikely. They were no doubt seeing Whimbrels.
Red Knot	Yes	Migrant, Breed	scarce spring migrant	uncommon migrant				somewhat surprised that it was not seen by more respondents. It is no doubt a sporadic migrant here, but numbers have dropped in recent years.



Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Ruddy Turnstone	Yes	Migrant, Breed	common migrant	common migrant	common migrant			should have been seen by all. Can't understand why 2 respondents would show a 'no'. Should not be confused with any other species.
Horned Lark	Yes	Migrant, Possibly breed	common. Breeds	common. Breeds	common	2004		no question they all knew this species
Lapland Longspur	Yes	Migrant, Breed	abundant. Breeds	abundant. Breeds	abundant	2004		no question they all knew this species
Killdeer	No	Accidental						highly unlikely it was seen by # 6
Northern Water Thrush	No							definitely not seen. I suggest the respondent noted an American Pipit - perhaps not a good look at it as well.
Snow Bunting	Yes	Migrant, Breed, wintertime	common. Breeds	very common. Breeds	very common	2004		no question they all knew this species
Fox Sparrow	No	Migrant, Breed						highly unlikely it was seen by # 5. It is a forest bird, however that's how we end up with 'accidentals' on checklists at times!
Common Redpoll	Yes	Migrant, Breed	very uncommon. Breeds					strange this species was not seen by all respondents. No explanation as to why not. Only seen by # 5.
Hoary Redpoll	Yes	Migrant, Breed	very uncommon Breeds					doubt if the casual observer would distinguish between Hoary and Common in any event
Sandhill Crane	Yes	Migrant, Breed	scarce. Breeds		rare	2004		seems all but one respondent has seen this obvious species. At a loss as to explain how it was missed by # 3.
Long Tailed Jaeger	Yes	Migrant, Breed	scarce migrant	rare migrant		2004		they are all familiar with this obvious species
Rock Ptarmigan	Yes	Permanent, Breed	abundant. Breeds	common. Breeds	very common. Breeds			no question they all knew this species
Willow Ptarmigan	Yes	Permanent, Breed	uncommon migrant	uncommon	uncommon. Breeds			no question they all knew this species
Snowy Owl	Yes	Permanent, Breed	common transient					no question they all knew this species
Short Eared Owl	Yes	Migrant, Breed		uncommon				not to be expected every year; perhaps only in high lemming years
Common Raven	Yes	Permanent, Breed	scarce visitor					no question they all knew this species
Red Phalarope	Yes	Migrant, Breed	common. Breeds	common. Breeds	common			hard to miss this species. Odd that two respondents claim not to have seen it.
Peregrine Falcon	Yes	Migrant, Breed	uncommon. Breeds		uncommon	2007		no question they all knew this species
Gryfalcon	Yes	Permanent, Breed		very uncommon				no question they all knew this species

Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Bald Eagle	No	Vagrant, Breed						quite probable that the two respondents did in fact see this species
Golden Eagle	No	Migrant, Breed						unlikely it was seen, but not impossible. Could be confused with Bald Eagle in immature plumage.
Glaucous Gull	Yes	Migrant, Breed	uncommon migrant			2004		most respondents knew this species. That one was unsure (and not a 'no') is encouraging
Herring Gull	Yes	Migrant, Breed	fairly common. Breeds	common. Breeds	common. Breeds	2004		no question they all knew this species
Mew Gull	No	Migrant, Breed						only # 6 reported seeing this species. While possible, I suspect he/she seen a Thayer's Gull even though Thayer's was not reported.
Ivory Gull	No	Accidental						possible that it was in fact seen by # 5. Would be hard to mistake this with any other species
Iceland Gull	Yes	Accidental		irregular				possible that it was seen by # 1, but there is room for confusion with Thayer's Gull which none of them reported.
Snow Goose	Yes	Migrant, Breed	fairly common. Breeds	common migrant		2004		no question they all knew this species. I have lumped Snow & Blue Goose together. They would have been separate by Hohn, Saville and Sutton.
Canada Goose	Yes	Migrant, Breed	very common. Breeds	common migrant		2004		no question they all knew this species.
Cackling Goose	n/a	Migrant, Breed						no question they all knew this species. Recently split from Canada Goose and would not have been reported by Hohn, Saville or Sutton.
White-fronted Goose	Yes	Migrant, Breed	scarce migrant			2004		interesting that only one respondent reported this species. Has been recorded more than once on NWT/NU Checklist survey
Tundra Swan	Yes	Migrant, Breed	scarce. Breeds	uncommon				no question they all knew this species
Arctic Tern	Yes	Migrant, Breed		abundant. Breeds	abundant. Breeds			no question they all knew this species
Thick-Billed Murre	Yes	Vagrant	uncommon	common migrant				most respondents knew this species. This is a seabird, and would only be encountered offshore in this geographic area.
Black Guillemot	Yes	Migrant, Breed	abundant. Breeds	common. Breeds				no question they all knew this species
Northern Fulmar	No	Accidental						possible but somewhat unlikely that it was seen by # 5
King Eider	Yes	Migrant, Breed	fairly common. Breeds	fairly common. Breeds	uncommon. Breeds	2004		no question they all knew this species



Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Common Eider	Yes	Migrant, Breed, wintertime	common. Breeds	common. Breeds	common. Breeds	2004		no question the all knew this species
Long Tailed Duck	Yes	Migrant, Breed	very common. Breeds	common. Breeds	common. Breeds	2004		no question they all knew this species
Northern Pintail	Yes	Migrant, Breed	fairly common. Breeds	common. Breeds	very common. Breeds	2004		can't explain why it was not seen by all. Could not be confused with any other species as reported.
Common Merganser	No	Migrant, Breed						highly unlikely they actually seen this species. None of them reported seeing Red-breasted Merganser, and no doubt that's what they seen
Arctic Loon	No							highly unlikely and very questionable that this species (easily confused with Pacific Loon) was actually seen
Common Loon	Yes	Migrant, Breed						all seemed familiar with this species
Red-throated Loon	Yes	Migrant, Breed	common. Breeds	abundant. Breeds	common			cannot explain why all of them have not seen this species!
Yellow-billed Loon	Yes	Migrant, Breed	rare spring migrant					very likely that those who claim to have seen it did so. The others either didn't see it as stated, or failed to properly ID compared to Common Loon
Pacific Loon	Yes	Migrant, Breed	not common. Breeds	not common. Breeds	common			all seemed familiar with this species
Species listed by others in reliable literature/journals; but not by respondents								
Dowitcher (Short-billed ?)	Yes	Accidental	accidental					not expected to be seen here
Rough-legged Hawk	Yes	Migrant, Breed	scarce migrant	fairly common				cannot understand why none of the respondents had not seen this obvious species
Pomarine Jaeger	Yes	Migrant, Breed	uncommon migrant	uncommon migrant				cannot understand why none of the respondents had not seen this obvious species
Parasitic Jaeger	Yes	Migrant, Breed	common. Breeds	common. Breeds	common			cannot understand why none of the respondents had not seen this obvious species
American Pipit	Yes	Migrant, Breed	uncommon. Breeds		uncommon	2004		cannot understand why none of the respondents had not seen this obvious species
Northern Shrike	No	Migrant, Breed		accidental			X	not expected to be seen here
Yellow-rumped Warbler	No	Migrant, Breed		accidental				not expected to be seen here
Cliff Swallow	Yes	Migrant, Breed	rare vagrant					not expected to be seen here

Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Dunlin	Yes	Migrant, Breed	fairly common. Breeds	fairly common. Breeds	very common	2004		cannot understand why none of the respondents had not seen this obvious species
Purple Sandpiper	Yes	Migrant, Breed	very scarce spring migrant	uncommon migrant				cannot understand why none of the respondents had not seen this obvious species
Pectoral Sandpiper	Yes	Migrant, Breed	scarce spring migrant	uncommon migrant		2007		cannot understand why none of the respondents had not seen this obvious species
Semipalmated Sandpiper	Yes	Migrant, Breed	abundant. Breeds	abundant. Breeds	abundant	2004		cannot understand why none of the respondents had not seen this obvious species. Undoubtedly the most common shorebird there
Sanderling	Yes	Migrant, Breed	fairly common migrant	common migrant	common migrant			cannot understand why none of the respondents had not seen this obvious species
Red-necked Phalarope	Yes	Migrant, Breed	scarce. Breeds	fairly common. Breeds	very common			cannot understand why none of the respondents had not seen this obvious species
Black-bellied Plover	Yes	Migrant, Breed	scarce migrant	regular migrant				cannot understand why none of the respondents had not seen this obvious species. Perhaps they don't differentiate with Golden-Plover
Gr. Black-backed Gull	No	Accidental		rare		2004		not expected to be seen here
Sabine's Gull	Yes	Migrant, Possibly breed	uncommon spring migrant					strange that none had seen it. I would have thought that a few would have
Thayer's Gull	Yes	Migrant, Breed	rare transient					strange that none had seen it. I would have thought that a few would have
Brant	Yes	Migrant, Breed	common spring migrant					cannot understand why none of the respondents had not seen this obvious species
Mallard	Yes	Migrant, Breed	accidental					not expected to be seen here
Green-winged Teal	Yes	Migrant, Breed	very uncommon		rare. Breeds			I would have thought that a least a few of the respondents would have reported this species
Red-breasted Merganser	Yes	Migrant, Breed	fairly common. Breeds					some reported (in error I suggest) Common Merganser. I think they were actually seeing Red-breasted Mergansers - not reported
Savannah Sparrow	Yes	Migrant, Breed	uncommon. Breeds		fairly common			fail to understand why this species was not reported
Dark-eyed Junco	No	Migrant, Breed	vagrant					not expected to be seen here
Tree Swallow	No	Vagrant						not expected to be seen here



Birds reported in interviews:	Is the bird within normal breeding range?	What status does the bird have within the area?	Hohn, 1968	Saville, 1951	Sutton, 1931	When was the bird listed with the NWT / NU Bird Checklist Survey?	Other sightings	Comments from Jim Richards on the likelihood of bird sighting frequency and interview findings.
Lesser Yellowlegs	No	Migrant, Breed			rare			not expected to be seen here
Black Duck	Yes	Vagrant		accidental	uncommon			not expected to be seen here; at least not regularly
Common Goldeneye	Yes	Migrant, Breed		common migrant				should have been reported (I think) by a few of the respondents
Red-winged Blackbird	No		accidental					not expected to be seen here
Smith's Longspur	Yes	Migrant, Breed	accidental					not expected to be seen here on a regular basis. Females alone could be confused with Lapland Longspur
Whooping Crane	No	Accidental			accidental			not expected here at all.
Species with range including Chesterfield Inlet according to Godfrey; not recorded by respondents or in available literature								
Ross's Goose	Yes	Migrant, Breed						somewhat surprised that none were reported
Greater Scaup	Yes	Migrant, Breed						somewhat surprised that none were reported
Merlin	Yes	Migrant, Breed						not expected here on a regular basis
Spotted Sandpiper	Yes	Migrant, Breed						not expected here on a regular basis
Hudsonian Godwit	Yes	Migrant						not expected here on a regular basis
Least Sandpiper	Yes	Migrant, Breed						somewhat surprised that none were reported
Barn Swallow	Yes	Vagrant, Breed						not expected here on a regular basis
American Tree Sparrow	Yes	Migrant, Breed						not expected here on a regular basis
White-crowned Sparrow	Yes	Migrant, Breed						not expected here on a regular basis



APPENDIX 4 NCRI FIELD GUIDE

INTRODUCTION

This Field Guide is a chronological account of tasks conducted during the 2008-2009 project year. In addition, this document can be used as a template to guide actions in future inventories.

The Guide is organized into four levels:

- Level 1 involves consultations, interviewee selection, and preparations required prior to the start of interviews.
- Level 2 contains interview protocols and all steps that result from their completion.
- Level 3 addresses GIS data digitization and image production.
- Level 4 addresses report completion and delivery back to the community, along with planning follow-up on project outcomes.

Information provided in all four levels must be available in both English and Inuktitut, which means that time required for document translation is an important consideration in the overall project work plan.

In addition, the establishment of a presence in each community is an important contributor to the project's ultimate success. Spending some time on each visit to get to know people, attend community events, and become familiar with local services and community resources (e.g. wharves, schools, government offices, etc.) will greatly reward the process.

LEVEL 1

Level 1 involved the development of a community profile (such as labourers, resources and infrastructure), along with the community consultations, preparation of locally relevant interview materials, selection of interviewees and training of local personnel.

Community Profile

Before beginning work in a community, and preferably before approaching potential interviewees, information about the study site was compiled. This information was used: to assist the literature review; to identify additional data that might be useful in the mapping process; to ensure that data collection would not be duplicated; and, to facilitate the report-writing process.

Information sought, included:

- Demographics
- Geography (location, description of coast)
- History of community, including government presence, points of interest, early settlement, traditional movements
- Current Institutions (local government, HTO, GN, schools, etc.)
- Current community activities, organizations, important events and activities
- Current community projects, e.g., economic development activity
- Land/sea based activities, reliance on traditional food sources, hunting territories
- Occupations and income profiles
- Reports of pollutants or other environmental accidents

- Perceived changes in climate (sea ice, winter camp locations and winter coast line)
- Changes in habitat, bird counts, fish, animals, marine environment
- Tourism resources
- Government reports and wildlife studies
- Common coastal/marine species found in the area

The desired output from such an exercise was a concise summary of the information gathered, that included: an annotated bibliography (using the Chicago Manual of Style) of important documents and data; a detailed contact list (name, contact, affiliation, etc.); a list and/or description of information that would be suitable for mapping; a binder/folder of all hard copies of information and an electronic backup of available files and web links.

Invitation and Consultation

Communities were invited to participate initially, with a letter of invitation that provided a detailed explanation of the coastal inventory, its objectives, timelines, and the manner in which the proposed work would be carried out. The invitation made clear that an initial community consultation was essential and would take place as soon as possible after agreement had been reached.

The initial meeting included all available Inuit hunters/trappers, Government representatives, youth groups, local researchers and non-profit organizations. This event was the first opportunity for the project team to establish a presence in the community, to identify community labour/service providers, to establish a short list of potential interviewees, to assess project risks and to organize administrative procedures related to community participation. In addition, it was important to establish very early the geographic extent of Inuit movement over the land. This information would be used to prepare maps

of the proper size and scale that would later be used in the planned interviews.

Next, the project team spent a minimum of a half-day touring the area that would be considered in the interviews. In most cases, a complete tour was impossible, but at the least, it covered important fishing/hunting areas, popular tourist attractions, and cultural sites within range of the community. Often, the guide was an excellent source of information on the area and its resources, and it provided the project team with a sense of place and involvement that had continuing benefits. It also sent an important message to the community that the project team was making an effort to become familiar with the places that would later be discussed in the interviews. These outings provided important material for the initial trip, and later final reports.

Finally, by end of the initial visit the team identified dates when it would return to the community to conduct the planned interviews. This also permitted the development of a realistic schedule for project deliverables.

Service Providers

Various services were required throughout the project lifecycle. These included interpreters, translators, transcribers, printers, student interns, and local outfitters. It was important that they were identified early and, if possible, used in some capacity before interviews were underway, in order to assess competence and reliability. Establishing early contact helped to identify schedule conflicts and important deadlines.

First Steps:

- When meeting with community organizations and other knowledgeable persons, a list of people was created. Information was gathered on each candidate (e.g. availability, cost, experience, knowledge

- background). Particular attention was paid to their relationship with service providers and other members of the community. Any causes for concern were addressed immediately.
- A determination was made as to appropriate levels of remuneration, which were then used in a standard manner across all communities involved in the inventory.
- Scheduling conflicts or important deadlines that could impact the project were explored in order to prevent unwanted interruptions in the project.
- Training and guidance were provided to those who signed on; for example, interviewers and translators required instructions as to the proper use of the interview survey, interview protocols and other methodologies required during the interview process. This was normally done the day before interviews began so that the information provided was immediate and relevant.

Interviewees

Interviewees are the subject-matter experts that contribute their knowledge to the project, guided by a semi-structured interview that provokes them to draw from their experiences information about species, such as their geographic location, when they occupy those locations, their migration routes, spawning areas or nesting sites. The number of interviewees selected in a community depended on many variables; such as, availability, community size, funding, and the data quality plateau (where information return was minimal with increasing numbers of interviews).

The preliminary selection of potential interviewees was made with the advice of community organizations and local knowledgeable persons. The project team then

created a final list of interviewees who were consistent with the objectives of a coastal resource inventory. Questions asked about each included:

- the nature of their hunting experience;
- their general area of interest;
- their geographic and species familiarity;
- the manner in which they travel over the land;
- the type of gear they use to harvest wildlife;
- their status - elder, experienced youth, retired or active hunter;
- whether they could provide historical or contemporary information;
- whether their focus was primarily terrestrial or marine; and,
- the degree to which they were esteemed within their community.

The final list was first reviewed with people/organizations in the community and then by the project team. Checks were then made to determine if they had previously been interviewed by others, resulting in transcriptions, maps, or audio files. If so, the information was summarized in a word document, noting species and locations so that the information could be included in the GIS project.

The overall objective was to gather as much information as possible about each potential interviewee, to gauge their 'fit' against project objectives, while maintaining awareness of cultural sensitivities.

Once an interviewee had been confirmed then initial contact was guided using the First Contact Calling Protocol (see Appendix 8). These pages were then photocopied for archival purposes while the originals were kept nearby during the interview setup, since they

contain important contact and background information. Whenever possible the interview setup was carried out by a community member, usually the interpreter. This was always done on the assumption that that individual chosen was fully capable of clearly communicating project goals and objectives.

Interview Team

Four essential personnel, in addition to the interviewee, participated in each interview: the Interviewer, Recorder, Scientist, Translator. Whenever possible a local student intern was hired to observe the interviews and take notes, thereby providing useful insights to the team as well as gaining experience and training. All personnel contributed to the setup and takedown of the interview, including maintenance of equipment (e.g. video camera, voice recorders). The role and responsibility of each individual is outlined below:

- Interviewer: responsible for posing survey questions to the interviewee via the translator (if necessary); assisting with drawing objects on map, when necessary; assigning codes to mapped items; clarifying questions; and, facilitating the overall interview process.
- Recorder: Throughout the interview, the recorder maintained a continuous written record, bridging information drawn on maps with that which was spoken; sometimes map codes were entered along with the question asked; since the Recorder was Inuktitut-speaking it was possible to provide a preliminary form of quality control during the exchanges between the interviewer, translator and interviewee; and, due to the "real time" nature of this process, this initial detailed account allowed rapid and precise data analysis well before the completion of final transcriptions and translations.

- Scientist: the scientist's role was that of an objective third party capable of focusing on the flow of the interview, identifying problems early, and beginning the process of contextualizing the data, something that proved to be very useful in both the data analysis and report writing phases; ensuring that data regarding species, abundances and location were set within an oceanographic context; and, wherever possible tried to link traditional knowledge and science in a complementary manner.
- Interpreter: the interpreter posed the Interviewer's question as precisely as possible, then translated and delivered the resulting response; clarification was often necessary to avoid unnecessary embellishment in either question or response and to encourage discussion whenever possible.
- Student Intern: local youths played an important role assisting in the interview process by also manually recording as much of the dialogue as possible around the mapping work, especially whenever questions were posed that were not part of the survey format; they also assisted the interpreter and recorder with translation. Intern and Recorder note taking were later consolidated to provide a complete record of the interview.

Interview Kit

The Interview Kit is the assemblage of materials required to conduct an interview (where all documents were available in both English and Inuktitut). Following is a list of materials and documents (most available as appendices) that together comprise an Interview Kit:

- Maps: the maps used in the interview were prepared using GIS and were constructed using freely available NTDB 1: 250 000 data. They were simple in style and included scale, latitude and longitude, lakes, rivers, contours, and key place names for orientation. Large



format maps were considerably easier to draw and print on and allowed the interviewee to see more detail over a larger geographic extent. The standard to date has been 64 inches by 42 inches. A map case was also essential, large enough to hold the blank maps and completed interviews. Folding maps was avoided as creases or tears can adversely impact their ability to be scanned later on.

- Interviewer Binder: contained an interview consent form, copies of the survey, species photos, species list/mapping codes, honorarium receipts, and service contract forms.
- Recorder Binder: contained a copy of the survey, species photos, species list and mapping codes.
- Student Intern Binder: contained a copy of the survey, species photos, species list and mapping codes, as well as a large notepad for documenting non-survey related dialogue.
- Equipment: batteries, battery chargers, user manuals, data cables, digital voice recorder, video camera with external microphone, tripod, card reader, multi-port surge protector, extension cords, markers, erasable color pencils, rubber bands, pencils, pens, tape, and other general office supplies. A computer with internet access to reference materials was helpful but not critical.
- Reference Materials: these documents included relevant research papers, species information sheets, wildlife identification books and community related information.

LEVEL 2

Level II addresses the immediate pre-interview period, the interviews, and the immediate post-interview period.

Pre-Interview

Before the interview began, the following preparations were essential:

- Attendance of the interviewee was confirmed, and transportation or assistance was provided, if needed.
- The interview kit, binders, equipment and maps were available and ready to go.
- Interview codes were entered on each page of the survey and the map sheet was coded. The interview code adhered to the following format - “Community”, “Interview Number”, and “Month and Year”, for example, “IG_3_1207” refers to Igloodik interview #3, during December, 2007. Map codes are similar, but with “Map #” placed before the interview code; for example, “Map_2 of 2_IG_3_1207” would refer to the second of two map sheets used during interview three in Igloodik during December 2007. Names were NOT written on the surveys or maps; names of interviewees were only recorded on the Consent Forms to protect privacy.

Interview

Following introductions, the consent form was reviewed with the interviewee. Once the contents were clear and understood the form was signed by the interviewee and the interview code was written on the document, along with the interviewee’s name in clear print. Assuming the interviewee consented to the use of audio and video recording, the devices were turned on.

The Recorder played an important role in the interview process. Following are some examples of those responsibilities:

- Identifying questions that were unanswered for whatever reason;
- Ensuring chart numbers and map codes were written into the spaces provided.
- Ensuring that “lines” drawn are noted as such;
- Interrupting the interview process whenever clarification was required or if some portion of a question was overlooked;
- Listening to the interview and interrupting if the translation was incorrect, communication was poor or clarity was lacking;
- Ensuring that all responses and corrections were accurately reflected in the survey;
- Ensuring that additional comments were recorded properly in allotted locations and when space was insufficient ensuring that a constant line of continuity was maintained between them and the relevant maps and map codes; and, .
- Providing guidance and assistance to student interns throughout the interview process.

The interviewer and interpreter kept close and continuous communication throughout the interview while strong eye contact was maintained with the interviewee. The language of the interviewee was used as much as possible.

The survey guides the interview process but the interviewer never hesitated to open the discussion in other directions, while still moving the process along. Interviews varied in length from 2-6 hours, but averaged approximately four hours.

Mapping was a key element of the interview process and required attention to detail and proper coding. The interviewer ensured the following:

- Separate codes were required for every area addressed and sometimes multiple codes for specific areas were needed, for example, if a location contains both arctic char and tundra swans the two codes must be affixed to that site;
- Care was taken to clarify whether the information presented was modern or historical. When some doubt existed then the year of observation was requested; and,
- Interviewees were prompted to respond, as much as possible, by drawing on the provided map as opposed to a verbal answer alone.

Post-Interview

The post-interview procedures are summarized in the following checklist:

Interviewee

- Two consent forms signed (one remained with the interviewee).
- Two honorarium receipts signed (one given to interviewee with agreement on method of payment).
- Token gift provided to interviewee.
- Points agreed to with the interviewee have been noted (e.g. provision of reports, contact information).
- Details of every interviewee (e.g. consent form information, address, and biography details) were logged into an excel file.

Translator

- Two Contract Service receipts were updated with hours worked and later signed (one given to translator). This was done at the end of all interviews, rather than after each one, but in either case it is essential to keep track of interview hours.

Maps

- Checked for labelling interview codes.
- Checked for color-coding and darkened where needed.
- Ensured that all areas drawn had codes.
- All codes checked for accuracy in style and numbering.
- Maps scanned into TIFF files and given to the person responsible for the GIS.
- Maps taped along top and bottom edges to protect them, and labelled to ensure reliable recovery once in storage.
- Maps placed in storage location.

Survey

- Interview codes were entered on every page of the survey and any additional pages. Names of interviewees were not recorded on the survey.
- Chart numbers accompanied map codes in the survey, especially if more than one map was used in an interview.
- All information on additional note pages was incorporated into the survey; by placing a check mark and the reviewer's initials on each page to indicate that the notes had been incorporated. Maps were then

reviewed for notes that may have been written directly on the map.

- Survey was checked against video/audio files and transcription.

Audio

- All audio files were properly named and stored on a computer.
- Two sets of CD/DVD copies of audio were created and labelled for each interview; one for project archives and one set to be returned to the community (typically the HTO).
- Audio files/transcriptions were reviewed and any missing information was entered into the survey and final data entry.

Video

- All video files were properly named and stored on a computer.
- Two sets of CD/DVD copies of video were created and labelled for each interview; one for project archives and one set to be returned to the community (typically the HTO).
- Videos were reviewed and missing information was entered into the survey and final data entry.

General

- All data was backed up according to protocols (see end of this section).
- Interview kit was refreshed by inserting new documents.

- A tracking document was created for each community. It records the participant's name, address, email, consent form details (e.g. whether they agreed to be video taped or not) and a brief description of the interviewee. This information can be useful later when attempting to contact an interviewee, readily access the details of their consent, or write up a biography of the person for the final report. This document can also be used to list people who were not interviewed, but recommended, names of translators or students, contact information for community organizations or any other community data.

- A tracking document was created for the final report. This was similar to a draft table of contents that allowed each report section to be tracked for completion, when it was sent for translation, when translation was complete, and finally, when it was sent to the printers for final layout. This document was very useful when compiling and finalizing the report for the community.

Transcription (optional)

- A blank MS Word document was opened and saved using the interview code followed by 'trans'; for example, "IG_4_0108_trans.doc".
- The beginning of each transcription was identified with: Interview Code, Interview Date, Interviewer Name, Duration of Transcription, Duration of Interview Transcribed, identification of all persons on the tape, along with any other general comments.
- Transcriptions were verbatim; English as English and Inuktitut translated into English. Key Inuit words were kept (un-translated) in the body of the text in Inuktitut and a glossary created to append to the transcription. This was done because some words cannot be translated well and/or they have extended

meanings that cannot be captured in the flow of the translation.

- Verbatim translations did not include irrelevant conversation; such as, meaningless cross-talk.
- Additional comments were added to a transcription using Track Changes in MS Word.
- Questions from the survey were used as they were written, as much as possible, to save time and introduce uniformity throughout the process.
- Dialogue was coded in the following way: "I-" to indicate what the Interviewer said, "E-" to indicate what the Interviewee said, "T-" for the Translator, "A-" for additional respondents on the tape (e.g. wife, son, uncle), "O-" for the Observer, and "R-" for what the Recorder said.
- Important passages were highlighted for later data analysis.

Excel Data Entry

- All data recorded on paper during the interview must be entered into an excel spreadsheet (see example template on CD). This spreadsheet should be updated after video/audio files are reviewed, and the GIS and transcription is completed. Complete the data entry as soon as possible following the completion of the interview so that if there are any remaining uncertainties concerning data then the Transcribers (if being used) should be notified so they can check for clarification when completing the transcription. This will also assist the person doing the GIS so that issues or changes can be identified early.
- Ensure that the map data and survey data correlate prior to data entry; for example, do not list four map



- codes in the survey if only one is on the chart). This check should occur immediately after the interview has been completed. To do this, each question, chart number and map code should be double-checked.
- Insert an 'NA' into all cells that were not used in each worksheet so that it is clear it was not left blank mistakenly.
- When recording months please use the month's number, followed by a comma. For example, May, June and July would be "5, 6, 7". No space is required following the commas. If entering a range of months enter "7 to 12", do not write "7-12" as this will be converted to a date in the cell.
- When recording time intervals please use the entire year, e.g. '1980-1985.' If only one year was given write out the entire year, e.g. '1987'.
- Write comments in complete sentences whenever possible as this information will/may be used in reports later on. Put quotation marks around comments that were word-for-word what the interviewee said.
- In cases where a husband and wife are interviewed together, distinguish information about a husband or wife by prefixing the data entered with a "H:" or a "W:". For example; H: born in Arviat; W: born in Rankin Inlet.
- Wherever species names are given in Inuktitut be sure to update the Species List for the project with this information.

Data Backup and Archiving

- Electronic File Back-up: All project related files were backed up in two locations (e.g. Desktop and external hard drive or network) onsite and one offsite (e.g.

external hard drive). In addition, CDs and DVDs were burned as hard copy backups that were included in archive boxes. Note: electronic files, especially audio and video, take up a great deal of space so forethought was given to acquiring the necessary storage capacity (e.g. video files can be 10 to 100 Gigabytes).

- All project documents were copied and stored in an archive box for each community. Originals were stored in the project office.
- Team members were diligent about signing in and out all materials from any storage location. Whenever possible, sign out copies of materials, not originals.

LEVEL 3

The GIS component of a coastal resource inventory is time consuming, technical and must be completed prior to writing the bulk of the final report. Data drawn on the maps must be organized, scanned, geo-referenced, digitized, queried, formatted and exported. The personnel responsible for the GIS work must be trained in the use of the software; otherwise the work will have to be contracted out as it is highly technical. This part of the guide is an outline of what was done to complete the GIS work, but it is also written in a way that it could be followed step-by-step to replicate it. Note that all of the GIS guide that follows is subject to change and is relevant to the coastal inventory and users of ArcGIS 9.3 (later versions of software may not comply).

Getting Started

The maps, surveys and excel data entry is critical to have completed and checked for accuracy before starting the GIS component. The excel data entry in particular is very important since it contains all the data that will become associated with the GIS project. The excel file outlines how many objects are to be drawn for each interview, the necessary labels that will be associated with each object and is also the source for the most complete and up to date assemblage of interview data.

The following checklist will assist in getting the GIS project underway:

- Compile all notes from the project team into the survey document. Notes can also often be made on the paper map itself so ensure that the map is also checked and include any notes in the survey document.
- Double check that the map codes in the paper survey match up with the codes on the interview maps. Address discrepancies and discuss issues with the

project team. Catching mistakes and ensuring the survey data is complete at this stage will save a lot of time in later stages.

- Using the updated survey document, complete the excel data entry for each interview. The template provided on the CD provides details on what data goes into each column. Ensure that all fields are filled in. Where no data exists enter "na".
- Print the excel data entry for reference when mapping. Check items off as they are digitized and make note of any discrepancies.
 - Note: After mapping is completed update the data entry with any notes/changes that were written on the printed worksheets. For example, if an object was discovered on the map that was not included in the data entry then it must be added to the excel data entry as well. Or if a map code was present in the data entry that did not exist on the map, ensure it is deleted or clarify with the project team.

Digitizing and Exporting Data

Every object drawn during an interview must be digitized into a GIS project. The data is then organized into groups (e.g. by species), formatted and exported as a PDF image to be analyzed and included in the final report. The following is a guideline, listed in chronological order, for how this can be achieved.

- Scan the map into a TIFF file format.
- Create a new GIS project (this should be done for each community's data).
- Set data source pathways to be relative.

- Set the Dataframe Properties for the appropriate coordinate system.
- Import each scanned map image into the GIS project and select 'yes' when prompted to build pyramids.
- Ensure that each imported image is assigned a compatible coordinate system to the Dataframe.
- Georeference the TIFF files by creating control points; this must be done for every map scanned.
- Modify the coordinate system, if necessary.
- Using ArcCatalog, create two shapefiles; one for polygons and one for lines. Migration routes, for example, are typically digitized into the shapefile for lines and all other areas drawn will be digitized into the shapefile for polygons. This is essential for being able to perform the 'join' function with the excel data entry later on.
 - Note! Add the 'Label_Num' and 'Map Code' attribute field to each shapefile; make the fields a text field of at least 50 characters.
- Add the shapefiles to the GIS project.
- Select the target shapefile and digitize the objects drawn in each interview's TIFF file. It is recommended to do all polygons first and then lines.
 - Try to digitize lines in the direction of their arrows, if applicable, as this makes setting the line style easier later on.
 - It is helpful to digitize all objects at the same scale (e.g. 1:250,000) and to keep the lines smooth by using enough vectors to capture the true shape of the object to be drawn.
- After an object is drawn, right click on it and enter the Label Number ('Label_Num) and Map Code (Map_Code) into the available attribute field. These fields must have data entered so that a Join can be performed later on with the excel data entry.
- Once all objects are digitized, review the Attribute tables for both the polygons and lines. Compare the data with the data entry that was printed off and ensure that map codes are entered in the exact same way. For example, Char_1 in the attribute table is Char_1 in the data entry. Address all discrepancies and update the excel data entry or the attribute tables as needed.
- Revisit the Excel data entry and do the following:
 - Modify the original excel data entry so that it is in a format that can be used for joining in the GIS project.
 - Delete all columns before the one labelled 'Res_Num' and after the first one labelled 'Comments'. Leaving columns: Label_Num, Object_Num, Inter_Code, Gen_Com, Chart_Num, mapcode, Species, Category, Pres_Hist, Abund, Year, Months, and Comments.
 - Delete all irrelevant or blank rows.
 - Delete worksheets that do not have mapping codes in them; leaving only Life History, Fish, Invertebrates, Marine Mammals, Marine Plants, Birds, and Special Places
 - Consolidate the remaining worksheets into one worksheet; do this in order by category, not interview (e.g. Life History first, followed by Fish).
 - Save the modified file as "GIS Data_Polygons"
- Very carefully check every record in the file to ensure that numbering and spelling is correct and that all fields have been filled out properly. If any data is missing (e.g. a Category or Label Number) it must be filled out before proceeding; otherwise all other use of the data will be affected.
- Create new excel files by making two copies of the "GIS Data_Polygons" file: rename one to "GIS_Everywhere" for data coded with an appended 'e' indicating that the species are found everywhere; and the other "GIS Data_Lines" for data that is line data.
- Open each of the Excel files and delete all irrelevant data from them. In the "GIS Data_Polygons" file remove all line data and data coded as everywhere. In the "GIS Data_Lines" file remove all data except those areas coded as migration routes or lines. In the "GIS_Everywhere" file remove all data that does not have an "e" in the mapping code.
- Save the line and polygon Excel files as Comma Separated Value files (.csv). This format will be used to import into the GIS project.
- Keep the "GIS_Everywhere" file for use later.
- Use the Join/Relate feature to join the data in the excel data entry for polygons with the polygon shapefile in the GIS project. Do the same for the lines data entry and the lines shapefile.
 - Make sure the shapefile attribute table and the excel file match up and have two fields in common (Map Code and Label Number). Map Code is best to use for a join, but make sure the names are written differently (mapcode in excel, Map_Code in GIS attribute table) so that when the tables are joined the data is not overwritten, it is appended.
- Add the .csv file to the GIS project by right clicking on the target shapefile and selecting Join. In order of appearance in the data window: choose 'Map_Code', choose the appropriate 'CSV' file, choose 'mapcode', and press 'OK'. The join is temporary at this stage.
- To finalize the join: right click on the target shapefile, Export the data, click OK, and say 'Yes' when asked to add the exported data as a new Layer. This new layer is now the file to be used; the original one can be removed from the GIS project (but do not delete it).
- Open the attribute table for the new shapefile and, after checking the map codes, delete the map code column you don't need (i.e. the incomplete column). Repeat this procedure for the excel data entry for lines and the line shapefile in the GIS project.
 - If there are codes that are not linked to data, review the excel data entry and even the maps to address any discrepancies.
 - If data collected was coded with a "u", representing "unsure" data, then decide if this data will be included in the final report. If it is not going to be included, delete each record now from the attribute table for the polygon and line layers so that it is no longer included in any future data processing. Otherwise, move on to the next step.
- Prior to querying out data to build maps from it is helpful to create a list of all the species mentioned and also to create a preliminary outline for how many maps will be created and with what data on them for the final report. This is referred to as creating the "Images List".



- Refer to the three excel data entries that were created (polygons, lines and everywhere) and compile a list, organized by category, of all the species (or data types) mentioned. For example, a list of fish may be made up of Char, Whitefish, Bull Trout, Lake Trout and Land Locked Char.
 - Now organize the list into groups that are most probably going to be represented together in the final report. For example, group Trout together, or put all Sandpipers in a group under birds.
 - Note which species are also listed as “everywhere”. For example, a species may be drawn by 9 of 10 interviewees, but the 10th interviewee codes the species as being “everywhere” they travel. Place an asterisk or note next to this species so that it is clear that it has also been coded as “everywhere”. This helps in ensuring that the text associated with each image in the final report will include data coded as being “everywhere”.
 - In some cases; for example, with Canada Geese, there may be no objects drawn and every participant codes the information as being “everywhere”. Be sure to note these instances as “everywhere only”. Species or data that is referenced as “everywhere only” can still be added to the final report images by creating empty shapefiles of Point type and ensuring that reference is made to the data via the legend and also the image caption.
- Query the polygon file for data that will be represented in the final report; use the Images List, created in the last step, as a guide. For example; query out all Char data and save it as a new layer so that data set can be used to create the final image of all the Char areas in the report. Repeat these queries and layer creation until all the data subsets have been addressed. Data subsets could be “All Char”, “All Historic Clam Locations”, “All Present Denning sites for Polar Bear”, etc. Each data subset created will become part of a map in the final report.
 - Add the necessary base layers to the GIS project. These can come from many sources; the inventory used NTS map sheet data available on the NRCAN (Natural Resources Canada) website. Base layers are the ‘background’ upon which the interview data is displayed.
 - Layout each image, again using the Images List as a guide and modify as needed. In layouts be sure to set the symbology (color, line width etc.), label each object, check titles, legends, scale, data source reference, geographic extent, etc. After each image’s layout is complete it is convenient to save the project as a new project with the same name as the data subset (e.g. All Char_Kugluktuk). Doing so allows the image to be opened and edited later on without having to revisit all the layout tasks.
 - When symbolizing data the important thing is to keep color coding consistent; for example, so that Soft Shell Clams are the same color on all maps showing Soft Shell Clams. This can be a challenge when it comes to the birds, so a suggestion is to group the birds by type and color code within the subcategories (e.g. Sandpipers).
 - The scale and geographic extent used in exported images for the report is a trade off between consistency of the image produced and the detail that can be shown on each image. This can be decided by the project team based on the needs of the report.
 - Use Extent Rectangles to zoom in on areas that need more scrutiny or for areas that are heavily congested with data.

- Before exporting images, check the following: image title, labels, legend, line widths, object colors, legend title, legend contents, scale, scale bar, data source, and geographic extent. Also ensure that the data associated with the image is complete. For example, if 9 char areas are visible, but there are 11 in the attribute table then address these discrepancies. Some areas may be overlapping making them seem invisible on the map.

LEVEL 4

Delivering the report and associated project results back to the community was a ceremonial event that included as many stakeholders as possible (e.g. public officials, interviewees, local government, youth etc.). A formal invitation was made and corresponded with delivery of the report, in both English and Inuktitut, along with supporting project materials (e.g. archive materials) to the HTO.

This can be an excellent opportunity to:

- Request letters of support from key groups for future use which can be included in the project files.
- Address any outstanding project budget or financial details.



APPENDIX 5 NUNAVUT COASTAL RESOURCE INVENTORY SURVEY

Interview code: _____
Interview date: _____
Interview location: _____

This project has been initiated by the Fisheries and Sealing Division. The members of our team here today are _____ (introduce interview team).

Our project is a mapping project to take an inventory of coastal and marine resources. Coastal resources are the animals and plants that live near the coast, on the beaches, on and around islands, above and below the surface of the ocean, above and below sea ice, and on the sea floor. To do this inventory we will be asking you about the location of animals that you know about, where you see them, and what time of year you see them. We will be using different colored pencils to draw on the maps and for each area drawn we will be asking a series of questions.

All of the data we collect here today will come back to the community for use by the community. It will also help government identify economic development and conservation opportunities that can be explored with yourself and the community.

During the interview, there will be regular breaks, about every 20 minutes or so, but feel free to ask for a break at any time.

Do you have any questions before we begin?

Yes.....1

No.....2

Comments:

Interview Start Time: _____

TABLE OF CONTENTS

- Section 1 – Participant History 104
- Section 2 – Travel Routes, Familiar Areas, Archeological Sites/Camp Sites/Other 104
- Section 3 – Species 105
 - Fish 105
 - Invertebrates 106
 - Marine Mammals 108
 - Marine Plants..... 109
 - Birds 111
- Section 4 – Special Places..... 112
- Section 5 – Other Reason 113
- Section 6 – Economic Development 113
- Section 7 – Change and the Future 114
- Closing Questions..... 114

SECTION 1

Participant History

To begin with we would like to ask you several questions about yourself and your fishing and hunting background.

1. **What year were you born?** _____
2. **Where were you born?** [encourage use of map]_____
3. **Where did you grow up?** [encourage use of map]_____
4. **How long have you lived in** [community name]?_____
5. **How old were you when you started fishing and hunting?** _____
6. **Are you still actively fishing and hunting?** [seasonally or year-round]
 Yes...1 No...2 [go to next question]
 Comments: _____
7. **(optional) If No, when did you stop fishing and hunting** [year]? _____
8. **Can you list all of the animals that you fish and hunt?**
 [since year 2000; recently; capture which ones are commercially harvested]
 Yes...1 No...2
 Comments: _____
9. **Are there any animals that you don't fish and hunt anymore? If so, why?**
 [is it because you can't, you don't want to, or you are not allowed to]
 Yes...1 No...2 Not Sure...3 Skipped...4
 Comments: _____

SECTION 2

Travel Routes, Familiar Areas, Archeological Sites/Camp Sites/Other

10. **Can you circle the area(s) on the map that you are most familiar with** (areas that you have spent a lot of time in, travel routes, hunted frequently, feel you know better than any other areas)?

Yes...1	No...2	Not Sure...3	Skipped...4
Chart #	Map Code	Type	Comments

11. **Can you show us the locations of archeological sites** (traditional sites, gathering places, camp sites, or other sites of importance to you and/or your community? [e.g. places where you find good Ulu making material, places with good soap stone, sod houses, rock houses, tenting places, anchoring places]

Yes...1	No...2	Not Sure...3	Skipped...4
If yes, please draw the area(s) on the map and tell us about each place.			
Chart #	Map Code	Type	Comments



SECTION 3

Species

Now we are going to talk about different animals. There are five parts to this section: fish, invertebrates, marine mammals, birds, and marine plants. I am going to show you photos and ask you to tell me which species you recognize, what you call them and to show me where you see them and at what time of year. I will also be asking you about areas where you find a lot of each species, their spawning areas, nursery areas and possible migration routes.

FISH

12. I'm going to show you some photos of fish. Please let me know if there is any that we do not have a picture of.

LIST OF SPECIES KNOWN:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Comments: _____

13. Can you identify areas where these animals are found in particularly high abundance? Areas where you find more than anywhere else? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
_____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

14. Can you identify areas where these animals are spawning/nesting? These are areas where animals go to reproduce or have their babies. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
_____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

15. Can you identify nursery areas for these animals? These are areas where animal go to raise their young or where young animals congregate until they are adults/older. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
_____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

16. (optional) Do these animals migrate? If they do, can you draw arrows indicating the direction of their migration and at what time of year? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
_____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

17. Has anything changed about your harvests (decreased, increased or remained consistent) over the years?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think it has changed?

Comments _____ Why _____

18. Has anything changed about the animal itself? Do they taste different or have a different texture; are they smaller, bigger, or skinnier? Are they producing more or fewer young?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think they have changed?

Comments Why

19. Do you think there is enough of any of these animals that they could be used to create income or jobs for people in your community? Or is there only enough for personal use?

Yes...1 No...2 Not Sure...3 Skipped...4

Comments Why

20. Would you want to see any of these animals used in a commercial way?

Yes...1 No...2 Not Sure...3 Skipped...4

If not, why?

Comments Why

21. Are there other animals commonly found in these areas?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

22. Can you describe the habitat that these animals are found in (sandy bottom, high cliffs, high current, islands etc.).

[link map codes already used to descriptions of habitat, or use codes]

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

23. Are there any that we have not asked you about? Describe them/tell us about it.

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

24. Are you seeing any different types of these animals now than you used to see? Are there any that you have never seen before? Describe them/tell us about it.

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

INVERTEBRATES

25. I'm going to show you some photos of invertebrates. Please let me know if there is any that we do not have a picture of.

LIST OF SPECIES KNOWN:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
-------	-------	-------	---

Comments



26. **Can you identify areas where these animals are found in particularly high abundance? Areas where you find more than anywhere else?** [these can be areas they have already identified]
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
27. **Can you identify areas where these animals are spawning/nesting? These are areas where animals go to reproduce or have their babies.** [these can be areas they have already identified]
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
28. **Can you identify nursery areas for these animals? These are areas where animal go to raise their young or where young animals congregate until they are adults/older.** [these can be areas they have already identified]
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
29. **(optional) Do these animals migrate? If they do, can you draw arrows indicating the direction of their migration and at what time of year?** [these can be areas they have already identified]
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
30. **Has anything changed about your harvests (decreased, increased or remained consistent) over the years?**
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, why do you think it has changed?
 Comments _____ Why _____

31. **Has anything changed about the animal itself? Do they taste different or have a different texture; are they smaller, bigger, or skinnier? Are they producing more or fewer young?**
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, why do you think they have changed?

- Comments _____ Why _____

32. **Do you think there is enough of any of these animals that they could be used to create income or jobs for people in your community? Or is there only enough for personal use?**
 Yes...1 No...2 Not Sure...3 Skipped...4
 Comments _____ Why _____

33. **Would you want to see any of these animals used in a commercial way?**
 Yes...1 No...2 Not Sure...3 Skipped...4
 If not, why?
 Comments _____ Why _____

34. **Are there other animals commonly found in these areas?**
 Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Species Comments

35. **Can you describe the habitat that these animals are found in (sandy bottom, high cliffs, high current, islands etc.). [link map codes already used to descriptions of habitat, or use codes]**
 Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

36. **Are there any that we have not asked you about? Describe them/tell us about it.**
 Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

37. Are you seeing any different types of these animals now than you used to see? Are there any that you have never seen before? Describe them/tell us about it.

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

MARINE MAMMALS

38. I'm going to show you some photos of marine mammals. Please let me know if there is any that we do not have a picture of.

LIST OF SPECIES KNOWN:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Comments

39. Can you identify areas where these animals are found in particularly high abundance? Areas where you find more than anywhere else? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
 _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

40. Can you identify areas where these animals are spawning/nesting? These are areas where animals go to reproduce or have their babies. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
 _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

41. Can you identify nursery areas for these animals? These are areas where animal go to raise their young or where young animals congregate until they are adults/older. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
 _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

42. (optional) Do these animals migrate? If they do, can you draw arrows indicating the direction of their migration and at what time of year? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart # Map Code Year Months
 _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

43. Has anything changed about your harvests (decreased, increased or remained consistent) over the years?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think it has changed?

Comments _____ Why

44. Has anything changed about the animal itself? Do they taste different or have a different texture; are they smaller, bigger, or skinnier? Are they producing more or fewer young?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think they have changed?



Comments Why

45. **Do you think there is enough of any of these animals that they could be used to create income or jobs for people in your community? Or is there only enough for personal use?**

Yes...1 No...2 Not Sure...3 Skipped...4

Comments Why

46. **Would you want to see any of these animals used in a commercial way?**

Yes...1 No...2 Not Sure...3 Skipped...4

If not, why?

Comments Why

47. **Are there other animals commonly found in these areas?**

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

48. **Can you describe the habitat that these animals are found in (sandy bottom, high cliffs, high current, islands etc.).**

[link map codes already used to descriptions of habitat, or use codes]

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

49. **Are there any that we have not asked you about? Describe them/tell us about it.**

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

50. **Are you seeing any different types of these animals now than you used to see? Are there any that you have never seen before? Describe them/tell us about it.**

Yes...1 No...2 Not Sure...3 Skipped...4

Chart #	Map Code	Species	Comments
---------	----------	---------	----------

MARINE PLANTS

51. **I'm going to show you some photos of marine plants. Please let me know if there is any that we do not have a picture of.**

LIST OF SPECIES KNOWN:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Comments

52. **Can you identify areas where these animals are found in particularly high abundance? Areas where you find more than anywhere else? [these can be areas they have already identified]**

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

53. Can you identify areas where these animals are spawning/nesting? These are areas where animals go to reproduce or have their babies. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

54. Can you identify nursery areas for these animals? These are areas where animal go to raise their young or where young animals congregate until they are adults/older. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

55. (optional) Do these animals migrate? If they do, can you draw arrows indicating the direction of their migration and at what time of year? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Year Months
 _____ _____ _____ Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

56. Has anything changed about your harvests (decreased, increased or remained consistent) over the years?

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, why do you think it has changed?
 Comments _____ Why

57. Has anything changed about the animal itself? Do they taste different or have a different texture; are they smaller, bigger, or skinnier? Are they producing more or fewer young?

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, why do you think they have changed?
 Comments _____ Why

58. Do you think there is enough of any of these animals that they could be used to create income or jobs for people in your community? Or is there only enough for personal use?

Yes...1 No...2 Not Sure...3 Skipped...4
 Comments _____ Why

59. Would you want to see any of these animals used in a commercial way?

Yes...1 No...2 Not Sure...3 Skipped...4
 If not, why?
 Comments _____ Why

60. Are there other animals commonly found in these areas?

Yes...1 No...2 Not Sure...3 Skipped...4
 If yes, please list:
 Chart # Map Code Species Comments

61. Can you describe the habitat that these animals are found in (sandy bottom, high cliffs, high current, islands etc.). [link map codes already used to descriptions of habitat, or use codes]

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

62. Are there any that we have not asked you about? Describe them/tell us about it.

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

63. Are you seeing any different types of these animals now than you used to see? Are there any that you have never seen before? Describe them/tell us about it.

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments



BIRDS

64. I'm going to show you some photos of birds. Please let me know if there is any that we do not have a picture of.

LIST OF SPECIES KNOWN:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Comments _____

65. Can you identify areas where these animals are found in particularly high abundance? Areas where you find more than anywhere else? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

66. Can you identify areas where these animals are spawning/nesting? These are areas where animals go to reproduce or have their babies. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

67. Can you identify nursery areas for these animals? These are areas where animal go to raise their young or where young animals congregate until they are adults/older. [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

68. (optional) Do these animals migrate? If they do, can you draw arrows indicating the direction of their migration and at what time of year? [these can be areas they have already identified]

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

69. Has anything changed about your harvests (decreased, increased or remained consistent) over the years?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think it has changed?

Comments _____ Why _____

70. Has anything changed about the animal itself? Do they taste different or have a different texture; are they smaller, bigger, or skinnier? Are they producing more or fewer young?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, why do you think they have changed?

Comments _____ Why _____

71. Do you think there is enough of any of these animals that they could be used to create income or jobs for people in your community? Or is there only enough for personal use?

Yes...1 No...2 Not Sure...3 Skipped...4

Comments _____ Why _____

72. Would you want to see any of these animals used in a commercial way?

Yes...1 No...2 Not Sure...3 Skipped...4

If not, why?

Comments _____ Why _____

73. **Are there other animals commonly found in these areas?**
 Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please list:

Chart #	Map Code	Species	Comments

74. **Can you describe the habitat that these animals are found in (sandy bottom, high cliffs, high current, islands etc.).**
 [link map codes already used to descriptions of habitat, or use codes]

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

Chart #	Map Code	Species	Comments

75. **Are there any that we have not asked you about? Describe them/tell us about it.**

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

Chart #	Map Code	Species	Comments

76. **Are you seeing any different types of these animals now than you used to see? Are there any that you have never seen before? Describe them/tell us about it.**

Yes...1 No...2 Not Sure...3 Skipped...4
 Chart # Map Code Species Comments

Chart #	Map Code	Species	Comments

SECTION 4

Special Places

Now we are going to ask you about areas of high diversity (biologically rich). Areas of high diversity are areas where many different animals, such as fish, birds, marine mammals, invertebrates etc. can be found together in one place (e.g. an island or inlet).

77. **Do you know of areas like these? Why do you think they are diverse?**

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please draw the area(s) on the map, tell us about them, and tell us what months of the year these areas have a lot of different animals in them.

Chart #	Map Code	Year	Months
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
_____	_____	_____	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Comments



Section 5

Other Reason

Now we are going to ask you about areas that are important to you for any other reason than we have already discussed. These areas could be scenic areas, areas you consider particularly beautiful or pristine (e.g. waterfall, view, secluded).

78. Do you know of areas like these?

Yes...1 No...2 Not Sure...3 Skipped...4

If yes, please draw the area(s) on the map, tell us about them, and tell us what months of the year these areas have a lot of different animals in them.

Table with columns: Chart #, Map Code, Year, Months (Jan-Dec). It contains 8 rows of blank lines for data entry.

Comments

Two horizontal lines for writing comments.

SECTION 6

Economic Development

List of types of businesses or economic development to guide discussion:

- Guiding: camps, fishing, military, transportation, training, capacity building, knowing the land
• Tourism: cultural, landscape, wildlife
• Commercial Fishery: infrastructure (e.g. Turbot fishery)
• Small Business: local harvest (e.g. clams), crafts
• Military: northern rangers
• Climate Change/Water Quality etc.: environmental monitoring activities
• Education: teachers, youth programs
• Mining
• Oil and Gas

79. Describe what the infrastructure is currently like in the community as it relates to the marine environment (e.g. wharves, boats, storage, anchoring sites, freezers).

Two horizontal lines for describing infrastructure.

80. What infrastructure do you think is needed or could be improved in order for your community to continue current hunting, fishing and commercial activities?

Two horizontal lines for describing needed infrastructure.

81. What do you think would have economic development potential in your community? What are some of your ideas?

Two horizontal lines for describing economic development potential.

82. Do you think Tourism would be a good business to have in your community? Tell us what you think about Tourism.

Yes...1 No...2 Not Sure...3 Skipped...4

Two horizontal lines for providing thoughts on tourism.

SECTION 7

Change and the Future

- 83. Have there been any changes you could discuss that you are concerned about? Change can be related to the animals or your community; such things as climate change, pollution, erosion, sea ice, community, economy or quality of country food.

- 84. How have these changes impacted you and your community?

- 85. What do you think needs to be done about those changes that have had a negative impact? (e.g. erosion, climate change)

- 86. What would you like to see for the future of your community and the animals in the area?

- 87. What concerns do you have about increasing marine transportation? [impacts of ballast water, emissions, garbage, shipping lanes, construction of ports, noise pollution, ice break-up]

Closing Questions

Before we finish, we would like to find out what you think about this kind of research and we would like to give you the opportunity to make any further comments.

- 88. Do you have any questions, comments, or suggestions for us about this interview? (Y/N)

- 89. Is there anything that you would like to discuss that we have not already covered? (Y/N)

- 90. Have you ever done an interview like this before? (Y/N)

- 91. Did you enjoy the interview? (Y/N)

Time Interview Completed: _____

(optional) Time and Date of Second Appointment _____



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Salvelinus namaycush</i>	Lake Trout	Δᓐᓐᓐᓐ Δᓐᓐᓐᓐ; Δᓐᓐᓐᓐ; Δᓐᓐᓐᓐ	I&ugaq; I&uuq; Akalukpik; Col-lic-puk; Iluuraq; Iclook; Ildlorak; Ihok; Ikalukpik; Ikhiloktok; Ikhlorak; Ilortoq; Iqluq; Ishioraliktaq; Islorak; Isok; Isuuq; Isuuqiaq; Isuuqiq; Isuuraaryuk; Isuuraq; Ivitaruk; Keyteeleek; Milaqqkayoq; Naaqtuuq; Nauktoq; Naluarryuk; Sigguayaq; Siuktuuk; Siyuktuuq; I&uuraq	Touladi, truite grise	Ikalupik, Ehok; Ihuuq	LT	FW
<i>Salvelinus malma</i>	Dolly-Varden	Δᓐᓐᓐᓐᓐᓐ	Iqalukpik	Dolly-Varden; omble du Pacifique	Iqalukpik; Imaulluk	DV	FW/SW; Often confused with Land Locked Char or Spawning Char. Not known in Nunavut, but still under investigation.
<i>Salmo salar</i>	Atlantic Salmon	Δᓐᓐᓐᓐᓐᓐ	Iqalukpik; Kapisalirksoak; Kapisilik; Kavisilik; Kebleriksorsoak; Kumaliq; Saama; Saamakutaak; Saamarug; Sama	Saumon de l'Atlantique	Iqalukpik	ASal	FW/SW; Possible in southeastern Nunavut; reported in Cape Dorset, Ellesmere, Coral Harbor. Known to occur in Kugluktuk.
<i>Coregonus clupeaformis</i>	Lake Whitefish	ᓐᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐ	Qakuqtaq; Ammiurluktuq; Kavisilik; Amiraqluktuq; Anadleq; Anahik; Anadlerk; Jikuktok; Kakiviaktok; Kakiviartut; Kakkiviartok; Kalupiat; Kapihilik; Kapisilik; Kavasilik; Kaviselik; Kavisilak; Kavisilik; Keki-yuak-tuk; Pi-kok-tok; Pikuktuuq; Qelaluqaq	Grand corrégone, corrégone de lac	Kapihiliit; Tasirmiutaq; Tahirmiuttat Kapihilik	LWh	FW
<i>Coregonus nasus</i>	Broad Whitefish	ᓐᓐᓐᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐᓐᓐᓐ; ᓐᓐᓐᓐᓐᓐᓐᓐ	Silittuq kavisilik; Kakkiviaqtuq; Aanaaksiiq; An-ark-hlirk; Anah'lih'; Anaklek; Anaklik; Ananaaklik; Kausriluk; Kavasilik; Kavisilik	Corrégone tschir	Hiliktut Kapihiliit	BWh	FW/SW; May be considered the same as Lake Whitefish – might be found near Kugluktuk only.
<i>Coregonus artedi</i>	Lake Cisco	Δᓐᓐᓐᓐᓐᓐᓐᓐᓐ	Iqalutuinnag; Arnarqseq; Kapisilik; Kaviselik; Kavisilik	Cisco de lac	Kapihilik; Tahirmiuttat Kapihilik	LaC	FW/SW
<i>Coregonus sardinella</i>	Least Cisco	Δᓐᓐᓐᓐᓐᓐᓐ	Iqalugaq; Kalushak; Kapahilik; Kraaktak; Qaqtak	Cisco sardinelle	Kapihilik	LeC	mostly FW; May find near Kugluktuk and probably confused with Arctic Cisco; Known to occur in the Queen Maud Gulf and Viscount Melville Ecozones

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Coregonus autumnalis</i>	Arctic Cisco	Δ ^ᵃ ᵇᵇ	Iqaluk; Kakatak; Kapisilik; Kraaktak; Qaqtak	Cisco arctique	Kapihilik	ArcC	FW/SW; May find near Kugluktuk and probably confused with least Cisco; Known to occur in the Queen Maud Gulf, Viscount Melville and Lancaster Sound Ecozones.
<i>Coregonus nigripinnis</i>	Blackfin Cisco	???	???	Cisco à nageoires noires	???	BfC	FW; Possibly only northern Ontario and Manitoba. Not known in Nunavut.
<i>Prosopium cylindraceum</i>	Round Whitefish (Frost Fish)	Γᵇᵇᵇᵇᵇ; ᵇᵇᵇᵇᵇᵇ; ᵇᵇᵇᵇᵇᵇ	Milugiaq; Kavisilik; Kapisilik; Kavasilik; Okeugnak; Osungnak	Ménomini rond	Kigalik; Kaimalluriktut Kapihiliit	RWh	FW
<i>Prosopium williamsoni</i>	Mountain Whitefish	Λᵇᵇᵇᵇᵇ	Pikuktuuq	Ménomini des montagnes	Pikuktuk; Mayuqqami; Hiuryuktuut; Mayuqqamiuttat Kapihilik	MWh	FW; Not known in Nunavut, but reported by interviewees.
<i>Stenodus leucichthys</i>	Inconnu	???	Si; Si-airryuk; Sierak; Sii; Teirark; Tiktalerk	Inconnu	Anakhiik; Aanakhiiq	Inc	FW/SW; Should not occur in study area Only known to occur in the Beaufort Sea-Amundsen Gulf Ecozone
<i>Thymallus arcticus</i>	Arctic Grayling	ᵇᵇᵇᵇᵇᵇᵇᵇ	Sulukpaugaq	Ombre arctique	Hulupaugaq	ArcG	FW
CYPRINIFORMES	SUCKERS						
<i>Catostomus commersoni</i>	White Sucker	ᵇᵇᵇᵇᵇᵇᵇᵇ	Quqsupuq	Meunier noir, mullet	Kapihilik	Wsu	mostly FW; Not known in Nunavut. Reported to be seen occasionally in Kugluktuk area.
<i>Catostomus catostomus</i>	Longnose Sucker	ᵇᵇᵇᵇᵇᵇᵇᵇ	Qusujuq; Quusujuuq	Meunier rouge	Miluqiak; Quhuyuq	Lsu	mostly FW
<i>Couesius plumbeus</i>	Lake Chub	???	???	Méné de lac	Hiuryuktuut	LCh	FW; A large minnow, likely absent from entire study area.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Myoxocephalus thompsonii</i>	Deepwater Sculpin	ΔΠϛϛϛϛϛϛϛϛ bɑ.ɽᵇ	Kanajuq	Chabot de profondeur	Kanavak; Kanayuq; Itingayumi Kanayuq	DScul	FW; Only found in very deep lakes – not present in study area; This species is caught in trawls and gill nets in the nearshore (50m) of the Beaufort Sea – there is a marine Arctic form and they are considered very abundant across the Arctic (the glacial relic lake forms).
<i>Myoxocephalus scorpioides</i>	Arctic Sculpin	ba.ɽᵇ	Kanayuk, Kanajuk, Tivaqiq	Chaboisseau arctique		ASc	SW
<i>Myoxocephalus scorpius</i>	Shorthorn Sculpin	ba.ɽᵇ	Qanirkuutuk, Kaniok, Kanayuk, Kanajuk	Chaboisseau à épines courtes, crapeau de mer	???	ShS	SW
<i>Cottus cognatus</i>	Slimy Sculpin	ba.ɽᵇ	Kanajuq; Kanaiyok	Chabot visqueux	Kanayuq	SScul	FW
<i>Cottus ricei</i>	Spoonhead Sculpin	ba.ɽᵇ	Kanajuq	Chabot à tête plate	Kanayuq; Aluutut Niaqulgit Kanayuq	SpScul	FW; Might be found near Chesterfield, but small and benthic, unlikely to be captured
<i>Artediellus scaber</i>	Hamecon, Pough, Rough Hookear Sculpin	ba.ɽᵇ	Kanajuq	Hameçon rude	???	RHS	SW
<i>Icelus bicornis</i>	Twohorn Sculpin	ba.ɽᵇ	Kanajuq	Icèle à deux cornes	???	TS	SW
<i>Icelus spatula</i>	Spatulate Sculpin	ba.ɽᵇ	Kanajuq	Icèle spatulée		SpS	SW
<i>Triglops nybelini</i>	Bigeye Sculpin	ba.ɽᵇ	Kanajuq	Faux-trigle à grands yeux	???	BSc	SW
<i>Triglops pingelii</i>	Ribbed Sculpin	ba.ɽᵇ	Kanajuq	Faux-trigle bardé	???	RSc	SW
<i>Triglops murrayi</i>	Mailed Sculpin	???	???	Faux-trigle armé	???	MS	SW
<i>Liparis cyclostigma</i> OR <i>Liparis gibbus</i>	Variiegated Snailfish, Dusky Seasnail, Polka-Dot Snailfish	???	Amersulak	Limace marbrée	???	DSS	SW
<i>Liparis tunicatus</i> OR <i>Liparis herschelini</i>	Bartail Seasnail, Greenland Seasanil, Kelp Snailfish	???	Nipishah, Nipi-sak, Nee-fitz-shak	Limace des laminaires	???	BSS	SW
<i>Liparis koefoedi</i> OR <i>Liparis fabricii</i>	Gelatinous Seasnail, Gelatinous Snailfish	???	???	Limace gélatineuse	???	GSS	SW
<i>Liparis atlanticus</i>	Atlantic Seasnail	???	Nipi-shah, Nipisak	Limace atlantique	???	AS	SW



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Cyclopterus lumpus</i>	Lumpsucker, Lumpfish	σΛኃ	Qorkshuyoq, Nipisa, Nepisa, Lepisuk, Arnardluk, Arnardlok, Angusedlok, Angusatdluk	Lompe, Grosse poule de mer	???	Lump	SW
<i>Cyclopteroopsis jordani</i>	Smooth Lumpfish	σΛኃ	Nipisa	Petite poule de mer douce	???	SLu	SW
<i>Eumicrotremus derjugini</i>	Leatherfin Lumpsucker	???	???	Petite poule de mer arctique	???	LL	SW
<i>Eumicrotremus spinosus</i>	Atlantic Spiny Lumpsucker	???	Nepisardluk, Nepisardluarsuk, Man-iktoe	Petite poule de mer atlantique	???	ASL	SW
<i>Ulcina olrikii</i>	Arctic Alligator Fish	???	???	Poisson-aligator arctique	AAF		SW
<i>Leptagonus decgonus</i>	Atlantic Sea Poacher	???	Kaniordluk, Kanajordlak	Agone atlantique	???	ASP	SW
<i>Sebastes marinus</i>	Ocean Perch, Golden Redfish	???	Sulugpâvaq, Sulugpavak, Sullupaugak, Iterdlarnat	Sébaste orangé	???	OP	SW
<i>Sebastes mentella</i>	Deepwater Redfish	???	???	Sébaste atlantique	???	DR	SW
PERCIFORMES	EELPOUTS, SHANNIES, SANDLANCE, WOLFISH, GUNNELS						
<i>Sander vitreus</i>	Walleye	ᑭᑭᑭᑭᑭᑭᑭᑭ	Sulukpaugaq	Doré jaune	Uugaq	WE	SW; Not known in Nunavut.
<i>Lycodes reticulatus</i>	Arctic Eelpout	ᑭᑭᑭᑭᑭᑭᑭᑭᑭᑭ	Qujjaunnaq; Sulupavak	Lycode arctique	Quliiligaq	AOP	SW; There is tons of Lycodes spp. They are very difficult to ID and I believe there are approximately 15 possible species with the most diverse collections located in Davis Strait-Baffin Bay. Reported to be seen occasionally in Kugluktuk area. Ocean pout.
<i>Lycodes mcallisteri</i>	McAllister's Eelpout	???	???	Lycode de McAllister	???	McE	SW
<i>Lycodes jugoricus</i>	Shulupaoluk	???	???	Lycode plume	???	Shu	SW
<i>Lycodes adolfi</i>	Adolf's Eelpout	???	???	Lycode d'Adolf	???	AE	SW
<i>Lycodes mucosus</i>	Saddled Eelpout	???	Kuxrauna, Kugrauna	Lycode à selles	???	SaE	SW
<i>Lycodes pallidus</i>	Pale Eelpout	???	???	Lycode pâle	???	PalE	SW
<i>Lycodes polaris</i>	Canadian Eelpout	???	???	Lycode polaire	???	CE	SW
<i>Lycodes rossi</i>	Threespot Eelpout	???	???	Lycode à trios taches	???	TE	SW



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Reinhardtius hippoglossoides</i>	Greenland Halibut/ Turbot	ᖃᑦᑦᑦᑦ; ᑦᑦᑦᑦᑦ; ᑎᖃᑦᑦᑦ	Qaliralik; Nattarnaq; Kaleralik; Nat-ah-nuh; Natarnak; Natarnaq; Netarnarak; Qaleralik; Tikkalik	Flétan du Groenland, flétan noir	Qaliralik	GHal	SW
OSMERIFORMES	SMELTS						
<i>Mallotus villosus</i>	Capelin	ᐃᑦᑦᑦᑦ; ᐃᑦᑦᑦᑦᑦ	Igligaaq (Baffin); Iglinnaq (Chesterfield); Quliiligaq; Amagiak; Angmaggeuck; Angmagsaat; Angmagsak; Anmugrun; Axmagaiak; Holili-gah; Ko le le kuk; Nulilighuk; Qoliiligaq; Qulilirraq; Igliraq	Capelan, capelin	Angmagiaq	Cape	FW/SW
<i>Osmerus mordax</i>	Rainbow Smelt	ᐃᖃᑦᑦᑦ	???	Éperlan, éperlan arc-en-ciel, éperlan de lac	Iqaluk	RBS	FW/SW
CULPEIFORMES	HERRINGS						
<i>Clupea harengus</i>	Atlantic Herring	ᑦᐱᑦᑦᑦᑦ	Kapisilik	Hareng, hareng atlantique	Angmagiaq; Kapihilik	AHerr	SW; Not known in Nunavut, but reported by interviewees.
<i>Clupea pallasii</i>	Pacific Herring	ᑦᐱᑦᐱᑦᑦᑦᑦ	Kapihilik	Hareng du Pacifique	Kapihilik	PHerr	SW; Not known in Nunavut, but reported by interviewees.
PERCOPSIFORMES	TROUT-PERCHES						
<i>Percopsis omiscomaycus</i>	Trout-perch	ᐃᖃᑦᑦᑦᑦᑦ	Iqalualaaq	Omisco	Hiuryktuut	TP	FW; Not known in Nunavut.
ESOCIFORMES	PIKES						
<i>Esox lucius</i>	Northern Pike	ᑦᐱᑦᑦᑦᑦ	Siggulik; Siulik; Idlulukak; Ihok; Kikiyuk; Kiqyoq; She; Sheoak; Siilik; Siolik; Siulik; Siun; Sjulik; Tchukvak	Brochet du Nord, grand brochet	Hiulik	NP	FW
GASTEROSTEIFORMES	STICKLEBACKS						
<i>Pungitius pungitius</i>	Ninespine Stickleback	ᐃᖃᑦᑦᑦᑦᑦ; ᑦᐱᑦᑦᑦᑦᑦ; ᑦᐱᑦᑦᑦᑦᑦ	Kakilasak; Kakelashuk; Kakidautidlik; Kakilahaq; Kakilasak; Kakilisak; Kakilishak; Kakilusuk; Kakiva; Kakkilasak; Natagnak	Épinoche à neuf épines	Iqalugaq	NStb	Very small fish
<i>Gasterosteus aculeatus</i>	Threespine Stickleback	ᐃᖃᑦᑦᑦᑦᑦ	Kakilasak	Épinoche à trois épines	Iqalugaq	TStb	FW/SW; Chesterfield Inlet only – very small fish; Known to occur in the Queen Maud Gulf, Baffin Bay-Davis Strait Nearshore and the High Arctic ecozones.
MYCTOPHIFORMES	LANTERNFISHES						
<i>Benthoema glaciale</i>	Glacier Lantern Fish	ᐱᑦᑦᑦᑦᑦᑦᑦᑦᑦ	Aulaquujaq; Kapisalingoak; Kapisilik; Keblernak; Mikiapic kapisilik	Lanterne glaciale	Iqaluk	GLF	SW

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
PETROMYZONTIFORMES	LAMPREYS						
<i>Lampetra camtschatica</i>	Arctic Lamprey	Δ ⁵ б ⁵ Δ ^c ΔΔ ^c Λ ⁵ Δ ⁵ Δ ⁵ Δ ^c ; Δ ⁵ б ⁵ Δ ^c Δ ^c Δ ⁵ б ⁵ ; Δ ⁵ б ⁵ Δ ^c Δ ^c Δ ^c Δ ⁵ б ⁵	Iqaluit Aittangainnartut (Taloyoak); Agliruittuq Iqaluk (Baker Lake); Agliruqangittuq Iqaluk (Clyde River)	Lamproie arctique	Iqaluk	Lamp	SW
MYXINIFORMES	HAGFISHES						
<i>Myxine glutinosa</i>	Northern Hagfish	???	Kopaluk, Ivik	Myxine du Nord	???	NHf	SW
INVERTEBRATES							
MOLLUSCA	SHELLFISH, SEA SLUGS AND CEPHALOPODS						
<i>Mya truncata</i>	Truncate Softshell Clam	Δ ⁵ Λ ⁵ Δ ^c	Ammumajuq	Mye tronquée	Angmagiaq	Clam	Buries itself in soft bottom areas.
<i>Mytilus edulis</i>	Blue Mussel	Δ ⁵ Δ ^c	Uviluk	Moule bleue	Uviluq	Mus	Usually attached to plants or rocks; bluish/blackish shell.
<i>Modiolus modiolus</i>	Northern Horse Mussel	???	???	Modiole, grande moule du Nord	???	NH	
<i>Cardium edule</i>	Common Cockle	Δ ⁵ Λ ⁵ Δ ^c Δ ^c ; Δ ⁵ Δ ^c Δ ^c	Ipiksaunna; Kukiujaq	Bucarde, coque	Ipikhaun; Kukiaq	Ckl	Buries in soft bottom areas, exposing the top that has a slight heart-shape to it.
<i>Chlamys islandica</i>	Islandic Scallop	Δ ^c Δ ^c Δ ^c Δ ^c ; Δ ^c Δ ^c Δ ^c Δ ^c ; Δ ^c Δ ^c Δ ^c Δ ^c	Tallurunnaq; Taplurjaq (Kivalliq); Tapluujaq	Pétoncle d’Islande	Tallurunnaq; Tablururna	Scal	Has eyes and also can ‘swim’ along the bottom.
<i>Crassostrea virginica</i>	Atlantic Oyster	Δ ⁵ Δ ^c Δ ^c Δ ^c	Ugjunnaq	Huitre	Uviluq; Uhuuya	Oys	
<i>Tectura testudinalis</i>	Tortoiseshell Limpet, Plant Limpet	Δ ⁵ Δ ^c Δ ^c	Siutirluk	Acmée tortue de l’Atlantique, patelle	Hiutiruq	TL	
<i>Buccinum sp.</i>	Whelk	Δ ⁵ Δ ^c Δ ^c /Δ ⁵ Δ ^c Δ ^c	Siunna; Ujjunnaq; Siutirluk	Buccin	Udjunnaq; Hiutiruq	Whe	Larger than common snails found on beaches.
<i>Clione limacina</i>	Naked Sea Butterfly	Δ ⁵ Δ ^c Δ ^c	Sulukpauga; Nativa; Natsiujaq	Papillon de mer	Hulukpaut; Kumaruq	NSB	Eats “shelled”
<i>Limacina sp.</i>	Naked Shelled Sea Butterfly	Δ ⁵ Δ ^c Δ ^c Δ ^c Δ ^c Δ ^c Δ ^c Δ ^c Δ ^c 2	Sulukpauga; Tulugarnaq Nalunaikkutilik	Papillon de mer	???	NSB2	Has “shell”
<i>Gyraulus deflectus</i>	Flexed Gyro, Ramshorn snail	???	???	Gyraule difforme	???	FG	FW
	Arctic Moonsnail						
<i>Gonatus fabricii</i>	Boreal Armhook Squid	Δ ⁵ Δ ^c Δ ^c	Amigguq	Encornet atlantoboréal	Amilguit; Amigguq	BAS	

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
SEAWEED AND MARINE PLANTS							
PHAEOPHYCEAE	BROWN SEAWEED						
<i>Alaria marginata</i>	Edible Kelp	ᑕᑦᑎᑦ	Kuanni	Alarie comestible	Kuani; Nirilaat Qiqquat	EK	Ujamiruti (ᑕᑦᑎᑦ) – lower leaf
<i>Saccharina longicururus</i>	Hollow Stemmed Kelp	ᑦᑦᑕᑦᑎᑦ	Qiqquaq	Laminaire à long stipe	Qiqquat; Haalukkaat Qiqquat	HSK	
<i>Agarum clathratum</i>	Sea Colander	ᑦᑕᑦᑎᑦᑕᑦᑎᑦ	Qallunniuti	Agare criblé	Qallunniutit; Taryup Qalunniut	Scol	
<i>Desmarestia aculeata</i>	Spiny Sour Weed	ᑕᑦᑎᑦ	Iquuti	Algue desmarestia	Aqayat; Kuannik	SSW	
<i>Fucus vesiculosus</i>	Bladder Wrack, Rockweed	ᑕᑦᑎᑦ	Iquti	Fucus vésiculeux	Aqayat; Iquutit	BWra	
RHODOPHYTA	RED ALGAE						
<i>Codium fragile</i>	Green sea fingers	ᑕᑦᑎᑦ	Aqaja	Algue codium fragile	Aqayat; Hungayaaqtut Taryup Qikquat	GSF	Was arctic kelp. Reported in deeper waters where freshwater meets salt water.
<i>Palmaria palmata</i>	Dulse	ᑕᑦᑎᑦᑕᑦᑎᑦ	Iquutit	Rodyménie palmé	Aqayat; Quannik	Dul	
LILIOPSISIDA	MONOCOT PLANTS						
<i>Zostera marina</i>	Eel Grass	???	???	Zostère marine	???	EG	
<i>Potamogeton robbinsii</i>	Robbin’s Pondweed	???	???	Potamot de Robbins	???	RP	
<i>Potamogeton alpinus</i>	Alpine Pondweed	???	???	Potamot alpin	???	APw	
<i>Potamogeton gramineus</i>	Variableleaf Pondweed	???	???	Potamot à feuilles de graminées	???	VP	
<i>Potamogeton praelongus</i>	Whitestem Pondweed	???	???	Potamot à long pédoncule	???	WP	
<i>Pleuropogon sabinei</i>	Semaphore Grass	???	???		???		
<i>Puccinellia phryganodes</i>	Goose Grass	ᑕᑦᑎᑦᑕᑦᑎᑦ	Nakiruat		???		
MAGNOLIOPSISIDA	EUDICOT PLANTS						
<i>Mertensia maritima</i>	Sea Lungwort	ᑦᑦᑕᑦᑎᑦᑕᑦᑎᑦ	Qiqquat; Siurap uqaujangit	Mertensia maritime	Qiqquat; Taryup nauttiangit	SL	Color of flower varies.
<i>Ranunculus hyperboreus</i>	Floating Buttercup	???	Iguttait niqingita ajjikasingit		???		
<i>Hippuris vulgaris</i>	Mare’s Tail	???	???		???		



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
BIRDS							
ANATIDAE	GEESE, SWANS & DUCKS						
<i>Anser albifrons</i>	Greater White-fronted Goose	σᶜᶜᵇ; σᶜᶜᵃᵇ; σᶜᶜᵃᵇᵇ	Nirlik	Oie rieuse, oie à fronc blanc	Nirlivik	GWFG (WFG)	Orange bill and feet. White patch on face at base of bill. Variable black bars on belly. Generally found near water in open grassy tundra. Widespread breeder on mainland, also present on Victoria Isl.
<i>Chen caerulescens</i>	Snow Goose	ᵇᵃᵇᵇ; ᵇᶜᵇᶜᶜᵇ; ᵇᵃᵇ; ᵇᶜᶜᶜᵇ; ᵇᵃᵇᵇᵇ; ᵇᶜᶜᶜᵇ; ᶜᵇᵃᵇᵇ	Kanguq; Kararjuk; Qaviq	Oie des neiges, oie blanche	Kanguq	SNGO (SG)	A white phase with black wingtips with pinkish bill and feet, and a dark (or 'blue') phase; very dark with white head. Grin patch on bill. On open tundra; usually in colonies. Present throughout arctic islands with scattered colonies on mainland.
<i>Chen rossii</i>	Ross's Goose	ᶜᵇᶜᶜᵇᵇ	Qaaraarjak	Oie de Ross	Kakat; Qaqat	ROGO (RG)	Smaller than Snow Goose. No grin patch. Stubby bill. Usually associate with Snow Goose. Breeds mainly in Perry River area on gulf as well as Southampton Isl.
<i>Branta bernicla</i>	Brant	σᶜᶜᵃᵇᵇ; σᶜᶜᵇ; σᶜᶜᶜᵃᵇᵇ; σᶜᶜᶜᵃᵇᵇᵇ	Nirlingnaq; Nirlirnaq; Nirlirnaarjuk	Bernache ctavant	Nirlirnaq	BRAN (Bran)	Black chest, head and neck with white patch on neck. Nests on islets or at water edge. Present along gulf coast and throughout the arctic islands.
<i>Branta hutchinsii</i>	Cackling Goose	σᶜᶜᶜᵃᵇᵇ; σᶜᶜᶜᶜᵃᵇᵇ	Nirliknaq	Bernache de Hutchins	Niklivik; Nirlivinuaq	CACG (CacG)	Black neck; white chinstrap. Smaller version of a Canada Goose. Usually near water. Found from southern Victoria Isl. south and eastwards on mainland. Also present on Southampton and s.w. Baffin.
<i>Branta canadensis</i>	Canada Goose	σᶜᶜᵇ; σᶜᶜᵇᵇ; ᵇᵇᵇᵇᵇᵇᵇᵇᵇᵇ; ᵇᵇᵇᵇᵇᵇᵇ; σᶜᶜᶜᵇᵇ; ᵇᶜᶜᶜᶜᵇᵇ	Nirlik; Nirliq; Ulluagullik	Bernache du Canada, outarde	Nikliknik; Olagalik; Niqlirniq	CANG (CG)	Very large goose. Black neck with white chinstrap. Usually near water. Widespread throughout mainland Nunavut as well as Southampton, Victoria and southern Baffin Isl.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Cygnus columbianus</i>	Tundra Swan	ᑦᑑᓄᓐ	Qugjuk	Cygne siffleur	Kukyuk; Qukyuk	TUSW (TS)	Very large, white bird. Black bill and legs. Widespread throughout mainland portions of Nunavut and on Victoria and Baffin islands.
<i>Anas clypeata</i>	Northern Shoveler	???	???	Canard souchet, souchet	???	NSHO	
<i>Anas americana</i>	American Wigeon	ᐱᓄᓐᐱᓄᓐ	Angutiviaq	Canard siffleur d'Amérique, canard d'Amérique	Angutiviaq; Alrinnaaq	AMWI (AWig)	Male with white patch on forehead, green patch on side of head. Female has brown and gray head. Usually near water. Breeding records only from mainland.
<i>Anas platyrhynchos</i>	Mallard	ᑦᑑᓄᓐᐱᓄᓐ	Qingalaaq	Canard colvert, canard mallard	Alrinnaaq	MALL (Mall)	Glossy green head, chestnut breast with white neck ring. Yellow bill. Female a mottled brown. Patched bill (orange/black). Breeds on mainland and in Bay islands. Nests on mainland.
<i>Anas acuta</i>	Northern Pintail	ᑦᑑᓄᓐᐱᓄᓐ; ᑦᑑᓄᓐᐱᓄᓐ; ᑦᑑᓄᓐᐱᓄᓐᑦᑑᓄᓐᐱᓄᓐ; ᐱᓄᓐᐱᓄᓐ	Qummuajuuq; Qummukaijuuq (Chesterfield); Qummuarjuk; Arnaviaq	Canard pilet	Arnaviaq; Kikaq	NOPI (NPin)	Slim neck. Long pointed tail Brown head with white breast which extends to side of head. Female a mottled brown. Nests in long grass. Breeds on Victoria and Southampton islands and throughout the mainland. Rare breeding records from other island locations.
<i>Anas crecca</i>	Green-winged Teal	ᑦᑑᓄᓐᐱᓄᓐ	???	Sarcelle d'hiver, sarcelle à ailes vertes	Alrinnaaq; Mitilluk	GWTE (GWT)	Small size. Brown head with green patch and green speculum. White vertical mark at front of wing noted when swimming. Female a mottled brown with green speculum. Generally a visitor only to most of Nunavut. Sporadic nesting on mainland and in James Bay. Absent as a breeder in arctic islands. Has bred on mainland and in Bay islands.
<i>Aythya marila</i>	Greater Scaup	ᑦᑑᓄᓐᐱᓄᓐ	Mitirluk	Filigule milouinan, grand morillon	Mitilluk	GRSC (GrS)	Gray back, white sides, dark (greenish) head. Gray bill. Female is a rich brown. Nests in long grass. Breeds only on lower mainland.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Gavia adamsii</i>	Yellow-billed Loon	ᑉᑦᑕᑦᑭᑦᑭᑦ	Tuulligjuaq; Tuligaaqjuk	Plongeon à bec blanc, huard à bec blanc	Tuulik	YBLO (YBL)	Similar to Common Loon only much larger and with ivory bill. Nests at water edge; usually on islands. Breeds on mainland, Victoria Island and Prince of Wales. Also present on Boothia and Melville pens.
PODICIPEDIDAE	GREBES			PODICIPÉDIDÉS			
<i>Podiceps auritus</i>	Horned Grebe	???	???	Grèbe esclavon ; grèbe cornu	Angutiviaq	HOGR (HGr)	Chestnut neck; golden ear tufts. Nests amid tall grasses and willow shrubs in shallow water. Has bred on mainland only.
PROCELLARIIDAE	SHEARWATERS			PROCELLARIIDÉS			
<i>Puffinus gravis</i>	Greater Shearwater	???	???	Puffin majeur; grand puffin	???	GRSH	
<i>Fulmarus glacialis</i>	Northern Fulmar	ᑦᑭᑦᑕᑦᑭᑦᑭᑦ	Qaulluq	Fulmar boréal	Qaulluq; Nauyaq	NOFU (NF)	Grayish in appearance with white undersides.. Dark phase has gray head, light phase has white head. Yellow legs and bill (with tube). Nests on cliff faces. Breeds at specific locations along the coasts of Baffin, Devon and Ellesmere.
SULIDAE	GANNETS			SULIDÉS			
<i>Morus bassanus</i>	Northern Gannet	???	???	Fou de Bassan	Takatagiaq	NOGA (NGan)	Large white bird with yellow on back of head and neck. Black primaries. Grayish bill. Nests on cliff faces. No breeding records for Nunavut; considered accidental/visitor only.
PHALACROCORACIDAE	CORMORANTS			PHALACROCORACIDÉS			
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	???	???	Cormoran à aigrettes	Tingmiaq	DCCO (DCC)	Large black bird, with yellow throat patch and hooked bill. Breeds only in James Bay islands. Accidental/visitor elsewhere.
ARDEIDAE	HERONS & BITTERNs			ARDÉIDÉS			
<i>Botaurus lentiginosus</i>	American Bittern	???	???	Butor d'amérique	Qupanuaq	AMBI (ABit)	Large brown bird with vertical streaks on buffy breast. Greenish legs. Black stripe on neck. Breeding records only from mainland.



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
ACCIPITRIDAE	HAWKS & EAGLES			ACCIPITRIDÉS			
<i>Haliaeetus leucocephalus</i>	Bald Eagle	ᓇᓃᓃᓃᓃᓃᓃ; ᓇᓃᓃᓃᓃ; ᓃᓃᓃᓃᓃᓃᓃ	Nakturalik	Pygargue à tête blanche	Kopaniupak; Nakturalik	BAEA (BE)	Large brown bird. White head and tail. Birds are generally uniform brown. Yellow bill and feet. Nests on cliff faces. Rare breeder on mainland only.
<i>Buteo lagopus</i>	Rough-legged Hawk	ᓃᓃᓃᓃᓃᓃᓃᓃ; ᓃᓃᓃᓃᓃᓃᓃᓃ; ᓃᓃᓃᓃᓃᓃᓃ	Qinuajuaq; Qinnuajuaq; Kaajuuq	Buse pattue	Kalak; Kilgavigyuaq; Kiglugik	RLHA (RLH)	Light phase is brown with white tail tipped in black and a streaked breast with belly band. Dark phase is charcoal color. Both show a distinctive dark wrist patch on underwing. Nests on high elevated mounds and hills. Widespread breeder throughout Nunavut.
<i>Accipiter striatus</i>	Sharp-Shinned Hawk	???	???	Épervier brun	???	SSHA	
<i>Accipiter gentilis</i>	Northern Goshawk	ᓃᓃᓃᓃᓃᓃᓃ	Kaajuuq	Autour des palombes		NOGO	
<i>Circus cyaneus</i>	Northern Harrier	???	???	Busard St-Martin; busard des marais	???	NOHA	
<i>Aquila chrysaetos</i>	Golden Eagle	ᓃᓃᓃᓃᓃᓃᓃᓃᓃ; ᓇᓃᓃᓃᓃᓃ; ᓃᓃᓃᓃᓃᓃᓃᓃᓃ; ᓇᓃᓃᓃᓃᓃᓃᓃ; ᓇᓃᓃᓃᓃᓃᓃᓃ	Qupanuaqpak; Qupanuaqpaq; Naktuligaq	Aigle royal; aigle doré	Kopaniupak; Qupanuaqpak; Nakturalik	GOEA (GE)	Large brown bird. Shows a 'golden wash' to head in certain light. Tail shows much white with blackish tips. Nests on cliff faces. Breeds only on mainland.
FALCONIDAE	FALCONS			FALCONIDÉS			
<i>Falco sparverius</i>	American Kestrel	ᓃᓃᓃᓃᓃᓃᓃᓃᓃ	Kiggaviarjuk	Crécelle d'Amérique	Kilgavigyuk	MAKE (AKes)	Small falcon. Both sexes are russet color with lighter and speckled breast/belly and a barred back. They have two sideburns. Tail of male is uniformly rusty with black tip. Female is rusty with horizontal stripes. Has bred on mainland and on bay islands.
<i>Falco columbarius</i>	Merlin	ᓃᓃᓃᓃᓃᓃᓃᓃᓃ	Kilgaviaraq	Faucon émerillon	Kilgaviaraq	MERL (Mer)	Small falcon. Male is gray with a buffy breast/belly; streaked. Female is brownish but otherwise similar. They have a single sideburn. Breeds on mainland and bay islands.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Falco rusticolus</i>	Gyr Falcon	ᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭ	Kiggavik; Kayou; Qinnuajuaq; Kiggaviarjuk; Qakuqtaq	Faucon gerfault; gerfault	Kilgavikpak; Kilgavik	GYRF (Gyr)	Large falcon. Dark (blackish) phase, light (gray) phase and a white phase. Nests on cliff faces. Widespread breeder throughout Nunavut.
<i>Falco peregrinus</i>	Peregrine Falcon	ᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭ	Kiggaviarjuk; Kakkajuuq	Faucon pellerin	Kilgavigyuk	PEFA (PF)	COSEWIC–Special Concern; Medium sized falcon. Dark gray back with horizontal streaks on breast/belly. One sideburn; dark head. Birds are uniformly brown with vertical streaks on breast/belly. Nests on cliff faces or on high hillsides amid rock rubble. Widespread breeder throughout most of Nunavut
<i>Falco peregrinus anatum</i>	Peregrine Falcon anatum	ᑭᑭᑭᑭᑭᑭᑭᑭᑭ	Kiggaviarjuk	Faucon pellerin de la sous- espèce anatum	???	PEFAa	COSEWIC–Threatened
<i>Falco peregrinus pealei</i>	Peale's Peregrine Falcon	ᑭᑭᑭᑭᑭᑭᑭ	Kiggavik	Faucon pellerin de la sous- espèce palei	???	PPEFA	
GRUIDAE	CRANES			GRUIDÉS			
<i>Grus canadensis</i>	Sandhill Crane	ᑭᑭᑭᑭᑭᑭᑭᑭᑭ; ᑭᑭᑭᑭᑭᑭᑭᑭᑭ	Tatiggarjuaq; Tatiggaq	Grue du Canada	Tatilgaq	SACR (SCrn)	Very large gray bird; 4' tall, with long black legs, red crown patch and white cheek. Nests in wet areas. Widespread breeder throughout mainland and southern arctic islands.
<i>Charadrius vociferus</i>	Killdeer	ᑭᑭᑭᑭᑭᑭᑭᑭᑭ	Qupanuaq	Pluvier kildir	Kokikolik; Qupanuaq	KILL (KD)	Similar but larger than Semipalmated Plover. Has two black breast bands. Shows rusty rump in flight. Medium sized shorebird. Has only bred on the James Bay islands.
SCOLOPACIDAE	SANDPIPERS & PHALAROPES	ᑭᑭᑭᑭᑭᑭᑭᑭᑭ		SCOLOPACIDÉS			
<i>Tringa flavipes</i>	Lesser Yellowlegs	???	???	Petit chevalier à pattes jaunes; petit chevalier	Tingmiaq	LEYE (LesY)	Sleek grayish shorebird with 'short' bill and long, yellow legs. Large shorebird. Nests in low grasses, sometimes amid willow shrubs. Only breeds on mainland and in James Bay islands. Has bred on mainland only.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Calidris alba</i>	Sanderling	ᐱᓄᓕᓕᓐᓂᓐ	Sigjariarjuk	Bécasseau Sanderling; bécasseau des sables	Higgariaryuk	SAND (Sand)	Generally gray bird with lighter breast/belly in winter plumage. Very rusty mottled appearance in breeding plumage. Black legs and short black bill. Medium sized shorebird. Nests in short vegetation. Breeds throughout the arctic islands.
<i>Limnodromus griseus</i>	Short-Billed Dowitcher	???	???	Bécassin roux; bécasseau roux	???	SBDO	
<i>Actitis macularius</i>	Spotted Sandpiper	ᐱᓄᓕᓕᓐᓂᓐ	Sigjariaq	Chevalier grivelé; chevalier branlequeue	Higyariaq	SPSA (SpoS)	Brown back, creamy breast/belly with large round spots. Yellow/green legs. ‘Teeters’ when walking. Small shorebird.
<i>Calidris pusilla</i>	Semipalmated Sandpiper	ᐱᓄᓕᓕᓐᓂᓐ; ᓕᓕᓕᓐᓂᓐ; ᐱᓄᓕᓕᓐᓂᓐ	Sigjariaq	Bécasseau semipalmé	Higyariaq	SESA (SPS)	Small brownish shorebird. Lightly streaked breast. Black legs. Short bill. Small shorebird. Nests in wet or dry grassy areas. Breeds on the mainland and the southern portions of the arctic islands. Small.
<i>Calidris minutilla</i>	Least Sandpiper	ᐱᓄᓕᓕᓐᓂᓐ	Sigjariarjuk	Bécasseau miniscule	Higyariaryuk	LESA (LSand)	Small brownish shorebird. Buffy breast. Greenish legs. Short bill. Small shorebird. Nests in wet or dry grassy areas. Breeds on the mainland and Southampton Isl. Some records for arctic islands and bay islands. Small.
<i>Calidris fuscicollis</i>	White-rumped Sandpiper	ᐱᓄᓕᓕᓐᓂᓐ	Sigjariarjuk	Bécasseau à croupion blanc	Higyariaryuk	WRS (WRS)	Similar to two preceding species but has darker markings on side of belly and shows a distinct white rump patch. Small shorebird. Nests in wet vegetation. Breeds along the gulf coast and throughout the arctic islands. Majority.



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Pagophila eburnea</i>	Ivory Gull	ᐃᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅ	Naujaq; Naujavaaq	Mouette blanche; mouette ivoire; goéland sénateur	Nauyaq	IVGU (IG)	COSEWIC—Special Concern; Pure white. Small gull with black legs. Black bill is yellow-tipped. Nests in open areas. Breeds at few locations in ‘high’ arctic islands (Baffin, Ellesmere, Prince Patrick, Polynia, Meighen, Seymore, & Devon).
<i>Xema sabini</i>	Sabine’s Gull	ᐃᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅᐅᐅᐅ	Iqqiriarriarjuk; Iqiggagiarjuk	Mouette de Sabine	Nauyavik	SAGU (SabG)	Forked tail. Triangular white wing patch; with black primaries. Black head. Black bill with yellow tip. Black legs. Medium sized gull. Nests in long or short grass usually near water. Breeds on most islands within the arctic islands.
<i>Chroicocephalus philadelphia</i>	Bonaparte’s Gull	ᐃᐅᐅᐅᐅᐅ	???	Mouette de Bonaparte	Nauyaq	BOGU (BonG)	Black head. Red bill. Dark gray mantle with white patch in black-tipped primaries. Red legs. Medium sized gull. Nests in trees. Breeds on the mainland only.
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	ᐃᐅᐅᐅᐅᐅᐅᐅ	Nasaulligaq	Mouette rieuse	Nauyaq	BHGU (BHG)	Similar to Bonaparte’s Gull but with reddish bill. Medium sized gull. Accidental in Nunavut; no breeding records.
<i>Rhodostethia rosea</i>	Ross’s Gull	ᐃᐅᐅᐅᐅᐅᐅᐅ; ᐃᐅᐅᐅᐅᐅᐅᐅᐅ	Naujarlugaq; Naujarjuaq	Mouette rosée; mouette de Ross	Kangunaaq	ROGU (RossG)	COSEWIC—Special Concern; Grayish white gull with black neck ring, orange legs and a white, wedge-shaped tail. Medium sized gull. Nests in tussock tundra. Breeds at isolated locations in the arctic islands (Cheyne Isl.)
<i>Larus canus</i>	Mew Gull	???	???	Goéland cendré	Nauyaq	MEGU (MewG)	White body, grayish wings with black primaries. Yellow bill and legs. Fairly large gull. Breeds on mainland and only in western Nunavut.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Larus argentatus</i>	Herring Gull	ᐱᐃᑭᑦ; ᐱᐃᑭ; ᐱᐃᑭᑦᐱᐱᑭᑦ	Naujaq; Nauja; Naujajjuaq	Goéland argenté	Nauyaq	HERG (HG)	Gray back and upper wings; white body. Large size. Yellow bill with red spot on lower mandible. Yellow eye. Pinkish legs. Nests in open areas near water. Breeds throughout the mainland and some locations within the arctic islands and bay islands.
<i>Larus thayeri</i>	Thayer's Gull	???	???	Goéland de Thayer	Nauyaq	THGU (ThG)	Similar to Herring Gull but with brownish eyes; not yellow. Pinkish legs. Flesh-colored legs. Medium sized. Nests on cliff faces and rocky crags. Breeds on mainland (coast) and throughout the same range as the following species.
<i>Larus glaucoides</i>	Iceland Gull	ᐱᐃᑭᐱᑦ	Naujavigvik	Goéland arctique; goéland à ailes blanches	Nauyavik	ICGU (IceG)	Similar to Glaucous Gull only smaller. Flesh-colored legs. Large gull. Nests near water. Breeds on Victoria Isl., eastern Baffin, southern Ellesmere and at scattered locations within the arctic islands.
<i>Larus hyperboreus</i>	Glaucous Gull	ᐱᐃᑭᐱᑦᐱᐱᑭᑦ; ᐱᐃᑭᑦ; ᐱᐃᑭ; ᐱᐃᑭᑦᐱᐱᑭᑦ; ᐱᐃᑭᐱᑦ	Naujavigjuaq; Naujaq; Nauja; Naujajjuaq; Kaumauk	Goéland bourgmestre	Nauyaryuaq	GLGU (GG)	All white plumage. Lighter primaries. Red spot on lower mandible which is yellow. Very large gull. Nests near water, sometimes on small islands. Prolific along the gulf coast and throughout the arctic islands.
<i>Larus delawarensis</i>	Ring-Billed Gull	???	???	Goéland à bec cerclé	???	RBGU	
<i>Larus californicus</i>	California Gull	???	???	Goéland de Californie	???	CAGU	
<i>Larus fuscus</i>	Lesser Black-Backed Gull	???	???	Goéland brun	???	LBBG	
<i>Larus marinus</i>	Great Black-Backed Gull	???	???	Goéland marin; goéland à mateau noir	???	GBBG	
<i>Sterna hirundo</i>	Common Tern	???	???	Sterne pierregarin; sterne commune; hirondelle de mer	???	COTE	
<i>Sterna dougallii</i>	Roseate Tern	ᐱᐃᑭᑦᐱᐱᑭᑦ	Imiqqutailaq	Sterne de Dougall; sterne rosée	???	ROST	



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Sterna paradisaea</i>	Arctic Tern	ΔΓ ^ε δCΔc ^{εb}	Immiqutaila; Imiqqutailaq	Sterne arctique	Emmikutailiak; Imitqutailaq	ARTE (AT)	Small white tern. Black cap and red bill. Pointed wings and forked tail. Nests near water in both wet and dry tundra. Extensive and widespread breeder throughout Nunavut.
STERCORARIIDAE	SKUAS & JAEGER			STERCORARIIDÉS			
<i>Stercorarius pomarinus</i>	Pomarine Jaeger	ΔΓ ^ε δCΔc ^{εb}	Isunngaq	Labbe pomarin	Ehagak; Ihunngaq	POJA (PoJ)	Large size. Central tail feathers project beyond square tail, and are twisted. Hooked bill. Usually near water on elevated ground. Breeds along gulf coast and on most of the arctic islands.
<i>Stercorarius parasiticus</i>	Parasitic Jaeger	ΔΓ ^ε δCΔc ^{εb} ; ΔΓ ^ε δCΔc ^{εb}	Isunngaq; Isunngarluk; Isunngaq	Labbe parasite	Ihunngaq	PAJA (PaJ)	Central tail feathers are sharply pointed. Hooked bill. Usually near water in wet grassy areas. Widespread breeder throughout Nunavut.
<i>Stercorarius longicaudus</i>	Long-tailed Jaeger	ΔΓ ^ε δCΔc ^{εb} ; bΓ ^ε δCΔc ^{εb} ; ΔΓ ^ε δCΔc ^{εb} ; bΓ ^ε δCΔc ^{εb} ; ΔΓ ^ε δCΔc ^{εb}	Isunngaq; Isunngarluk; Isunngaq; Kamigalik	ILabbe à longue queue	Ihunngaq	LTJA (LTJ)	Very long central tail feathers. Hooked bill, pointed wings. Usually near water in dry tundra. With short vegetation. Extensive breeder throughout Nunavut.
ALCIDAE	AUKS, MURRES & PUFFINS			ALCIDÉS			
<i>Alle alle</i>	Dovekie	ΔΓ ^ε δCΔc ^{εb}	Akpaliarjuk	Mergule nain	Appaq	DOVE (Dove)	Black above, white below. Very small. Very stubby bill. On rocky cliffs. Only known to breed in one location within Nunavut (Home Bay, Baffin Isl.)
<i>Uria lomvia</i>	Thick-billed Murre	ΔΓ ^ε δCΔc ^{εb} ; ΔΓ ^ε δCΔc ^{εb} ; ΔΓ ^ε δCΔc ^{εb}	Akpa	Guillemot de Brünnich, marmette de Brünnich	Akpak; Apparyuaq	TBMU (TBM)	Black above, white below. Pointed bill with white gape line. On rocky cliffs. Breeds along the east coast of Baffin Isl., and at scattered locations elsewhere in 'high' arctic. Floe edge.
<i>Alca torda</i>	Razorbill	???	???	Petit pingouin, gode	Akparyuat	RAZO (RZB)	Black above, white below. Large head. White mark on black bill. In rocky crags. Breeds mainly at one location on east Baffin Isl., and on Digges Isl.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Fratercula arctica</i>	Atlantic Puffin	???	???	Macareux moine; macareux arctique, macareux de l'Atlantique	???	ATPU	
<i>Cephus grylle</i>	Black Guillemot	ᐱᑦᑎᐅᑦᑲ; ᐱᑦᑎᐅᑦᑲ; ᐱᑦᑎᐅᑦᑲᑦᑲᑲᑲ; ᑦᑎᑲᑲᑲᑲᑲᑲᑲ ᑲᑲᑲᑲᑲ	Pittiulaaq; Pitsiulaaq; Pitsiulaaqjuaq	Guillemot à miroir; guillemot noir	Pittuulaaq; Qingnariktuq Akpait	BLGU (BG)	Black with white wing patch. Bright orange/red feet. In/on rocky crags. Mainly confined to the eastern arctic islands and Southampton as well as a few coastal locations on eastern mainland. Floe edge. Winter: pale grey with black wing and white under.
STRIGIDAE	OWLS			STRIGIDÉS			
<i>Bubo scandiacus</i>	Snowy Owl	ᐅᑲᐱᑲᑲᑲᑲᑲ; ᐅᑲᐱᑲᑲᑲᑲᑲ; ᐅᑲᐱᑲ	Ukpikjuaq; Ukpigjuaq	Harfang des neiges	Ukpik	SNOW (Sowl)	Large white owl. Adults are generally white with black flecks. Imm. shows more spotting. Nests in dry tundra on elevated mounds. Widespread breeder throughout Nunavut.
<i>Asio flammeus</i>	Short-eared Owl	ᐃᑲᐱᑲ; ᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲ; ᑲᑲᑲᑲᑲᑲᑲ; ᐅᑲᑲᑲᑲᑲᑲᑲᑲᑲ; ᐅᑲᑲᑲᑲᑲᑲᑲᑲᑲᑲ	Masilli; Unnuaqsiuti	Hibou des marais	Ukpik	SEOW (SEO)	COSEWIC—Special Concern; Medium sized owl. Generally brown with vertical streaks Buffy wing linings show a dark wrist patch in flight. Nests in long grass usually in wet areas. Breeds on mainland and at a few arctic island locations.
CAPRIMULGIDAE	GOATSUCKERS			CAPRIMULGIDÉS			
<i>Chordeiles minor</i>	Common Nighthawk	ᑎᑲᑲᑲᑲᑲ	Kiggavik	Engoulevant d'Amérique	Kilgavik	CONI (CNH)	Gray/brown bird with pointed wings. Shows a white throat patch and white bar in wings in flight. Accidental in Nunavut; no breeding records.
LANIIDAE	SHRIKES			LANIIDÉS			
<i>Lanius excubitor</i>	Northern Shrike	ᑦᑲᑲᑲᑲᑲᑲ	Qupanuaq	Pie-grièche grise; pie-grièche boréale	Qupanuaq; Mitilluk	NSHR (NSh)	Grayish bird. Black face mask. Black wings with white wrist mark, and dark tail edged in white. Hooked bill. Nests in trees and is restricted as a breeder to lower mainland, and perhaps bay islands.



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
CORVIDAE	CROWS & JAYS						
<i>Corvus corax</i>	Common Raven	ᑕᑕᓂᓐ	Tulugaq	Grand corbeau	Tuluqakjuak; Tulugaq	CORA (CR)	Large black bird. Rounded tail. Croaking call. Nests on cliff faces, rocky crags or manmade structures. Extensive and widespread throughout Nunavut.
<i>Perisoreus canadensis</i>	Gray Jay	???	???	Mésangeai du Canada; geai du Canada	???	GRAJ	
ALAUDIDAE	LARKS			ALAUDIDÉS			
<i>Eremophila alpestris</i>	Horned Lark	ᓄᑦᑕᑦᑕᑦᑕᓐᓂᓐ; ᓄᑦᑕᑦᑕᓐᓂᓐᓂᓐ	Qupanuaqpaq; Qupanuarjuk	Alouette hausse-col; alouette cornue	Konaniqpajuk; Qupanuaqpaq; Qupanuaqpak	HOLA (HL)	Generally brownish bird with lighter belly. Black breast band. Dark sideburn on yellowish face. Underside of tail is black. Nests in dry tundra with sparse vegetation. Widespread breeder throughout Nunavut. Open, dry tundra.
HIRUNDINIDAE	SWALLOWS			HIRUNDINIDÉS			
<i>Riparia riparia</i>	Bank Swallow	ᓄᑦᑕᑦᑕᓐᓂᓐ	Qupanuaq	Hirondelle de ravage; hirondelle des sables	Qupanuaq	BANS (BnkS)	Generally brownish bird with white underparts and a brown chest band. Pointed wings and notched tail. Accidental in Nunavut; no breeding records.
<i>Tachycineta bicolor</i>	Tree Swallow	???	???	Hirondelle bicolor	???	TRES	
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow	???	???	Hirondelle à front blanc	???	CLSW	
<i>Hirundo rustica</i>	Barn Swallow	???	???	Hirondelle rustique; hirondelle des granges	Qupanuaq	BARS (BrnS)	Metallic blue on back, buffy/orange underparts. Rusty throat patch. Forked tail. Has nested rarely on mainland and in bay islands.
TURDIDAE	THRUSHES			TURDIDÉS			
<i>Oenanthe oenanthe</i>	Northern Wheatear	ᓄᑦᑕᑦᑕᓐᓂᓐᓂᓐ; ᐃᓄᑦᑕᓂᓐᓂᓐ	Iquligaq	Traquet motteux	Qupanuaqpaq	NOWH (Nwh)	Gray bird with white breast/belly. Black face mask, edged in white. White tail with black tips. White rump patch. Imm. birds are similar but are buffier, with brownish back. Nests in rocky areas. Breeds mainly on Baffin and Ellesmere with infrequent nestings elsewhere in 'high' arctic islands and on mainland.

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Sialia currucoides</i>	Mountain Bluebird	???	???	Merle bleu azuré; merle bleu des montagnes	???	MOBL	
<i>Catharus ustulatus</i>	Swainson's Thrush	???	???	Grive à dos olive	???	SWTH	
<i>Catharus guttatus</i>	Hermit Thrush	???	???	Grive solitaire	???	HETH	
<i>Catharus minimus</i>	Gray-cheeked Thrush	ᑦᑲᑦᑲᑦᑲᑦ	Qupanuaq	Grive à joues grises	Qupanuaq	GCTH (GCT)	Dull, gray-brown thrush with whitish belly. Breast is speckled with dark spots. Shows a gray wash to side of face. Breeds in forested areas on mainland.
<i>Turdus migratorius</i>	American Robin	ᐃᑲᑲᑲᑲ; ᑦᑲᑦᑲᑦᑲᑦ	???	Merle d'Amérique	Naqugik; Qupannuaq	AMRO (ARob)	Generally blackish bird with reddish breast/belly. Broken white eye ring and dark tail. Breeds mainly on mainland but with a few nest records in arctic islands and bay islands.
STURNIDAE	STARLINGS			STURNIDÉS			
<i>Sturnus vulgaris</i>	European Starling	???	???	Étourneau sansonnet	Tulugannuaq	EUST (EST)	Iridescent black bird with yellow bill and reddish legs in summer. Heavily speckled with cream spots and dark bill in winter. Only breeding records are from mainland communities.
MOTACILLIDAE	WAGTAILS & PIPITS			MOTACILLIDÉS			
<i>Anthus rubescens</i>	American Pipit	ᑲᑲᑲᑲᑲᑲ; ᑲᑲᑲᑲᑲᑲ	Kujamiqtaq; Siusiuk	Pipit d'Amérique	Qupanuaq	AMPI (APip)	Light brown bird with grayish back. Fine streaks on buffy breast. Thin pointed bill. Tail has black central feathers and white outer feathers seen in flight. Nests in rocky areas or steep hillsides and embankments. Widespread breeder throughout most of Nunavut except for the very 'high' arctic islands.
PARULIDAE	WOOD-WARBLERS			PARULIDÉS			
<i>Dendroica petechia</i>	Yellow Warbler	ᑦᑲᑦᑲᑦᑲᑦ	Qupanuaq	Paruline jaune	Qupanuaq; Quriiktaq Qupanuaqpak	YWAR (YW)	Bright yellow above and below. Male has rusty vertical lines. Breeds on mainland and on bay islands.
<i>Setophaga ruticilla</i>	American Redstart	???	???	Paruline flamboyante	???	AMRE	

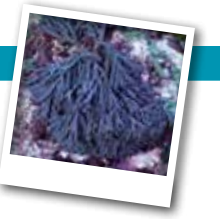


SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
<i>Wilsonia pusilla</i>	Wilson's Warbler	???	???	Paruline à calotte noire	???	WIWA	
<i>Dendroica palmarum</i>	Palm Warbler	???	???	Paruline à couronne rousse	???	PAWA	
<i>Dendroica coronata</i>	Yellow-Rumped Warbler	???	???	Paruline à croupion jaune	???	YRWA	
<i>Protonotaria citrea</i>	Prothonotary Warbler	ᖃᑦᑦᑦᑦᑦᑦ	Qupanuaq	Paruline orangée	???	PROW	
<i>Dendroica striata</i>	Blackpoll Warbler	ᖃᑦᑦᑦᑦᑦᑦ	Qupanuaq	Paruline rayée	Qupanuaq; Qingnariktuq Qupanuaqpak	BLPW (BPW)	Grayish bird with stripes on back and sides. Black cap, white cheeks and black whisker mark. Female is paler and lacks whisker and has a dark cap (not black). Breeds on mainland and perhaps on bay islands.
<i>Seiurus noveboracensis</i>	Northern Waterthrush	ᖃᑦᑦᑦᑦᑦᑦ	Qupanuaq	Paruline des ruisseaux	Qupanuaq	NOWA (NWT)	Dark brown back and cap. Yellow/buff breast and sides with vertical streaks. Yellow eyebrow. Vagrant only; no breeding records.
EMBERIZIDAE	SPARROWS & ALLIES	Δᖃᖃᑦᑦᑦᑦᑦᑦ; Δᖃᖃᑦᑦᑦᑦᑦᑦ		EMBERIZIDÉS			
<i>Spizella arborea</i>	American Tree Sparrow	ᖃᖃᖃᑦᑦᑦᑦ	???	Bruant hudsonnien	Tirinnguaq; Kayuqtaaraq	ATSP (ATSp)	Rufous colored bird with rusty cap. Clear, buffy breast/belly with a black spot in central breast. A treeline species, it only breeds on mainland and on bay islands.
<i>Passerculus sandwichensis</i>	Savannah Sparrow	ᑦᑦᑦᑦᑦᑦᑦᑦ ᖃᑦᑦᑦᑦᑦᑦᑦᑦᑦ	Nunamiutaq Qupanuannaq	Bruant des prés	Tirinnguaq; Kayuqtaaraq	SAVS (SSp)	Generally brownish. Heavily streaked breast/sides. Striped cap. Usually shows a yellow eyeline. Breeds on mainland and on bay islands with few records from arctic islands.
<i>Passerella iliaca</i>	Fox Sparrow	ᖃᖃᖃᑦᑦᑦᑦᑦᑦ	???	Bruant fauve	Kikiniktajok; Tirinnguaq; Qupanuaq	FOSP (FSp)	Large, rusty sparrow with rusty streaks on breast/sides. Treeline species; only breeds on mainland and bay islands.
<i>Zonotrichia querula</i>	Harris's Sparrow	???	???	Bruant à face noire	Nahaolik; Tirinnguaq; Qupanuaq	HASP (HSp)	Large grayish/brown bird with black crown, face and bib. Pink bill. Gray on side of cheek. Few breeding records for mainland only.



SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
FRINGILLIDAE	FINCHES			FRINGILLIDÉS			
<i>Carduelis flammea</i>	Common Redpoll	ᑦᑲᑦᑲᑦᑲᑦ; ᑦᑲᑦᑲᑦᑲᑦ; ᑦᑲᑦᑲᑦᑲᑦ	Qupanuaq; Saququariaq; Siqsigiaq	Sizerin flammé	Hikinitjuak; Qupanuaq; Qupanuaqpak	CORE (CRP)	Brownish bird with heavy streaks on back and sides. Male has a red forehead, black bib and rosy breast. Female is similar but lacks the rosy breast. Both sexes have yellow bills. Nests in willow shrubs in wet areas. Common breeder on mainland as well as southern Baffin and scattered locations elsewhere.
<i>Carduelis hornemanni</i>	Hoary Redpoll	ᑦᑲᑦᑲᑦᑲᑦ; ᑦᑲᑦᑲᑦᑲᑦ; ᑦᑲᑦᑲᑦᑲᑦ	Qupanuaq; Saququariaq; Siqsigiaq	Sizerin blanchâtre	Qupanuaq; Qupanuaqpak	HORE (HRP)	Very similar to Common Redpoll but generally lighter color. Faint to absent streaks on sides and usually shows a distinct white rump patch. Nests in willow shrubs in wet areas. Prolific breeder on mainland as well as on Baffin, Ellesmere, Devon and southern Victoria islands.
<i>Loxia leucoptera</i>	White-Winged Crossbill	???	???	Bec-croisé bifascié; bec-croisé à ailes blanches	???	WWCR	
ICTERIDAE	BLACKBIRDS AND ORIOLES			ICTERIDÉS			
<i>Euphagus carolinus</i>	Rusty Blackbird	???	???	Quiscale rouilleux	???	RUBL	
<i>Xanthocephalus xanthocephalus</i>	Yellow-Headed Blackbird	???	???	Carouge à tête jaune	???	YHBL	
BOMBYCILLIDAE	WAXWINGS			BOMBYCILLIDÉS			
<i>Bombycilla garrulus</i>	Bohemian Waxwing	???	???	Jaseur boréal	???	BOWA	
REGULIDAE	KINGLETS			REGULIDÉS			
<i>Regulus calendula</i>	Ruby-Crowned Kinglet	???	???	Roitelet à couronne rubis	???	RCKI	
CERYLIDAE	KINGFISHERS			CERYLIDÉS			
<i>Megaceryle alcyon</i>	Belted Kingfisher	???	???	Martin-pêcheur d'Amérique	???	BEKI	
PELECANIDAE	PELICANS			PÉLÉCANIDÉS			
<i>Pelecanus erythrorhynchos</i>	American White Pelican	???	???	Pélican d'Amérique; pelican blanc d'Amérique	???	AWPE	

SPECIES	COMMON NAME	INUKTITUT	TRANSLITERATION	FRENCH	INUINNAQTUN	MAP CODE	NOTES
TERRESTRIAL ANIMALS							
<i>Ursus arctos horribilis</i>	Grizzly Bear	ᐱᐅᑦ	Ak&a	Grizzli; grizzly	Akhaq	GBear	Could be considered marine since it was reported in Kugluktuk to be swimming to Victoria Island and hunting marine animals.
<i>Gulo gulo</i>	Wolverine	ᑭᐅᐱᑦ	Qavviq	Carcajou; glouton	Qalvik	Wolv	
<i>Rangifer tarandus groenlandicus</i>	Barren-ground Caribou	ᑕᑕᑕ	Tuktu	Caribou de la toundra	Tuktu	BGCar	
<i>Rangifer tarandus pearyi</i>	Peary Caribou	ᑕᑕᑕ	Tuktu	Caribou de Peary	Tuktu	PCar	
<i>Vulpes lagopus</i>	Arctic Fox	ᐅᐱᐱᑦᐅᑦ	Turiganniaq; Tiriganiaq	Renard arctique	Tiriganniaq	AFox	
<i>Vulpes vulpes</i>	Red Fox	ᐅᐱᐱᑦ ᐅᐱᐱᑦᐅᑦ	Kajuq	Renard roux	Kayuqtuq	RFox	
<i>Ovibos moschatus</i>	Muskox	ᑕᐱᐱᑦᐅᑦ	Umingmak	Boeuf musqué	Umingmak	MOx	
<i>Canis lupus</i>	Arctic Wolf	ᐱᐱᐱᑦ	Amaruq	Loup, loup gris	Amaruq	AWolf	
<i>Lepus arcticus</i>	Arctic Hare	ᑕᐅᐅᑦ	Ukaliq	Lièvre arctique	Ukaliq	AHare	
<i>Mustela erminea</i>	Ermine	ᐅᐱᐱᑦ	Tiriaoq	hermine	Tiriaoq	ERM	
<i>Lemmus trimucronatus</i>	Brown Lemming	ᐅᐱᐱᑦ ᐱᐱᐱᑦ	Kajuq Avingaq	Lemming brun	Avin'ngaq	BrLem	
<i>Dicrostonyx</i>	Collared Lemming	ᐱᐱᐱᑦ ᐱᐱᐱᑦ	Aupajaaqtuq Avingaq	Lemming variable; lemming des neiges; lemming à colier	Avin'ngaq	CoLem	
<i>Mustela vison</i>	Mink	ᐅᐱᐱᑦᐅᑦ; ᐅᐱᐱᑦᐅᑦ	???	Vison d'Amérique	???	M	
<i>Ondata zibethicus</i>	Muskrat	ᐱᐱᐱᑦ	???	Rat musqué	???	Mr	
<i>Spermophilus parryii</i>	Arctic Ground Squirrel	ᐱᐱᐱᑦ	Siksik	Spermophile arctique	Hikhik	AGSq	



APPENDIX 7

SPECIES PHOTOS

FISH



GREENLANDIC SHARK



ARCTIC SKATE



BLACK DOGFISH



THORNY SKATE



ARCTIC CHAR



BROOK TROUT



BULL TROUT



LAKE TROUT



DOLLY-VARDEN



ATLANTIC SALMON



LAKE WHITEFISH



BROAD WHITEFISH



LAKE CISCO



LEAST CISCO



ARCTIC CISCO



BLACKFIN CISCO



ROUND WHITEFISH



MOUNTAIN WHITEFISH



INCONNU



ARCTIC GRAYLING



WHITE SUCKER



LONGNOSE SUCKER



LAKE CHUB



ATLANTIC COD



GREENLAND COD



ARCTIC OR POLAR COD



TOOTHED COD



BURBOT



THREEBEARD ROCKLING



ARCTIC ROCKLING



ROCK GRENADIER



ARCTIC STAGHORN SCULPIN



DEEPWATER SCULPIN



FOURHORN SCULPIN



ARCTIC SCULPIN



SHORTHORN SCULPIN



SLIMY SCULPIN



SPOONHEAD SCULPIN



HAMECON



TWOHORN SCULPIN



SPATULATE SCULPIN



BIGEYE SCULPIN



RIBBED SCULPIN



MAILED SCULPIN



VARIEGATED SNAILFISH



BARTAIL SEASNAIL



GELATINOUS SEASNAIL



ATLANTIC SEASNAIL



LUMPSUCKER



SMOOTH LUMPFISH



LEATHERFIN LUMPSUCKER



ATLANTIC SPINY LUMPSUCKER



ARCTIC ALLIGATOR FISH



ATLANTIC SEA POACHER



OCEAN PERCH



DEEPWATER REDFISH



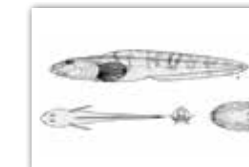
WALLEYE



ARCTIC EELPOUT



MCALLISTER'S EELPOUT



SHULUPAOLUK



ADOLF'S EELPOUT



SADDLED EELPOUT



PALE EELPOUT



CANADIAN EELPOUT



THREESpot EELPOUT



LONGEAR EELPOUT



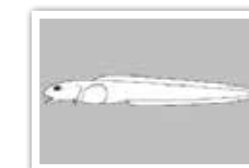
PAAMIUT EELPOUT



POLAR EELPOUT



LUTKEN'S EELPOUT



BARSUKOV'S POUT



FISH DOCTOR



SLENDER EELBLENNY



DAUBED SHANNY



STOUT EELBLENNY



FOURLINE SNAKEBLENNY



PACIFIC SAND LANCE



NORTHERN SAND LANCE



NORTHERN WOLFISH



SPOTTED WOLFISH



ATLANTIC WOLFISH



BANDED GUNNEL



STARRY FLOUNDER



ARCTIC FLOUNDER



WINTER FLOUNDER



GREENLAND HALIBUT



CAPELIN



RAINBOW SMELT



ATLANTIC HERRING



PACIFIC HERRING



TROUT-PERCH



NORTHERN PIKE



NINESPINE STICKLEBACK



THREESPINE STICKLEBACK



GLACIER LANTERN FISH



ARCTIC LAMPREY



NORTHERN HAGFISH



INVERTEBRATES



TRUNCATE SOFTSHELL CLAMS



BLUE MUSSEL



NORTHERN HORSEMUSSEL



COMMON COCKLE



ISLANDIC SCALLOP



ATLANTIC OYSTER



TORTOISESHELL LIMPET



WHELK



NAKED SEA BUTTERFLY



NAKED SHELLED SEA BUTTERFLY



FLEXED GYRO



ARCTIC MOONSNAIL



BOREAL ARMHOOK SQUID



PALE SEA URCHIN



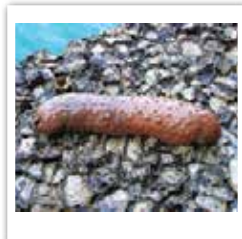
POLAR SEA STAR



MUD STAR



BASKET STAR



NORTH ATLANTIC SEA CUCUMBER



SNOW CRAB



TOAD CRAB



HERMIT CRAB



DEEP SEA KING CRAB



CRAYFISH



NORTHERN SHRIMP



STRIPED SHRIMP



AMPHIPOD



NORTHERN KRILL



MYSID SHRIMP



ACORN BARNACLE



SEA SPIDER



PARCHMENT WORM



PLANKTON WORM



SEA ANEMONE



JELLYFISH



ARROW WORM



CTENOPHORE



ORANGE FINGER SPONGE

MARINE MAMMALS



POLAR BEAR



WALRUS



RINGED SEAL



HARP SEAL



BEARDED SEAL



HOODED SEAL



HARBOUR SEAL



HARBOUR PORPOISE



ATLANTIC WHITE-SIDED DOLPHIN



WHITE-BEAKED DOLPHIN



NORTHERN BOTTLENOSE WHALE



LONG-FINNED PILOT WHALE



KILLER WHALE



BELUGA



NARWHAL



BOWHEAD WHALE



NORTH ATLANTIC RIGHT WHALE



COMMON MINKE WHALE



FIN WHALE



BLUE WHALE



SEI WHALE



SPERM WHALE



HUMPBACK WHALE

SEAWEED AND MARINE PLANTS



EDIBLE KELP



HOLLOW STEMMED KELP



SEA COLANDER



SPINY SOUR WEED



BLADDER WRACK



GREEN SEA FINGERS



DULSE



EEL GRASS



ROBBIN'S PONDWEED



ALPINE PONDWEED



VARIABLELEAF PONDWEED



WHITESTEM PONDWEED



SEMAPHORE GRASS



GOOSE GRASS



SEA LUNGWORT



FLOATING BUTTERCUP



MARE'S TAIL



BIRDS



WHITE-FRONTED GOOSE



SNOW GOOSE



ROSS'S GOOSE



BRANT



CACKLING GOOSE



CANADA GOOSE



TUNDRA SWAN



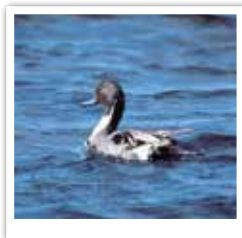
NORTHERN SHOVELER



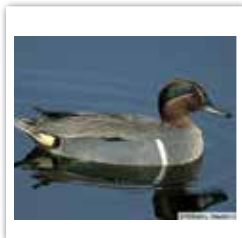
AMERICAN WIGEON



MALLARD



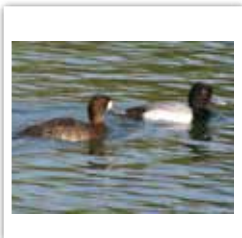
NORTHERN PINTAIL



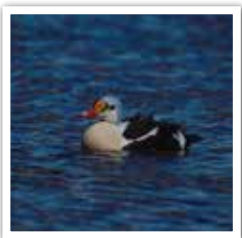
GREEN-WINGED TEAL



GREATER SCAUP



LESSER SCAUP



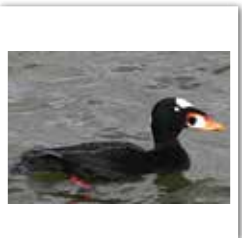
KING EIDER



COMMON EIDER



HARLEQUIN DUCK



SURF SCOTER



WHITE-WINGED SCOTER



BLACK SCOTER



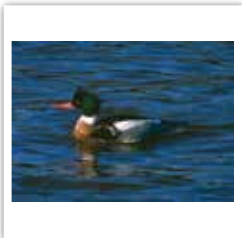
AMERICAN BLACK DUCK



LONG-TAILED DUCK



COMMON MERGANSER



RED-BREASTED MERGANSER



HOODED MERGANSER



COMMON GOLDENEYE (MALE)



BARROW'S GOLDENEYE



WILLOW PTARMIGAN



ROCK PTARMIGAN



WHITE-TAILED PTARMIGAN



SPRUCE GROUSE (MALE)



RED-THROATED LOON



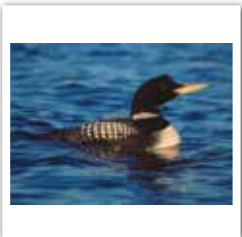
ARCTIC LOON



PACIFIC LOON



COMMON LOON



YELLOW-BILLED LOON



HORNED GREBE



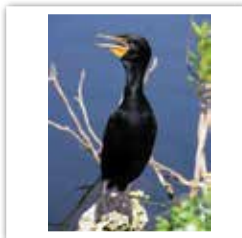
GREATER SHEARWATER



NORTHERN FULMAR



NORTHERN GANNET



DOUBLE-CRESTED CORMORANT



AMERICAN BITTERN



BALD EAGLE



ROUGH-LEGGED HAWK



SHARP-SHINNED HAWK



NORTHERN GOSHAWK



NORTHERN HARRIER



GOLDEN EAGLE



AMERICAN KESTREL



MERLIN



GRYFALCON



PEREGRINE FALCON



PEREGRINE FALCON ANATUM



PEALE'S PEREGRINE FALCON



SANDHILL CRANE



WHOOPING CRANE



BLACK-BELLIED PLOVER



AMERICAN GOLDEN-PLOVER



COMMON RINGED PLOVER



SEMPALMATED PLOVER



PIPING PLOVER MELODUS



PIPING PLOVER



KILLDEER



LESSER YELLOWLEGS



GREATER YELLOWLEGS



ESKIMO CURLEW



WHIMBREL



HUDSONIAN GODWIT



RUDDY TURNSTONE



RED KNOT



SANDERLING



SHORT-BILLED DOWITCHER



SPOTTED SANDPIPER



SEMPALMATED SANDPIPER



LEAST SANDPIPER



WHITE-RUMPED SANDPIPER



BAIRD'S SANDPIPER



PECTORAL SANDPIPER



PURPLE SANDPIPER



DUNLIN



STILT SANDPIPER



BUFF-BREADED SANDPIPER



WILSON'S SNIPE



RED-NECKED PHALAROPE



RED PHALAROPE



BLACK-LEGGED KITTIWAKE



IVORY GULL



SABINE'S GULL



BONAPARTE'S GULL



BLACK-HEADED GULL



ROSS'S GULL



MEW GULL



HERRING GULL



THAYER'S GULL



ICELAND GULL



GLAUCOUS GULL



RING-BILLED GULL



CALIFORNIA GULL



LESSER BLACK-BACKED GULL



GREAT BLACK-BACKED GULL



COMMON TERN



ROSEATE TERN



ARCTIC TERN



POMARINE JAEGER



PARASITIC JAEGER



LONG-TAILED JAEGER



DOVEKIE



THICK-BILLED MURRE



RAZORBILL



ATLANTIC PUFFIN



BLACK GUILLEMOT



SNOWY OWL



SHORT-EARED OWL



COMMON NIGHTHAWK



NORTHERN SHRIKE



COMMON RAVEN



GRAY JAY



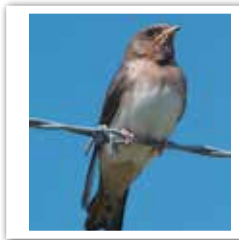
HORNED LARK



BANK SWALLOW



TREE SWALLOW (MALE)



CLIFF SWALLOW



BARN SWALLOW



NORTHERN WHEATEAR



MOUNTAIN BLUEBIRD



SWAINSON'S THRUSH



HERMIT THRUSH



GRAY-CHECKED THRUSH



AMERICAN ROBIN



EUROPEAN STARLING



AMERICAN PIPIT



YELLOW WARBLER



AMERICAN REDSTAR



WILSON'S WARBLER



PALM WARBLER



YELLOW-RIMPED WARBLER



PROTHONOTARY WARBLER



BLACKPOLL WARBLER



NORTHERN WATERTHRUSH



AMERICAN TREE SPARROW



SAVANNAH SPARROW



FOX SPARROW



HARRIS'S SPARROW



WHITE-CROWNED SPARROW



DARK-EYED JUNCO



LAPLAND LONGSPUR



SMITH'S LONGSPUR



SNOW BUNTING



COMMON REDPOLL



HOARY REDPOLL



WHITE-WINGED CROSSBILL



RUSTY BLACKBIRD



YELLOW-HEADED BLACKBIRD



BOHEMIAN WAXWING



RUBY-CROWNED KINGLET



BELTED KINGFISHER



AMERICAN WHITE PELICAN



APPENDIX 8 NCRI FIRST CONTACT CALLING PROTOCOL

INTRODUCTION

Hello, may I please speak to _____?

If they are home then proceed, if not then ask when would be a convenient time to call back ... _____

My name is _____ and I am calling about a Marine Resource Inventory project being undertaken by the Fisheries and Sealing Division. You have been identified by members of your community as someone who is very knowledgeable. We would like to ask you to participate in our project. Do you have a few minutes now so that I can tell you about the project, or is there a better time that I can call you back?

Yes: proceed with the interview

No: determine when would be a better time to call

OK, great.

This project is a multi-community project intended to develop an inventory of coastal resources. To develop such an inventory we will be asking you to discuss a variety of topics; including descriptions and locations of marine animals and habitats. We will be asking you about the location of species that you know about, what time of year you see them and to describe what habitat they are associated with. We hope the outcomes of the project will be the sustainable use of the coastal resources in your area, the protection of sensitive areas or special

places, the preservation of invaluable local knowledge, and also the ability of your community to meet its economic development needs now and in the future. All information that we record and maps we create will remain in the community for the benefit of the community.

Our survey will take a few hours depending upon how much time you have to offer and the amount of knowledge you are willing to share with us. We would ideally begin with a 2 to 3 hour interview and following this it will be your decision as to whether we continue or meet again and complete the survey in more detail.

We recognize that the knowledge you have from your hunting and fishing experience would be a great asset in furthering our overall knowledge of marine resources. We would greatly appreciate any time you could commit to help us in this project and your time will be compensated at a rate of \$50 per hour of interview.

Would you be willing to participate in this survey?

Yes: proceed with rest of protocol

No: ask them... Would you mind telling me why you don't want to participate? _____

Thank you very much for your time. We would like to let you know that if you change your mind or find time to do the survey later then you are more than welcome to still participate. You can contact me at _____ if you change your mind or you are able to find the time.

TRAVEL ARRANGEMENT

We will be coming to _____ from _____ to _____. Can you meet with us on one of these days?

Yes: proceed to set it up

No: ask them when would be a good time to call back and arrange the travel part

What day and time works best for you?

We have a house rented where we will be hosting the interview and we can arrange transportation if you need. We will give you a call in a few days and let you know the address for the house.

No: proceed to arranging time

Do you need transportation? [get address]

Thank you very much for your time today. We will call ahead of our arrival. If for any reason you need to reschedule or cancel our meeting please let us know as soon as possible.

If you have any questions or need to contact me I can be reached at _____. Thank you again for your time today and I am looking forward to our meeting.

APPENDIX 9 WHAT IS A COASTAL RESOURCE INVENTORY?

Community-based coastal inventories are often undertaken by community groups with the support and help of government and other agencies. Since many communities in Nunavut are lacking the resources and capacity to carry out such work, the GN has set out to develop this project and encourage and financially help communities to do so.

A coastal inventory is a collection of information on coastal resources and activities, gained from community interviews, research, reports, maps, etc., which can be mapped, to assist in management, development and conservation of coastal areas. Inventories of coastal and marine resources will allow communities and governments to use the information to better understand and plan future activities in coastal areas.

Coastal Zone: there are many definitions of what the “coastal zone” consists of. In simple terms and for the purpose of this project it is “the coastal waters and adjacent land which are influenced by each other.”

Community-based: This project is described as community-based, and for our purposes this means that the data collected will fall within the area that surrounds a particular community and will be collected with the community and for the communities use.

Community-based coastal inventories are also a way to gather, record and map Inuit Qaujimaqatungit in a central database and link it with other scientific research and knowledge. Due to the social and economic changes over the years, there is a growing need to record, protect and conserve Nunavut’s traditional coastal biological, cultural and ecological knowledge before it disappears with the present generation.

In addition, there is a growing concern over the impact that climate change will have on the Arctic environment and on Nunavut society. Having IQ recorded will allow for monitoring of changes in species populations, patterns and behaviours, as a result of the changes in climate and ice conditions.

What information will be collected?

A community-based coastal inventory for Nunavut will include (but not limited to):

- fishery resources and fish habitat;
- fish species information;
- community infrastructure;
- marine mammals;
- aquatic plants;
- birds;
- shellfish resource information;
- cultural, recreational and tourism-related resources;
- significant or unique coastal features;
- shoreline classification;
- sources of pollution;
- and others.

How will this information be collected?

Interviews

The main source of information and knowledge will be collected through community interviews. There will be a standard list of questions to answer and guide discussion (including information on the items listed above), as well as, any and all information community members feel is important to note.

Community members will also be asked to locate on maps, locations of species and specific activities such as species breeding grounds, hunting routes, etc, and to comment on trends in distribution, abundance, predation, animal behaviour, etc.

The actual number of interviews (group or individual) per community will vary, as the population, scale of traditional hunting areas, and geography is factored in to the sample size. The amount of coastline included in the survey for each community will vary per community and depend on the type/amount of information gathered during interviews and research.

Research

Research will be conducted to identify what information already exists (such as data collected by other organizations, reports, documents, maps, and other materials), as to not duplicate efforts, or over-interview individuals. This inventory will build on what has already been done and will aim to include as much information as available.

Visual Surveys

Site visits will be conducted to identify resources such as wharves, fish plants and other infrastructure, to provide first hand information. This will be necessary to verify

data. Photographs will be taken to document condition of structures.

What will the information be used for and how will it benefit the community?

The information gathered from the coastal inventory can be used for a number of purposes including:

Economic development - fisheries development relies on sound knowledge of the numbers and location of fish stocks and species. Gathering this type of information in one central location will be the foundation for fisheries development. It will help in determining where fish resources are located, areas to conduct test fisheries, where to develop new fisheries, where there is a need to gather more data, etc. Information may also lead to identification and development of coastal parks, and related tourism opportunities and economic development in coastal areas.

Management plans – in order to properly manage resources it is important to know the population and harvest levels, locations of herds/breeding grounds/etc. Having this information collected and mapped will better allow for management of resources (such as the fisheries), developing management zones, and for management of land based activities that may affect coastal resources (location of community dumps, etc.).

Conservation efforts - information collected will be useful in identifying sensitive terrestrial and marine coastal areas, breeding grounds, species locations and populations, habitats, significant landscape features, etc. It will help understand trends in global warming, and the effects on species migration, populations, behaviours, etc. Having this type of information in one central location will better allow for protecting species and the land.



The project itself will also provide direct benefits such as:

Employment – This project will employ members of the community to help conduct the interviews and gather the data (translators, student intern, guides). As well, to oversee and facilitate the entire project across Nunavut a Project Coordinator and Project Liaison will be employed by the GN.

Capacity and Resource Building – It is intended that the communities be involved in the process throughout, and that all final products be available for the community to use for their purposes, including land-use planning, fisheries development, generating maps for community projects, etc.

What are the Objectives and Outcomes of the inventory?

- Identify and obtain existing information and sources about Nunavut's coastal resources from reports, documents, maps, and from agencies, organizations and departments.
- Identify and record IQ through discussion and documentation from local residents.
- Produce a useable database of coastal resources in Nunavut, utilizing GIS (Geographic Information System) capabilities, for resource management, economic development and conservation.
- Identify information gaps in the existing knowledgebase and determine opportunities for future research.
- Attempt to Integrate IQ and modern science using overlays, reference points, and data collaboration.

- Produce and publish informational materials, such as regional summary documents of the project, maps, posters, and report/articles on the project including methodology, results, and analysis of the information collected. An interactive website may also be developed in the future.

What costs are involved in completing an inventory?

Each community varies in the total project costs because of different travel costs. However, on average, each community costs \$150, 000 to complete an inventory. This amount covers partial salary dollars for 2 full time staff (GN), travel costs, equipment, community labour (including honorariums and site visits), consulting fees and consultant travel, production and printing of the final report, and delivery of the report back to the community and other stakeholders.

Currently inventory costs are shared between the community and GN Department of Environment. Secondary funding comes from partnerships with Federal agencies, such as, INAC or DFO.

APPENDIX 10 NUNAVUT CRI PARTICIPANT CONSENT FORM

Thank you for agreeing to participate in our study. This project is an important opportunity for Inuit knowledge to be recognized and included in marine science, planning and management.

Please review this consent form to ensure you understand the purpose of the project and the meaning of your participation. This consent form explains how the data collected is managed and it gives you an opportunity to refuse any aspect of our work. If you have any questions at any time please do not hesitate to ask.

Participant Selection

Participants are selected by asking members of the community who they consider to be local experts on marine animals and plants. Each person nominated is selected based on how long they have been a hunter, how much experience they have in the marine environment and what geographic area they are familiar with. Your participation is voluntary; however an honorarium is offered at a rate of \$50 per hour of interview, which is paid upon completion of the interview.

Expectations

The interview is a series of questions about your local hunting and fishing areas and about the distribution and abundance of fish, invertebrates, mammals, birds and plants. We have brought maps that we will draw the locations of animals on. After something is drawn on the

map we will discuss it and code it properly. We encourage you to discuss the species in as much detail as you can.

Confidentiality of Data

This project has been designed from the outset to benefit the people of Nunavut. The Fisheries and Sealing Division is committed to protecting your knowledge so that it is not used inappropriately, but also acknowledges that it must be shared with others for improved decision-making in support of better management, conservation and economic development.

The data collected in this study will be securely stored indefinitely by the Fisheries and Sealing Division and will also be given to an appropriate organization within the community; such as, the Hunter's and Trapper's Organization. The organization chosen in the community will be capable of storing the materials properly and representing the best interests of the community members.

Data may be used in future projects within the Fisheries and Sealing Division, as well as by the participating members of the project's Steering Committee. Outside of this group (e.g. private companies or non-Nunavut based researchers or organizations) data access may be granted upon written request and only after consultation with the project's Steering Committee. No charges will be levied for these materials when permission has been granted.

The community organization holding copies of data collected can distribute the information as they wish and, if they desire, require fees to be paid to the organization for access to the data.

You will also be given copies of your interview and the maps we create with you, which you can share as you wish.

The results will be published in a public report which is shared with project partners, the project Steering Committee, and the Iqaluit Public Library.

During the interview you may ask us to shut off the video camera and/or turn off the voice recorders at any point in the interview if you feel uncomfortable, or if you feel it inappropriate to record any particular information.

Questions?

If you have any questions regarding this research, please feel free to contact Janelle Kennedy, Project Coordinator, Phone #867.975.7706 or Corenna Nuyalia, Community Liaison, Phone #867.975.7702. Department of Environment, Fisheries and Sealing Division, Box 1000, Station 1390, Iqaluit, NU, X0A 0H0.

CONSENT

I have understood the details of this project and my involvement in it. I have been given the opportunity to ask questions and they have been answered to my satisfaction. I realize that my participation in this survey is voluntary and that I am free to withdraw from the survey at any time. I hereby consent to take part in this study.

I also consent to the following:

Audio recording the interview. Yes.....1 No.....2

Video recording the interview. Yes.....1 No.....2

Including my name in the acknowledgements of this report or any report related to this project? Yes.....1 No.....2

Participant Signature: _____

Witness: _____

To what address should we send you a copy of your interview?



APPENDIX 11 NCRI DATA RELEASE FORM – DRAFT

This project is an important opportunity for Inuit knowledge to be recognized and included in marine science, planning and management. Users of project data must be aware of the project background, scope, data collection process, limitations and context of the information available. Review all details of this data release form to ensure you understand the latter and the limitations, if any, on your use of the data.

Project Background:

What is a Coastal Resource Inventory (as applied to this project)?

This coastal inventory is a collection of information on coastal resources and activities gained from community interviews, research, reports and maps. This data is spatially mapped using a Geographic Information System (GIS) to assist in the management, development and conservation of coastal areas. A coastal inventory could:

- support an integrated coastal management plan;
- provide information to help identify and protect important coastal and marine areas;
- facilitate environmental impact assessments, sensitivity mapping, and community planning; and
- provide communities and governments with the tools to engage in strategic assessments, informed development and enlightened stewardship.

How is the Nunavut Coastal Resource Inventory (NCRI) carried out?

Due to a shortage of information on Nunavut's coastal and marine resources, the principle source of information for these community-based coastal inventories is interviews with community members, usually elders. A semi-structured survey document is used to collect information on coastal landscapes and plant and animal resources on beaches, on and around islands, above and below the surface of the ocean, above and below the sea ice, and on the sea floor. Other sources of information for the inventory include existing reports, maps, and visual surveys of the coastline and community.

Who is asked to participate in the NCRI interviews?

Interview participants are selected in consultation with the local HTO and by polling the community as to who they consider to be local experts on marine animals and plants. Each person nominated is selected based on how long they have been a hunter, how much experience they have in the marine environment and what geographic area they are familiar with.

During the interview, participants may ask to shut off the video camera and/or turn off the voice recorders at any point if they feel uncomfortable, or if they feel it might be inappropriate to record specific information. Participants retain the right to remain anonymous, or to be acknowledged for their contributions, and may withdraw from the study at any time without repercussion.

How can the interview data be used and how is it stored?

This project has been designed from the outset to benefit the people of Nunavut. The Fisheries and Sealing

Division is committed to protecting this traditional knowledge so that it will not be used inappropriately, but also acknowledges that it must be shared with others for improved decision-making in support of better management, conservation and economic development.

The original data collected in this study will be archived indefinitely by the Department of Environment (Fisheries and Sealing Division) and copies will also be provided to an appropriate organization within the community; such as, the Hunter's and Trapper's Organization. This organization will be responsible for storing the materials securely and representing the best interests of the community members. The community organization that holds the collected data can distribute the information as they wish, on behalf of community members, and if they desire can require fees to be paid by any organization that requests the data.

The results of coastal inventories will be published in a public report that will be shared with project partners, the project Steering Committee, and the Iqaluit Public Library. Raw Data (e.g. GIS data, audio tapes) may be used in future projects within the Fisheries and Sealing Division, as well as by the participating members of the project's Steering Committee. Outside of this group (e.g. private companies or non-Nunavut based researchers or organizations) data access may be granted upon written request and only after consultation with the project's Steering Committee. No charges will be levied for these materials when permission has been granted.

The project Steering Committee is an advisory panel that is made up of Territorial and Federal government departments, Inuit Organizations and the NCRI team. The duties of the Steering Committee include reviewing all requests for raw data associated with the NCRI project. The purpose of reviewing requests is to ensure that data is being shared with reputable organizations or individuals

and that the interests of the participants and community involved are considered. If the committee feels that a request may result in a negative impact, or that the person(s) making the request are ill intentioned then they may consult the affected community directly, or deny the request.

DATA RELEASE FORM

Date requested:

Details of Request (attach details if necessary):

Describe, in as much detail as possible, the type(s) of data you require?

How will the data be used?

Who will use the data?

Will any publications include the data?

Date Released:

Details of Release:

Data Types:

Restrictions on Use:

Questions?

If you have any questions regarding this research, please contact the NCRI Project Coordinator, Phone #867.975.7700, Department of Environment (Fisheries and Sealing Division), Box 1000, Station 1390, Iqaluit, NU, X0A 0H0.

Signatures

I have understood the details of this project and the details of the release of this data to me. I have been given the opportunity to ask questions and they have been answered to my satisfaction. All information that I have provided in my request is true and I will notify the NCRI Project Coordinator of any changes.

Researcher: _____

Date: _____

Contact Information: _____

Coordinator: _____

Date: _____

Witness: _____

Date: _____

