

# EXECUTIVE SUMMARY

This report is derived from the Hamlet of Coral Harbour and represents one component of the sixth 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 other resources. This data is ultimately 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 facilitate 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 Qaujimajatuqangit, or IQ) and the preparation for forthcoming environmental changes, particularly those driven by climate change.

The Fisheries and Sealing Division of the Department of Environment (DOE) initiated this inventory in 2007 by conducting a pilot project in the community of Igloolik, Nunavut. Following the success of this project further communities were approached and agreed to take part in the inventory process, they are as follows:

- 2008 Kugluktuk and Chesterfield Inlet
- 2009 Arctic Bay and Kimmirut
- 2010 Sanikiluaq
- 2011 Qikitarjuaq and Gjoa Haven
- 2012 Iqaluit, Repulse Bay, and Grise Fiord
- 2013 Pangnirtung
- 2014 Coral Harbour, Clyde River, and Taloyoak

This report presents the findings of the coastal resource inventory of Coral Harbour, which was conducted in February 2014.

Inventory deliverables include:

- A final report summarizing all of the activities undertaken as part of this project;
- Provision of the coastal resource inventory in a GIS database;
- Large-format resource inventory maps for the Hamlet of Coral Harbour and Southampton Island, Nunavut;
- Key recommendations on both the use of this study as well as future initiatives.

During the course of this project, Coral Harbour was visited on one occasion in February 2014 to conduct on-site interview sessions. Community consultations were conducted via phone conferencing. A total of nine interviews were conducted. Five individuals were present during each interview: the interviewee, an interviewer, a translator/recorder, a science consultant,

and a student intern. The interviewer followed a defined protocol of predetermined questions with photographs of various species known to occur in the area. The interview process varied from 2.8-7.75 hours depending on the individuals being interviewed. Information collected through interviews and research was plotted on working maps when appropriate. Once the inventory was completed, a database was generated and maps were digitized and analyzed.

An array of maps, drawn from the interviews is provided in this report. Data are organized into the following categories: Marine Mammals, Fish, Birds, Invertebrates, Marine Plants, Areas of High Diversity, and Other. Additional maps illustrate the territory of Nunavut, the extent of the study area, and a reproduction of the study area extracted from the Nunavut Atlas. The map format was chosen to provide a synoptic view of the collected data. In addition, the maps are complimented by extensive tabular information.

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## 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. Although interviews with elders have become commonplace throughout the Territory, community differences are sufficiently important to warrant an individual and focused approach in the manner in which this information is elicited. Each community is unique in terms of its physical environment, oceanographic setting, organisms present, and the interests and approaches of its hunters and trappers. One might even suggest that each community has been treated independently 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 of interview materials and methodologies.

## THE COASTAL RESOURCE INVENTORY

A coastal resource inventory, as used in this report, is an information compendium on coastal resources and activities gained principally from interviews with elders and hunters 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. Defining the extent of resources varies by community and "near the coast" may include species and activities 50 miles or up to 100 miles inland (mainly lakes and river systems).

The information obtained is then augmented with additional data acquired from scientific articles, unpublished reports, government documents, environmental assessments, maps, etc. All of the community-specific data is digitized and 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 Pacific coasts where the information gained from this approach was used to provide: the foundation for an integrated coastal management plan; essential insights to assist with the protection of important coastal areas; and information to facilitate 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 Qaujimagatuqangit in Inuktitut, or IQ) gathered through interviews. Over the past 50 years, 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 of Inuit culture. To ensure we retain this traditional knowledge 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 type and condition of infrastructure (wharves and fish plants) and the location of a variety of coastal activities or impacts (town dumps or sewage sites).



**Figure 1** Map of Nunavut

Information on coastal resources may provide insights regarding the potential for future fisheries development or other economic opportunities. Given the high unemployment rates in many of Nunavut's coastal communities, it is increasingly important to identify areas of potential economic development. Establishment of a new fishery requires reliable information on species-specific abundance and distribution of fish stocks in order to determine both the feasibility of the initiative as well as its long-term sustainability. Community resource

information gathered in one central location can be an important first step toward fishery commercialization. This information could also lead to the identification of potential coastal parks and related tourism opportunities, including sensitive coastal areas, breeding grounds, important species, and unique habitats.

Traditional knowledge (IQ) embodies both historical and contemporary information. Conserving this knowledge has importance in its own right and for its potential to inform future management plans. Some communities have expressed an interest in exploring development options using a 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 of extant knowledge into a form that could assist informed decision-making. Regardless, there is growing urgency throughout the Territory to identify, record, and conserve Nunavut's traditional biological, cultural, and ecological knowledge.

There is increasing concern over the potential impact 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 climate-change driven shifts in sea ice formation and movement. The coastal resource inventory provides a means of collecting information on environmental changes observed by community members.

## ORIGIN OF THE COASTAL INVENTORY

The Fisheries and Sealing Division of the Department of Environment, Government of Nunavut 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 were deemed to offer support to the project's success, including a satellite office of the Nunavut Research Institute (NRI). This office is home to the IQ and Oral History project, which has been underway for more than two decades. The staff of this remarkable unit has extensive experience in the collection of IQ, which is stored in a computer-accessible database. Collaboration with NRI, especially the opportunity to learn from their experience, was judged an important initial benefit. In addition,



officials of the Hamlet of Iglulik were very positive in regards to the potential benefits to their community, as well as providing important administrative support for the project.

The pilot project was an intense learning process. The primary goals were to create a database comprising an assemblage of IQ that would contain depth and breadth, as well as developing a well-vetted process for interviews, data recording, range of topics, data reduction, digitization, analysis, GIS integration, and presentation. Although the pilot project was judged successful, subsequent phases of this project have demonstrated the need for continuous adjustment and adaptation of the process, in order to improve its efficiency and better adhere to project goals. Phase II of the NCRI saw inventories completed for the communities of Kugluktuk (October 2008), Chesterfield Inlet (November 2008), Arctic Bay (February 2009), and Kimmirut (March 2009). Two communities, Qikiqtarjuaq (March 2010) and Sanikiluaq (February 2011), participated in Phase III. The three communities selected for Phase IV were Gjoa Haven (November 2011), Iqaluit (January 2012), and Repulse Bay (March 2012).

## **PERSONNEL AND PROJECT DELIVERABLES**

The Coastal Resource Inventory of Gjoa Haven was conducted by Department of Environment (DOE) staff with the assistance of the Marine Institute of Memorial University of Newfoundland. Overall project leadership was provided by Wayne Lynch, Director, Fisheries and Sealing Division, and his staff: Ron Brown, Manager, Policy and Programs; and Corenna Nuyalia, Acting Project Coordinator. Consulting on the project and participating in all interviews was Stephen Roberts from the School of Fisheries, Marine Institute of Memorial University of Newfoundland.

Project deliverables include:

- A final report summarizing project activities;
- The Nunavut Coastal Resource Inventory in a GIS database;
- A series of large-format resource inventory maps;
- Access to all documentation pertaining to project completion; and
- Recommendations on the use of this study and future initiatives



# 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 Field Guide (Appendix 4) for an in-depth explanation of all 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 the selection were devised early in the development of the project, but as one might expect, undergo continuous revision. Once a provisional choice was made, the community was visited with the purpose of determining whether it wished to participate in the inventory, and if so, which individuals would be most appropriate for the interviews. The above questions were directed principally at the local Hunters and Trappers Organization (HTO), who provided an annotated list of potential candidates. 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 six individuals: the interviewee, an interviewer, a translator, a recorder, a science consultant, and a student observer. The process varied from 1.5 - 4 hours, depending on the amount of detail in the interviewee's responses and the amount of clarification required. Each interview followed the same format (refer to Survey in Appendix 5). The first round of questions requested information about the interviewee's early life history as well as their general knowledge of and familiarity with the local area. This was followed by resource-based questions that referred to specific animals and plants observed in the area. Responses were documented during the interview, with spatial information recorded using maps prepared in advance that were annotated by the interviewee. The entire proceedings, with permission, 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 data analysis.

## DETAILS OF THE PROCESS

### Community Selection

Criteria to guide community selection were established prior to the start of the NCRI 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 were subject to continuous refinement as knowledge and insights improved. Community selection

did not depend on meeting the requirements of 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 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 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-accepted leadership available to assist the project?
- Does the community have a close association with a park or a protected area?

### Community Visits

Communities are visited on three occasions: an initial scoping/consultation meeting (October 2011), followed by on-site interview sessions (November 23-27, 2011), and finally a follow-up visit to present the finished report and supporting material to the community. The scoping session was designed to put into place all of the elements that were required to properly conduct the interviews. This process depended on the support and participation of the Gjoa Haven Hunters and Trappers Organization (HTO) and the Hamlet office. The HTO formally agreed to support this initiative by providing an annotated list of local Inuit hunters and trappers who, 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 of seven interviewees (Appendix 1) was made by NCRI project personnel. In addition, HTO personnel recommended the names of individuals who could be used as translators and student observers. These individuals were contacted, and tentative interview schedules were established. The next step was to select a venue that would accommodate the interview process.

### Interview Preparation

Preparations for the interviews focused on the definition and acquisition of all the information and equipment 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 on prepared maps. It also involved

defining the subject matter to 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 and condition at occurrence (breeding, migrating, feeding, etc.). Once these decisions were made the results were translated into maps of the area normally used by hunters and fishers (Fig. 2), into a list (Appendix 6) and photos (Appendix 7) of the target species, and used to develop relevant questions that would later be posed to interviewees (Appendix 5).



**Figure 2:** The study area extent discussed in the Coral Harbour interviews.

## Interview Strategy

The manner in which the interviews would be conducted was repeatedly discussed over a lengthy period and ultimately reflected the advice that NCRI personnel received from many different sources. The goal of the interview process was 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 held by individuals, and the importance of that information from both cultural and management standpoints. Considerable attention was devoted to the realization of these goals. Over the years, Inuit hunters have often been interviewed; however, this time they were

pleased to learn that the process would comprehensively embrace a broad range of living marine resources and that the NCRI staff would provide each HTO with a copy of all data collected from the interviews in its community.

### The Interviews

Six individuals were present during each interview: the interviewee, an interviewer, a translator, a recorder, a science consultant, and a student observer. The interviewer followed 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 and colour coded pencils were provided for interviewees to illustrate locations of interest. Interviewees were encouraged to supplement their responses by drawing on the maps provided to annotate their verbal remarks. Specific categories addressed in the interviews included: interviewee life-history information; locations of outpost camps; archaeological sites; travel routes and hunting/fishing areas frequented; the geographic occurrence of mammals, fish, birds, invertebrates, and plants; linkages between coastal resources; present and future environmental changes; and potential economic development (e.g. the possibility of an emergent fishery).

Every annotation on the maps was coded to 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 selected portions were simultaneously manually recorded. Manual recording was used to maintain a running record of all map annotations and codes. This permitted the analysis of interviews to proceed without first transcribing the audio tapes. The interview process varied from 1.5 - 4 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 clarifying 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. From the outset, the maps were planned to form the cornerstone of the interview process and of the resulting community reports.

### Non-Interview Data Acquisition

Data on marine resources can be found scattered throughout many different sources including scientific papers, government reports, environmental impact assessments, and maps. However, three surveys with similar geographic breadth and goals have proven to be especially useful.

The three-volume *"Inuit Land Use and Occupancy Study"* was undertaken in the early 1970s 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, based on interviews with Inuit in each community. It used topographic maps to outline regions associated with hunting, trapping, and fishing activities for every community in Nunavut over three periods: pre-contact, the trading period up to the 1950s, and the present (early 1970s). The third volume is an atlas that displays the results. The original research is available in Ottawa at the National Archives and a copy is also available in the Legislative Library in Iqaluit.

The second document is the *Nunavut Atlas* co-published in 1992 by the Canadian Circumpolar Institute and the Tunngavik 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 is approximately 35 years old. Relevant maps from this volume are presented in this report (Figures 30-33).

The third document is the *Nunavut Wildlife Harvest Study* produced by the Nunavut Wildlife Management Board in August 2004 as 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 current harvesting levels (at that time) 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 are presented on all inventory maps. The scale is small, in keeping with the size of the geographic area under discussion. The scale was common to all maps to permit relatively easy comparisons. 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 accessed by users with diverse interests.

Data management also included protecting the confidentiality of the data. Each interviewee provided their consent to be interviewed, as well as audio and video taped (see Appendix 8). Any person or organization wishing to access NCRI data must provide written justification to the NCRI Steering Committee and agree to the terms outlined in the Data Release Form (see Appendix 11).

## GIS Interface

Once the inventory maps and database were completed, they were entered into a geographic information system (GIS), which creates 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 A PHYSICAL SETTING

## 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. These include 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 an essential prerequisite 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 the impacts of global warming directly, through changes in their physiology and indirectly, through variations in their physical or 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 of limited usefulness 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. The different processes that contribute to this reliability are reviewed below.

The formation of recurring open water sites in ice-covered seas, including polynyas, pack ice edges, and shore-fast leads reflect local geography, ice conditions, and water movements such as upwelling and tidal mixing. There is a positive correlation between recurrent open water sites and abundance of marine organisms. Stirling (1980, 1997) 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. In some cases, animals are drawn to these sites for practical reasons such as the availability of breathing holes, a platform to haul out and rest, predator avoidance, pupping, or moulting (Stirling 1997). Ultimately, recurrent open water sites encourage a non-homogeneous distribution of animals that is linked to greater biological productivity.

The availability of food, the product of primary production in phytoplankton, ice algae, and marine plants, is a major contributing factor in the abundance of marine organisms observed at recurrent open water sites. Bradstreet and Cross (1982) believe the aggregation of food items available to invertebrates and vertebrates on the under-ice surface is a factor of significance. Algal groups are important, although their relative contributions can vary depending on ice conditions and available light. Ice algae can represent 5 to 30% of the total primary production (Alexander, 1974; Harrison and Cota, 1991; Legendre et al 1992). 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). This results in a form of oasis or hotspot in an otherwise ice-covered area. With the sea ice thinning faster and earlier in the spring, sunlight sufficient to drive photosynthesis, especially in ice algae, is available sooner. These conditions are extending both the growing and grazing seasons, in some cases by as much as two months.

In addition, these open water sites appear to have been of great importance 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, have 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, settlements were usually located within reasonable proximity of game, which often meant areas of recurrent open water. Schledermann (1980) also found a close correlation between 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

The Hamlet of Coral Harbour is located on the southern coast of Southampton Island on the northern rim of Hudson's Bay adjacent to the Fisher and Evans Straits. The township is located at 64.14°N and 83.17°W.

### 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, promoting vertical mixing. Warmer, deeper water moves to the surface slowing or preventing the formation of ice. Tidal mixing also delivers nutrients, which promote plant and algal growth when sufficient light is available, especially in summer months. Examples of this phenomenon are the well-known polynyas in Fury and Hecla Strait at the head of Foxe Basin (Hannah et al 2009).

## 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 water to the surface, which slows or eliminates ice formation. The second process is controlled by wind and/or ocean currents, which remove any ice formed at 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 polynyas.

Recurring polynyas typically occur between near shoals and islands, within the land-fast ice. As the name implies, they occur regularly each year due to a combination of upwelling, winds and tidal currents, which prevent the formation of ice. By and large, there are two types of recurring polynyas: those that freeze over for one or two of the coldest months of the year, only to re-open in the early spring; and those that remain open all year long. Animals such as seals, walrus and some migratory sea birds use these polynyas as important over-wintering areas.

The Roes Welcome Sound polynya occurs along the eastern side of Southampton Island. The Roes Welcome Sound itself is important for surface transport into Hudson Bay as indicated by ice drifts and the Polynya that occurs in its southern part (Prisenberg, 1986). The Sound is quite shallow (less than 50m) (Prisenberg, 1986) so does not possess the deep water reservoir to



create a sensible heat polynya and as such the currents present are the likely cause for it being ice free.

### Landfast Leads (or Flaw Leads)

Extensive systems of land-fast leads occur throughout the Arctic. Stirling (1981) summarizes their many characteristics. Land-fast 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 ice 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 great 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 elders and previous research. For instance:

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

The reasons for greater biological abundance and diversity associated with landfast leads and ice edges are largely the same as those outlined above for recurrent open water. However, upwelling is an additional mechanism that appears to occur at shore-fast and pack ice edges.

### Upwelling: Topographic and Ice-Edge

Upwelling is a mechanism by which warmer, deeper water is moved to the surface, where it can create and/or maintain ice-free open water. Topographic upwelling occurs where a current moving through warmer subsurface water is deflected or welled upward toward the surface by a bottom structure such as a sill, bank, or ridge (Tee et al. 1993).

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

In addition to a greater heat flux to the surface, upwelled 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.

### Marine Resources in the Context of Global Warming

Over the past 20 years, many Arctic researchers have commented on the impending probability of global warming, with its predicted impacts on the marine environment as well as the abundance, diversity, and well-being of marine organisms (Tynan and DeMaster 1997, Michel et al. 2006, Moore and Huntington 2008). Many changes may occur potentially impacting the role that recurrent open water sites play in the coastal resources. Changes may occur affecting 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, changes in traditional species distributions 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, change may occur in our physical world that could, 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 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. Nevertheless, the observations below provide highly personal and very useful insights that could be worthy of additional investigation.

### MARINE ENVIRONMENT

The geographic area identified by interviewees as the normal range of their hunting and fishing activities spans approximately 250km north, 220km east, 170km west, and 150km south. The region includes Roes Welcome Sound, Fisher Strait, and the northern coast of Coats Island.

### HUNTING/FISHING

Coral Harbour hunters/fishers depend on a broad array of animals to supply their country food needs. Ensuring access to and availability of country food continues to be an issue of importance and concern for the community.

- Hunters and fishers expressed concern about the state of the community freezer, said it frequently breaks down, and it is too small for the community.
- Many expressed concern about the state of the community dock. It is ageing, and is only accessible at high tide.
- One interviewee noted that if a new freezer and dock were to be built they should be closer to one another than the previous facilities citing not all hunters and fishers had vehicles to easily transport catches.
- Several interviewees reported that a road to East Bay would be beneficial for hunting and fishing access

### HEALTH, SIZE, AND PRESENCE

Throughout the course of the interviews references were repeatedly made regarding the health, size, or presence/absence of different species.

- Several interviewees expressed concern that the caribou population health was suffering. They believed that it had a relationship to foxes in the area.
- One interviewee reported that the polar bears he was catching were skinnier than in previous years.

## CHANGES UNDERWAY

Participants commented on changes in their local area regarding- species and climate change.

- Interviewees expressed concerns about changing ice and snow conditions during winter. They reported that this winter 2013/2014 has had very little snow.
- They reported concerns that the ice conditions especially at the floe edge were becoming more hazardous in recent years.
- Several interviewees expressed concern about pollution, citing that there was more dust pollution along road ways than before.
- Several interviewees also expressed concerns about the environmental impacts of mining on the land and the species that they depend on.
- The interviewees noted that spring seemed to be occurring earlier and fall is beginning later each year.
- Some interviewees expressed concerns about marine traffic in the area scaring marine mammals, specifically interviewees noted that the walruses seemed to be most affected.
- Several interviewees reported concerns about fuel spills in the area, especially there effect on marine filter feeders such as clams and mussels.

## ECONOMIC DEVELOPMENT

In general the Gjoa Haven interviewees discussed the following with regards to social changes and economic development in their area.

- All interviewees expressed support for the creation and expansion of tourism in the community. Most believed that adventure and sightseeing tours would be viable in the area.
- Several interviewees expressed that they believed mining could bring more money into the community, but they felt that the environmental impacts may outweigh the economic benefits.
- Many believe that tourism would benefit if there was easier access to the east coast of Southampton Island
- One interviewee noted that the community would benefit from the construction of a modern restaurant
- Interviewees expressed that a store was required that specialized in the selling of locally caught foods, and furs.

## GUIDE TO MAPS AND TABLES

The following group of maps summarizes the geographic context, species locations, and information from earlier studies (derived from the *Nunavut Atlas*). The maps are accompanied by data in tabular form, which provides additional detail, along with descriptive information, when available. Table 1 interprets the map codes provided in the tables accompanying the maps. All historic data is presented at the end of this section.

**Table 1.** Guide to maps and tables.

Category	Map Code
Anything unsure or unreliable	Appended with a lower case 'u'
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'
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
Other	OTH
Area Known Best (area most familiar with or a travel route)	AKB
Camp / Cabin (typically modern)	CAMP

Generally, maps comprise groupings of several species or a single species as reported in multiple interviews. Species and interviews are normally color-coded and 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.

The species identified by interviewees as being distributed “Everywhere” are not mapped in this report. The designation of “Everywhere” was used when interviewees felt that the organism under discussion has been observed everywhere throughout their travels and places with which they are very familiar. 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” data is not represented on the maps, but is provided as a table of data following the maps.

Some species were described by a portion of the interviewees as being “Everywhere” while other interviewees provided specific locations for the same species. In these cases, 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 the species presented to the interviewees, birds (e.g. sandpipers or gulls) present the greatest challenge in proper identification; a challenge often encountered by even the keenest observers. To assist in interpreting the data, Appendix 3 compares observations recorded through the inventory with literature and sightings by other authors. In the future, inventory work will endeavour 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” by some interviewees. Species identified as being “Everywhere Only” are shown by the use of a solid bullet in the Map legend.

## MAPS – PRESENT

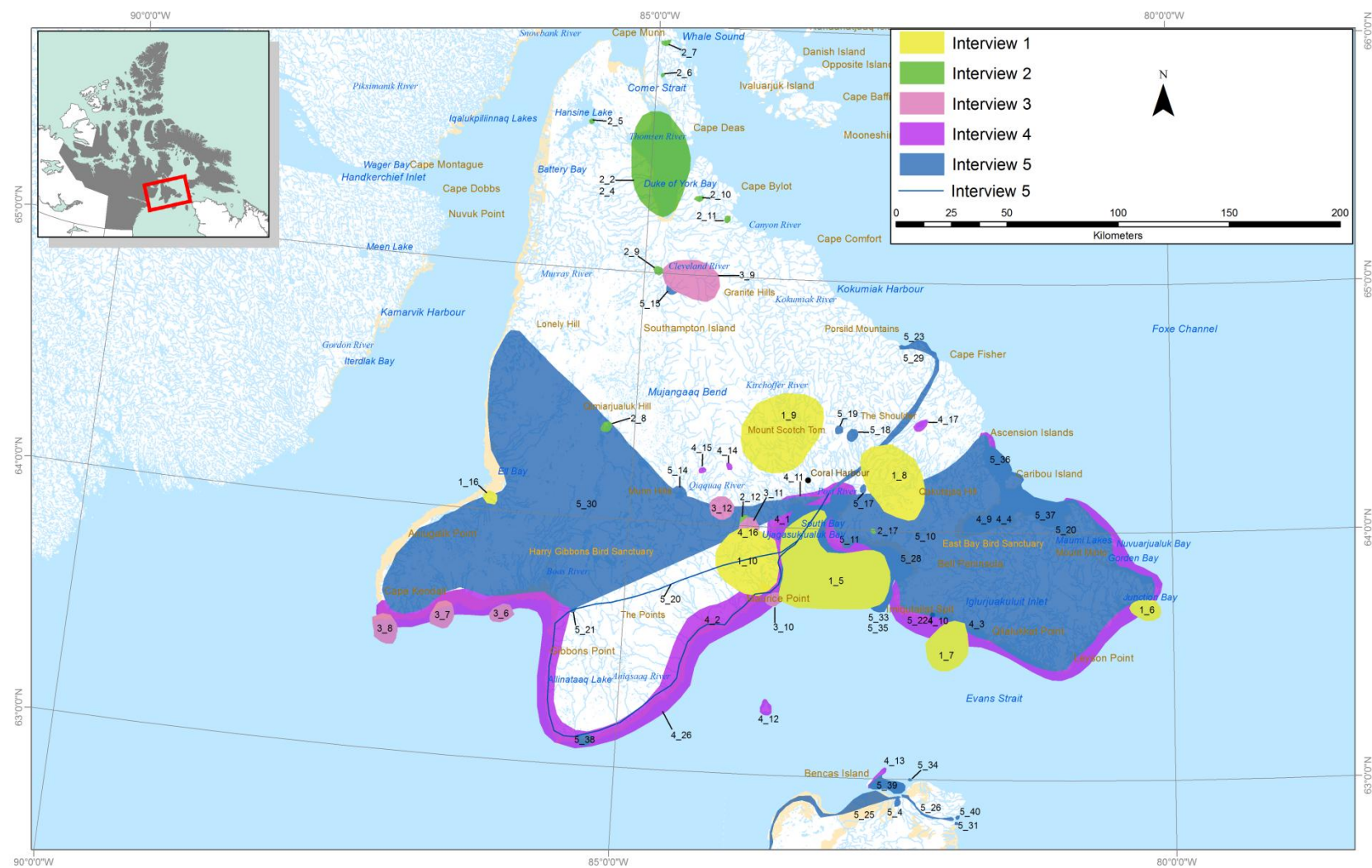


Figure 3. Areas Known Best Interviews 1 to 5



Table 2: Areas Known Best Interviews 1 to 5

Map Code	Interview Code	Category	Comments
1_5	CORAL_1_0214	AKB	Seal hunting
1_6	CORAL_1_0214	AKB	Seal hunting
1_7	CORAL_1_0214	AKB	Seal hunting
1_8	CORAL_1_0214	AKB	Caribou hunting
1_9	CORAL_1_0214	AKB	Caribou hunting
1_10	CORAL_1_0214	AKB	Caribou hunting
1_16	CORAL_1_0214	AKB	Fox trapping area
2_2	CORAL_2_0214	AKB	
2_4	CORAL_2_0214	AKB	
2_5	CORAL_2_0214	AKB	
2_6	CORAL_2_0214	AKB	
2_7	CORAL_2_0214	AKB	
2_8	CORAL_2_0214	AKB	
2_9	CORAL_2_0214	AKB	
2_10	CORAL_2_0214	AKB	
2_11	CORAL_2_0214	AKB	
2_12	CORAL_2_0214	AKB	
2_13	CORAL_2_0214	AKB	
2_17H	CORAL_2_0214	AKB	
3_6	CORAL_3_0214	AKB	Fox trapping area
3_7	CORAL_3_0214	AKB	Fox trapping area
3_8	CORAL_3_0214	AKB	Fox trapping area
3_9	CORAL_3_0214	AKB	
3_10	CORAL_3_0214	AKB	Seal hunting area
3_11	CORAL_3_0214	AKB	Where they went fishing
3_12	CORAL_3_0214	AKB	Where they went fishing
4_1	CORAL_4_0214	AKB	Area where he grew up
4_2H	CORAL_4_0214	AKB	Fox hunting
4_3H	CORAL_4_0214	AKB	Fox hunting
4_4H	CORAL_4_0214	AKB	Fox hunting
4_9	CORAL_4_0214	AKB	Seal hunting
4_10	CORAL_4_0214	AKB	Seal hunting
4_11	CORAL_4_0214	AKB	Seal hunting
4_12	CORAL_4_0214	AKB	Walrus hunting
4_13	CORAL_4_0214	AKB	Walrus hunting
4_14	CORAL_4_0214	AKB	Fishing
4_15	CORAL_4_0214	AKB	Fishing
4_16	CORAL_4_0214	AKB	Fishing
4_17	CORAL_4_0214	AKB	Fishing
4_26	CORAL_4_0214	AKB	Polar bear hunting on South coast
5_4	CORAL_5_0214	AKB	Spring goose colony
5_10	CORAL_5_0214	AKB	End of June snow goose and Canada goose egg picking
5_11	CORAL_5_0214	AKB	Red phalaropes, dunlins

Map Code	Interview Code	Category	Comments
5_14	CORAL_5_0214	AKB	Salmon pond
5_15	CORAL_5_0214	AKB	Qukuqtaraliq (fishing area)
5_17	CORAL_5_0214	AKB	Caribou hunting
5_18	CORAL_5_0214	AKB	Caribou hunting
5_19	CORAL_5_0214	AKB	Cabin
5_20	CORAL_5_0214	AKB	Historic location of the flow edge, and trap lines
5_21	CORAL_5_0214	AKB	Arctic char, never freezes in winter
5_23	CORAL_5_0214	AKB	"Qakutaq" fox trap line
5_25	CORAL_5_0214	AKB	Fox trapline, used to catch caribou here
5_26	CORAL_5_0214	AKB	Fox trapline
5_28	CORAL_5_0214	AKB	Polar bear hunting, pretty much all over
5_29	CORAL_5_0214	AKB	Polar bear hunting
5_30	CORAL_5_0214	AKB	Polar Bear hunting, same route as AKB_5_20H
5_31	CORAL_5_0214	AKB	
5_34	CORAL_5_0214	AKB	Qaaluktaa Island, walrus hunting area
5_35	CORAL_5_0214	AKB	Seal hunting: ringed, bearded, and harbour Jan-Mar
5_36	CORAL_5_0214	AKB	Seal hunting Jan-Mar
5_37	CORAL_5_0214	AKB	Seal hunting Jan-Mar
5_38	CORAL_5_0214	AKB	Harbour seals all go here Jul-Sep
5_39	CORAL_5_0214	AKB	Lots of ringed and bearded seals year-round
5_40	CORAL_5_0214	AKB	Seals year-round

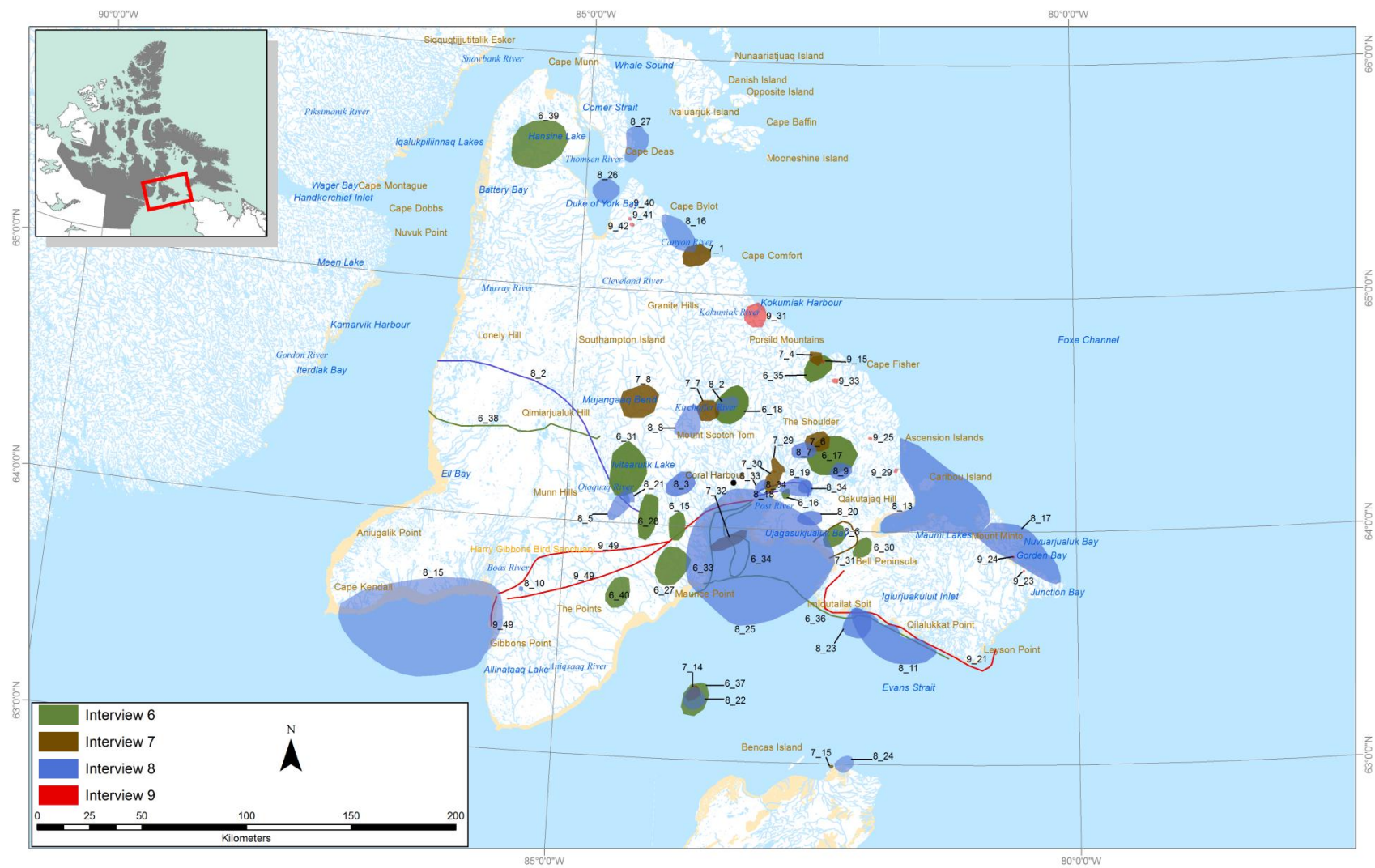


Figure 4. Areas Known Best Interviews 6 to 10

Table 3. Areas Known Best Interviews 6 to 10

Map Code	Interview Code	Category	Comments
6_6	CORAL_6_0214	AKB	Goose egg picking area
6_15	CORAL_6_0214	AKB	Spring fishing area
6_17	CORAL_6_0214	AKB	
6_18	CORAL_6_0214	AKB	
6_27	CORAL_6_0214	AKB	Autumn caribou hunting area
6_28	CORAL_6_0214	AKB	Autumn caribou hunting area
6_30	CORAL_6_0214	AKB	Autumn caribou hunting area
6_31	CORAL_6_0214	AKB	Fishing area
6_33	CORAL_6_0214	AKB	Summer hunting area
6_34	CORAL_6_0214	AKB	Summer hunting area
6_35	CORAL_6_0214	AKB	Winter fishing area
6_36	CORAL_6_0214	AKB	Winter seal hunting on flow edge
6_37	CORAL_6_0214	AKB	Summer walrus hunting area
6_38	CORAL_6_0214	AKB	Summer caribou hunting
6_39	CORAL_6_0214	AKB	Summer/Spring fishing area
6_40	CORAL_6_0214	AKB	Fishing area
7_1	CORAL_7_0214	AKB	Always fishing
7_4	CORAL_7_0214	AKB	
7_6	CORAL_7_0214	AKB	Winter caribou
7_7	CORAL_7_0214	AKB	Winter caribou
7_8	CORAL_7_0214	AKB	Winter caribou
7_14	CORAL_7_0214	AKB	Summer walrus hunt
7_15	CORAL_7_0214	AKB	Summer walrus hunt
7_28	CORAL_7_0214	AKB	Spring geese hunting and egg picking
7_29	CORAL_7_0214	AKB	Spring geese hunting and egg picking
7_30	CORAL_7_0214	AKB	Spring geese hunting and egg picking
7_31	CORAL_7_0214	AKB	Spring geese hunting and egg picking
7_32	CORAL_7_0214	AKB	Winter sealing at flow edge
8_2	CORAL_8_0214	AKB	Caribou hunting area winter
8_3	CORAL_8_0214	AKB	Caribou hunting area winter/fall
8_5	CORAL_8_0214	AKB	Summer caribou hunting area near salmon pond
8_7	CORAL_8_0214	AKB	Caribou hunting area
8_8	CORAL_8_0214	AKB	Caribou hunting area
8_9	CORAL_8_0214	AKB	Caribou hunting area, along mountain ridge
8_10	CORAL_8_0214	AKB	
8_11	CORAL_8_0214	AKB	Winter polar near hunting
8_13	CORAL_8_0214	AKB	Winter polar bear hunting
8_15	CORAL_8_0214	AKB	Winter polar bear hunting
8_16	CORAL_8_0214	AKB	Winter polar bear hunting
8_17	CORAL_8_0214	AKB	Winter polar bear hunting
8_19	CORAL_8_0214	AKB	Goose egg picking area
8_20	CORAL_8_0214	AKB	Goose egg picking area

Map Code	Interview Code	Category	Comments
8_21	CORAL_8_0214	AKB	Fishing location
8_22	CORAL_8_0214	AKB	Summer walrus hunting
8_23	CORAL_8_0214	AKB	Summer walrus hunting
8_24	CORAL_8_0214	AKB	Summer walrus hunting
8_25	CORAL_8_0214	AKB	Winter and summer seal hunting
8_26	CORAL_8_0214	AKB	Summer seal hunting
8_27	CORAL_8_0214	AKB	Summer seal hunting
8_33	CORAL_8_0214	AKB	Goose hunting
8_34	CORAL_8_0214	AKB	Goose hunting
9_15	CORAL_9_0214	AKB	
9_21	CORAL_9_0214	AKB	
9_23	CORAL_9_0214	AKB	Fishing locations
9_24	CORAL_9_0214	AKB	Fishing locations
9_25	CORAL_9_0214	AKB	Fishing locations
9_29	CORAL_9_0214	AKB	
9_31	CORAL_9_0214	AKB	Denning area
9_33	CORAL_9_0214	AKB	Polar bear denning area on glacier
9_40	CORAL_9_0214	AKB	
9_41	CORAL_9_0214	AKB	
9_42	CORAL_9_0214	AKB	
9_49	CORAL_9_0214	AKB	Fox trapping

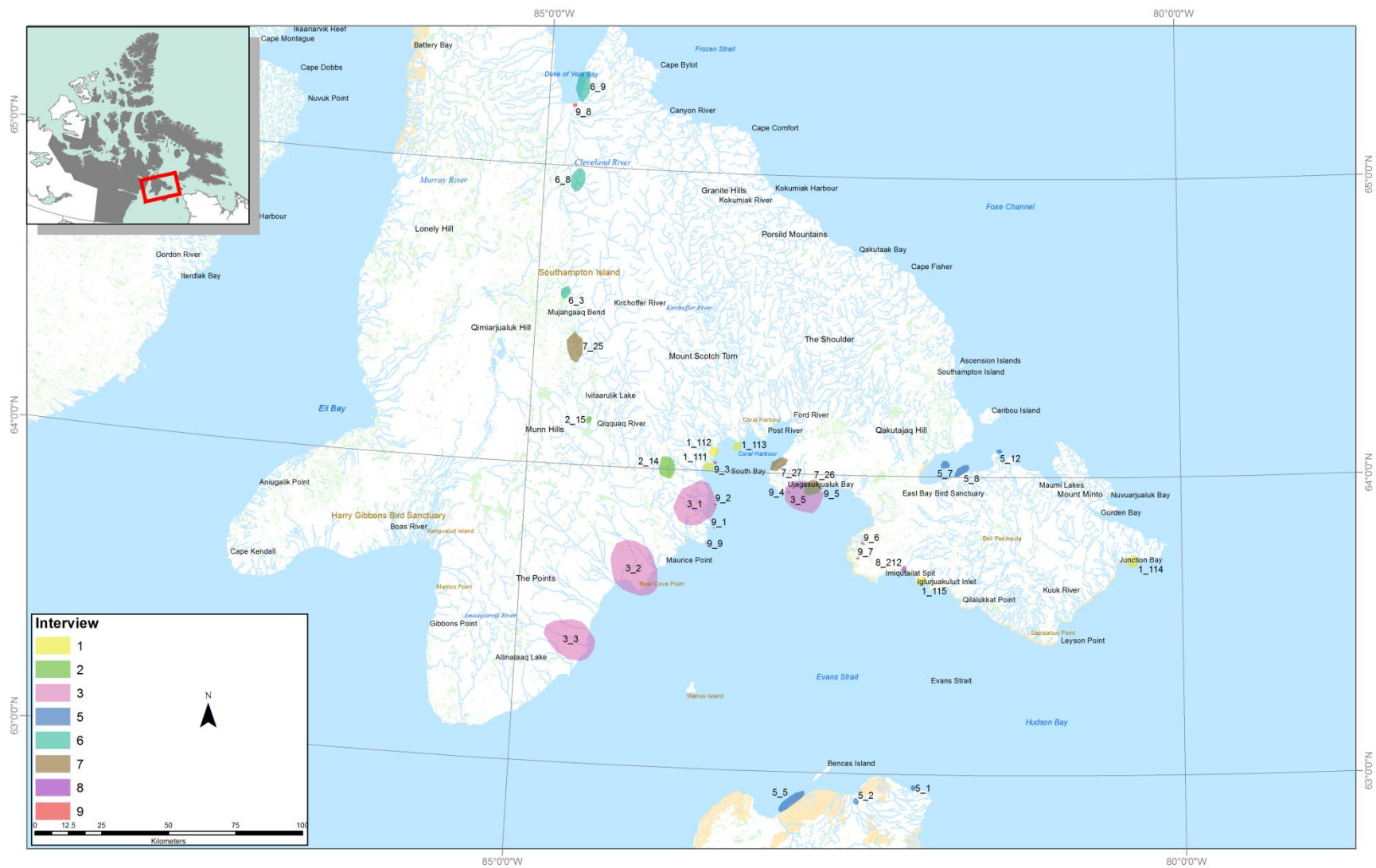


Figure 5. Campsites



Table 4. Campsites

Map Code	Interview Code	Category	Comments
1_111	CORAL_1_0214	Camp	Igloo / campsite
1_112	CORAL_1_0214	Camp	Igloo / campsite
1_113	CORAL_1_0214	Camp	Igloo / campsite
1_114	CORAL_1_0214	Camp	Igloo / campsite
1_115	CORAL_1_0214	Camp	Igloo / campsite
2_14	CORAL_2_0214	Camp	
2_15	CORAL_2_0214	Camp	
3_1	CORAL_3_0214	Camp	Campsites where she grew up
3_2	CORAL_3_0214	Camp	Camps
3_3	CORAL_3_0214	Camp	Fox trapping area
3_5	CORAL_3_0214	Camp	Fox trapping area
5_1	CORAL_5_0214	Camp	Environment Canada camp where they study thick bill murre
5_2	CORAL_5_0214	Camp	Shorebird research camp
5_5	CORAL_5_0214	Camp	Shore birds
5_7	CORAL_5_0214	Camp	Environment Canada research camp (3 cabins)
5_8	CORAL_5_0214	Camp	Environment Canada research camp (2 cabins)
5_12	CORAL_5_0214	Camp	Hunting cabin
6_3	CORAL_6_0214	Camp	Main, Fishing camp
6_8	CORAL_6_0214	Camp	Year round camp
6_9	CORAL_6_0214	Camp	Summer fishing camp
7_25	CORAL_7_0214	Camp	
7_26	CORAL_7_0214	Camp	Spring family camp
7_27	CORAL_7_0214	Camp	Spring family camp
8_212	CORAL_8_0214	Camp	
9_1	CORAL_9_0214	Camp	Camp areas where he grew up
9_2	CORAL_9_0214	Camp	Camp areas where he grew up
9_3	CORAL_9_0214	Camp	Camp areas where he grew up
9_4	CORAL_9_0214	Camp	Camp areas where he grew up
9_5	CORAL_9_0214	Camp	Camp areas where he grew up
9_6	CORAL_9_0214	Camp	Camp areas where he grew up
9_7	CORAL_9_0214	Camp	Camp areas where he grew up
9_8	CORAL_9_0214	Camp	
9_9	CORAL_9_0214	Camp	



Figure 6. Travel routes for interviews 1 to 5



Table 5. Travel Routes Interviews 1 to 5

Map Code	Interview Code	Category	Comments
1_18	CORAL_1_0214	Travel route	to go fox trapping
2_3	CORAL_2_0214	Travel route	
2_13	CORAL_2_0214	Travel route	
2_16	CORAL_2_0214	Travel route	
3_13	CORAL_3_0214	Travel route	Travel route from AKB_3_1 to AKB_3_9
3_17	CORAL_3_0214	Travel route	Travel on dog teams, All sorts of species on this route
4_5	CORAL_4_0214	Travel route	Current route to fox traps
4_6	CORAL_4_0214	Travel route	Dog team to fox traps
4_7	CORAL_4_0214	Travel route	Route to seal hunting area
4_8	CORAL_4_0214	Travel route	Route to seal hunting area
5_13	CORAL_5_0214	Travel route	Spring travel route
5_24	CORAL_5_0214	Travel route	Fox trapline
5_31	CORAL_5_0214	Travel route	Travel route to walrus hunting
5_32	CORAL_5_0214	Travel route	Travel route to Walrus Island
5_33	CORAL_5_0214	Travel route	Travel route to Walrus hunting

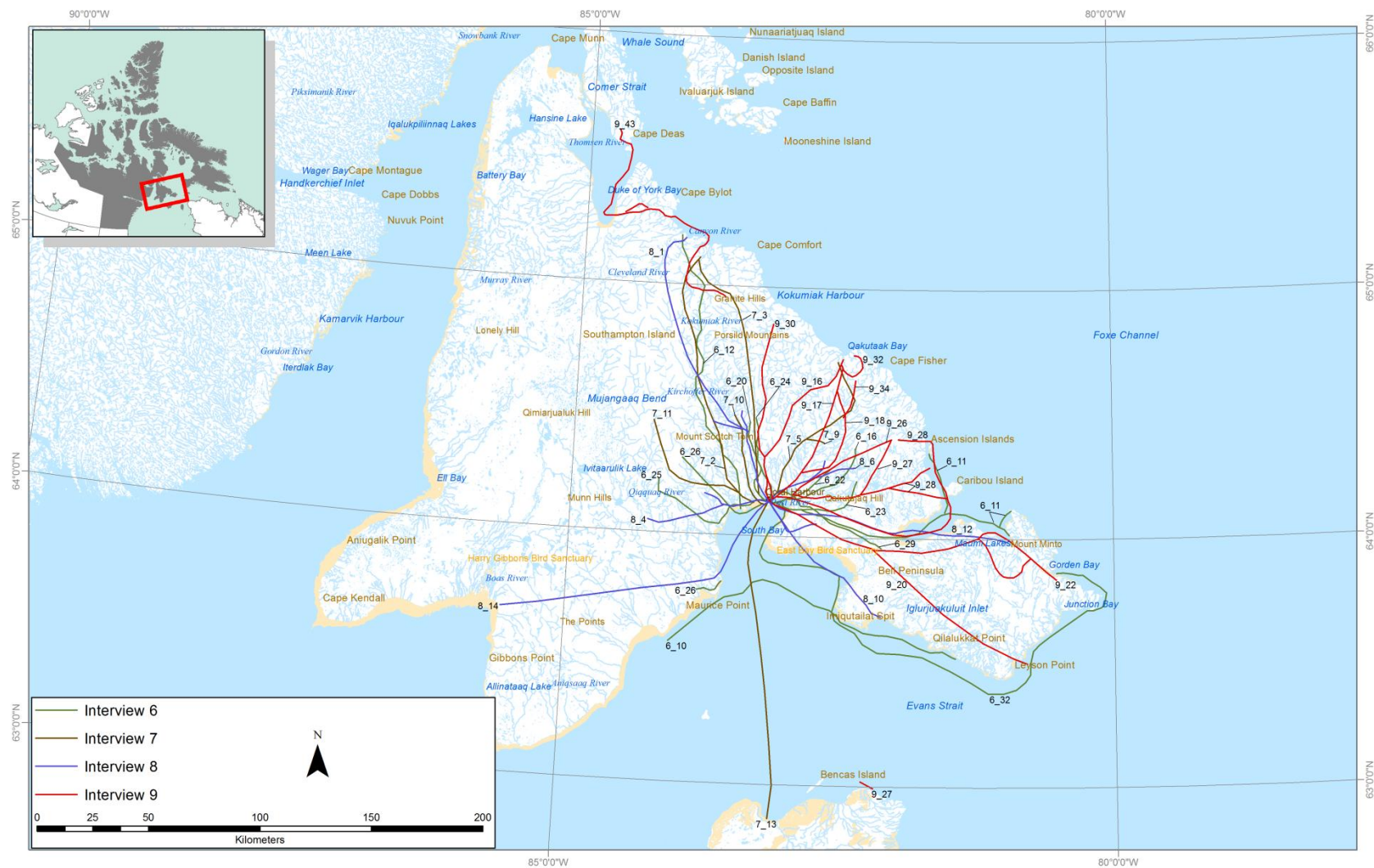


Figure 7. Travel routes for interviews 6 to 9

Table 6. Travel routes for interviews 6 to 9

Map Code	Interview Code	Category	Comments
6_10	CORAL_6_0214	Travel route	Polar Bear hunting route
6_11	CORAL_6_0214	Travel route	Winter travel route to hunt Polar Bear
6_12	CORAL_6_0214	Travel route	Travel route to hut polar bear following the Kirchoffor River.
6_16	CORAL_6_0214	Travel route	Travel route to caribou hunting in winter
6_20	CORAL_6_0214	Travel route	Travel route to AKB_6_18 in winter
6_22	CORAL_6_0214	Travel route	Travel route to AKB_6_17 in winter
6_23	CORAL_6_0214	Travel route	Travel route to AKB_6_17 in winter
6_24	CORAL_6_0214	Travel route	ATV travel route to AKB_6_17 in Sep
6_25	CORAL_6_0214	Travel route	ATV travel route to AKB_6_19
6_26	CORAL_6_0214	Travel route	ATV trail
6_29	CORAL_6_0214	Travel route	ATV trail to AKB_6_30
6_32	CORAL_6_0214	Travel route	Summer boat travel and hunting route
7_2	CORAL_7_0214	Travel route	Follows Kirchoffer, smooth but lots of turns
7_3	CORAL_7_0214	Travel route	Shortcut
7_5	CORAL_7_0214	Travel route	
7_9	CORAL_7_0214	Travel route	Travel to AKB_7_6
7_10	CORAL_7_0214	Travel route	
7_11	CORAL_7_0214	Travel route	
7_13	CORAL_7_0214	Travel route	Summer travel to Coats Island
8_1	CORAL_8_0214	Travel route	
8_4	CORAL_8_0214	Travel route	
8_6	CORAL_8_0214	Travel route	
8_10	CORAL_8_0214	Travel route	
8_12	CORAL_8_0214	Travel route	
8_14	CORAL_8_0214	Travel route	
9_16	CORAL_9_0214	Travel route	Travel to AKB_9_15
9_17	CORAL_9_0214	Travel route	Travel to AKB_9_15
9_18	CORAL_9_0214	Travel route	Travel to AKB_9_15
9_20	CORAL_9_0214	Travel route	Travel to AKB_9_19
9_26	CORAL_9_0214	Travel route	Route to AKB_9_25
9_27	CORAL_9_0214	Travel route	Route to AKB_9_25
9_28	CORAL_9_0214	Travel route	Polar Bear hunting route
9_30	CORAL_9_0214	Travel route	Route to 9_31
9_32	CORAL_9_0214	Travel route	Rout to 9_33
9_34	CORAL_9_0214	Travel route	Travel route, can get very deep snow
9_43	CORAL_9_0214	Travel route	Polar Bear hunting route



Table 7. Special Places of Diversity

Map Code	Interview Code	Category	Comments
1_100	CORAL_1_0214	Special Place Diversity	Flow edge that can start using in March
1_102	CORAL_1_0214	Special Place Diversity	Catch seal here in winter
2_162	CORAL_2_0214	Special Place Diversity	
2_163	CORAL_2_0214	Special Place Diversity	
2_164	CORAL_2_0214	Special Place Diversity	
2_165	CORAL_2_0214	Special Place Diversity	
3_69	CORAL_3_0214	Special Place Diversity	
4_77	CORAL_4_0214	Special Place Diversity	
4_78	CORAL_4_0214	Special Place Diversity	
5_348	CORAL_5_0214	Special Place Diversity	Polynya
5_349	CORAL_5_0214	Special Place Diversity	Polynya
5_350	CORAL_5_0214	Special Place Diversity	Flow edge South East corner of Southampton Island
5_351	CORAL_5_0214	Special Place Diversity	Flow edge near Caribou Island
5_352	CORAL_5_0214	Special Place Diversity	Flow edge near Black Rock
5_353	CORAL_5_0214	Special Place Diversity	Flow edge South East corner of Southampton Island
5_354	CORAL_5_0214	Special Place Diversity	Flow edge East corner of Sthampton Island, currents cause edge to break up often
5_355	CORAL_5_0214	Special Place Diversity	Ice sometimes freezes across to mainland and people go caribou hunting, last freeze up was 6 years ago
5_356	CORAL_5_0214	Special Place Diversity	
5_357	CORAL_5_0214	Special Place Diversity	
5_358	CORAL_5_0214	Special Place Diversity	
5_359	CORAL_5_0214	Special Place Diversity	Large numbers of seals and walrus
6_157	CORAL_6_0214	Special Place Diversity	Flow edge closest it's ever been this year and keeps breaking in this spot
6_158	CORAL_6_0214	Special Place Diversity	Massive species diversity



Map Code	Interview Code	Category	Comments
7_132	CORAL_7_0214	Special Place Diversity	
7_134	CORAL_7_0214	Special Place Diversity	This year flow edge is really bad because of the number of storms
7_135	CORAL_7_0214	Special Place Diversity	
7_136	CORAL_7_0214	Special Place Diversity	
7_137	CORAL_7_0214	Special Place Diversity	
7_138	CORAL_7_0214	Special Place Diversity	
7_139	CORAL_7_0214	Special Place Diversity	
8_187	CORAL_8_0214	Special Place Diversity	Open water area
8_188	CORAL_8_0214	Special Place Diversity	Very high currents
8_189	CORAL_8_0214	Special Place Diversity	Very high currents
8_190	CORAL_8_0214	Special Place Diversity	Very high currents
8_191	CORAL_8_0214	Special Place Diversity	Polynya
8_192	CORAL_8_0214	Special Place Diversity	Current direction at flow edge when tide is high
8_193	CORAL_8_0214	Special Place Diversity	Current direction at flow edge when tide is low
8_194	CORAL_8_0214	Special Place Diversity	This years flow edge (closest he's seen)
8_195	CORAL_8_0214	Special Place Diversity	Furthest extent of flow edge he's seen
8_196	CORAL_8_0214	Special Place Diversity	Flow edge
8_205	CORAL_8_0214	Special Place Diversity	Polynya
9_14	CORAL_9_0214	Special Place Diversity	
9_35	CORAL_9_0214	Special Place Diversity	Normal flow edge
9_36	CORAL_9_0214	Special Place Diversity	Normal flow edge
9_37	CORAL_9_0214	Special Place Diversity	



Table 8. Special Places for other reasons

Map Code	Interview Code	Category	Comments
1_106	CORAL_1_0214	Special Place Other reason	Area where he has always been happy hunting
1_107	CORAL_1_0214	Special Place Other reason	Perfect hunting area relexing and peaceful
1_108	CORAL_1_0214	Special Place Other reason	Perfect hunting area relexing and peaceful
1_109	CORAL_1_0214	Special Place Other reason	Found soapstone here
2_166	CORAL_2_0214	Special Place Other reason	All sorts of species here
2_167	CORAL_2_0214	Special Place Other reason	Beautiful location
2_168	CORAL_2_0214	Special Place Other reason	
2_169	CORAL_2_0214	Special Place Other reason	
2_170	CORAL_2_0214	Special Place Other reason	
3_70	CORAL_3_0214	Special Place Other reason	
5_360	CORAL_5_0214	Special Place Other reason	Beautiful area
5_361	CORAL_5_0214	Special Place Other reason	All kinds of sea mammals
6_159	CORAL_6_0214	Special Place Other reason	Soap stone
8_197	CORAL_8_0214	Special Place Other reason	
8_198	CORAL_8_0214	Special Place Other reason	
8_199	CORAL_8_0214	Special Place Other reason	
8_200	CORAL_8_0214	Special Place Other reason	High water fall
8_201	CORAL_8_0214	Special Place Other reason	Highest mountain
8_203	CORAL_8_0214	Special Place Other reason	
8_204	CORAL_8_0214	Special Place Other reason	Major char run
8_206	CORAL_8_0214	Special Place Other reason	Sod houses
8_207	CORAL_8_0214	Special Place Other reason	Sod house found with skeletons, bullet caseing and doll
8_208	CORAL_8_0214	Special Place Other reason	Shammans grave, marked with cross last year



Map Code	Interview Code	Category	Comments
8_209	CORAL_8_0214	Special Place Other reason	Sod houses that have never been touched
8_214	CORAL_8_0214	Special Place Other reason	Large rock with inukshuk on top



Figure 10. Probability of occurrence for Arctic Char

Table 9. Probability of occurrence for Arctic Char

Map Code	Interview Code	Species	Months	Comments
1_22SA	CORAL_1_0214	Arctic Char		
1_23A	CORAL_1_0214	Arctic Char		
1_24A	CORAL_1_0214	Arctic Char		
1_25A	CORAL_1_0214	Arctic Char		
1_26	CORAL_1_0214	Arctic Char		
1_27	CORAL_1_0214	Arctic Char		
1_28	CORAL_1_0214	Arctic Char		
1_29	CORAL_1_0214	Arctic Char		
1_30	CORAL_1_0214	Arctic Char		
1_37	CORAL_1_0214	Arctic Char		
1_48	CORAL_1_0214	Arctic Char		
2_25	CORAL_2_0214	Arctic Char	Year-round	
2_26	CORAL_2_0214	Arctic Char	Year-round	
2_27	CORAL_2_0214	Arctic Char	Year-round	
2_28	CORAL_2_0214	Arctic Char	Year-round	
2_29	CORAL_2_0214	Arctic Char	Year-round	
2_30	CORAL_2_0214	Arctic Char	Year-round	
2_31	CORAL_2_0214	Arctic Char	Year-round	
2_32	CORAL_2_0214	Arctic Char	Year-round	
2_33	CORAL_2_0214	Arctic Char	Year-round	
2_34	CORAL_2_0214	Arctic Char	Year-round	
2_35	CORAL_2_0214	Arctic Char	Year-round	
2_36	CORAL_2_0214	Arctic Char	Year-round	
2_37	CORAL_2_0214	Arctic Char	Year-round	
2_38S	CORAL_2_0214	Arctic Char		
2_39S	CORAL_2_0214	Arctic Char		
2_83	CORAL_2_0214	Arctic Char		
2_87	CORAL_2_0214	Arctic Char		
2_88	CORAL_2_0214	Arctic Char		
2_89	CORAL_2_0214	Arctic Char		
3_19	CORAL_3_0214	Arctic Char		
3_20	CORAL_3_0214	Arctic Char		
3_21	CORAL_3_0214	Arctic Char		
3_22	CORAL_3_0214	Arctic Char		Big Char
3_23	CORAL_3_0214	Arctic Char		
4_28S	CORAL_4_0214	Arctic Char	Winter	No access in summer
4_29S	CORAL_4_0214	Arctic Char	Summer and Winter	
4_30S	CORAL_4_0214	Arctic Char	Summer and Winter	
4_31S	CORAL_4_0214	Arctic Char	Jan, Feb, Mar	No access in summer

Map Code	Interview Code	Species	Months	Comments
4_32S	CORAL_4_0214	Arctic Char	Jan, Feb, Mar	No access in summer
4_33S	CORAL_4_0214	Arctic Char	Summer and Winter	
5_206	CORAL_5_0214	Arctic Char		
5_207	CORAL_5_0214	Arctic Char		
5_208	CORAL_5_0214	Arctic Char		
5_209	CORAL_5_0214	Arctic Char		
5_210	CORAL_5_0214	Arctic Char		
5_211	CORAL_5_0214	Arctic Char		
5_212	CORAL_5_0214	Arctic Char		
5_213	CORAL_5_0214	Arctic Char		
5_214	CORAL_5_0214	Arctic Char		
5_215	CORAL_5_0214	Arctic Char		
5_216	CORAL_5_0214	Arctic Char		
5_217	CORAL_5_0214	Arctic Char		
5_218	CORAL_5_0214	Arctic Char		
5_219S	CORAL_5_0214	Arctic Char		
5_224	CORAL_5_0214	Arctic Char		
5_227	CORAL_5_0214	Arctic Char		
5_228	CORAL_5_0214	Arctic Char		
6_41S	CORAL_6_0214	Arctic Char		
6_42	CORAL_6_0214	Arctic Char		
6_43	CORAL_6_0214	Arctic Char		
6_44	CORAL_6_0214	Arctic Char		
6_45	CORAL_6_0214	Arctic Char		
6_46	CORAL_6_0214	Arctic Char		
6_47S	CORAL_6_0214	Arctic Char		Cleveland River
6_52S	CORAL_6_0214	Arctic Char		Hansine Lake
6_54	CORAL_6_0214	Arctic Char		
6_57	CORAL_6_0214	Arctic Char		
6_59	CORAL_6_0214	Arctic Char	June	
6_60	CORAL_6_0214	Arctic Char		
7_47	CORAL_7_0214	Arctic Char		
7_48	CORAL_7_0214	Arctic Char		
7_49	CORAL_7_0214	Arctic Char		
7_50	CORAL_7_0214	Arctic Char		
7_51	CORAL_7_0214	Arctic Char		
7_58	CORAL_7_0214	Arctic Char		
7_59	CORAL_7_0214	Arctic Char		
7_60	CORAL_7_0214	Arctic Char		
7_61	CORAL_7_0214	Arctic Char		
7_62	CORAL_7_0214	Arctic Char		
8_35	CORAL_8_0214	Arctic Char		

Map Code	Interview Code	Species	Months	Comments
8_36S	CORAL_8_0214	Arctic Char		Spawn once in summer
8_37S	CORAL_8_0214	Arctic Char		
8_38	CORAL_8_0214	Arctic Char	Winter	Small lake, can't see on map
8_42	CORAL_8_0214	Arctic Char	Winter	
8_44	CORAL_8_0214	Arctic Char	Winter	
8_45S	CORAL_8_0214	Arctic Char		
9_52	CORAL_9_0214	Arctic Char		
9_74	CORAL_9_0214	Arctic Char		
9_75	CORAL_9_0214	Arctic Char		
9_77	CORAL_9_0214	Arctic Char		
9_78	CORAL_9_0214	Arctic Char		
9_80	CORAL_9_0214	Arctic Char		
9_85	CORAL_9_0214	Arctic Char		
9_86S	CORAL_9_0214	Arctic Char		
9_87S	CORAL_9_0214	Arctic Char		
9_88	CORAL_9_0214	Arctic Char		
9_89	CORAL_9_0214	Arctic Char		
9_90	CORAL_9_0214	Arctic Char		
9_95	CORAL_9_0214	Arctic Char		
9_99	CORAL_9_0214	Arctic Char		
9_101S	CORAL_9_0214	Arctic Char		
9_102	CORAL_9_0214	Arctic Char		
9_105	CORAL_9_0214	Arctic Char		
9_106	CORAL_9_0214	Arctic Char		
9_111	CORAL_9_0214	Arctic Char		
9_113	CORAL_9_0214	Arctic Char		Below water fall
9_117	CORAL_9_0214	Arctic Char		

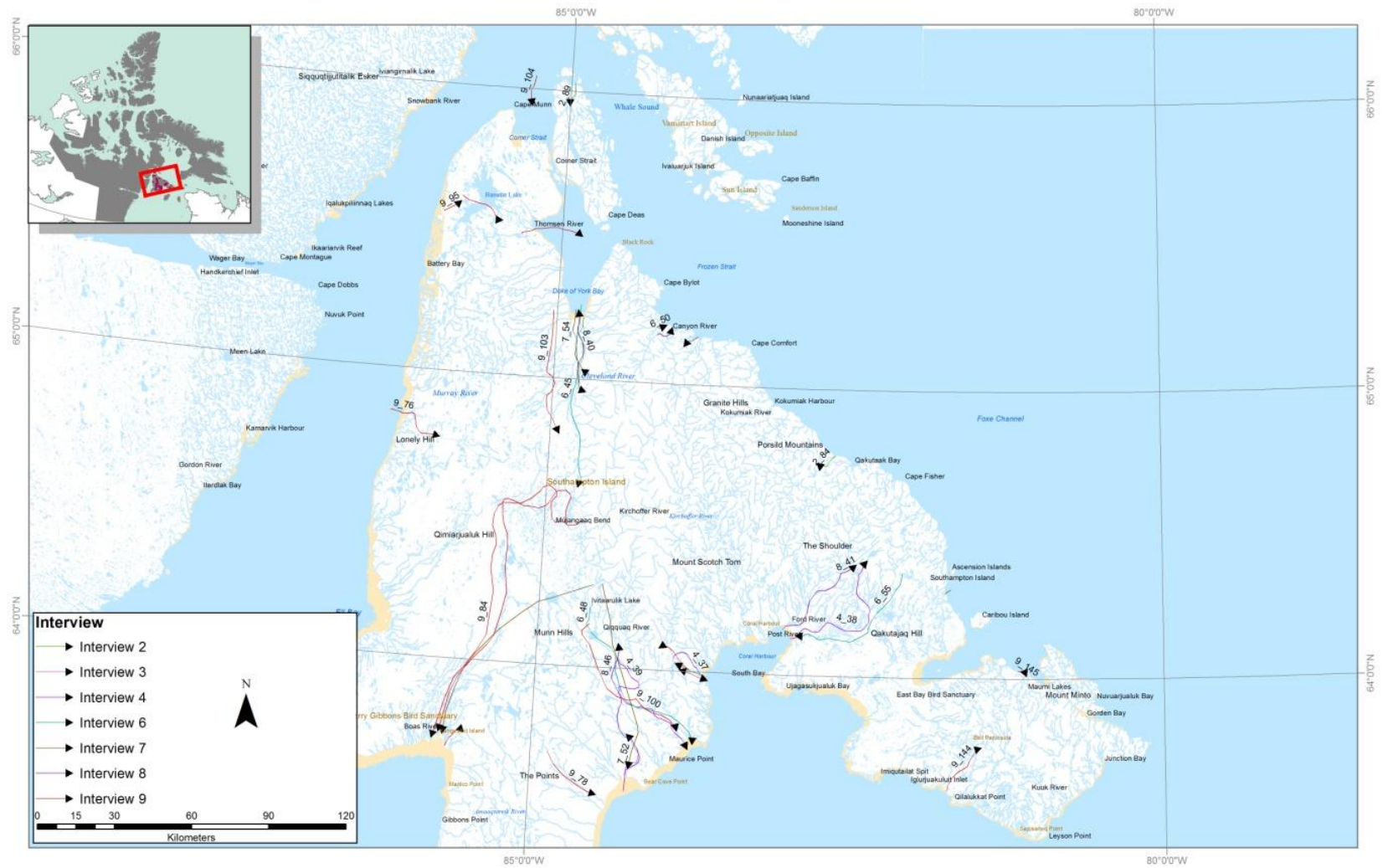


Figure 11. Migration routes for Arctic Char

Table 10. Migration Routes for Arctic Char

Map Code	Interview Code	Species	Months	Comments
2_81M	CORAL_2_0214	Arctic Char		
2_84M	CORAL_2_0214	Arctic Char		
3_26M	CORAL_3_0214	Arctic Char	June to Aug	
3_27M	CORAL_3_0214	Arctic Char	June to Aug	
4_37M	CORAL_4_0214	Arctic Char	Jun	Spring Migration
4_38M	CORAL_4_0214	Arctic Char	Jun	
4_39M	CORAL_4_0214	Arctic Char		
6_48M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_43S
6_49M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_44S
6_50M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_46
6_51M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_42S
6_53M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_52S
6_55M	CORAL_6_0214	Arctic Char	June	Migration from CHAR_6_54S
6_58M	CORAL_6_0214	Arctic Char		Migration from CHAR_6_57 small river missing from map
8_39M	CORAL_8_0214	Arctic Char	Aug	Migration from CHAR_8_37S
8_40M	CORAL_8_0214	Arctic Char		Migration from CHAR_8_36S
8_41M	CORAL_8_0214	Arctic Char		Migration from CHAR_8_38
8_43M	CORAL_8_0214	Arctic Char		
8_46M	CORAL_8_0214	Arctic Char		Migration from CHAR_8_45S
9_53M	CORAL_9_0214	Arctic Char		
9_76M	CORAL_9_0214	Arctic Char		
9_84M	CORAL_9_0214	Arctic Char		
9_96M	CORAL_9_0214	Arctic Char		
9_103M	CORAL_9_0214	Arctic Char		
9_104M	CORAL_9_0214	Arctic Char		
9_112M	CORAL_9_0214	Arctic Char		
9_292_1M	CORAL_9_0214	Arctic Char		
9_292_2M	CORAL_9_0214	Arctic Char		
9_292_3M	CORAL_9_0214	Arctic Char		







Table 11. Probability of occurrence for Land Locked Char

Map Code	Interview Code	Species	Months	Comments
2_40	CORAL_2_0214	Land-locked Char	Year-round	
2_41	CORAL_2_0214	Land-locked Char	Year-round	
2_42	CORAL_2_0214	Land-locked Char	Year-round	
2_43	CORAL_2_0214	Land-locked Char	Year-round	
2_44	CORAL_2_0214	Land-locked Char	Year-round	
2_45	CORAL_2_0214	Land-locked Char	Year-round	
2_46	CORAL_2_0214	Land-locked Char	Year-round	
2_47	CORAL_2_0214	Land-locked Char	Year-round	
2_48	CORAL_2_0214	Land-locked Char	Year-round	
2_49	CORAL_2_0214	Land-locked Char	Year-round	
2_50	CORAL_2_0214	Land-locked Char	Year-round	
2_51	CORAL_2_0214	Land-locked Char	Year-round	
2_52	CORAL_2_0214	Land-locked Char	Year-round	
2_53	CORAL_2_0214	Land-locked Char	Year-round	
3_25	CORAL_3_0214	Land-locked Char		Not certain of location but in this area
4_34S	CORAL_4_0214	Land-locked Char		
4_35S	CORAL_4_0214	Land-locked Char		
5_220	CORAL_5_0214	Land-locked Char		
5_221	CORAL_5_0214	Land-locked Char		
5_222	CORAL_5_0214	Land-locked Char		
6_61	CORAL_6_0214	Land-locked Char		
6_62	CORAL_6_0214	Land-locked Char		
6_63	CORAL_6_0214	Land-locked Char		Kirchoffer River

Map Code	Interview Code	Species	Months	Comments
6_64	CORAL_6_0214	Land-locked Char		
6_65	CORAL_6_0214	Land-locked Char		
6_66	CORAL_6_0214	Land-locked Char		
7_63	CORAL_7_0214	Land-locked Char		
7_64	CORAL_7_0214	Land-locked Char		
8_47	CORAL_8_0214	Land-locked Char		
8_48	CORAL_8_0214	Land-locked Char	Year round	
8_49	CORAL_8_0214	Land-locked Char		
8_50	CORAL_8_0214	Land-locked Char		
8_51	CORAL_8_0214	Land-locked Char		
9_50	CORAL_9_0214	Land-locked Char		
9_51	CORAL_9_0214	Land-locked Char		
9_79	CORAL_9_0214	Land-locked Char		
9_82	CORAL_9_0214	Land-locked Char		
9_83	CORAL_9_0214	Land-locked Char		
9_93	CORAL_9_0214	Land-locked Char		
9_94	CORAL_9_0214	Land-locked Char		
9_97	CORAL_9_0214	Land-locked Char		
9_107	CORAL_9_0214	Land-locked Char		
9_108	CORAL_9_0214	Land-locked Char		
9_110	CORAL_9_0214	Land-locked Char		
9_114	CORAL_9_0214	Land-locked Char		
9_116	CORAL_9_0214	Land-locked Char		
9_118	CORAL_9_0214	Land-locked Char		

Map Code	Interview Code	Species	Months	Comments
9_119	CORAL_9_0214	Land-locked Char		
9_120	CORAL_9_0214	Land-locked Char		
9_146	CORAL_9_0214	Land-locked Char		
9_147	CORAL_9_0214	Land-locked Char		
9_148	CORAL_9_0214	Land-locked Char		
9_149	CORAL_9_0214	Land-locked Char		

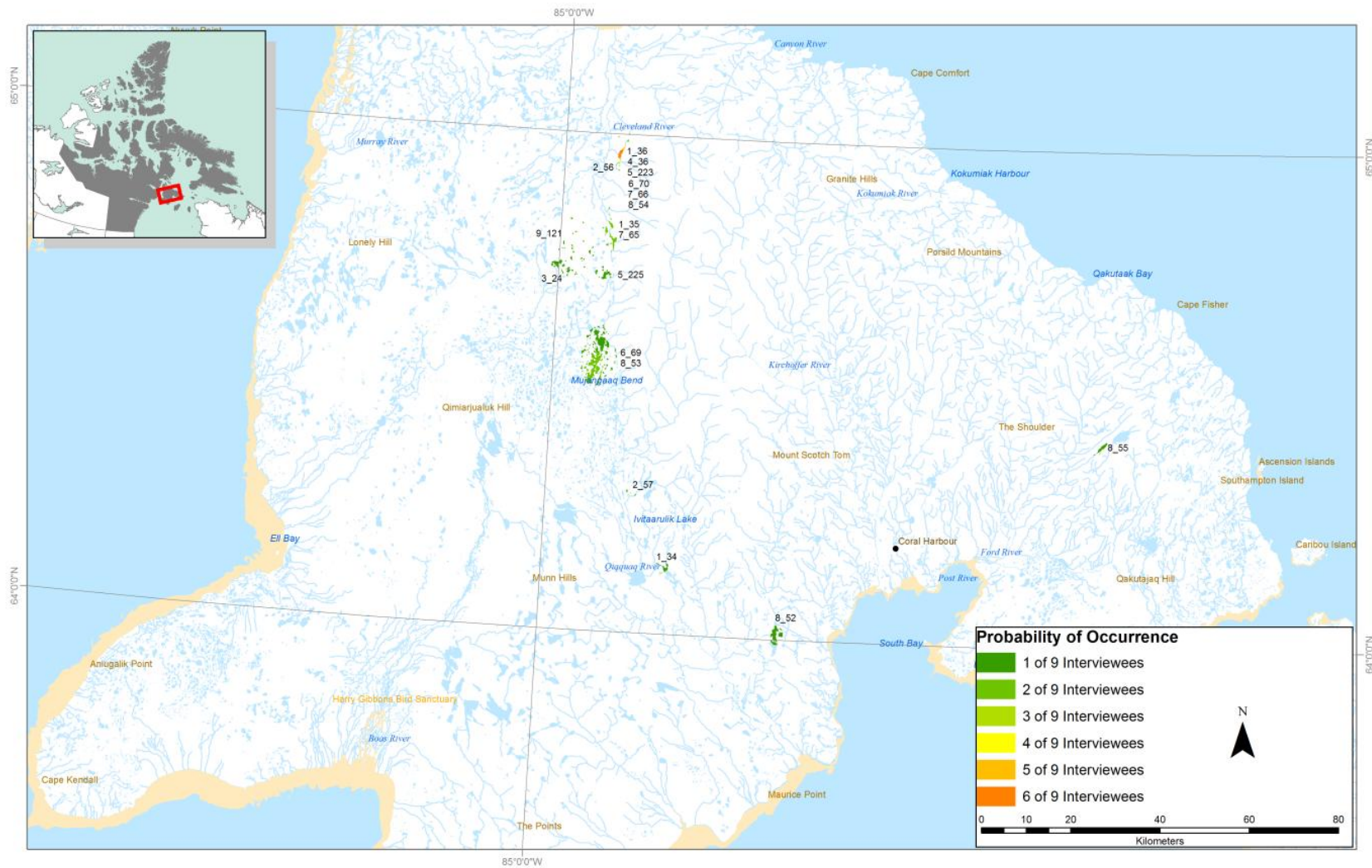


Figure 13. Probability of occurrence for lake trout

Table 12. Probability of occurrence for Lake Trout

Map Code	Interview Code	Species	Months	Comments
1_34	CORAL_1_0214	Lake Trout		
1_35	CORAL_1_0214	Lake Trout		
1_36	CORAL_1_0214	Lake Trout		
2_56	CORAL_2_0214	Lake Trout	winter	
2_57	CORAL_2_0214	Lake Trout	winter	
3_24	CORAL_3_0214	Lake Trout		
4_36S	CORAL_4_0214	Lake Trout		
5_223	CORAL_5_0214	Lake Trout		
5_225	CORAL_5_0214	Lake Trout		
6_69	CORAL_6_0214	Lake Trout	Year-round	
6_70	CORAL_6_0214	Lake Trout	Year-round	
7_65	CORAL_7_0214	Lake Trout		
7_66	CORAL_7_0214	Lake Trout		
8_52S	CORAL_8_0214	Lake Trout		
8_53S	CORAL_8_0214	Lake Trout		
8_54	CORAL_8_0214	Lake Trout		
8_55	CORAL_8_0214	Lake Trout		
9_121	CORAL_9_0214	Lake Trout		



Table 13. Areas of occurrence for Atlantic Salmon, Bull Trout, and Brook Trout

Map Code	Interview Code	Species	Months	Comments
2_54	CORAL_2_0214	Bull Trout	winter	
2_55	CORAL_2_0214	Bull Trout	winter	
2_59	CORAL_2_0214	Atlantic Salmon	Fall	rarely ever sees them
6_71	CORAL_6_0214	Atlantic Salmon	May	Only seen a couple of times
7_67	CORAL_7_0214	Atlantic Salmon		
9_123	CORAL_9_0214	Atlantic salmon		
6_67	CORAL_6_0214	Brook Trout	Year-round	
6_68	CORAL_6_0214	Brook Trout	Year-round	





Table 14. Areas of occurrence for Arctic Cod, Atlantic Cod

Map Code	Interview Code	Species	Months	Comments
5_229	CORAL_5_0214	Arctic cod		
5_230	CORAL_5_0214	Arctic cod		
5_231	CORAL_5_0214	Arctic cod		
5_232	CORAL_5_0214	Arctic cod		
6_75	CORAL_6_0214	Arctic cod		Same area as Atlantic Cod
6_76	CORAL_6_0214	Arctic cod		Same area as Atlantic Cod
8_56	CORAL_8_0214	Arctic Cod		
8_57	CORAL_8_0214	Arctic Cod		Very large fish
8_58	CORAL_8_0214	Arctic Cod		
8_60	CORAL_8_0214	Arctic Cod		
2_64	CORAL_2_0214	Atlantic cod	June	
2_65	CORAL_2_0214	Atlantic cod	June	
2_66	CORAL_2_0214	Atlantic cod	June	
2_67	CORAL_2_0214	Atlantic cod	June	
2_68	CORAL_2_0214	Atlantic cod	June	
2_69	CORAL_2_0214	Atlantic cod	June	
2_70	CORAL_2_0214	Atlantic cod	June	
6_72	CORAL_6_0214	Atlantic cod	Jul to Oct	
6_73	CORAL_6_0214	Atlantic cod	Jul to Oct	



Table 16. Areas of occurrence for Greenland Cod, and Toothed Cod

Map Code	Interview Code	Species	Months	Comments
1_42	CORAL_1_0214	Greenland Cod		
2_71	CORAL_2_0214	Greenland Cod	Year-round	
2_72	CORAL_2_0214	Greenland Cod	Year-round	
3_28	CORAL_3_0214	Greenland Cod		
4_40	CORAL_4_0214	Greenland Cod		Shallow waters
4_41	CORAL_4_0214	Greenland Cod		Shallow waters
4_42	CORAL_4_0214	Greenland Cod		Shallow waters
4_43	CORAL_4_0214	Greenland Cod		Shallow waters
7_68	CORAL_7_0214	Greenland Cod		
9_126	CORAL_9_0214	Greenland Cod		
1_43	CORAL_1_0214	Toothed Cod		
3_31	CORAL_3_0214	Toothed Cod		
4_44	CORAL_4_0214	Toothed Cod		Cod darker than the ones close to town
9_128	CORAL_9_0214	Toothed Cod		
6_78	CORAL_6_0214	Burbot	May	Mother caught one on a fishing derby approx 40 cm length

Table 17. Greenland Cod and Toothed Cod everywhere data

Map Code	Interview Code	Species	Months	Comments
4_80E	CORAL_4_0214	Greenland cod		Shallow waters
9_328E	CORAL_9_0214	Toothed cod		



Figure 17. Areas of occurrence for Arctic Sculpin and Shorthorn Sculpin

Table 18. Areas of occurrence for Arctic Sculpin and Shorthorn Sculpin

Map Code	Interview Code	Species	Months	Comments
2_75	CORAL_2_0214	Shorthorn Sculpin	Year-round	
2_76	CORAL_2_0214	Shorthorn Sculpin	Year-round	
2_77	CORAL_2_0214	Shorthorn Sculpin	Year-round	
2_78	CORAL_2_0214	Shorthorn Sculpin	Year-round	
5_236	CORAL_5_0214	Shorthorn Sculpin		
7_69	CORAL_7_0214	Shorthorn Sculpin		
8_61	CORAL_8_0214	Shorthorn Sculpin		
8_62	CORAL_8_0214	Shorthorn Sculpin		
5_233	CORAL_5_0214	Arctic Sculpin		
5_234	CORAL_5_0214	Arctic Sculpin		
5_235	CORAL_5_0214	Arctic Sculpin		
6_81	CORAL_6_0214	Arctic Sculpin	May	

Table 19. Arctic Staghorn Sculpin, and Shorthorn Sculpin everywhere data

Map Code	Interview Code	Species	Months	Comments
4_81E	CORAL_4_0214	Shorthorn Sculpin		
9_329E	CORAL_9_0214	Shorthorn Sculpin		



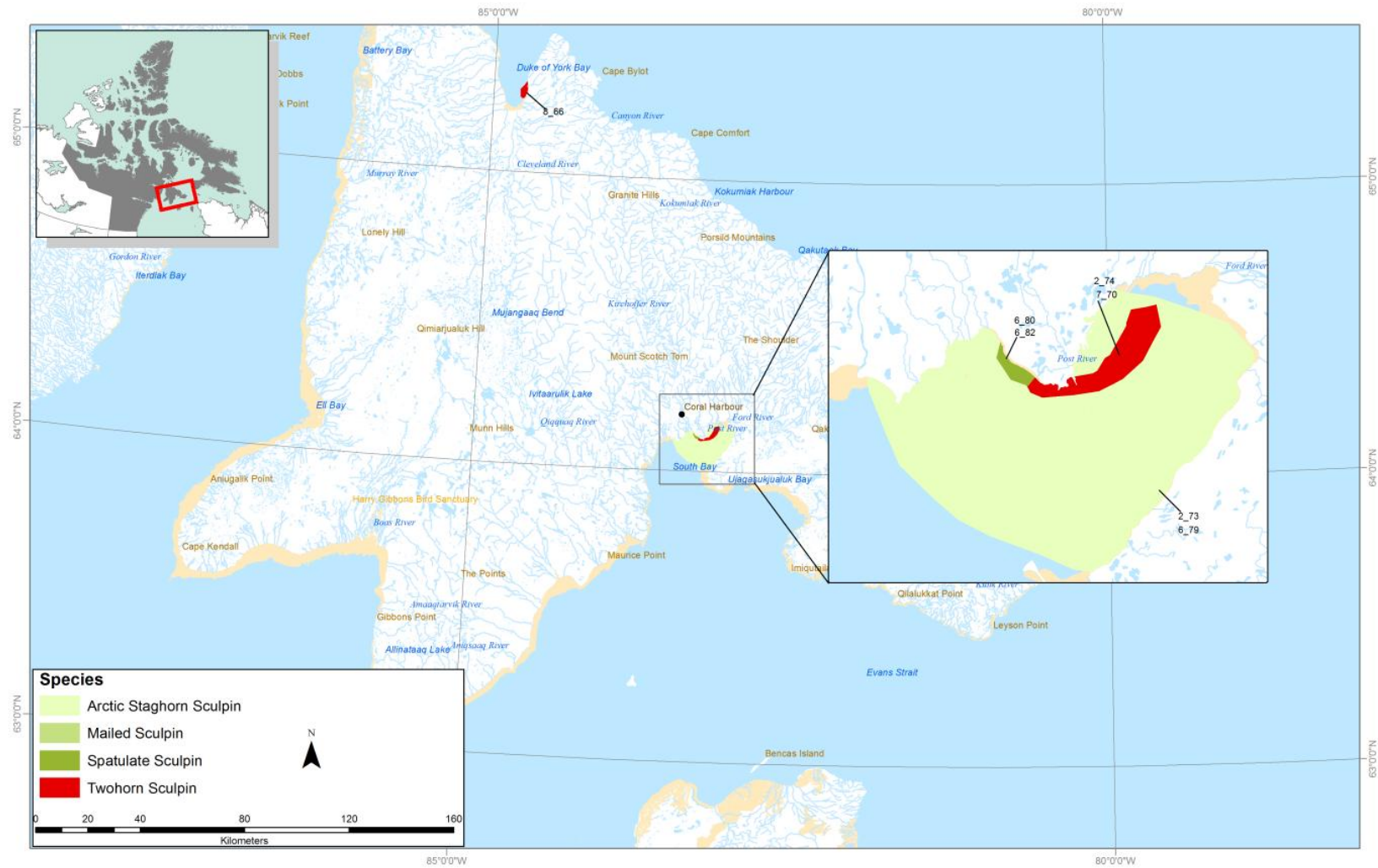


Figure 18. Areas of occurrence for Arctic Staghorn Sculpin, Mailed Sculpin, Spatulate Sculpin, and Twohorn Sculpin



Table 20. Areas of occurrence for Arctic Staghorn Sculpin, Mailed Sculpin, Spatulate Sculpin, and Twohorn Sculpin

Map Code	Interview Code	Species	Months	Comments
2_73	CORAL_2_0214	Arctic Staghorn Sculpin	Year-round	
2_74	CORAL_2_0214	Arctic Staghorn Sculpin	Year-round	
6_79	CORAL_6_0214	Arctic Staghorn Sculpin	Spring	
6_80	CORAL_6_0214	Arctic Staghorn Sculpin	Spring	
5_237	CORAL_5_0214	Mailed sculpin		
6_82	CORAL_6_0214	Spatulate Sculpin		
7_70	CORAL_7_0214	Two-horn sculpin		
8_64	CORAL_8_0214	Two-horn sculpin		Inside this line
8_66	CORAL_8_0214	Two-horn sculpin		

Table 21. Slimy Sculpin everywhere data

Map Code	Interview Code	Species	Months	Comments
9_330E	CORAL_9_0214	Slimy Sculpin		

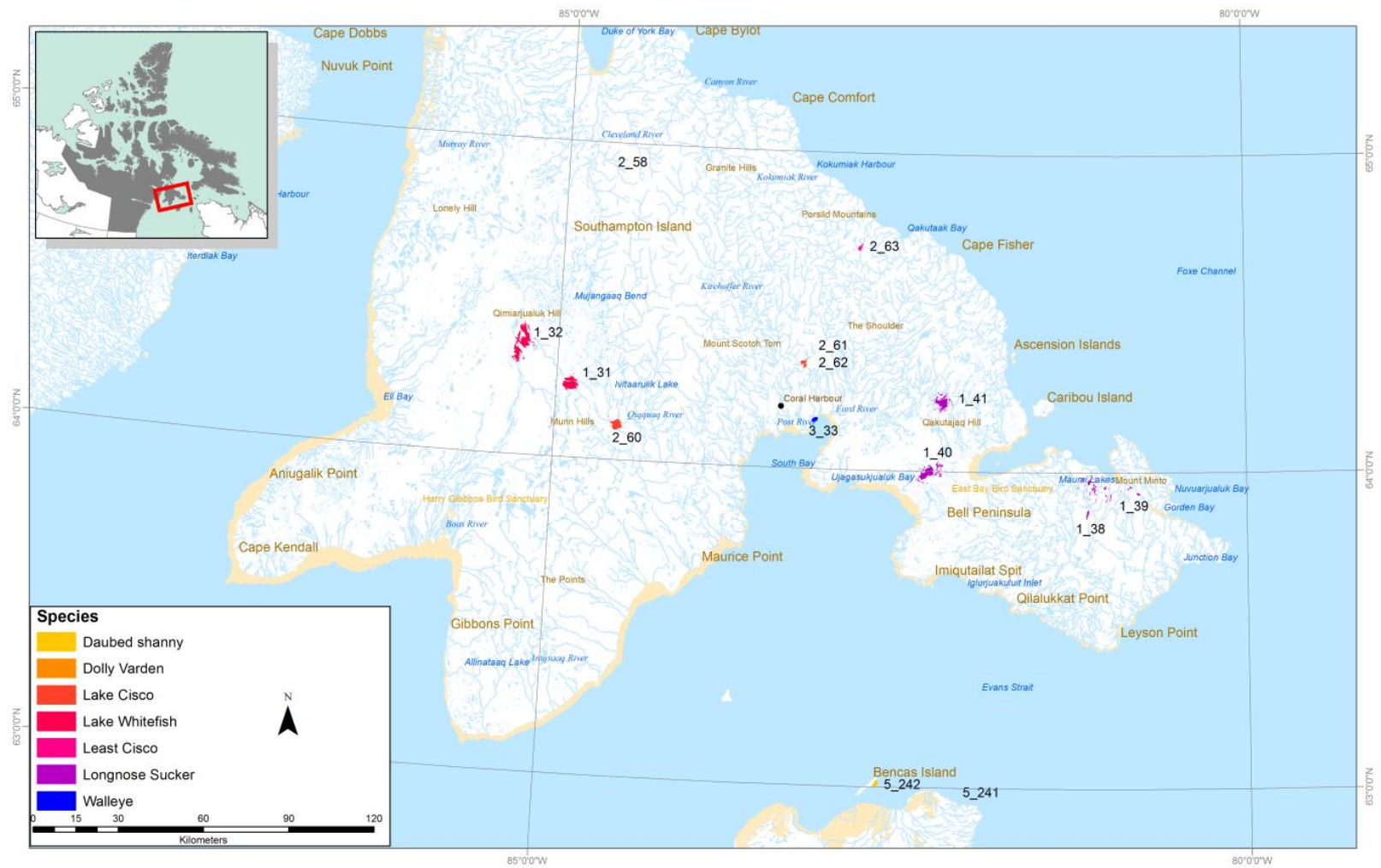


Figure 19. Areas of occurrence for Daubed Shanny, Dolly Varden, Lake Cisco, Lake Whitefish, Least Cisco, Longnose Sucker, and Walleye

Table 22. Longnose Sicker, Dolly Varden, Lake Cisco, Least Cisco, Walleye, Daubed Shanny, Arctic Grayling, and Lake Whitefish.

Map Code	Interview Code	Species	Months	Comments
1_31	CORAL_1_0214	Lake Whitefish		
1_32	CORAL_1_0214	Lake Whitefish		
1_38	CORAL_1_0214	Longnose Sucker		Got stuck in his fish nets
1_39	CORAL_1_0214	Longnose Sucker		
1_40	CORAL_1_0214	Longnose Sucker		
1_41	CORAL_1_0214	Longnose Sucker		
2_58	CORAL_2_0214	Dolly Varden	winter	
2_60	CORAL_2_0214	Lake Cisco	Year-round	
2_61	CORAL_2_0214	Lake Cisco	Year-round	
2_62	CORAL_2_0214	Least Cisco	Year-round	
2_63	CORAL_2_0214	Least Cisco	Year-round	
3_33	CORAL_3_0214	Walleye	Jul, Aug	
5_241	CORAL_5_0214	Daubed Shanny		
5_242	CORAL_5_0214	Daubed Shanny		

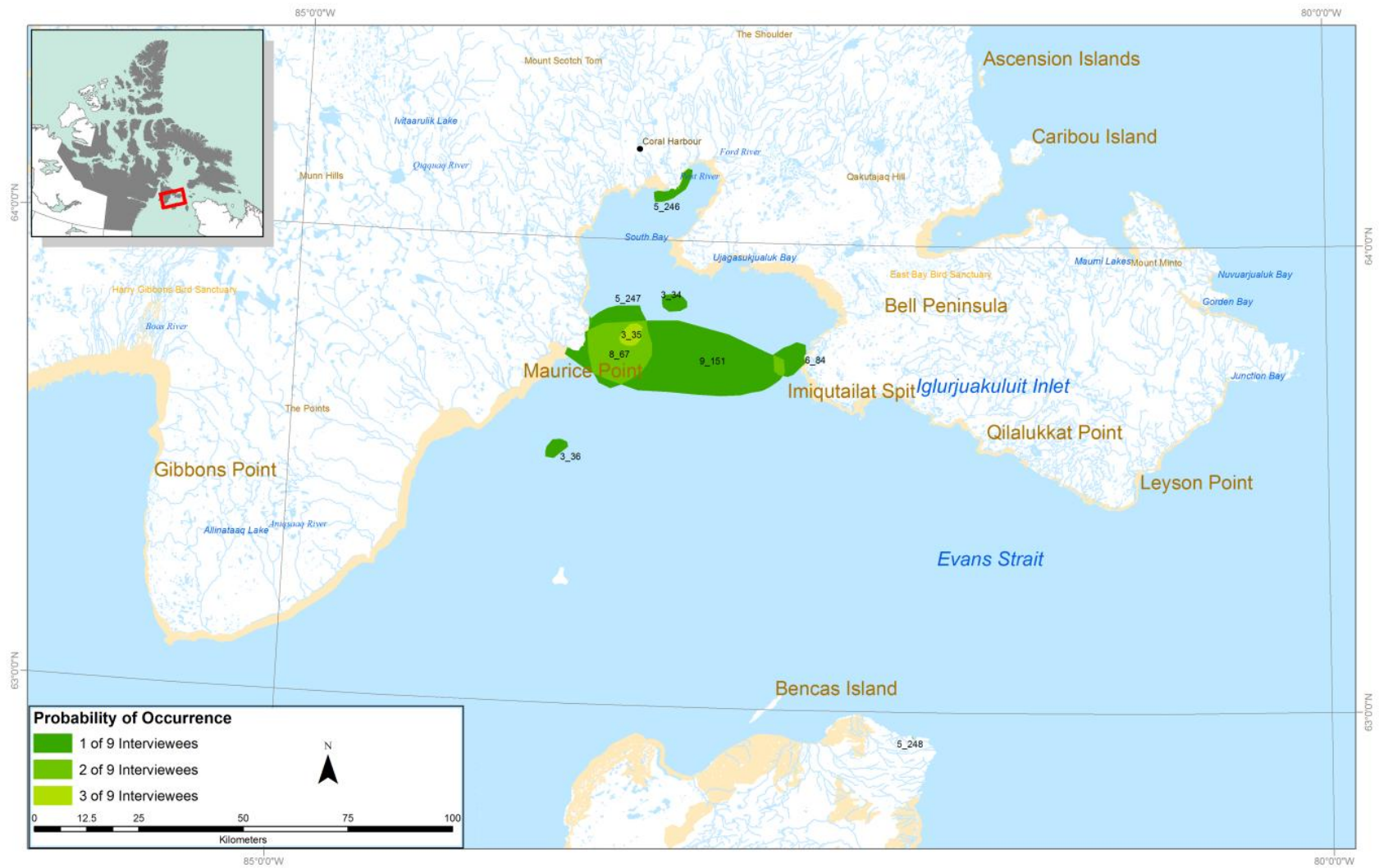


Figure 20. Probability of occurrence for Capelin

Table 23. Probability of occurrence for Capelin

Map Code	Interview Code	Species	Months	Comments
3_34	CORAL_3_0214	Capelin		
3_35	CORAL_3_0214	Capelin		
3_36	CORAL_3_0214	Capelin		
5_246	CORAL_5_0214	Capelin		
5_247	CORAL_5_0214	Capelin		
5_248	CORAL_5_0214	Capelin		
6_84	CORAL_6_0214	Capelin		Seen during winter when hunting seal
8_67	CORAL_8_0214	Capelin	Summer	Only place has seen them
9_151	CORAL_9_0214	Capelin		



Figure 21. Areas of occurrence for Northern Sandlance and Pacific Sandlance

Table 24. Areas of occurrence for Northern Sandlance and Pacific Sandlance

Map Code	Interview Code	Species	Months	Comments
5_243	CORAL_5_0214	Pacific Sand Lance		
5_244	CORAL_5_0214	Northern Sand Lance		
5_245	CORAL_5_0214	Northern Sand Lance		





Figure 22. Areas of occurrence for Lumpfish and Smooth Lumpfish

Table 25. Areas of occurrence for Lumpsucker, and Smooth Lumpfish

Map Code	Interview Code	Species	Months	Comments
1_45	CORAL_1_0214	Smooth Lumpfish		
2_79	CORAL_2_0214	Lumpsucker	Year-round	
2_80	CORAL_2_0214	Lumpsucker	Year-round	
3_32	CORAL_3_0214	Lumpsucker		
4_46	CORAL_4_0214	Lumpsucker		Caught in fish net
5_238	CORAL_5_0214	Lumpsucker		
6_83	CORAL_6_0214	Lumpsucker		Caught right next to town
9_131	CORAL_9_0214	Lumpsucker		
9_133	CORAL_9_0214	Lumpsucker		

Table 26. Lumpsucker everywhere data

Map Code	Interview Code	Species	Months	Comments
9_332	CORAL_9_0214	Lumpsucker		



Figure 23. Areas of occurrence for Arctic Eelpout, Northern Hagfish, Arctic Skate, Black Dogfish

Table 27. Areas of occurrence for Arctic Eelpout, Northern Hagfish, Arctic Skate, Black Dogfish

Map Code	Interview Code	Species	Months	Comments
1_46	CORAL_1_0214	Arctic Eelpout		
9_70	CORAL_9_0214	Black Dogfish		
9_71	CORAL_9_0214	Black Dogfish		
9_72	CORAL_9_0214	Arctic Skate		
9_153	CORAL_9_0214	Northern Hagfish		

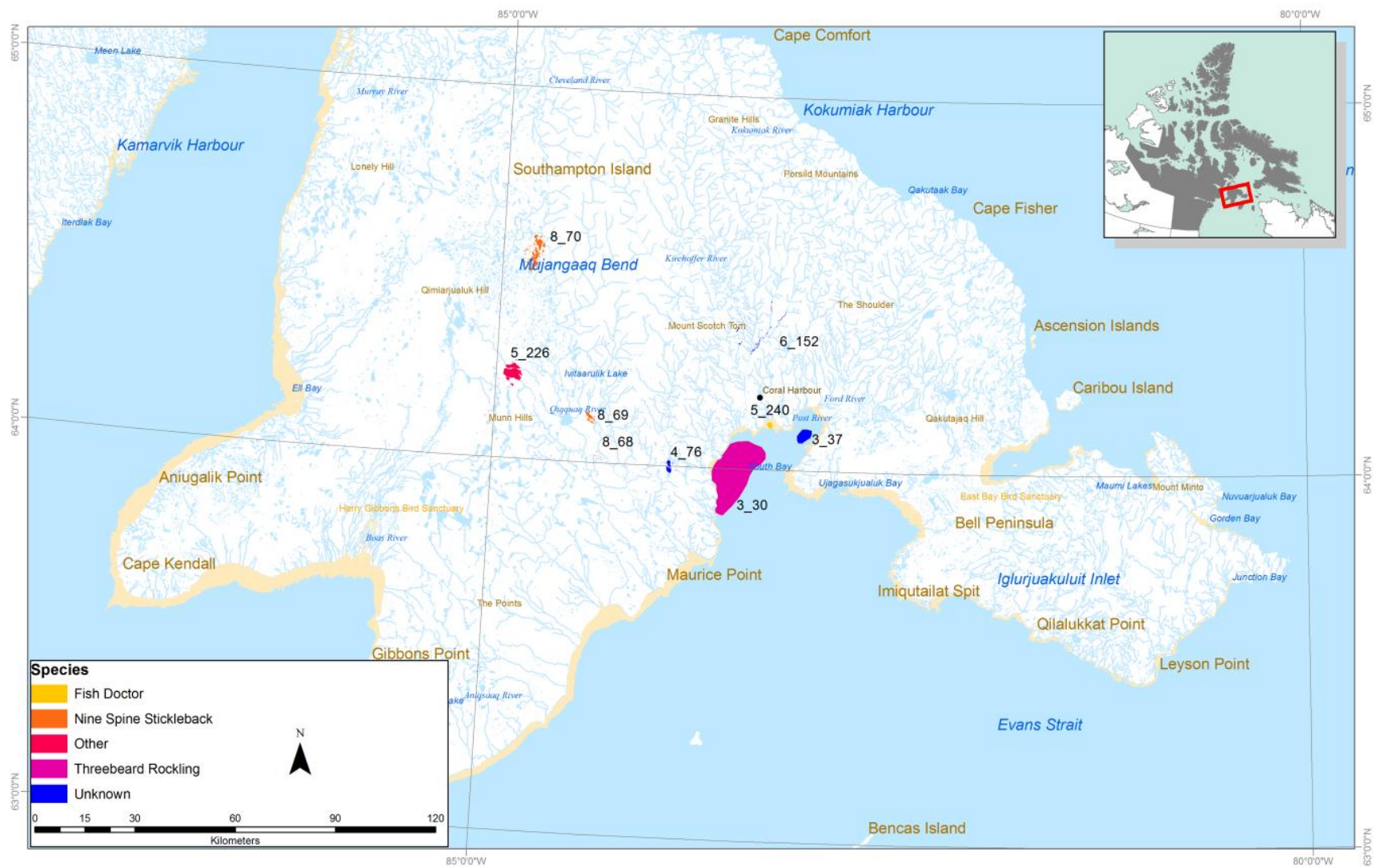


Figure 24. Areas of occurrence for Three Beard Rockling, Fish Doctor, Nine Spine Stickleback, Other, and Unknown

Table 28. Areas of occurrence for Three Beard Rockling, Fish Doctor, Nine Spine Stickleback, Other, and Unknown

Map Code	Interview Code	Species	Months	Comments
3_30	CORAL_3_0214	Three Beard Rockling		
5_240	CORAL_5_0214	Fish doctor		
8_68	CORAL_8_0214	Nine Spine Stickleback		
8_69	CORAL_8_0214	Nine Spine Stickleback		
8_70	CORAL_8_0214	Nine Spine Stickleback		
5_226	CORAL_5_0214	Other		Thinks this is where someone caught Arctic Grayling but never saw it himself.
3_37	CORAL_3_0214	Unknown		



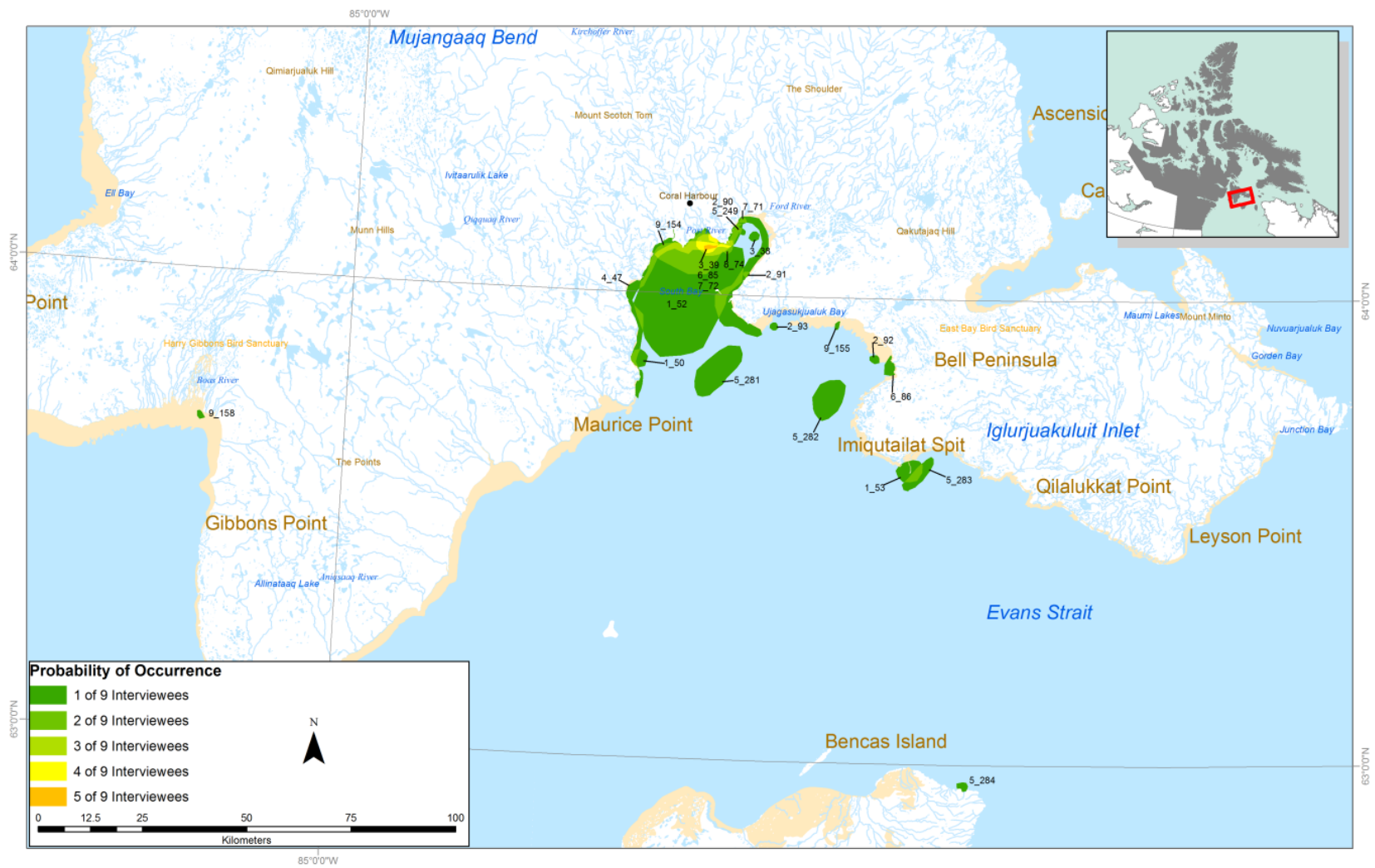


Figure 25. Probability of occurrence for Truncate Softshell Clam

Table 29. Probability of occurrence for Truncate Softshell Clam

Map Code	Interview Code	Species	Months	Comments
1_50	CORAL_1_0214	Truncate Softshell Clam		
1_52	CORAL_1_0214	Truncate Softshell Clam		
1_53	CORAL_1_0214	Truncate Softshell Clam		
2_90	CORAL_2_0214	Truncate Softshell Clam		
2_91	CORAL_2_0214	Truncate Softshell Clam		
2_92	CORAL_2_0214	Truncate Softshell Clam		
2_93	CORAL_2_0214	Truncate Softshell Clam		
3_38	CORAL_3_0214	Truncate Softshell Clam		
3_39	CORAL_3_0214	Truncate Softshell Clam		
4_47	CORAL_4_0214	Truncate Softshell Clam		Along the shore
5_249	CORAL_5_0214	Truncate Softshell Clam		Not a lot
5_281	CORAL_5_0214	Truncate Softshell Clam		Walrus eat these
5_282	CORAL_5_0214	Truncate Softshell Clam		Walrus eat these
5_283	CORAL_5_0214	Truncate Softshell Clam		Walrus eat these
5_284	CORAL_5_0214	Truncate Softshell Clam		Walrus eat these
6_85	CORAL_6_0214	Truncate Softshell Clam		
6_86	CORAL_6_0214	Truncate Softshell Clam		
7_71	CORAL_7_0214	Truncate Softshell Clam		
7_72	CORAL_7_0214	Truncate Softshell Clam		Very small specimens
8_74	CORAL_8_0214	Truncate Softshell Clam	Summer, autumn	
9_154	CORAL_9_0214	Truncate Softshell Clam		
9_155	CORAL_9_0214	Truncate Softshell Clam		
9_156	CORAL_9_0214	Truncate Softshell Clam		

Map Code	Interview Code	Species	Months	Comments
9_158	CORAL_9_0214	Truncate Softshell Clam		

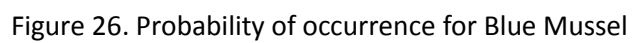


Table 30. Probability of occurrence for Blue mussel

Map Code	Interview Code	Species	Months	Comments
1_55	CORAL_1_0214	Blue Mussel		
1_56	CORAL_1_0214	Blue Mussel		
1_57	CORAL_1_0214	Blue Mussel		
1_58	CORAL_1_0214	Blue Mussel		
3_40	CORAL_3_0214	Blue Mussel		
4_48	CORAL_4_0214	Blue Mussel		
4_49	CORAL_4_0214	Blue Mussel		
4_50	CORAL_4_0214	Blue Mussel		
4_51	CORAL_4_0214	Blue Mussel		
4_52	CORAL_4_0214	Blue Mussel		
5_251	CORAL_5_0214	Blue Mussel		
5_252	CORAL_5_0214	Blue Mussel		
6_89	CORAL_6_0214	Blue Mussel	Summer	
6_90	CORAL_6_0214	Blue Mussel	Summer	
8_75	CORAL_8_0214	Blue Mussel		
8_76	CORAL_8_0214	Blue Mussel		
8_78	CORAL_8_0214	Blue Mussel		
8_79	CORAL_8_0214	Blue Mussel		
8_80	CORAL_8_0214	Blue Mussel		
9_162	CORAL_9_0214	Blue Mussel		
9_163	CORAL_9_0214	Blue Mussel		
9_168	CORAL_9_0214	Blue Mussel		

Table 31. Blue Mussel everywhere data

Map Code	Interview Code	Species	Months	Comments
9_334E	CORAL_9_0214	Blue Mussel		

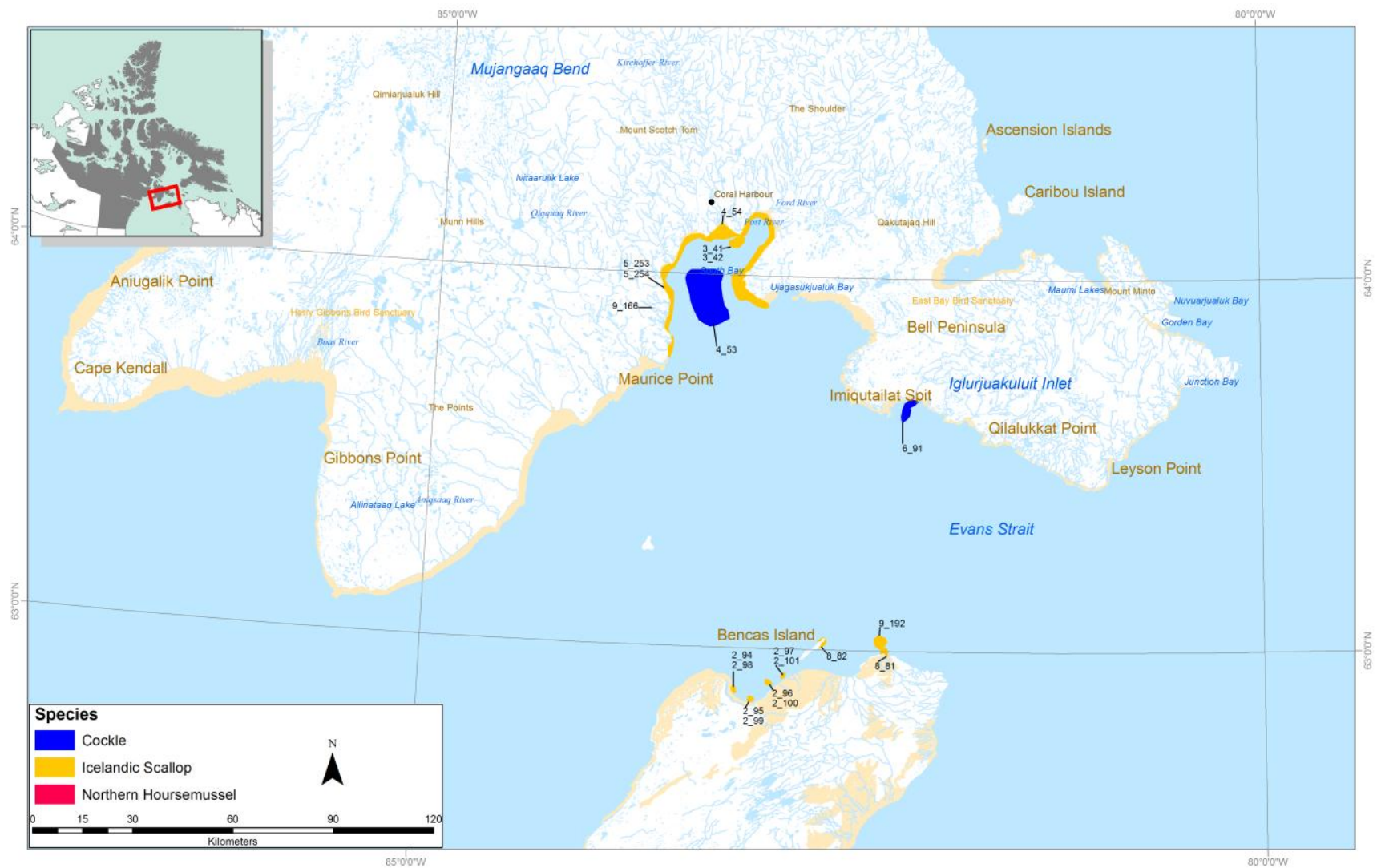


Figure 27. Areas of occurrence for Northern Horse Mussel, Icelandic Scallop, and Cockle



Table 32. Areas of occurrence for Northern Horse Mussel, Icelandic Scallop, and Cockle

Map Code	Interview Code	Species	Months	Comments
9_166	CORAL_9_0214	Northern Horse Mussel		
1_59	CORAL_1_0214	Icelandic Scallop		
2_98	CORAL_2_0214	Icelandic Scallop		
2_99	CORAL_2_0214	Icelandic Scallop		
2_100	CORAL_2_0214	Icelandic Scallop		
2_101	CORAL_2_0214	Icelandic Scallop		
3_42	CORAL_3_0214	Icelandic Scallop		
4_54	CORAL_4_0214	Icelandic Scallop		
5_254	CORAL_5_0214	Icelandic Scallop		
8_81	CORAL_8_0214	Icelandic Scallop		
8_82	CORAL_8_0214	Icelandic Scallop		
9_192	CORAL_9_0214	Icelandic Scallop		
2_94	CORAL_2_0214	Cockle		
2_95	CORAL_2_0214	Cockle		
2_96	CORAL_2_0214	Cockle		
2_97	CORAL_2_0214	Cockle		
3_41	CORAL_3_0214	Cockle		
4_53	CORAL_4_0214	Cockle		
5_253	CORAL_5_0214	Cockle		
6_91	CORAL_6_0214	Cockle	Summer	

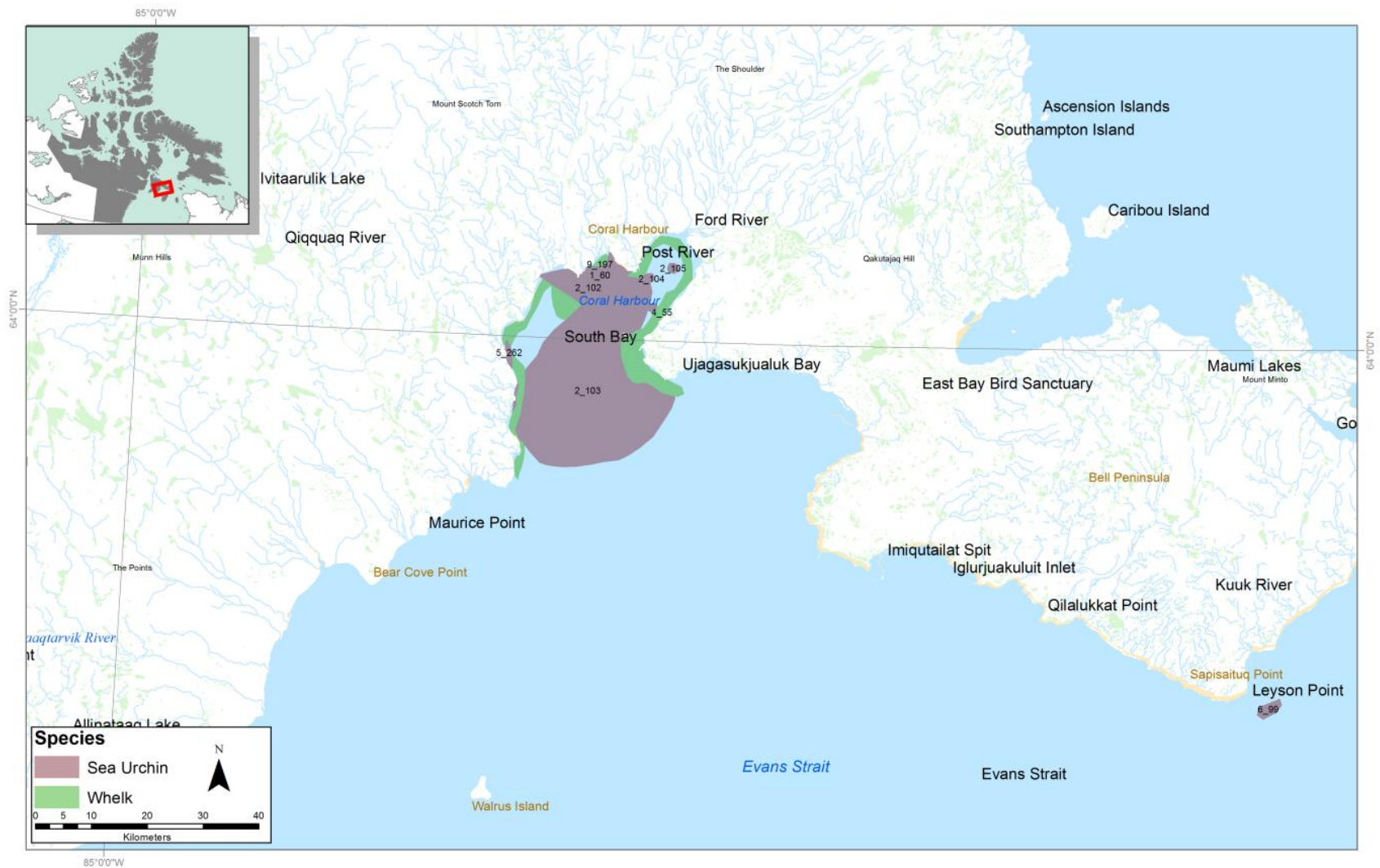


Figure 28. Areas of occurrence for Whelk and Sea Urchin

Table 33. Areas of occurrence for Whelk and Sea Urchin

Map Code	Interview Code	Species	Months	Comments
1_60	CORAL_1_0214	Whelk		
4_55	CORAL_4_0214	Whelk		
2_102	CORAL_2_0214	Sea Urchin		
2_103	CORAL_2_0214	Sea Urchin		
2_104	CORAL_2_0214	Sea Urchin		
2_105	CORAL_2_0214	Sea Urchin		
6_99	CORAL_6_0214	Sea Urchin	Summer	
9_197	CORAL_9_0214	Sea Urchin		



Table 34. Areas of occurrence for Snow crab, Toad Crab, Northern Shrimp, Crayfish

Map Code	Interview Code	Species	Months	Comments
1_61	CORAL_1_0214	Snow Crab		
4_58	CORAL_4_0214	Snow Crab	May, Jun	Cracked ice in spring
9_208	CORAL_9_0214	Snow Crab		
6_101	CORAL_6_0214	Toad Crab		
7_81	CORAL_7_0214	Toad Crab		
5_268	CORAL_5_0214	Northern Shrimp		
6_103	CORAL_6_0214	Northern Shrimp	Winter	
9_211	CORAL_9_0214	Northern Shrimp		
9_212	CORAL_9_0214	Northern Shrimp		
9_213	CORAL_9_0214	Northern Shrimp		
9_214	CORAL_9_0214	Northern Shrimp		
2_110	CORAL_2_0214	Crayfish		once in a while
2_111	CORAL_2_0214	Crayfish		once in a while

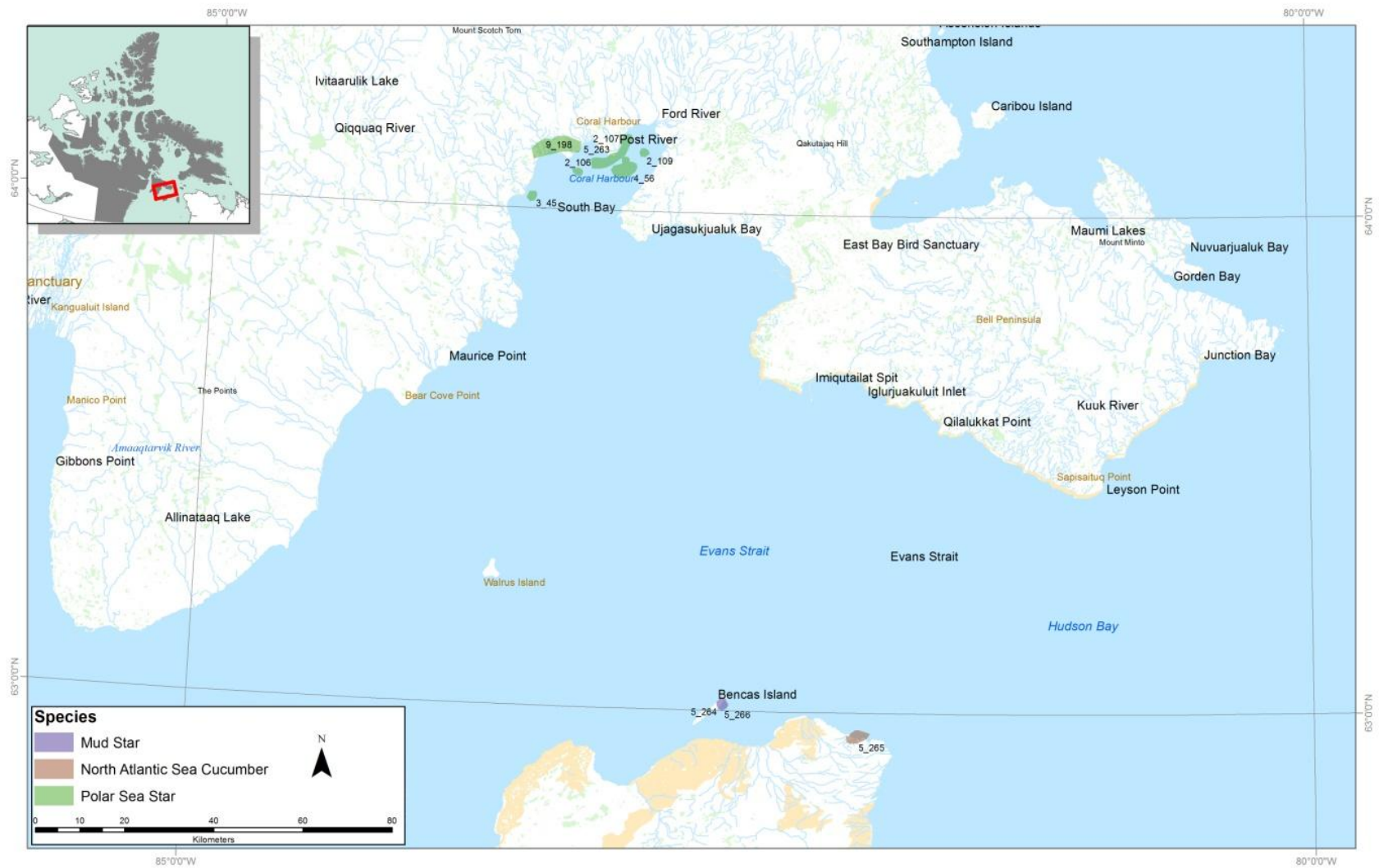


Figure 30. Areas of occurrence for Polar Sea Star, Mud Star, Sea Cucumber



Table 35. Areas of occurrence for Polar Sea Star, Mud Star, Sea Cucumber

Map Code	Interview Code	Species	Months	Comments
2_106	CORAL_2_0214	Polar Sea Star		
2_107	CORAL_2_0214	Polar Sea Star		
2_109	CORAL_2_0214	Polar Sea Star		
3_45	CORAL_3_0214	Polar Sea Star		
4_56	CORAL_4_0214	Polar Sea Star	May, Jun	Through cracks in the ice in spring
5_263	CORAL_5_0214	Polar Sea Star		Used to be more when I was a child
9_198	CORAL_9_0214	Polar Sea Star		
5_264	CORAL_5_0214	Mud Star		Slightly different from photo, whiter and 7 to 11cm long
		Sea Cucumber		Can eat them
5_265	CORAL_5_0214			
5_266	CORAL_5_0214	Sea Cucumber		

Table 36. Polar Sea Star everywhere data

Map Code	Interview Code	Species	Months	Comments
9_336E	CORAL_9_0214	Polar Sea Star		



Figure 31. Areas of occurrence for Mysid Shrimp, Northern Krill, Amphipod, Hermit Crab

Table 37. Areas of occurrence for Mysid Shrimp, Northern Krill, Amphipod, Hermit Crab

Map Code	Interview Code	Species	Months	Comments
5_270	CORAL_5_0214	Amphipod		Stay under rocks
5_271	CORAL_5_0214	Amphipod		
5_272	CORAL_5_0214	Northern Krill		Thick billed murres at these, smaller than amphipods
6_105	CORAL_6_0214	Northern Krill	Winter	
6_102	CORAL_6_0214	Hermit Crab		
6_106	CORAL_6_0214	Mysid Shrimp	Winter	

Table 38. Amphipod everywhere data

Map Code	Interview Code	Species	Months	Comments
1_117E	CORAL_1_0214	Amphipod		
4_82E	CORAL_4_0214	Amphipod		
7_141E	CORAL_7_0214	Amphipod		

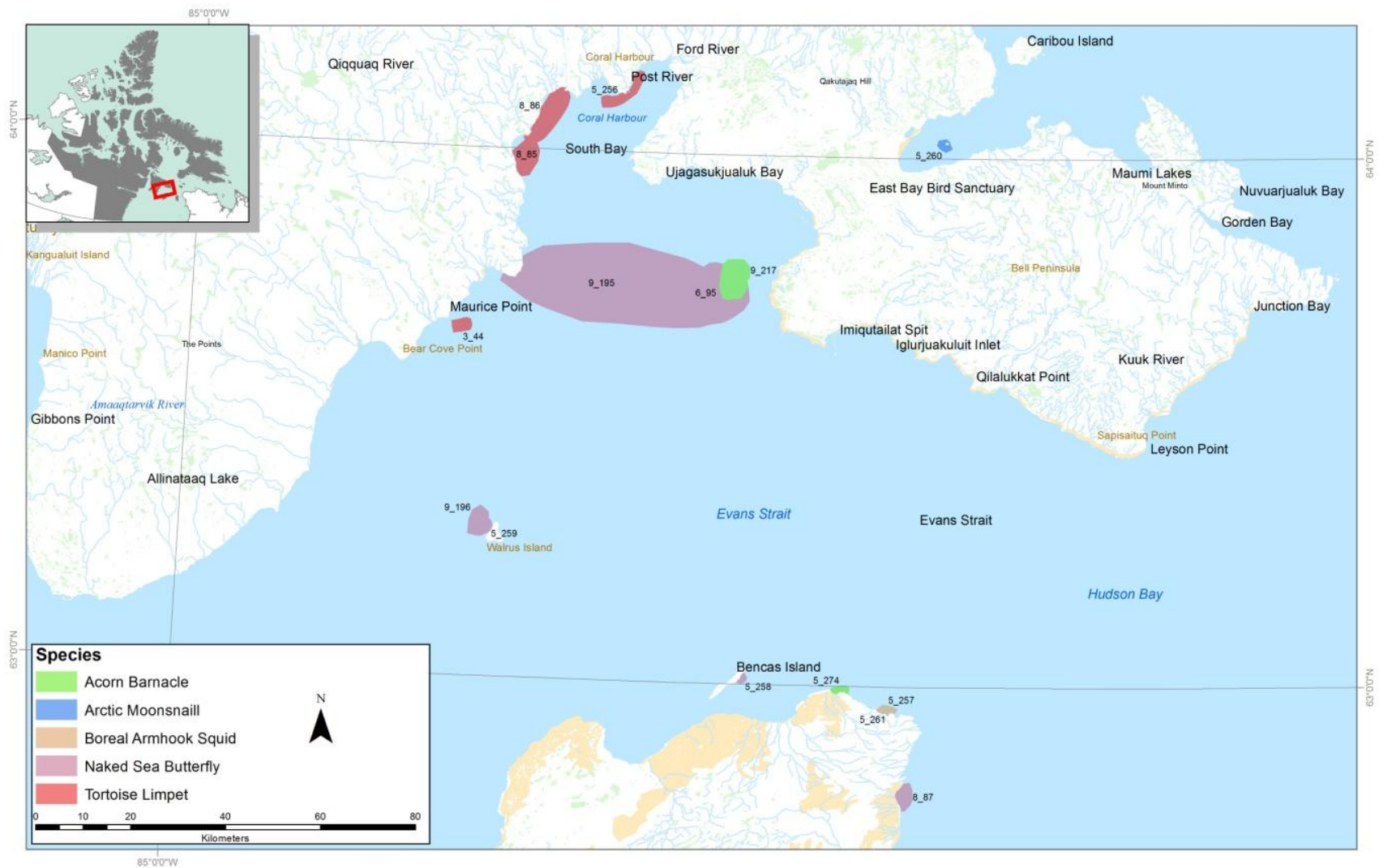


Figure 32. Areas of occurrence for Moonsnail, Limpet, Naked Sea Butterfly, Boreal Armhook Squid, and Acorn Barnacle

Table 39. Areas of occurrence for Moon snail, Limpet, Naked Sea Butterfly, Boreal Armhook Squid, and Acorn Barnacle

Map Code	Interview Code	Species	Months	Comments
5_260	CORAL_5_0214	Arctic Moon snail		
3_44	CORAL_3_0214	Tortoise Limpet		seen along shore
5_256	CORAL_5_0214	Tortoise Limpet		Tiny
8_85	CORAL_8_0214	Tortoise Limpet		
8_86	CORAL_8_0214	Tortoise Limpet		
5_274	CORAL_5_0214	Acorn Barnacle		
9_217	CORAL_9_0214	Acorn Barnacle		Where he beaches boat in summer
5_257	CORAL_5_0214	Naked Sea Butterfly		
5_258	CORAL_5_0214	Naked Sea Butterfly		
5_259	CORAL_5_0214	Naked Sea Butterfly		
6_95	CORAL_6_0214	Naked Sea Butterfly	Winter	Small in size approx 10 cm
8_87	CORAL_8_0214	Naked Sea Butterfly		
9_195	CORAL_9_0214	Naked Sea Butterfly		
9_196	CORAL_9_0214	Naked Sea Butterfly		
5_261	CORAL_5_0214	Boreal Armhook Squid		Approx 10cm long

Table 40. Tortoise Limpet and Acorn Barnacle everywhere data

Map Code	Interview Code	Species	Months	Comments
9_335E	CORAL_9_0214	Tortoise Limpet		
2_178E	CORAL_2_0214	Acorn Barnacle		



Figure 33. Areas of occurrence for Jellyfish, and Ctenophore

Table 41. Jellyfish and Ctenophore

Map Code	Interview Code	Species	Months	Comments
2_113	CORAL_2_0214	Jellyfish		
5_275	CORAL_5_0214	Jellyfish		
5_276	CORAL_5_0214	Jellyfish		
5_277	CORAL_5_0214	Jellyfish		
6_107	CORAL_6_0214	Jellyfish	Summer	
6_109	CORAL_6_0214	Jellyfish	Summer	
6_110	CORAL_6_0214	Jellyfish	Summer	
8_96	CORAL_8_0214	Jellyfish		
3_47	CORAL_3_0214	Ctenophore		not very many of them
5_279	CORAL_5_0214	Ctenophore		
5_280	CORAL_5_0214	Ctenophore		
6_111	CORAL_6_0214	Ctenophore	Winter	

Table 42. Jellyfish and Ctenophore everywhere data

Map Code	Interview Code	Species	Months	Comments
1_118E	CORAL_1_0214	Jellyfish		
4_83E	CORAL_4_0214	Jellyfish		
7_142E	CORAL_7_0214	Jellyfish		
9_337E	CORAL_9_0214	Jellyfish		
1_119E	CORAL_1_0214	Ctenophore		
9_338E	CORAL_9_0214	Ctenophore		



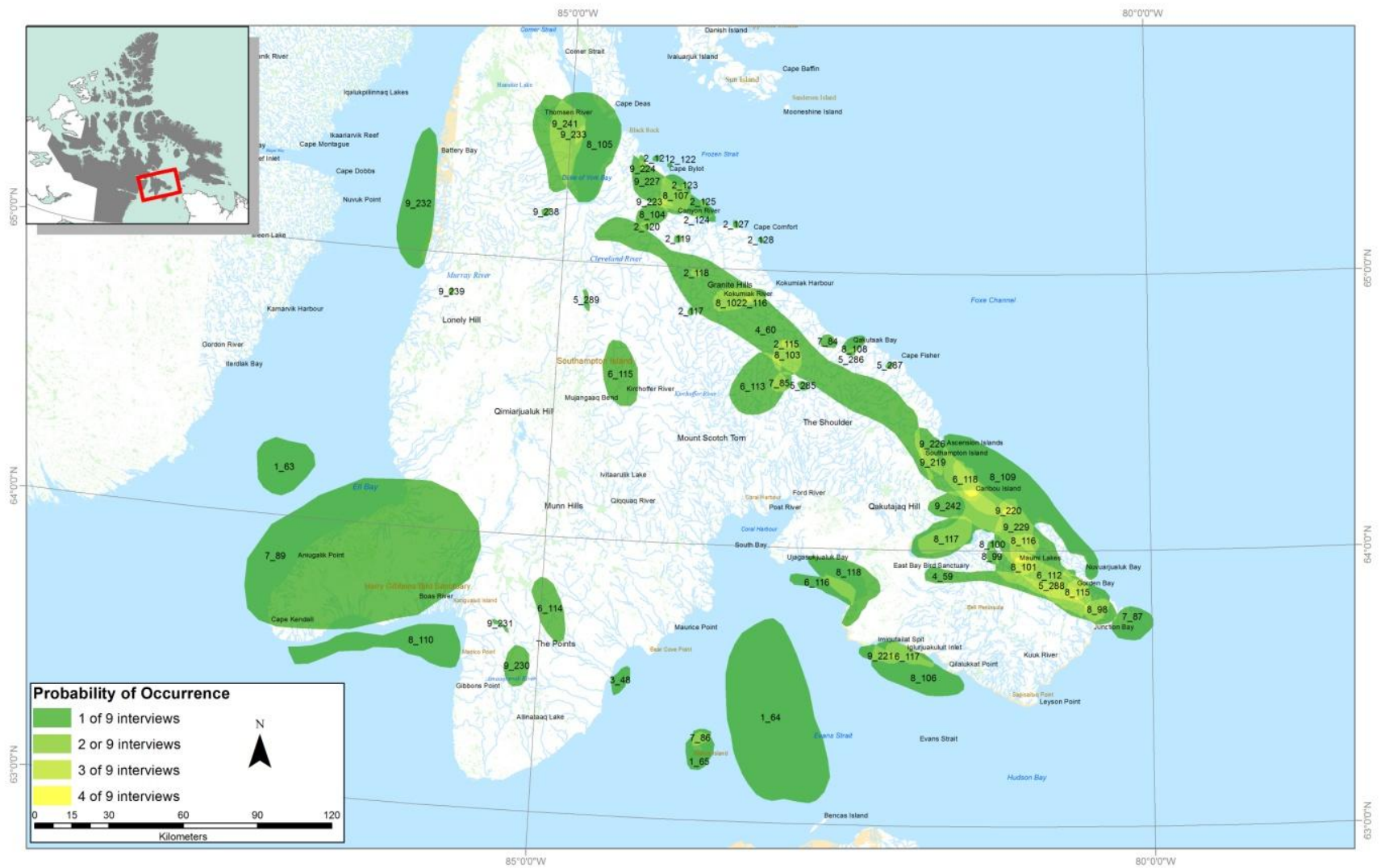


Figure 34. Probability of occurrence for Polar Bear

Table 43. Probability of occurrence for Polar Bear

Map Code	Interview Code	Species	Months	Comments
1_63S	CORAL_1_0214	Polar Bear		
1_64S	CORAL_1_0214	Polar Bear		
1_65S	CORAL_1_0214	Polar Bear		
2_115S	CORAL_2_0214	Polar Bear		
2_116S	CORAL_2_0214	Polar Bear		
2_117S	CORAL_2_0214	Polar Bear		
2_118S	CORAL_2_0214	Polar Bear		
2_119S	CORAL_2_0214	Polar Bear		
2_120S	CORAL_2_0214	Polar Bear		
2_121	CORAL_2_0214	Polar Bear		
2_122	CORAL_2_0214	Polar Bear		
2_123	CORAL_2_0214	Polar Bear		
2_124	CORAL_2_0214	Polar Bear		
2_125	CORAL_2_0214	Polar Bear		
2_126	CORAL_2_0214	Polar Bear		
2_127	CORAL_2_0214	Polar Bear		
2_128	CORAL_2_0214	Polar Bear		
3_48	CORAL_3_0214	Polar Bear		
4_59S	CORAL_4_0214	Polar Bear		
4_60S	CORAL_4_0214	Polar Bear		
5_285S	CORAL_5_0214	Polar Bear		
5_286S	CORAL_5_0214	Polar Bear		
5_287S	CORAL_5_0214	Polar Bear		
5_288S	CORAL_5_0214	Polar Bear		
5_289S	CORAL_5_0214	Polar Bear		
6_112	CORAL_6_0214	Polar Bear	Nov to Mar	Denning
6_113	CORAL_6_0214	Polar Bear	Nov to Mar	Denning
6_114	CORAL_6_0214	Polar Bear	Nov to Mar	Denning
6_115	CORAL_6_0214	Polar Bear	Nov to Mar	Denning
6_116	CORAL_6_0214	Polar Bear	Mar to May	Spring feeding
6_117	CORAL_6_0214	Polar Bear	Mar to May	Spring feeding
6_118	CORAL_6_0214	Polar Bear	Mar to May	Mostly females with cubs
7_84	CORAL_7_0214	Polar Bear		
7_85	CORAL_7_0214	Polar Bear		
7_86	CORAL_7_0214	Polar Bear		
7_87	CORAL_7_0214	Polar Bear		
7_89	CORAL_7_0214	Polar Bear	Large numbers of bears, many with aggressive tendencies	
8_98S	CORAL_8_0214	Polar Bear		Denning area
8_99S	CORAL_8_0214	Polar Bear		Denning area
8_100S	CORAL_8_0214	Polar Bear		Denning area
8_101S	CORAL_8_0214	Polar Bear		Denning area
8_102S	CORAL_8_0214	Polar Bear		Denning area

Map Code	Interview Code	Species	Months	Comments
8_103S	CORAL_8_0214	Polar Bear		Denning area
8_104S	CORAL_8_0214	Polar Bear		Denning area
8_105	CORAL_8_0214	Polar Bear		Females and cubs
8_106	CORAL_8_0214	Polar Bear		
8_107	CORAL_8_0214	Polar Bear		
8_108	CORAL_8_0214	Polar Bear	Winter	
8_109	CORAL_8_0214	Polar Bear	Feb, Mar	
8_110	CORAL_8_0214	Polar Bear	Winter	
8_115	CORAL_8_0214	Polar Bear	Nov	Congregate while waiting for ice to form
8_116	CORAL_8_0214	Polar Bear		Congregate while waiting for ice to form
8_117	CORAL_8_0214	Polar Bear		Congregate while waiting for ice to form
8_118	CORAL_8_0214	Polar Bear		Congregate while waiting for ice to form
9_219S	CORAL_9_0214	Polar Bear		Mating
9_220S	CORAL_9_0214	Polar Bear		Mating
9_221S	CORAL_9_0214	Polar Bear		Mating
9_223S	CORAL_9_0214	Polar Bear		Mating
9_224S	CORAL_9_0214	Polar Bear		Mating
9_226N	CORAL_9_0214	Polar Bear		Females and cubs
9_227N	CORAL_9_0214	Polar Bear		Females and cubs
9_229S	CORAL_9_0214	Polar Bear		Denning
9_230S	CORAL_9_0214	Polar Bear		Denning
9_231S	CORAL_9_0214	Polar Bear		Denning
9_232S	CORAL_9_0214	Polar Bear		Denning
9_233S	CORAL_9_0214	Polar Bear		Denning
9_238S	CORAL_9_0214	Polar Bear		Denning
9_239S	CORAL_9_0214	Polar Bear		Denning
9_240	CORAL_9_0214			Hunt seal
9_241	CORAL_9_0214			Hunt seal
9_242	CORAL_9_0214			Hunt seal

Table 44. Polar Bear everywhere data

Map Code	Interview Code	Species	Months	Comments
3_72E	CORAL_3_0214	Polar Bear		
4_84E	CORAL_4_0214	Polar Bear	Spring	



Figure 35. Migrations routes for Polar Bear

Table 45. Migrations routes for Polar Bear

Map Code	Interview Code	Species	Months	Comments
1_62M	CORAL_1_0214	Polar Bear		
2_129M	CORAL_2_0214	Polar Bear		
2_130M	CORAL_2_0214	Polar Bear		
2_131M	CORAL_2_0214	Polar Bear		
2_132M	CORAL_2_0214	Polar Bear		
2_133M	CORAL_2_0214	Polar Bear		
2_134M	CORAL_2_0214	Polar Bear		
5_293M	CORAL_5_0214	Polar Bear	Autumn	
5_294M	CORAL_5_0214	Polar Bear	Autumn, Winter	Males, females, cubs
5_295M	CORAL_5_0214	Polar Bear	Autumn, Winter	Males, females, cubs
5_296M	CORAL_5_0214	Polar Bear		Move along flow edge in winter
8_111M	CORAL_8_0214	Polar Bear		
8_112M	CORAL_8_0214	Polar Bear		
8_114M	CORAL_8_0214	Polar Bear	March	
8_119M	CORAL_8_0214	Polar Bear		
8_120M	CORAL_8_0214	Polar Bear	Autumn	
9_234M	CORAL_9_0214	Polar Bear		North migration in fall
9_235M	CORAL_9_0214	Polar Bear		South migration in April
9_236M	CORAL_9_0214	Polar Bear		South migration in April
9_237M	CORAL_9_0214	Polar Bear		South migration in April







Table 46. Probability of occurrence for Walrus

Map Code	Interview Code	Species	Months	Comments
1_66	CORAL_1_0214	Walrus		
1_67	CORAL_1_0214	Walrus		
1_68	CORAL_1_0214	Walrus		
1_69	CORAL_1_0214	Walrus		
1_72	CORAL_1_0214	Walrus		
2_136	CORAL_2_0214	Walrus		
2_137	CORAL_2_0214	Walrus		
2_138	CORAL_2_0214	Walrus		
2_140	CORAL_2_0214	Walrus		
2_141	CORAL_2_0214	Walrus		
2_142	CORAL_2_0214	Walrus		
2_143	CORAL_2_0214	Walrus		
3_51	CORAL_3_0214	Walrus	August	
3_52	CORAL_3_0214	Walrus	August	
4_61	CORAL_4_0214	Walrus	Summer to Autumn	
4_62	CORAL_4_0214	Walrus	Summer to Autumn	
4_63	CORAL_4_0214	Walrus	Summer to Autumn	
4_64	CORAL_4_0214	Walrus	Feb, Mar	
4_65	CORAL_4_0214	Walrus	Feb, Mar	
5_297	CORAL_5_0214	Walrus	Autumn	
5_298	CORAL_5_0214	Walrus	Autumn	
5_299	CORAL_5_0214	Walrus	Autumn	
5_300	CORAL_5_0214	Walrus	Summer	
5_301	CORAL_5_0214	Walrus	Summer	
5_302	CORAL_5_0214	Walrus	Summer	
5_303	CORAL_5_0214	Walrus	Summer	
5_304	CORAL_5_0214	Walrus	Summer	
6_119	CORAL_6_0214	Walrus	Jul, Aug	
6_120	CORAL_6_0214	Walrus	Jul, Aug	
6_121	CORAL_6_0214	Walrus	Jul, Aug	
6_122	CORAL_6_0214	Walrus	Jul, Aug	
6_123	CORAL_6_0214	Walrus	Dec, Jan	
6_124	CORAL_6_0214	Walrus	Summer	
6_125	CORAL_6_0214	Walrus	Summer	
7_90	CORAL_7_0214	Walrus	Summer	Spend time at the flow edge
7_91	CORAL_7_0214	Walrus	Summer	
7_92	CORAL_7_0214	Walrus	Summer	
7_93	CORAL_7_0214	Walrus	Summer	
7_94	CORAL_7_0214	Walrus	Summer	
7_95	CORAL_7_0214	Walrus	Winter	

Map Code	Interview Code	Species	Months	Comments
7_96	CORAL_7_0214	Walrus	Summer	
7_97	CORAL_7_0214	Walrus	Summer	
7_98	CORAL_7_0214	Walrus	Summer	
7_99	CORAL_7_0214	Walrus		Walrus stopped coming here 15 years ago
7_100_1	CORAL_7_0214	Walrus		Summer movement
7_100_2	CORAL_7_0214	Walrus		Heading towards Nottingham Island
8_121	CORAL_8_0214	Walrus	Jul to Aug	
8_122	CORAL_8_0214	Walrus	August	
8_123	CORAL_8_0214	Walrus	Jul to Aug	
8_124	CORAL_8_0214	Walrus	August	
8_125	CORAL_8_0214	Walrus	January	
8_126	CORAL_8_0214	Walrus		
8_127	CORAL_8_0214	Walrus		
8_128	CORAL_8_0214	Walrus		
9_248	CORAL_9_0214	Walrus		Haulout locaton
9_249	CORAL_9_0214	Walrus		haulout Aug
9_250	CORAL_9_0214	Walrus		haulout Aug
9_251	CORAL_9_0214	Walrus		haulout Aug
9_252	CORAL_9_0214	Walrus		Haulout sandy beach
9_253	CORAL_9_0214	Walrus		Haulout Aug
9_254	CORAL_9_0214	Walrus		Haulout Aug
9_255	CORAL_9_0214	Walrus		Haulout Aug
9_256	CORAL_9_0214	Walrus		In water in Aug
9_257	CORAL_9_0214	Walrus	Winter	
9_258	CORAL_9_0214	Walrus	Winter	
9_259	CORAL_9_0214	Walrus	Winter	
9_263	CORAL_9_0214	Walrus		
9_264	CORAL_9_0214	Walrus		Haulout Aug
9_265	CORAL_9_0214	Walrus		Haulout Aug
9_266	CORAL_9_0214	Walrus		Haulout Aug
9_267	CORAL_9_0214	Walrus		Haulout Aug
9_268	CORAL_9_0214	Walrus		
9_269	CORAL_9_0214	Walrus		Haulouts on points on east coast
9_270	CORAL_9_0214	Walrus		Haulouts on points on east coast
9_271	CORAL_9_0214	Walrus		Haulouts on points on east coast
9_272	CORAL_9_0214	Walrus		Breathing holes in ice bridge
9_274	CORAL_9_0214	Walrus		
9_307	CORAL_9_0215	Walrus		
9_308	CORAL_9_0216	Walrus		

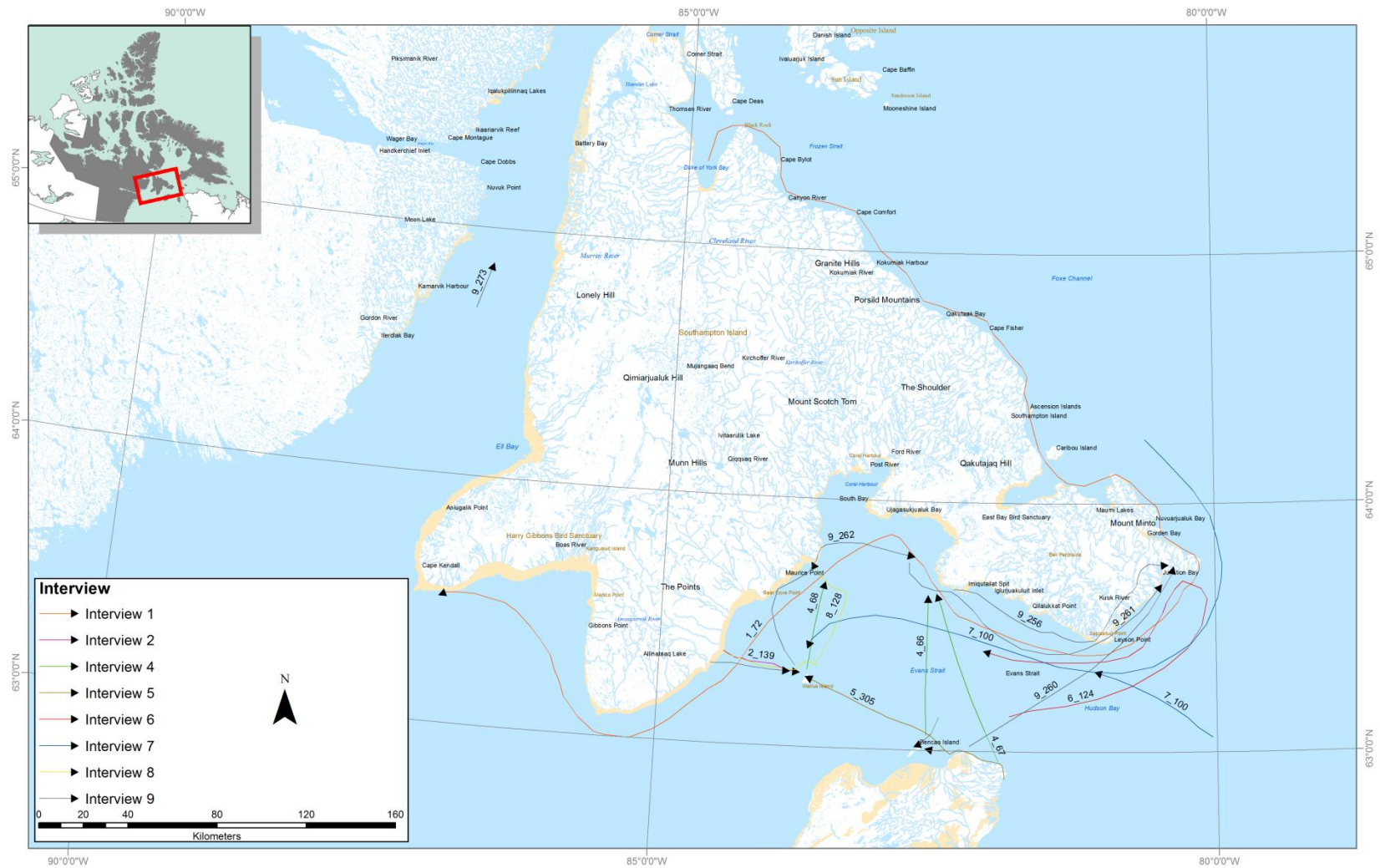


Figure 37. Migration routes for Walrus

Table 47. Walrus Migration routes, and mating sites

Map Code	Interview Code	Species	Months	Comments
1_72M	CORAL_1_0214	Walrus		
2_139M	CORAL_2_0214	Walrus		
4_66M	CORAL_4_0214	Walrus	Oct, Nov	
4_67M	CORAL_4_0214	Walrus	Oct, Nov	
4_68M	CORAL_4_0214	Walrus	Oct, Nov	
5_305M	CORAL_5_0214	Walrus		
7_100M	CORAL_7_0214	Walrus		
8_128M	CORAL_8_0214	Walrus		
9_256M	CORAL_9_0214	Walrus		
9_260M	CORAL_9_0214	Walrus	Aug to fall	
9_261M	CORAL_9_0214	Walrus	Aug to fall	
9_262M	CORAL_9_0214	Walrus	Winter and Summer	
9_273M	CORAL_9_0214	Walrus		Northern movement from breathing holes during freeze up.



Table 48. Probability of occurrence for Bearded Seal

Map Code	Interview Code	Species	Months	Comments
1_71	CORAL_1_0214	Bearded seal		
1_73	CORAL_1_0214	Bearded seal		
2_153	CORAL_2_0214	Bearded seal		
5_313	CORAL_5_0214	Bearded seal	Summer	
5_314	CORAL_5_0214	Bearded seal	Winter	
5_315	CORAL_5_0214	Bearded seal	Summer	close to shore
5_316	CORAL_5_0214	Bearded seal	Autumn	
6_134	CORAL_6_0214	Bearded seal	Summer	Anywhere on coastline
6_135	CORAL_6_0214	Bearded seal	Winter	Along flow edge
6_136	CORAL_6_0214	Bearded seal	Winter	Along flow edge
7_110	CORAL_7_0214	Bearded seal	Winter	
7_112	CORAL_7_0214	Bearded seal	Summer	
8_88	CORAL_8_0214	Bearded seal		
8_92	CORAL_8_0214	Bearded seal		
8_142	CORAL_8_0214	Bearded seal		
8_144	CORAL_8_0214	Bearded seal	Summer	
8_145	CORAL_8_0214	Bearded seal	Summer	
8_146	CORAL_8_0214	Bearded seal		
8_147	CORAL_8_0214	Bearded seal		

Table 49. Bearded seal everywhere data

Map Code	Interview Code	Species	Months	Comments
4_87E	CORAL_4_0214	Bearded seal		



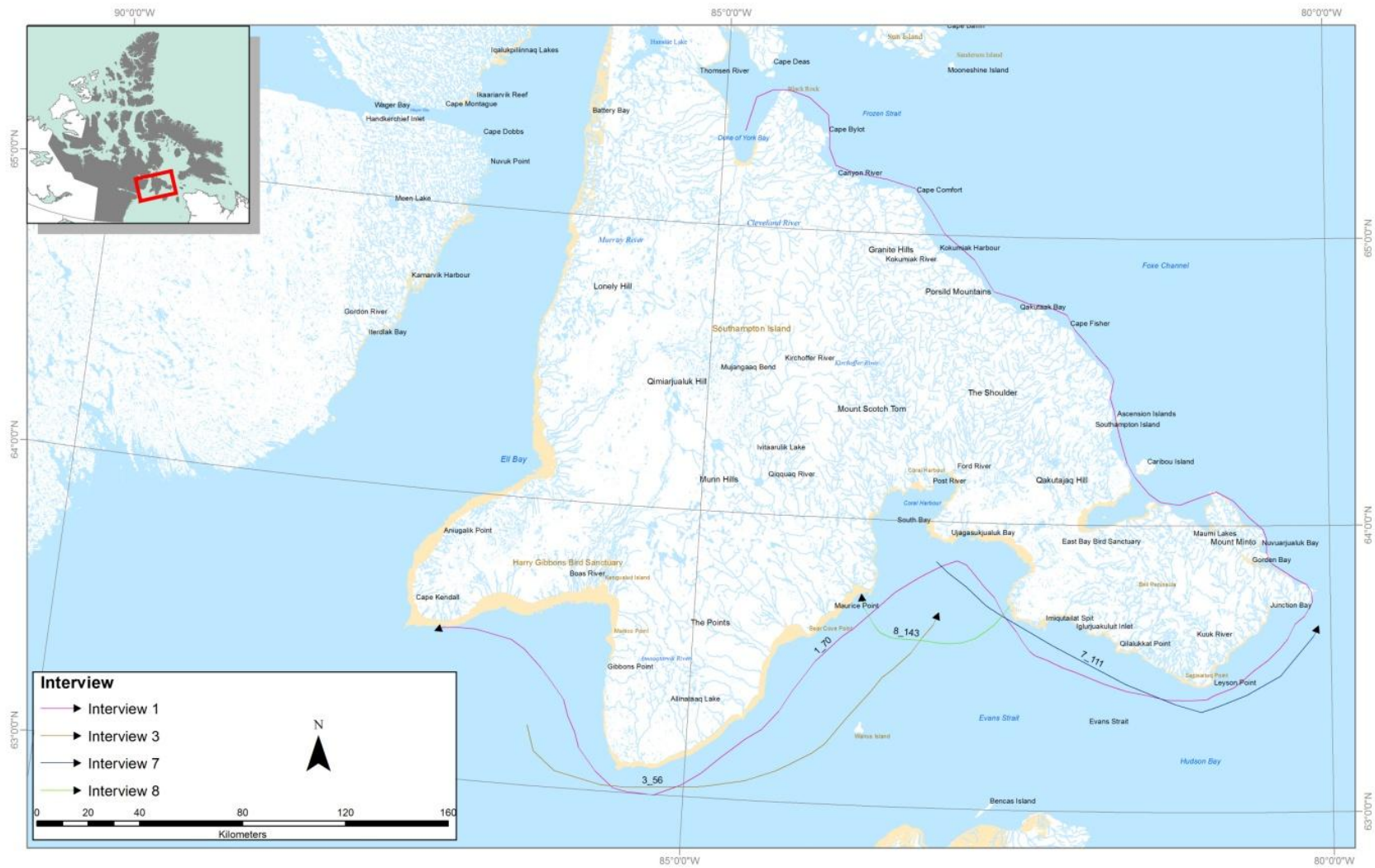


Figure 39. Migration routes for Bearded Seal

Table 50. Migration routes for Bearded Seal

Map Code	Interview Code	Species	Months	Comments
1_70M	CORAL_1_0214	Bearded seal		
3_56M	CORAL_3_0214	Bearded seal	Year-round	
7_111M	CORAL_7_0214	Bearded seal	Summer	
8_143M	CORAL_8_0214	Bearded seal	Year-round	



Table 51. Probability of occurrence for Ring Seal

Map Code	Interview Code	Species	Months	Comments
1_74	CORAL_1_0214	Ring seal		
1_75	CORAL_1_0214	Ring seal		
1_76	CORAL_1_0214	Ring seal		
1_77	CORAL_1_0214	Ring seal		
1_78	CORAL_1_0214	Ring seal		
2_144	CORAL_2_0214	Ring seal		
2_145	CORAL_2_0214	Ring seal		
2_146	CORAL_2_0214	Ring seal		
2_147	CORAL_2_0214	Ring seal		
2_148	CORAL_2_0214	Ring seal		
2_149	CORAL_2_0214	Ring seal		
2_150	CORAL_2_0214	Ring seal		
2_151	CORAL_2_0214	Ring seal		
2_152	CORAL_2_0214	Ring seal		
5_307	CORAL_5_0214	Ring seal	Year-round	Along coast
6_126	CORAL_6_0214	Ring seal	Summer	
6_127	CORAL_6_0214	Ring seal	Winter	Along flow edge
6_128	CORAL_6_0214	Ring seal	Winter	Along flow edge
6_129	CORAL_6_0214	Ring seal	May, Jun	Pupping area
6_130	CORAL_6_0214	Ring seal	May, Jun	Pupping area
6_131	CORAL_6_0214	Ring seal	May, Jun	
7_101	CORAL_7_0214	Ring seal		Flow edge in winter
7_102	CORAL_7_0214	Ring seal	Spring	On top of ice\
7_103	CORAL_7_0214	Ring seal		
7_105	CORAL_7_0214	Ring seal	Spring	
7_106	CORAL_7_0214	Ring seal		
7_107	CORAL_7_0214	Ring seal	Spring	
8_129	CORAL_8_0214	Ring seal		
8_130S	CORAL_8_0214	Ring seal		Pupping area
8_131S	CORAL_8_0214	Ring seal		Pupping area
8_132S	CORAL_8_0214	Ring seal		Pupping area
8_133S	CORAL_8_0214	Ring seal		Pupping area
8_134S	CORAL_8_0214	Ring seal		Pupping area
8_135S	CORAL_8_0214	Ring seal		
8_136	CORAL_8_0214	Ring seal	Aug	
8_137	CORAL_8_0214	Ring seal	Autumn	
8_139	CORAL_8_0214	Ring seal	Aug	
8_140	CORAL_8_0214	Ring seal	Autumn	
8_170	CORAL_8_0214	Ring seal	Autumn	

Table 52. Ring Seal everywhere data

Map Code	Interview Code	Species	Months	Comments
4_85E	CORAL_4_0214	Ring seal	Year-round	
8_217E	CORAL_8_0214	Ring seal		



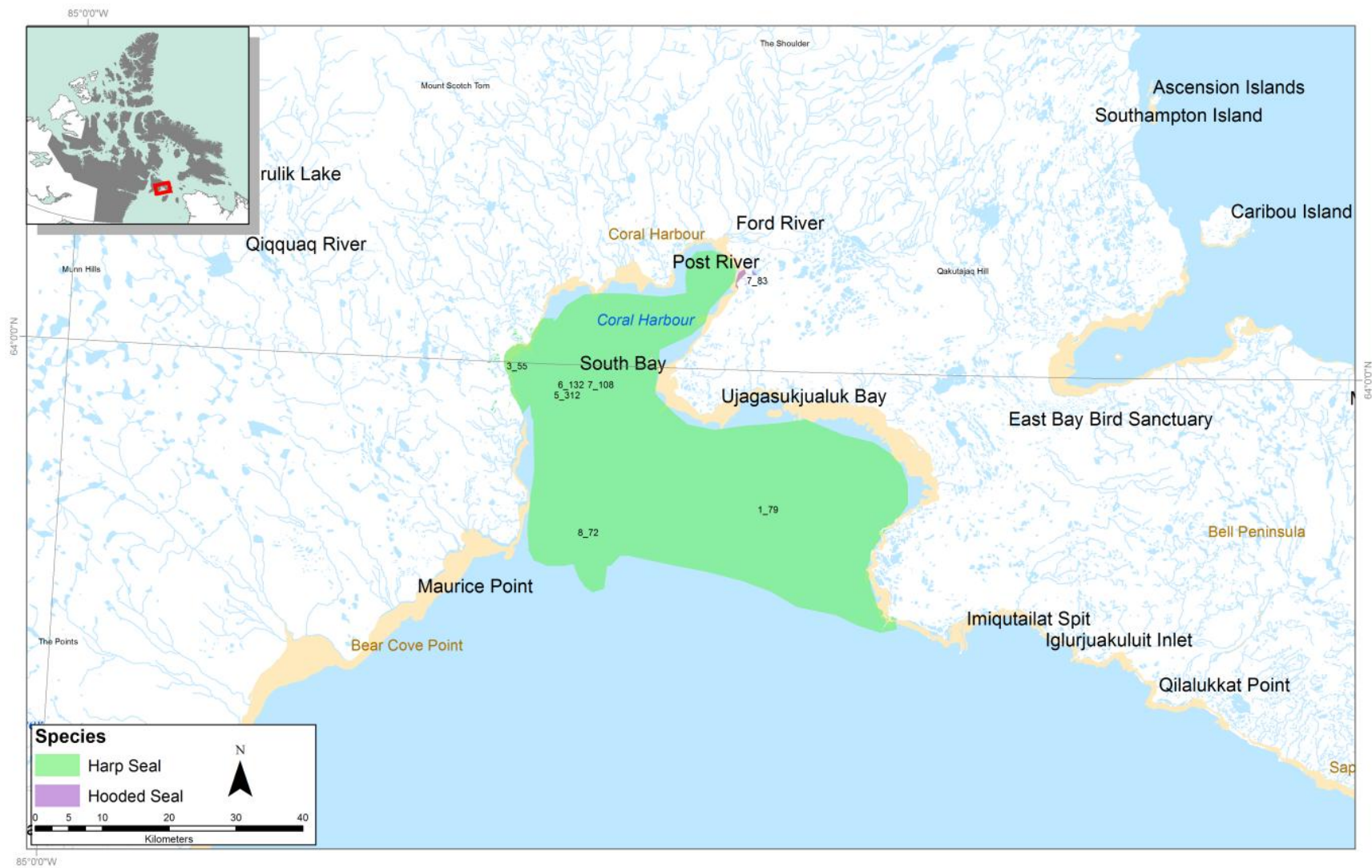


Figure 41. Areas of occurrence for Harp Seal and Hooded Seal



Table 53. Areas of occurrence for Harp Seal and Hooded Seal

Map Code	Interview Code	Species	Months	Comments
1_79	CORAL_1_0214	Harp seal		
3_55H	CORAL_3_0214	Harp seal		
5_312	CORAL_5_0214	Harp seal	Sep	
6_132	CORAL_6_0214	Harp seal	Summer	
7_108	CORAL_7_0214	Harp seal	Summer	
8_72	CORAL_8_0214	Harp seal		
7_83	CORAL_7_0214	Hooded seal		

Table 54. Harp Seal everywhere data

Map Code	Interview Code	Species	Months	Comments
4_86E	CORAL_4_0214	Harp seal	Jul to Sep	

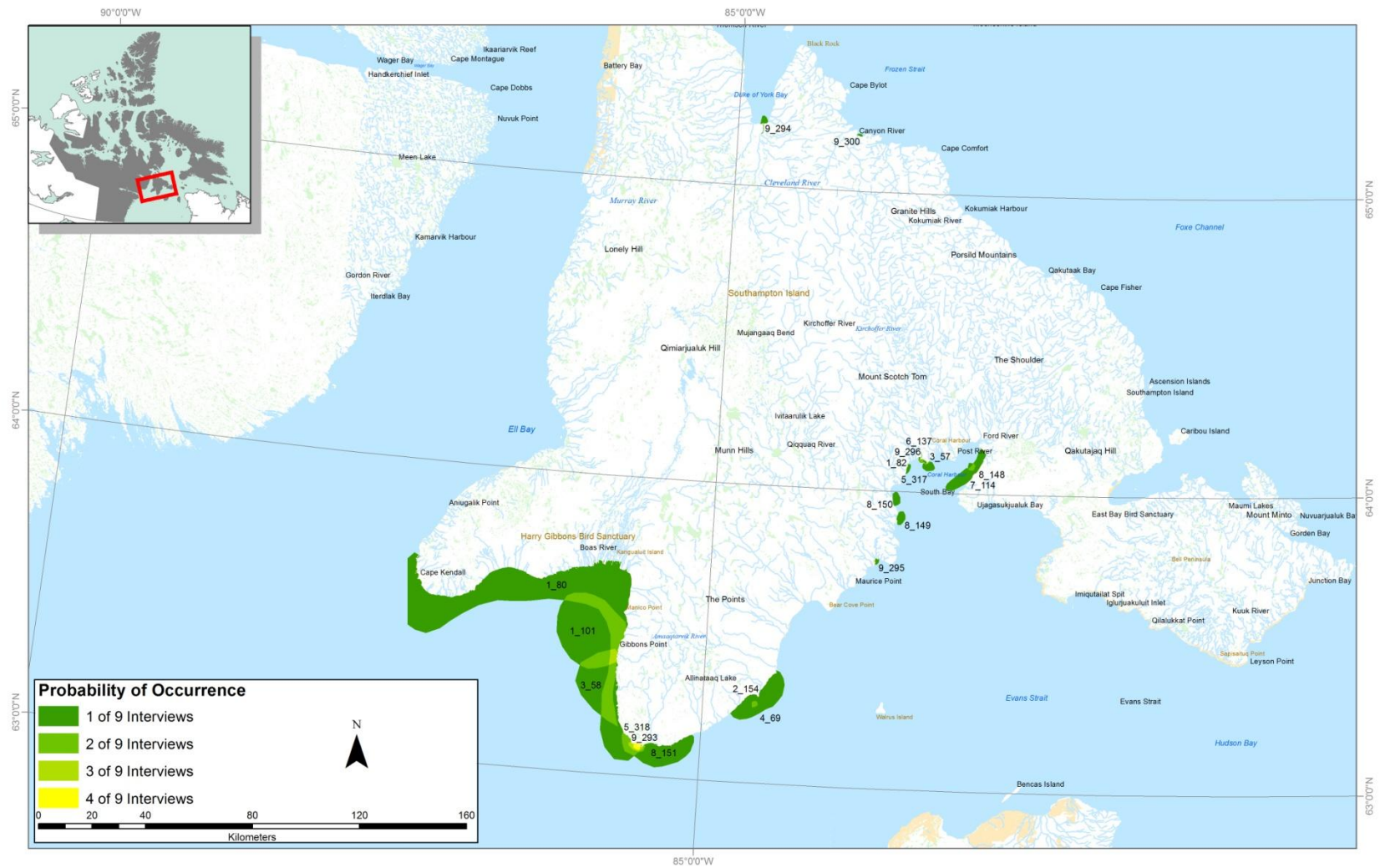


Figure 42. Probability of occurrence for Harbour seal

Table 55. Probability of occurrence for Harbour seal

Map Code	Interview Code	Species	Months	Comments
1_80	CORAL_1_0214	Harbour Seal		
1_82	CORAL_1_0214	Harbour Seal		
1_101	CORAL_1_0214	Harbour Seal		
2_154	CORAL_2_0214	Harbour Seal		
3_57	CORAL_3_0214	Harbour Seal		Kugluktuk river, people catch them there
3_58H	CORAL_3_0214	Harbour Seal		
4_69	CORAL_4_0214	Harbour Seal	Jul to Sep	
5_317	CORAL_5_0214	Harbour Seal		
5_318	CORAL_5_0214	Harbour Seal	Summer	
6_137	CORAL_6_0214	Harbour Seal	Summer	
7_114	CORAL_7_0214	Harbour Seal		
8_148	CORAL_8_0214	Harbour Seal	Aug, Sep	
8_149	CORAL_8_0214	Harbour Seal	Aug, Sep	
8_150	CORAL_8_0214	Harbour Seal	Aug, Sep	
8_151	CORAL_8_0214	Harbour Seal	Aug, Sep	

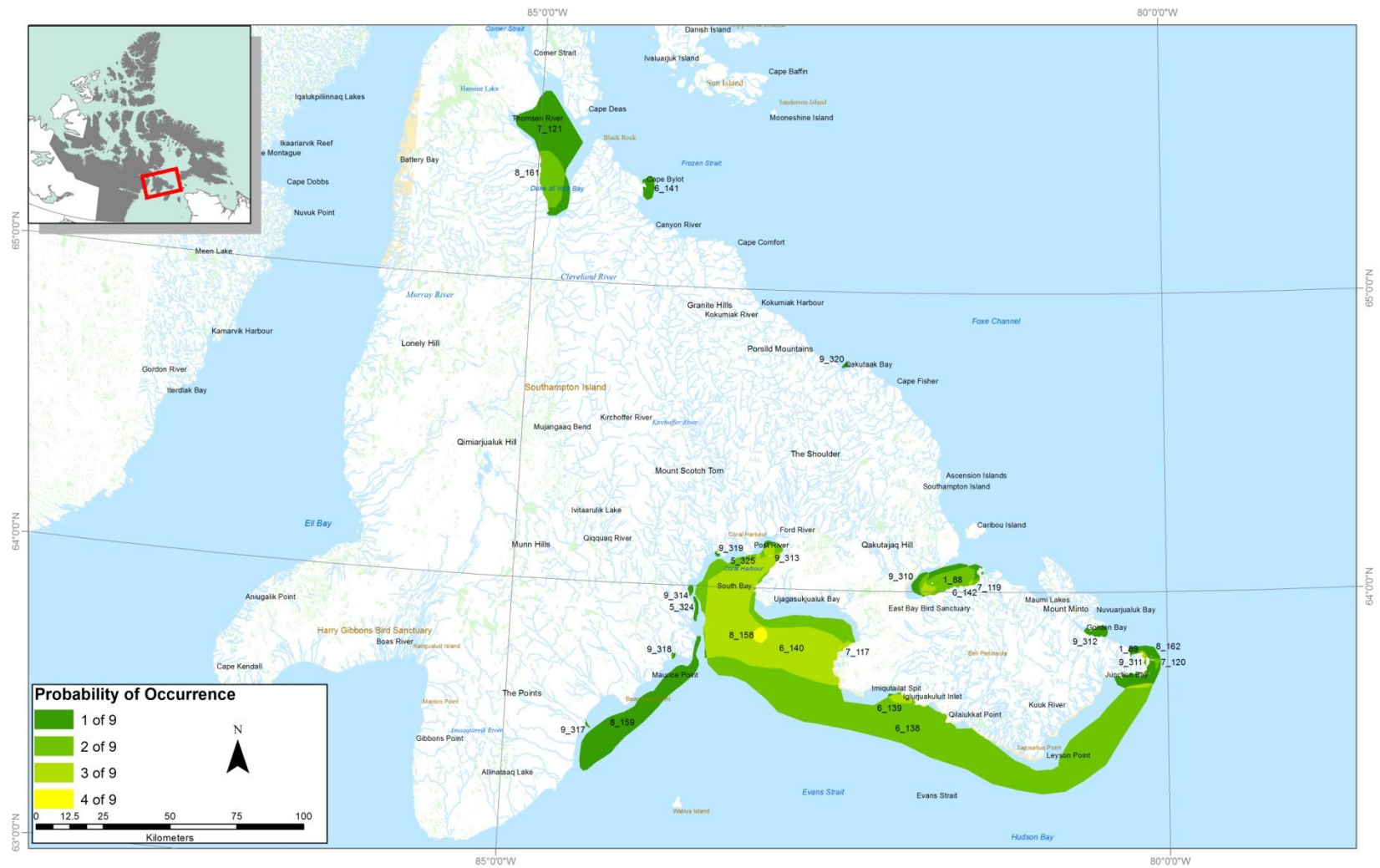


Figure 43. Probability of occurrence for Beluga Whale

Table 56. Probability of occurrence for Beluga Whale

Map Code	Interview Code	Species	Months	Comments
1_88	CORAL_1_0214	Beluga		
1_89	CORAL_1_0214	Beluga		
3_60	CORAL_3_0214	Beluga	Aug	anywhere inside that line
5_324	CORAL_5_0214	Beluga	Summer	Summer hunting grounds
5_325	CORAL_5_0214	Beluga		Summer hunting grounds
6_138	CORAL_6_0214	Beluga	Jun, Aug	Along coastline, close to shore in June
6_139	CORAL_6_0214	Beluga	Spring	Along flow edge
6_140	CORAL_6_0214	Beluga		Along flow edge
6_141	CORAL_6_0214	Beluga	Apr, May	Caught one here 7 years ago
6_142N	CORAL_6_0214	Beluga		Calving area
7_117	CORAL_7_0214	Beluga	Summer	Along shore
7_119	CORAL_7_0214	Beluga		Large amount were trapped by ice 10-11 years ago
7_120	CORAL_7_0214	Beluga		Lots of calving
7_121	CORAL_7_0214	Beluga		
8_158	CORAL_8_0214	Beluga	Spring	
8_159	CORAL_8_0214	Beluga		
8_161	CORAL_8_0214	Beluga		
8_162	CORAL_8_0214	Beluga	Aug	
9_309	CORAL_9_0214	Beluga	Spring	enter Duke of York Bay in July when ice is breaking up to feed on fish
9_310	CORAL_9_0214	Beluga		Calving
9_311	CORAL_9_0214	Beluga		Calving
9_312	CORAL_9_0214	Beluga		Feed on char
9_313	CORAL_9_0214	Beluga		Used to come here often to feed in the 1990's now only come occasionally
9_314	CORAL_9_0214	Beluga		Used to come here often to feed in the 1990's now only come occasionally
9_315	CORAL_9_0214	Beluga	Spring	Stop to feed the river mouths where char are
9_317	CORAL_9_0214	Beluga		River mouths where they feed
9_318	CORAL_9_0214	Beluga		River mouths where they feed
9_319	CORAL_9_0214	Beluga		River mouths where they feed
9_320	CORAL_9_0214	Beluga		Feeding, Cape Donovai
9_321	CORAL_9_0214	Beluga		Hang around near canyon river during migration







Table 57. Probability of occurrence for Bowhead Whale

Map Code	Interview Code	Species	Months	Comments
1_85	CORAL_1_0214	Bowhead Whale		
1_86	CORAL_1_0214	Bowhead Whale		
1_87	CORAL_1_0214	Bowhead Whale		
2_157	CORAL_2_0214	Bowhead Whale		
2_158	CORAL_2_0214	Bowhead Whale		
3_62H	CORAL_3_0214	Bowhead Whale	Summer	Only in summer of 1964
4_73	CORAL_4_0214	Bowhead Whale		
4_74	CORAL_4_0214	Bowhead Whale		
5_327	CORAL_5_0214	Bowhead Whale	Summer	
5_328	CORAL_5_0214	Bowhead Whale	Summer	
6_144	CORAL_6_0214	Bowhead Whale	Summer	
6_145	CORAL_6_0214	Bowhead Whale	Summer	
7_124	CORAL_7_0214	Bowhead Whale		
8_167	CORAL_8_0214	Bowhead Whale	Sept	
8_168	CORAL_8_0214	Bowhead Whale	Aug	
8_169	CORAL_8_0214	Bowhead Whale	Aug	
9_323	CORAL_9_0214	Bowhead Whale		Saw killer whales hearding one to shore
9_324	CORAL_9_0214	Bowhead Whale		Usually see them here
9_325	CORAL_9_0214	Bowhead Whale		
9_326	CORAL_9_0214	Bowhead Whale		Migrate with the narwhal, see more often at repulse bay
9_327	CORAL_9_0214	Bowhead Whale		Sometimes hang around floe edge in spring, to hard to hunt here

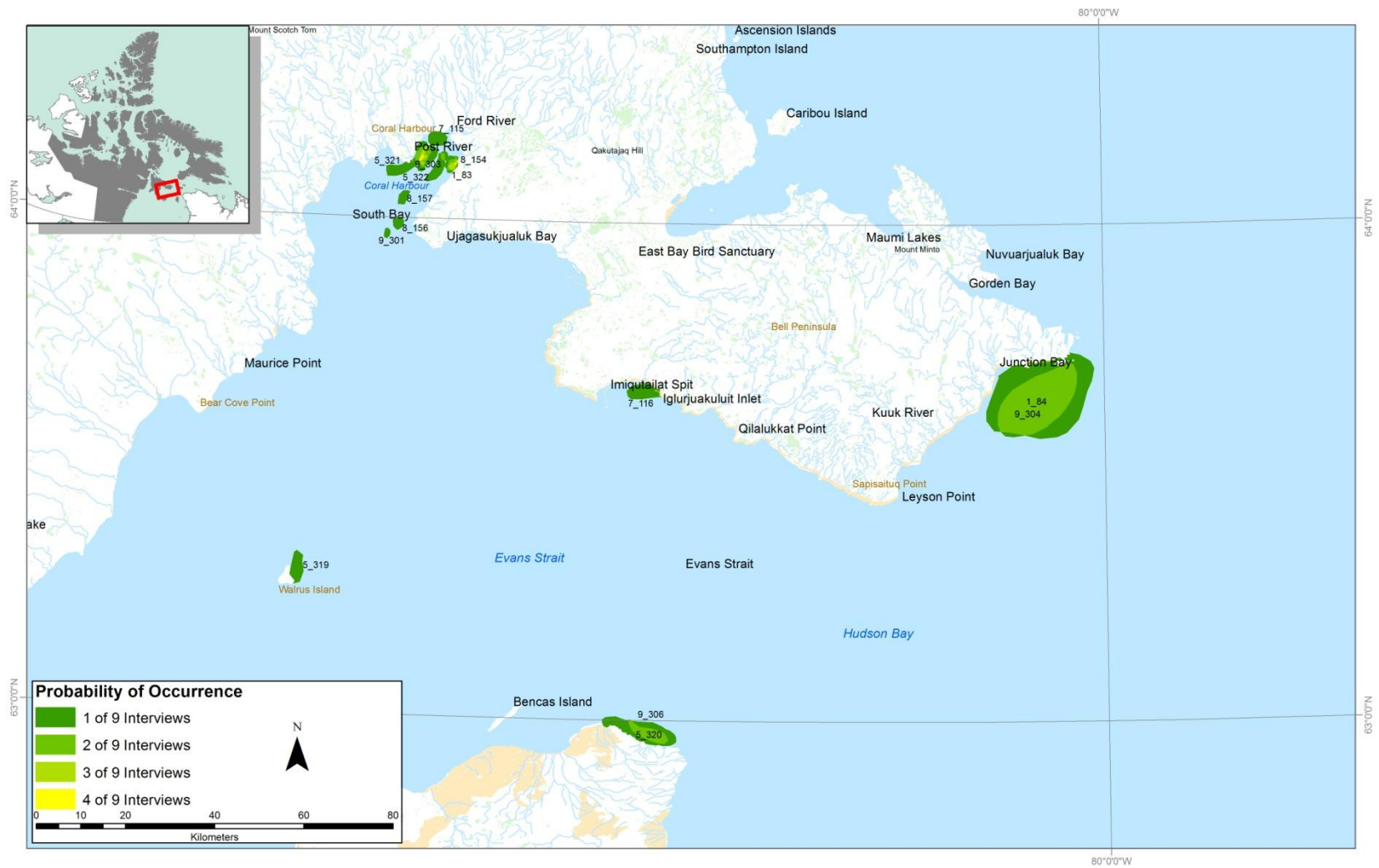


Figure 45. Probability of occurrence for Orca

Table 58. Probability of occurrence for Orca

Map Code	Interview Code	Species	Months	Comments
1_83	CORAL_1_0214	Orca		
1_84	CORAL_1_0214	Orca		
2_155	CORAL_2_0214	Orca		
3_59	CORAL_3_0214	Orca		spyhopping 2012
4_70	CORAL_4_0214	Orca	Aug	2 years prior a group came quite close to the community
4_71	CORAL_4_0214	Orca	Aug	
5_319H	CORAL_5_0214	Orca		2003, Approx 3
5_320	CORAL_5_0214	Orca		2005, Approx 15
5_321	CORAL_5_0214	Orca		2011
5_322	CORAL_5_0214	Orca		2011
7_115	CORAL_7_0214	Orca		2011/2012
7_116	CORAL_7_0214	Orca		2010
8_153	CORAL_8_0214	Orca		2013
8_154	CORAL_8_0214	Orca		2013, large whale found dead here
8_155	CORAL_8_0214	Orca		2013
8_156	CORAL_8_0214	Orca		2013
8_157	CORAL_8_0214	Orca		2013
9_301	CORAL_9_0214	Orca	Autumn	Late Autumn when inner bay had new ice
9_302	CORAL_9_0214	Orca		Found dead one beached
9_303	CORAL_9_0214	Orca		Seen a pod of 3-4 whales a couple of times since finding dead male here
9_304	CORAL_9_0214	Orca		
9_305	CORAL_9_0214	Orca		Saw pod trying to lure a bowhead whale to beach here.
9_306	CORAL_9_0214	Orca		

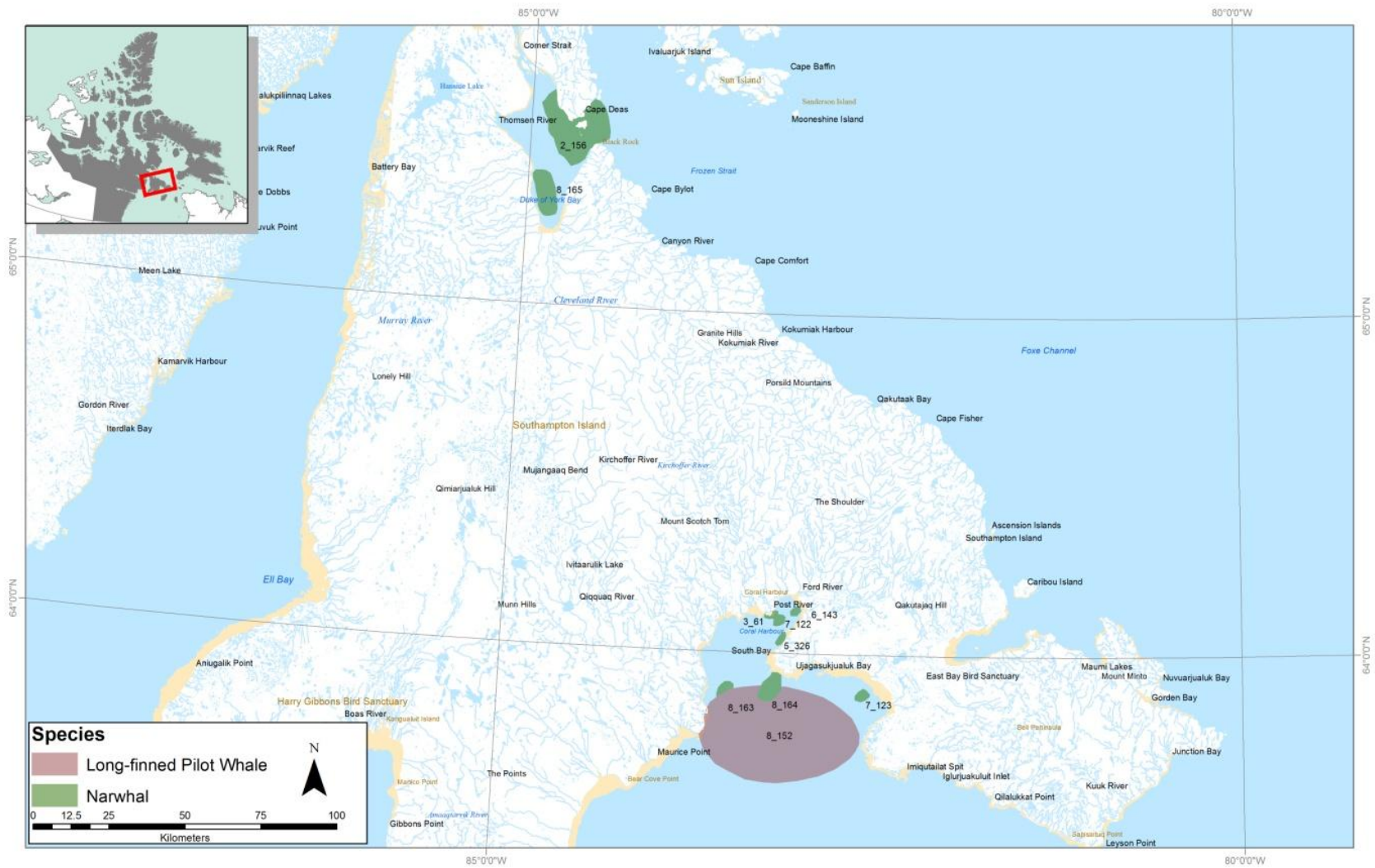


Figure 46. Areas of occurrence for Narwhal and Long Finned Pilot Whale

Table 59. Areas of occurrence for Narwhal and Long Finned Pilot Whale

Map Code	Interview Code	Species	Months	Comments
2_156	CORAL_2_0214	Narwhal		
3_61H	CORAL_3_0214	Narwhal		
5_326H	CORAL_5_0214	Narwhal		One was caught with no tusks in 1999
6_143	CORAL_6_0214	Narwhal	Summer	Only caught once in a while
7_122	CORAL_7_0214	Narwhal		2-3 years ago >10 whale
7_123	CORAL_7_0214	Narwhal		4 years ago >10 whales
8_163	CORAL_8_0214	Narwhal	Aug	
8_164	CORAL_8_0214	Narwhal	Aug	
8_165	CORAL_8_0214	Narwhal		
8_166	CORAL_8_0214	Narwhal		
9_316	CORAL_9_0214	Narwhal	Spring	Deeper than beluga
9_322	CORAL_9_0214	Narwhal	Summer	Sometimes come to this area
8_152	CORAL_8_0214	Long-finned Pilot Whale	Aug	

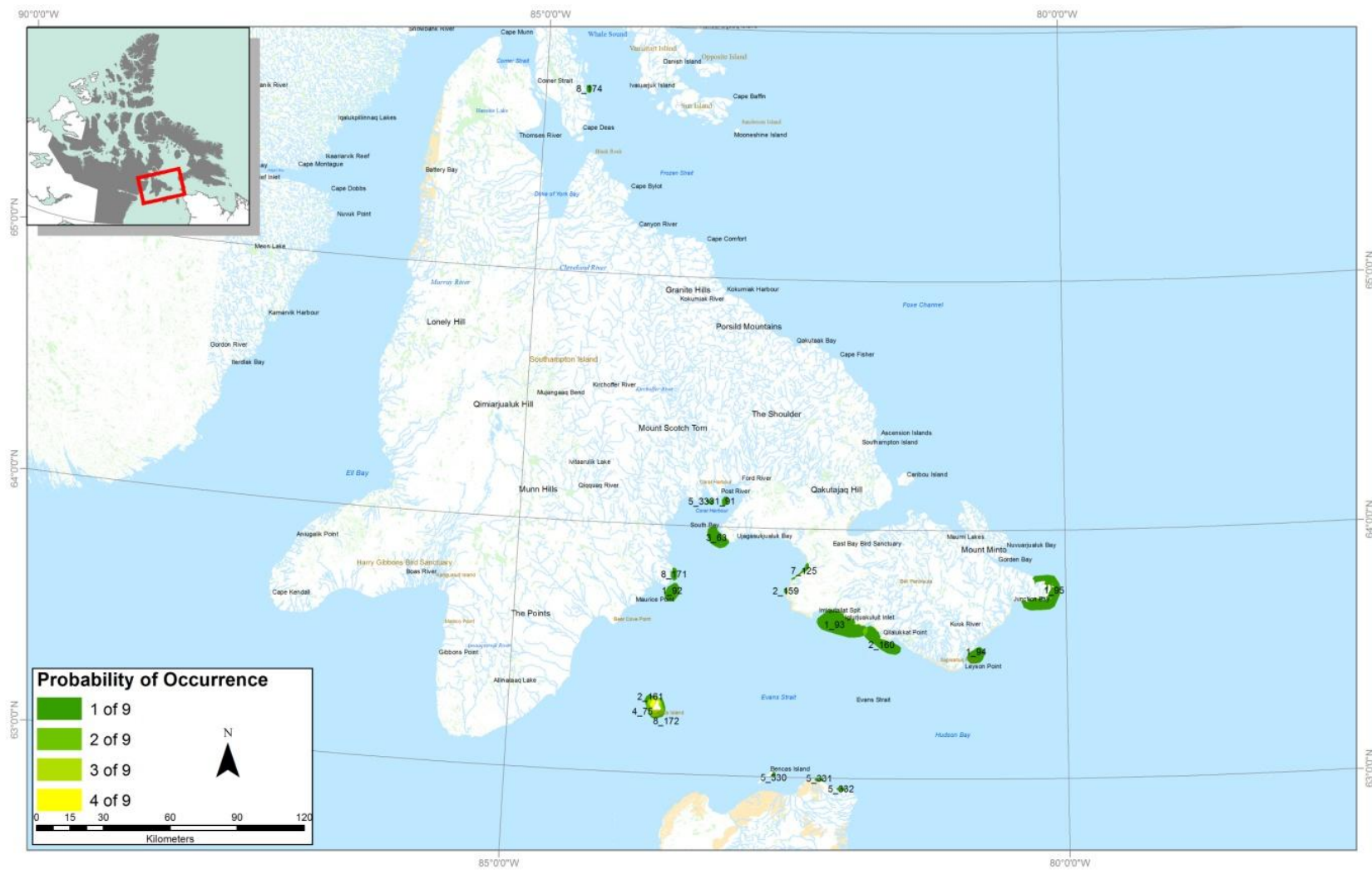




Table 60. Probability of occurrence for Edible Kelp

Map Code	Interview Code	Species	Months	Comments
1_91	CORAL_1_0214	Edible Kelp		
1_92	CORAL_1_0214	Edible Kelp		
1_93	CORAL_1_0214	Edible Kelp		
1_94	CORAL_1_0214	Edible Kelp		
1_95	CORAL_1_0214	Edible Kelp		
2_159	CORAL_2_0214	Edible Kelp		
2_160	CORAL_2_0214	Edible Kelp		
2_161	CORAL_2_0214	Edible Kelp		
3_63	CORAL_3_0214	Edible Kelp		In places of deep water
3_64	CORAL_3_0214	Edible Kelp		In places of deep water
4_75	CORAL_4_0214	Edible Kelp		
5_329	CORAL_5_0214	Edible Kelp		
5_330	CORAL_5_0214	Edible Kelp		
5_331	CORAL_5_0214	Edible Kelp		
5_332	CORAL_5_0214	Edible Kelp		
5_333	CORAL_5_0214	Edible Kelp		
7_125	CORAL_7_0214	Edible Kelp		Use fishing hooks to collect and eat fresh
8_171	CORAL_8_0214	Edible kelp		
8_172	CORAL_8_0214	Edible kelp		
8_174	CORAL_8_0214	Edible kelp		

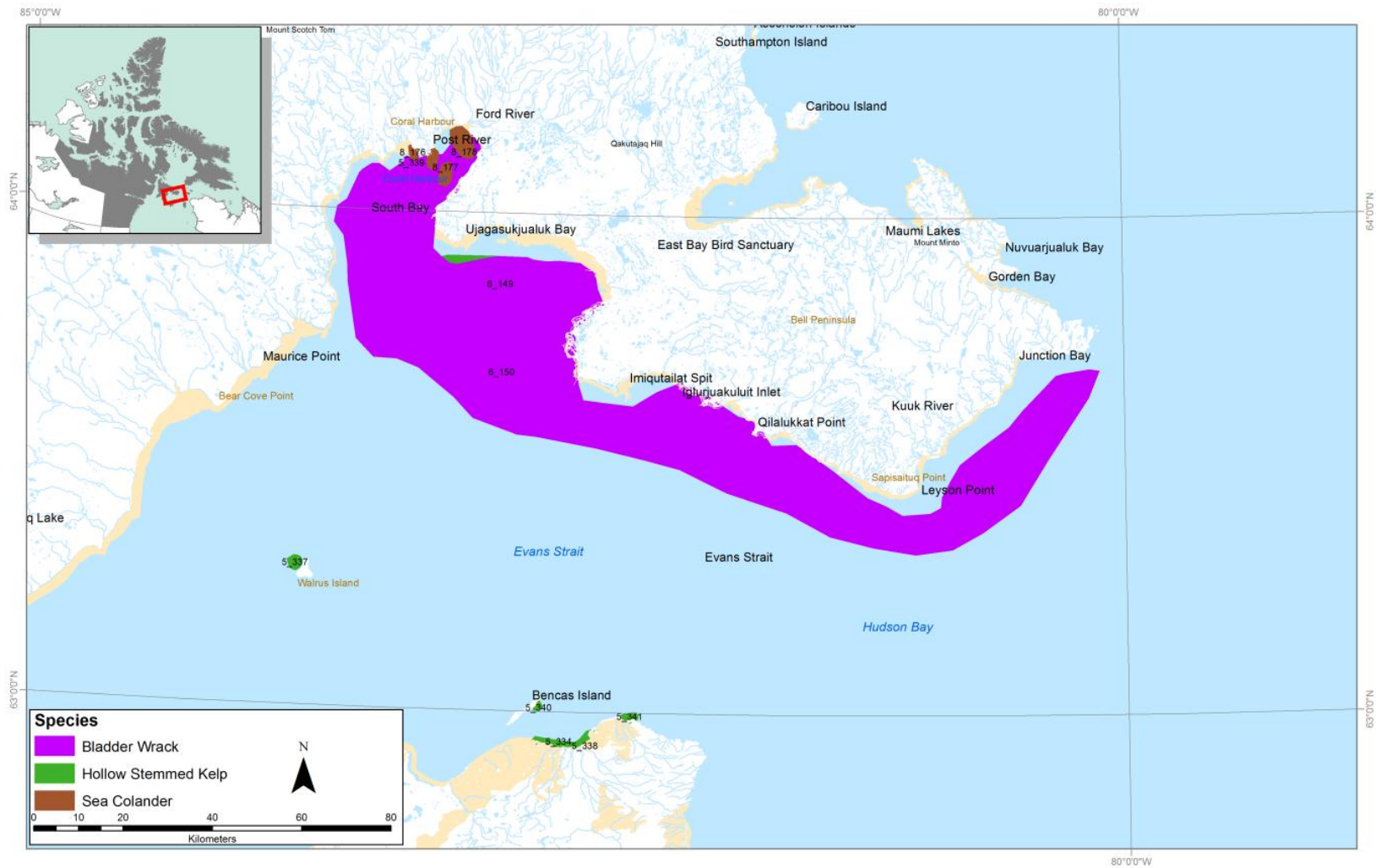


Figure 48. Areas of occurrence for Hollow Stemmed Kelp, Sea Colander, and Bladder Wrack

Table 61. Areas of occurrence for Hollow Stemmed Kelp, Sea Colander, and Bladder Wrack

Map Code	Interview Code	Species	Months	Comments
5_334	CORAL_5_0214	Hollow stemmed kelp		
5_335	CORAL_5_0214	Hollow stemmed kelp		
5_336	CORAL_5_0214	Hollow stemmed kelp		
5_337	CORAL_5_0214	Hollow stemmed kelp		
6_149	CORAL_6_0214	Hollow stemmed kelp	Summer	
5_338	CORAL_5_0214	Sea colander		
8_176	CORAL_8_0214	Sea colander		
8_177	CORAL_8_0214	Sea colander		
8_178	CORAL_8_0214	Sea colander		
5_339	CORAL_5_0214	Bladder wrack		
5_340	CORAL_5_0214	Bladder wrack		
5_341	CORAL_5_0214	Bladder wrack		
6_150	CORAL_6_0214	Bladder wrack		Along coastline

Table 62. Hollow Stemmed Kelp, Bladder Wrack, and Sea Colander everywhere data.

Map Code	Interview Code	Species	Months	Comments
4_89E	CORAL_4_0214	Hollow Stemmed		
8_218E	CORAL_8_0214	Hollow Stemmed		
2_184E	CORAL_2_0214	Bladder wrack		
4_90E	CORAL_4_0214	Bladder wrack		
8_219E	CORAL_8_0214	Bladder wrack		

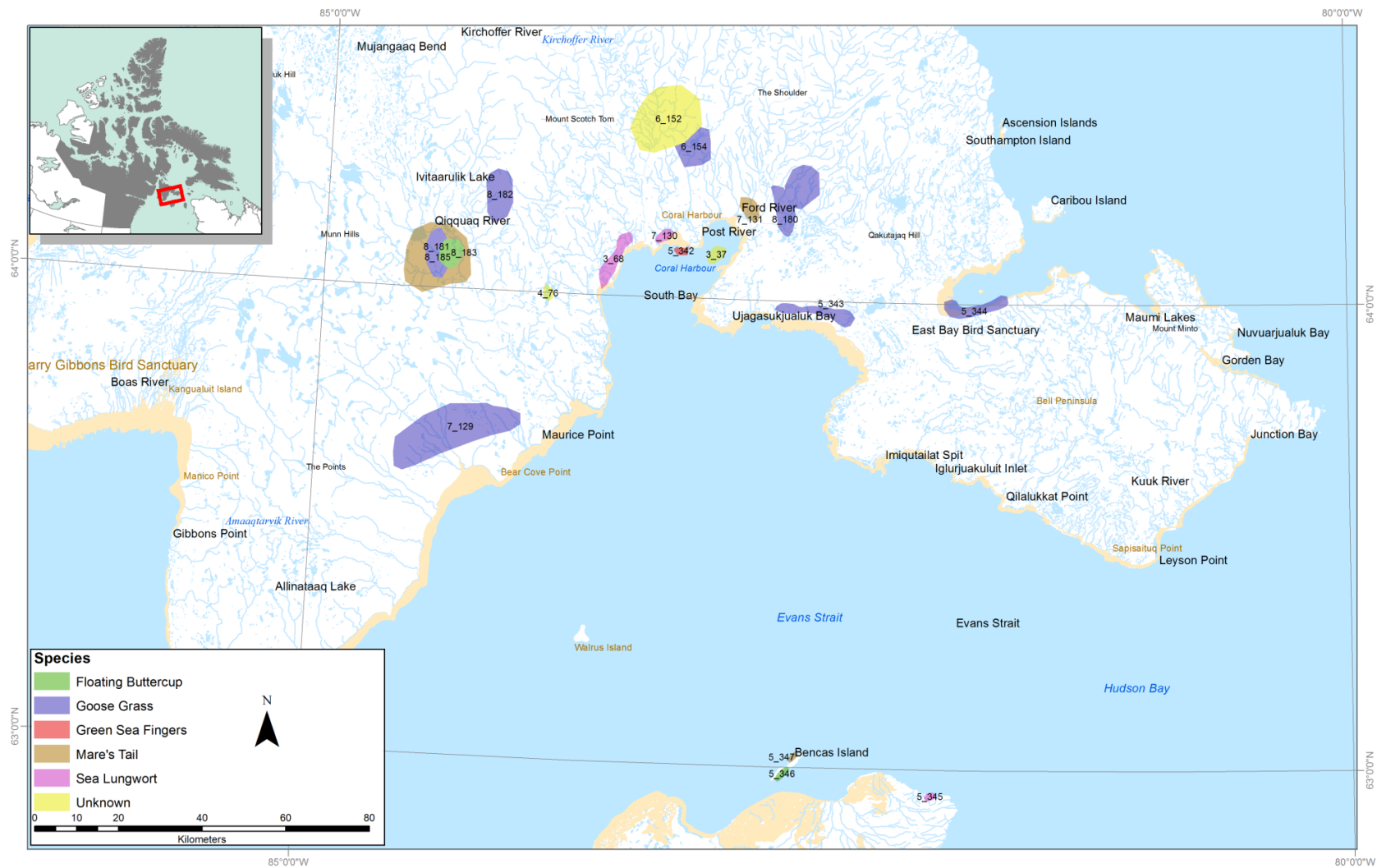


Figure 49. Areas of occurrence for Sea Lungwort, Floating Buttercup, Mare's Tail, Unknown, Semaphore Grass, Eel Grass, Goose Grass, and Green Sea Fingers.

Table 63. Sea Lungwort, Floating Buttercup, Mare's Tail, Unknown, Semaphore Grass, Eel Grass, Goose Grass, and Green Sea Fingers.

Map Code	Interview Code	Species	Months	Comments
5_343	CORAL_5_0214	Goose Grass		Seen in the stomach's of geese
5_344	CORAL_5_0214	Goose Grass		Seen in the stomach's of geese
6_154	CORAL_6_0214	Goose Grass		
7_129	CORAL_7_0214	Goose Grass		
8_180	CORAL_8_0214	Goose Grass		Lives in flat areas
8_181	CORAL_8_0214	Goose Grass		Lives in flat areas
8_182	CORAL_8_0214	Goose Grass		Lives in flat areas
3_68	CORAL_3_0214	Sea Lungwort		along the shore
5_345	CORAL_5_0214	Sea Lungwort		Tastes sour but edible
7_130	CORAL_7_0214	Sea Lungwort		Large numbers
4_76	CORAL_4_0214	Unknown		Probable pond weed spp.
6_152	CORAL_6_0214	Unknown		Species has been misidentified as eel grass, comment indicated a land species
5_342	CORAL_5_0214	Green Sea Fingers		
5_346	CORAL_5_0214	Floating Buttercup		Edible
8_183	CORAL_8_0214	Floating Buttercup		
5_347	CORAL_5_0214	Mare's Tail		Not edible
7_131	CORAL_7_0214	Mare's Tail		Notice it where rivers dry up
8_185	CORAL_8_0214	Mare's Tail		Prefers marshy lakes

Table 64. Floating Buttercup, Goose Grass, Semaphore Grass everywhere data

Map Code	Interview Code	Species	Months	Comments
4_91E	CORAL_4_0214	Floating Buttercup		
6_168E	CORAL_6_0214	Floating Buttercup		Everywhere but in small amounts
2_185E	CORAL_2_0214	Goose Grass		
6_167E	CORAL_6_0214	Semaphore Grass		
8_221E	CORAL_8_0214	Semaphore Grass		
8_220E	CORAL_8_0214	Unknown		Interview identified this species as eel grass but living in ponds



Figure 50. Areas of occurrence for Snow Goose, Barnacle Goose, Canada Goose, Ross's Goose, and Trumpeter Swan



Table 65. Areas of occurrence for Snow Goose, Barnacle Goose, Canada Goose, Ross's Goose, Trumpeter Swan

Map Code	Interview Code	Species	Months	Comments
5_50SN	CORAL_5_0214	Snow goose	Jun, Jul	Laying eggs
5_52SN	CORAL_5_0214	Barnacle goose	Jun, Jul	Same location as SNGO_5_50 but closer to shore
5_54SN	CORAL_5_0214	Barnacle goose	Jun, Jul	Higher densities than 52SN/53SN
5_56SN	CORAL_5_0214	Barnacle goose	Jun, Jul	
5_53SN	CORAL_5_0214	Canada goose	Jun, Jul	Same location as SNGO_5_50 but closer to shore
5_55SN	CORAL_5_0214	Canada goose	Jun, Jul	Higher densities than 52SN/53SN
5_57SN	CORAL_5_0214	Canada goose	Jun, Jul	
5_58SN	CORAL_5_0214	Ross's goose	Jun, Jul	
5_59SN	CORAL_5_0214	Ross's goose	Jun, Jul	
5_60	CORAL_5_0214	Trumpeter Swan	Jun, Jul	Not large numbers
5_61	CORAL_5_0214	Trumpeter Swan	Jun, Jul	Not large numbers
5_62	CORAL_5_0214	Trumpeter Swan	Jun, Jul	Not large numbers

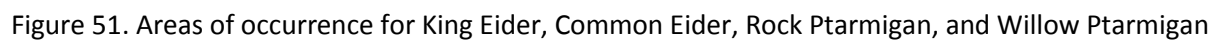


Table 66. Areas of occurrence for King Eider, Common Eider, Rock Ptarmigan, and Willow Ptarmigan

Map Code	Interview Code	Species	Months	Comments
5_74SN	CORAL_5_0214	King Eider	Jun	Common eiders outnumber king eiders
5_75SN	CORAL_5_0214	Common Eider	Jun	
5_77SN	CORAL_5_0214	Common Eider	Jun	
5_86	CORAL_5_0214	Willow Ptarmigan	Mar, Apr	
5_87	CORAL_5_0214	Willow Ptarmigan	Mar, Apr	
5_88	CORAL_5_0214	Willow Ptarmigan	Mar, Apr	
5_90SN	CORAL_5_0214	Willow Ptarmigan	Year round	nest in mid July
5_89SN	CORAL_5_0214	Rock Ptarmigan	Mid Jul	only small number nest here
5_91	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	
5_92	CORAL_5_0214	Rock Ptarmigan	Apr	
5_93	CORAL_5_0214	Rock Ptarmigan	Apr	
5_94	CORAL_5_0214	Rock Ptarmigan	Apr	
5_95	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	
5_96	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	
5_97	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	
5_98	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	
5_99	CORAL_5_0214	Rock Ptarmigan	Mar, Apr	

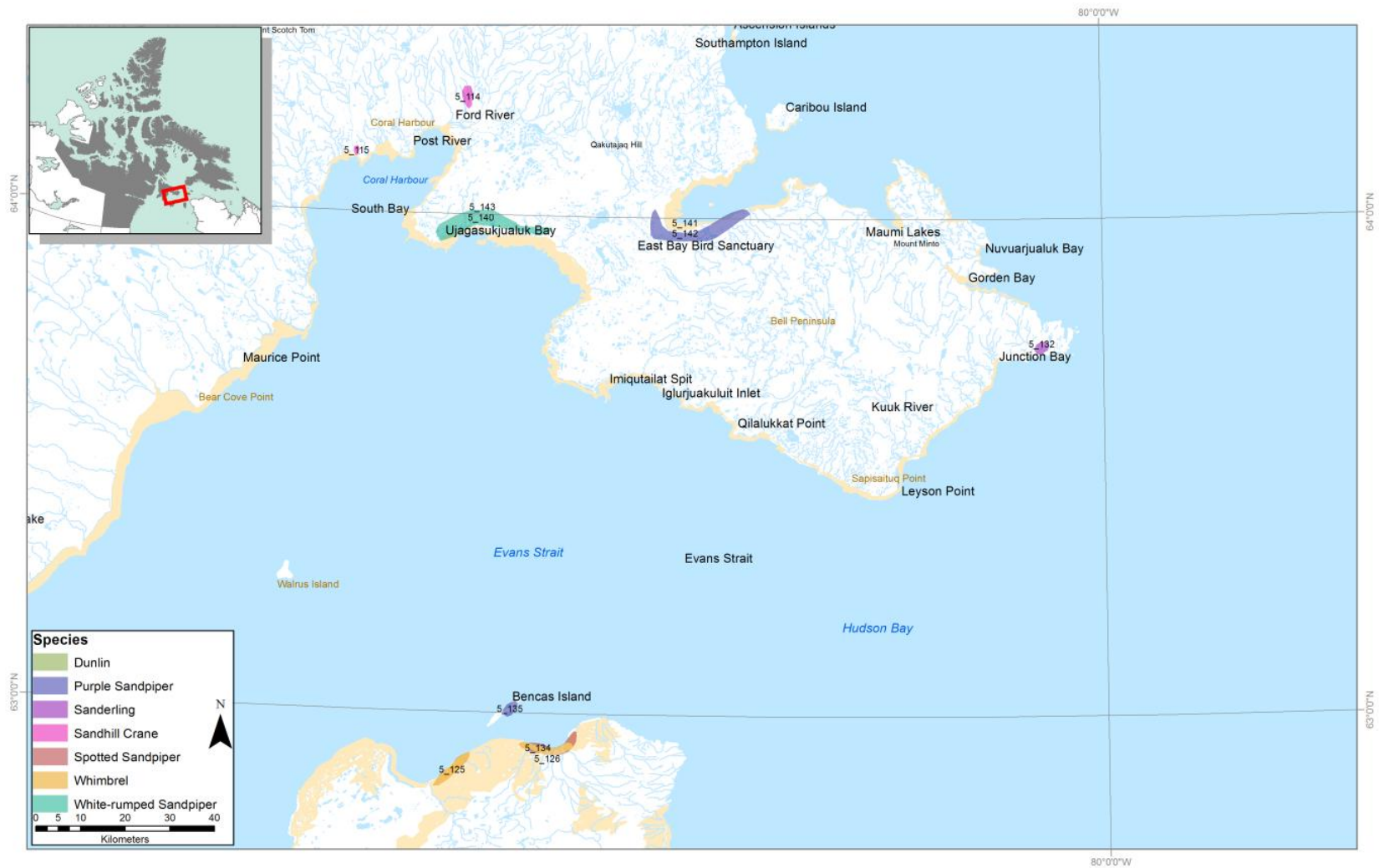


Figure 52. Areas of occurrence for Sandhill Crane, Sanderling, Spotted Sandpiper, Semipalmated Sandpiper, White-rumped Sandpiper, Purple Sandpiper, whimbrel, and Dunlin

Table 67. Areas of occurrence for Sandhill Crane, Sanderling, Spotted Sandpiper, Semipalmated Sandpiper, White-rumped Sandpiper, Purple Sandpiper, whimbrel, and Dunlin

Map Code	Interview Code	Species	Months	Comments
5_114	CORAL_5_0214	Sandhill crane	Jun	
5_115	CORAL_5_0214	Sandhill crane	Jun	
5_131	CORAL_5_0214	Sanderling		
5_132	CORAL_5_0214	Sanderling		
5_134	CORAL_5_0214	Spotted sandpiper	Jun, Jul	
5_135	CORAL_5_0214	Spotted sandpiper	Jun, Jul	
5_140S N	CORAL_5_0214	Whit-rumped sandpiper		Low numbers nest here
5_141S N	CORAL_5_0214	Whit-rumped sandpiper	Jul, Aug	Large numbers at site but don't all nest
5_142	CORAL_5_0214	Purple Sandpiper		
5_143S N	CORAL_5_0214	Dunlin		
5_125	CORAL_5_0214	Whimbrel	Summer	
5_126	CORAL_5_0214	Whimbrel		



Figure 53. Areas of occurrence for Peregrine Falcon, Snowy, Owl, Short eared Owl, Common raven, Rough-legged Hawk, Gyr Falcon



Table 68. Areas of occurrence for Peregrine Falcon, Snowy, Owl, Short eared Owl, Common raven, Rough-legged Hawk, Gyrfalcon

Map Code	Interview Code	Species	Months	Comments
5_107	CORAL_5_0214	Rough-legged hawk	Aug	
5_108	CORAL_5_0214	Gyrfalcon	Jul, Aug	
5_109S N	CORAL_5_0214	Peregrin falcon	Jul, Aug	Nest on same cliffs as murren
5_110S N	CORAL_5_0214	Peregrin falcon	Jul, Aug	Nest on same cliffs as murren
5_111S N	CORAL_5_0214	Peregrin falcon	Jul, Aug	Nest on same cliffs as murren
5_176S N	CORAL_5_0214	Snowy owl	Year-round	
5_177	CORAL_5_0214	Short-eared owl	Spring	
5_178	CORAL_5_0214	Common raven		Spend most time around dump

Table 69. Snowy Owl everywhere data

Map Code	Interview Code	Species	Months	Comments
5_363E	CORAL_5_0214	Snowy owl	Apr	



Figure 49. Areas of occurrence for Gray Phalarope and Red-necked Phalarope

Table 70. Areas of occurrence for Rednecked Phalarope, and Gray Phalarope

Map Code	Interview Code	Species	Months	Comments
5_145	CORAL_5_0214	Red-necked phalarope		
5_146	CORAL_5_0214	Red-necked phalarope		
5_147S N	CORAL_5_0214	Gray phalarope		
5_148S N	CORAL_5_0214	Gray phalarope		Low numbers nest here
5_149S N	CORAL_5_0214	Gray phalarope		



Figure 55. Areas of occurrence for Sabin's Gull, Herring Gull, Iceland Gull, Glaucous Gull, Ring Billed Gull, Pomarine Jaeger, Long-tailed Jaeger, and Northern Fulmar

Table 71. Areas of occurrence for Sabin's Gull, Herring Gull, Iceland Gull, Glaucous Gull, Ring Billed Gull, Pomarine Jaeger, Long-tailed Jaeger, and Northern Fulmar

Map Code	Interview Code	Species	Months	Comments
5_150S N	CORAL_5_0214	Sabin's gull	Jul, Aug	
5_152S N	CORAL_5_0214	Herring gull	Jun, Jul	
5_153S N	CORAL_5_0214	Iceland gull	Jun, Jul	
5_154S N	CORAL_5_0214	Glaucous gull		
5_155	CORAL_5_0214	Ring-billed gull	Jun, Jul	
5_162	CORAL_5_0214	Pomarine jaeger	Jun	
5_166S N	CORAL_5_0214	Long-tailed jaeger	Jul, Aug	
5_168	CORAL_5_0214	Long-tailed jaeger		
5_106	CORAL_5_0214	Northern fulmar	Summer	



Figure 56. Areas of occurrence for Thick Billed Murre, Razorbill, Atlantic Puffin, and Black Guillemot



Table 72. Areas of occurrence for Thick-billed Murre, Razor bill, Atlantic Puffin, and Black Guillemont.

Map Code	Interview Code	Species	Months	Comments
5_169S N	CORAL_5_0214	Thick-billed murre	Jun to Aug	
5_170	CORAL_5_0214	Razorbill		
5_171	CORAL_5_0214	Atlantic puffin		Sighted 8 to 10 years ago
5_172S N	CORAL_5_0214	Black guillemont		
5_173S N	CORAL_5_0214	Black guillemont	Jul to Aug	
5_174S N	CORAL_5_0214	Black guillemont	Jul to Aug	
5_175S N	CORAL_5_0214	Black guillemont	Jul to Aug	



Figure 57. Areas of occurrence for Northern Shoveler, American Wigeon, Mallard, Blue-winged Teal, and Northern Pintail

Table 73. Areas of occurrence for Northern Shoveler, American Wigeon, Mallard, Blue-winged Teal, and Northern Pintail

Map Code	Interview Code	Species	Months	Comments
5_63	CORAL_5_0214	Northern Shoveler		
5_64	CORAL_5_0214	American Wigeon		
5_65	CORAL_5_0214	Mallard		
5_66	CORAL_5_0214	Blue-winged teal		
5_67	CORAL_5_0214	Northern Pintail	Jul	
5_68	CORAL_5_0214	Northern Pintail	Jul	



Figure 58. Areas of occurrence for Long-tailed Duck, Red Breasted Merganser, Red Throated loon, Arctic loon, Pacific Loon, Black-billed Plover, and Semipalmated Plover

Table 74. Areas of occurrence for Long-tailed Duck, Red Breasted Merganser, Red Throated loon, Arctic loon, Pacific Loon, Black-billed Plover, and Semipalmated Plover

Map Code	Interview Code	Species	Months	Comments
5_79SN	CORAL_5_0214	Long-tailed Duck		Nest on lakes
5_81	CORAL_5_0214	Long-tailed Duck	Aug	Stay around this area with chicks but do not nest
5_82SN	CORAL_5_0214	Long-tailed Duck	Jun	Laying eggs
5_83	CORAL_5_0214	Red-breasted merganser	Jul	
5_84	CORAL_5_0214	Red-breasted merganser		
5_85	CORAL_5_0214	Red-breasted merganser		
5_100S N	CORAL_5_0214	Red-throated loon	Jun to Aug	Arrive mid June, fledge in Autumn
5_101S N	CORAL_5_0214	Red-throated loon	Jul, Aug	
5_103S N	CORAL_5_0214	Red-throated loon	Jul, Aug	
5_105S N	CORAL_5_0214	Pacific loon	Jul, Aug	
5_116	CORAL_5_0214	Black-billed Plover	Jun, Jul	
5_118	CORAL_5_0214	Black-billed Plover		
5_122S N	CORAL_5_0214	Semipalmated plover	Jul, Aug	
5_124S N	CORAL_5_0214	Semipalmated plover	Jul, Aug	



Figure 59. Areas of occurrence for Arctic Tern, Horned Lark American Robin, American Pipit, Rudy Turnstone, and Redknot



Table 75. Arctic tern, Horned Lark, American Robin, American Pipit, Rudy Turnstone, Red Knot.

Map Code	Interview Code	Species	Months	Comments
5_157	CORAL_5_0214	Arctic tern	Jun	
5_158S N	CORAL_5_0214	Arctic tern	Jul	
5_159S N	CORAL_5_0214	Arctic tern	Jul	
5_160S N	CORAL_5_0214	Arctic tern	Jul	
5_161S N	CORAL_5_0214	Arctic tern	Jul	
5_180	CORAL_5_0214	Horned lark	Jun	
5_181	CORAL_5_0214	Horned lark	Jun	
5_183	CORAL_5_0214	American robin	Autumn	In town 5 to 6 years ago
5_184	CORAL_5_0214	American pipit		Nest on mountains, only a few near coast
5_127S N	CORAL_5_0214	Ruddy turnstone	Jul, Aug	
5_129	CORAL_5_0214	Red knot		
5_130	CORAL_5_0214	Red knot		



Figure 60. Areas of occurrence for Brewer's Black Bird, Common Redpoll, American Tree Sparrow, Lapland Longspur, and Snow Bunting

Table 76. Areas of occurrence for Brewer's Black Bird, Common Redpoll, American Tree Sparrow, Lapland Longspur, and Snow Bunting

Map Code	Interview Code	Species	Months	Comments
5_193S N	CORAL_5_0214	Snow Bunting		
5_194	CORAL_5_0214	Snow Bunting		
5_195S N	CORAL_5_0214	Snow Bunting		
5_196	CORAL_5_0214	Common Redpoll		
5_197	CORAL_5_0214	Brewer's Blackbird	Jul	
5_190	CORAL_5_0214	Lapland Longspur		
5_191	CORAL_5_0214	Lapland Longspur		
5_186	CORAL_5_0214	American Tree Sparrow	Aug	Nesting in broken loader



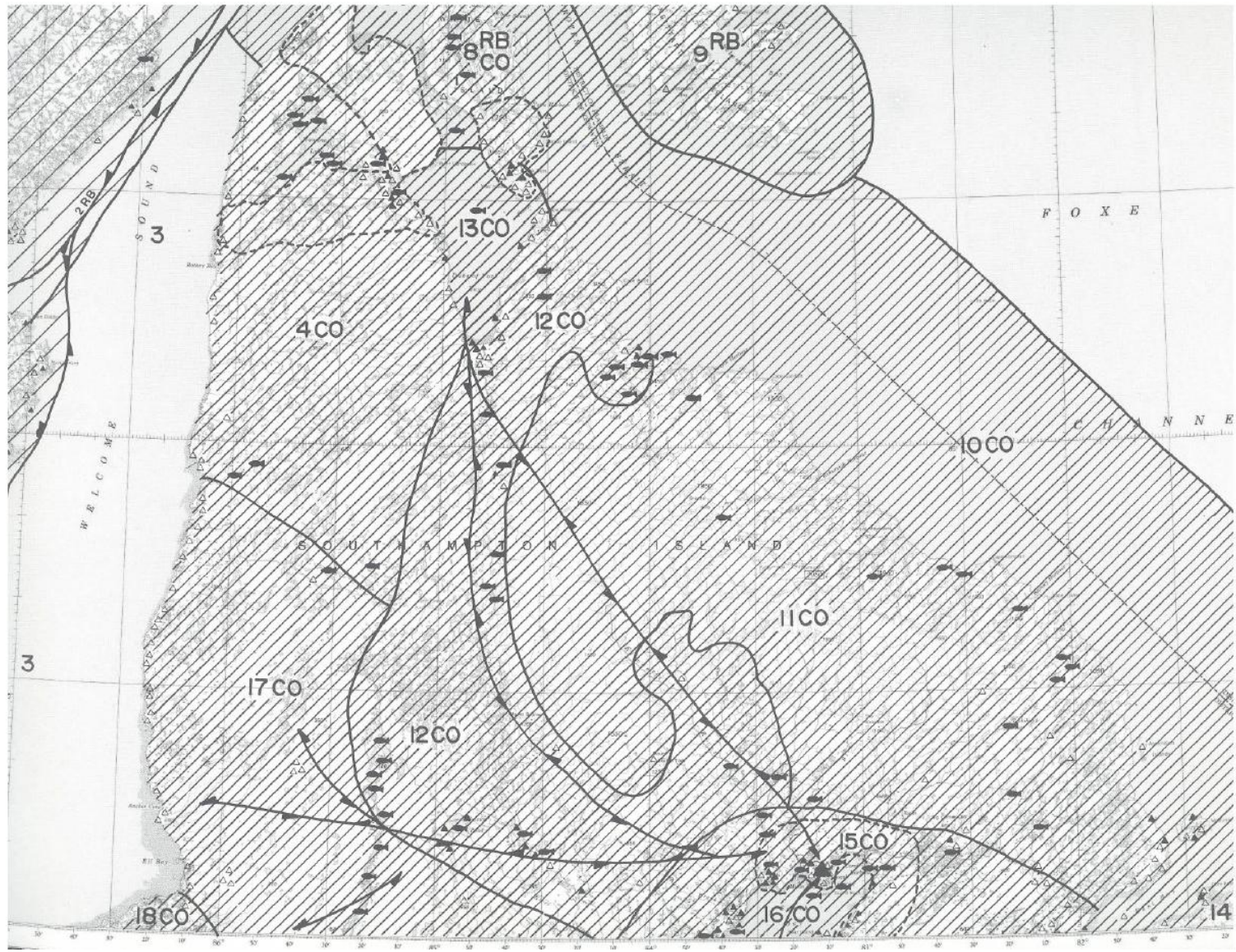


Figure 61. Nunavut Atlas map for Southampton Island north

# Southampton Island North

## **Inuit Land Use**

**1RB & CO** While most of this area is currently little used, Repulse Bay hunters and trappers have used parts of this area for caribou hunting during summer and fall, and for arctic fox trapping along the coast and the Snowbank river during winter in the recent past. Hunters from Coral Harbour have occasionally crossed Roes Welcome Sound, when it is frozen, to hunt caribou in this area.

**2RB** Repulse Bay residents use the west side of Roes Welcome Sounds as a travel route to Wager Bay. This route may extend overland between Bury Cove and Douglas Harbour to the west. Wildlife and marine mammals are hunted as seen. Spring and summer Arctic char fishing camps are established at Smooth Rock Point and at the Snow Bank River mouth.

**3** This portion of Roes Welcome Sound is currently unused for resource harvesting. Coral Harbour hunters have hunted seals along the west side of Southampton Island in the past.

**4CO** The northwest part of Southampton Island has not been used for resource harvesting as intensively as in the past but is still used for fishing.

**5RB & CO** Hunters from Repulse Bay hunt caribou along the western coast of Roes Welcome Sound while traveling between Chesterfield Inlet and Repulse Bay. Hunters from Coral Harbour have crossed Roes Welcome Sound, when it is frozen to hunt caribou on the mainland during winter.

**6RB & CO** This area is currently little used for resource harvesting by the Repulse Bay and Coral Harbour hunters.

**7RB & CO** This portion of Roes Welcome Sound is not heavily used by Repulse Bay and Coral Harbour hunters and trappers.

**8CO & RB** White Island is not used as often as in the past but it is still used for fishing.

**9RB** This large area along the Melville Peninsula coast encompassing Vansittart and Sturges Bourne Islands may be used by Repulse Bay hunters for polar bear hunting each winter. Ringed, bearded and harp seals are harvested in this area each year, especially around Vansittart Island. Waterfowl are hunted along the shore by boat each summer. A travel route along the coast, linking Repulse Bay and Hall Beach, is used throughout the winter. Beluga whales and narwhals are occasionally hunted in the Lyon Inlet area; walrus are hunted around Vansittart and Sturges Bourne Islands.

**10CO** This Portion of Foxe Channel and Frozen Strait is currently used for seal hunting.

**11CO** This is part of a large, mostly hilly area, that extends along the entire east central portion of Southampton Island. Arctic fox are trapped in the river valley to the west and south and polar bears are hunted along the coast to the south during winter.

**12CO** This large area of west central Southampton Island is used for Arctic fox trapping each winter. The Cleveland, Boas and Sutton and adjacent river valleys are used annually. Arctic char are fished each fall in the Cleveland River with nets set below the thin ice. Many people use the cabins along the Cleveland River and Salmon Pond area. Gull eggs are collected at Cape Bylot and Cape Welsford, and seals are hunted along the coast.

**13CO** In the Duke of York Bay area, Coral Harbour residents harvest Arctic fox and several polar bears (from their annual quota of 65 bears) during winter; seals Arctic char, belugas and narwhals are also taken here. The residents may spend spring, summer and fall camped around the bay, and return to Coral Harbour in winter.

**14CO** The entire coast of Bell Peninsula is important for Arctic fox trapping, especially the north coast, including East Bay. Polar bears are hunted in October throughout the entire peninsula and East Bay. Several rivers along the north coast are used for Arctic char fishing. Waterfowl are hunted each summer Between East and Native Bays to the south.

**15CO** This entire area adjacent to South and Native Bays is heavily used by the over 100 general license holders of Coral Harbour. Most of the annual quota of 70 caribou are harvested in this area. Spring sealing, fishing and waterfowl hunting camps are found along virtually the entire shore. Arctic char are fished throughout the summer at the numerous river mouths, especially at Sixteen Mile Brook and the Kirchoffer River. Arctic fox are heavily trapped throughout this area. The NWT Wildlife Service estimates that much of Coral Harbour's annual Arctic fox take, which exceeds 500, may come from this large area. Geese are hunted and eggs collected during summer in the vicinity of numerous camps, especially between Coral Harbour east to East Bay.



**16CO** South and Native Bays are heavily used by Coral Harbour residents for marine mammal hunting. Many of Coral Harbour's annual polar bear quota of 65 are harvested in this area each winter. The NWT Wildlife Service estimates that over 200 ringed, bearded and harp seals are harvested by Coral Harbour residents annually, many in this area. Ringed and bearded seals are hunted year-round and harp seals are hunted during summer. The NWT Wildlife Service estimates that up to 40 beluga whales and the annual quota of 10 narwhals may be harvested in this area which extends to the south, each August and September.

**17CO** Coral Harbour trappers use this western portion of Southampton Island for Arctic fox trapping. Traplines are set throughout this area, especially in the Boas and Sutton River valleys.

**18CO** This is part of a large area used by Coral Harbour residents for goose hunting during summer. It extends south to Cape Kendall and the Boas River. This area has also been recently used for Arctic fox trapping.

**19CI** Chesterfield Inlet residents use this area occasionally for caribou and wolf hunting and Arctic fox trapping during winter. Hunting in this area was more intense in previous years.

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## Notes on Domestic Commercial Fisheries

Fish particularly anadromous Arctic char, are an important food for residents of Coral harbour. Between March and December, fishermen from the community range across the length and breadth of Southampton Island. Travelling by boat from mid July until late September and by snowmobile for the rest of the year, they gillnet, jig, or angle for Arctic char, lake trout, least cisco, cod and sculpin. There are several important fishing sites in this map area.

Residents of Coral Harbour travel by snowmobile in the fall and winter to fish headwater lakes on the Cleveland, Boas and Sutton river systems. Gillnets and jigs are used to catch Arctic char, lake trout and least cisco. Landlocked or lake dwelling Arctic char are caught in each of the river systems, anadromous Arctic char in the Cleveland and Sutton rivers, least cisco in Salmon Pond, and lake trout are caught in the Cleveland River and are reportedly caught in the head water lakes on the Boas and Sutton rivers.

In November and December, residents of Repulse Bay travel by snowmobile to the Piksimanik River and to a lake south of the Snowbank River (65°55'N, 86°56'W) to gillnet anadromous Arctic char through the ice.

There are quotas on commercially caught anadromous Arctic char of 2,300 kg round weight (rnd) on the Thomsen River and 9,100 kg on the Cleveland River. There is no record of commercial fishing at the Thomsen River. The most recent record of Fishing at the Cleveland River was in 1980, when fishermen from Coral Harbour caught 885 kg of char. The fish were gillnetted in November and December through the ice at several headwater lakes (64°58'N, 88°44'W; 64°45'W), and marketed by the Katugevik Co-operative in Coral Harbour.

There are quotas (2,300 kg rnd) on commercially caught anadromous Arctic char at the mouths of the Piksimanik River, Snowbank River, and a river on the south side of Wager Bay (65°15'N, 87°43'W). The only recorded commercial fishing was in 1982, when fishermen from Repulse Bay caught 363 kg of char in the Piksimanik River.

In 1979, a test fishery permit was requested to assess the commercial fishing potential of Salmon Pond. There is no record that the test was conducted.

There are quotas on commercially caught anadromous Arctic char of 1,100 and 2,300 kg (rnd) at the mouths of the Gordon River and Kamarvik Creek respectively. There are no records of either area having been commercially fished.

The commercial fishing potential of Tesikalik Lake was tested in November of 1979. Small numbers of small Land-locked Arctic char were caught and no further interest has been shown in commercially fishing the lake.

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## **Wildlife**

### **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 river with adjacent lakes and tundra ponds tend to be 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 coastal 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 after 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, most likely 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 Hutchin's race, probably breed within the area. Oldsquaws are particularly abundant and breed throughout. Other breeders within this 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 next throughout the entire area, usually as scattered isolated pairs or occasionally in small colonies. Favoured nesting sites are usually offshore boulders and small islands along the coast or in tundra lakes and ponds. Many nesting colonies of Arctic terns occur in scattered locations along the coast. In areas where colonies occur, such as Kamarvik Harbour and off the islands at the north end of this map area. Arctic terns are locally 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.

## **4 Waterfowl and Seabirds**

This area, which encompasses Frozen Strait and 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 other adjacent 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 guillemonts, Arctic tern, herring gull, Thayer's gull, glaucous gull, red throated loon, and Arctic loon. Nesting by common eider, black guillemont 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 guillemont, 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 the 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 the ice conditions. Species which may winter within the area include black guillemont, 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 they have not been documented nesting

anywhere on the island. The eastern side of Southampton Island is thought to lie within the migratory 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 shore 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 near shore coastal waters are important foraging areas for these marine feeding species.

## **8 Raptors and Waterfowl**

The numerous cliffs throughout the White Island and its adjacent small islands provide 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.

## **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, oldsquaw 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 2 areas north of Tom's Harbour each contain 2 cliff nesting sites in close proximity to each other. Nias Island has 3 cliff nesting sites. Colonies of Thayer's and glaucous gulls range in size from approximately 25-200 breeding pairs in the northern most site in the area of Cape Welsford.

## **13 Seabirds**

These areas support cliff nesting colonies of predominantly Thayer's gulls but also kumliens 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 predominantly 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 seems to have declined significantly in recent years. In the past (mid 1950's), the area was estimated to support 3,00-5,000 brant. At present (1983), it probably supports at most a few hundred.

## **18 Waterfowl and Seabirds**

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 Ell Bay. Large numbers of non-breeders and unsuccessful breeders may be found scattered throughout much of the area. With the completion of the hatch by mid-July, many 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 scattered or as 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 on small islands in lakes or in 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, rudy 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.

## **19 Raptors**

The numerous cliffs, throughout this rugged area along the south side of Wager Bay, provide optimal nesting habitat for raptors, which likely include peregrine falcons and rough-legged hawks. The occasional gyrfalcon or 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 peregrine 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 the 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 raptor species thought to nest within this 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 common 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-legged 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 the 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 the 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.

## **28 Walruses, Belugas and Seals**

Walruses 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.

## **30 Waterfowl**

The 1,142 km<sup>2</sup> East Bay Migratory Bird Sanctuary is one of 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 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, oldsquaw 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.

### **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 freeze up, 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 way to the sea ice feed on vegetation. On Southampton Island, sedges, grasses, and Arctic willows are most commonly eaten, followed by mosses 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 are built in leeward, south facing slopes where snow accumulates quickly. Polar bears in the denning area or on their way to the sea ice feed on vegetation. On Southampton Island, sedges, grasses, and Arctic willows are most commonly eaten, followed by mosses and lichens. Inuit believe that polar bear 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 sub-adult ringed seals can be found. The bearded seal is also taken, but less frequently because of lower abundance.

### **36 Polar Bears, Seals and Walruses**

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

Small numbers of walruses are present at 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 landfast ice formation in winter, and ice floes persist throughout 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 landfast 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 the 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 areas due to the abundance of stable ice habitat. Bearded seals occur sporadically and in low numbers. Bearded seals' diet in frozen Strait include shrimps.

### **40 Walruses and Seals**

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

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

### **41 Polar Bears**

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 the waters near Cape Deas during an aerial survey conducted in July of 1982.

#### **43 Walruses**

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

#### **44 Walruses**

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

#### **45 Walruses**

Each uglit is situated on a promontory and the dip of the 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 walruses prefer to haulout.

#### **46 Bowheads, Belugas and sals**

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 at 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**

Beluga 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 umbers 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 59 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.

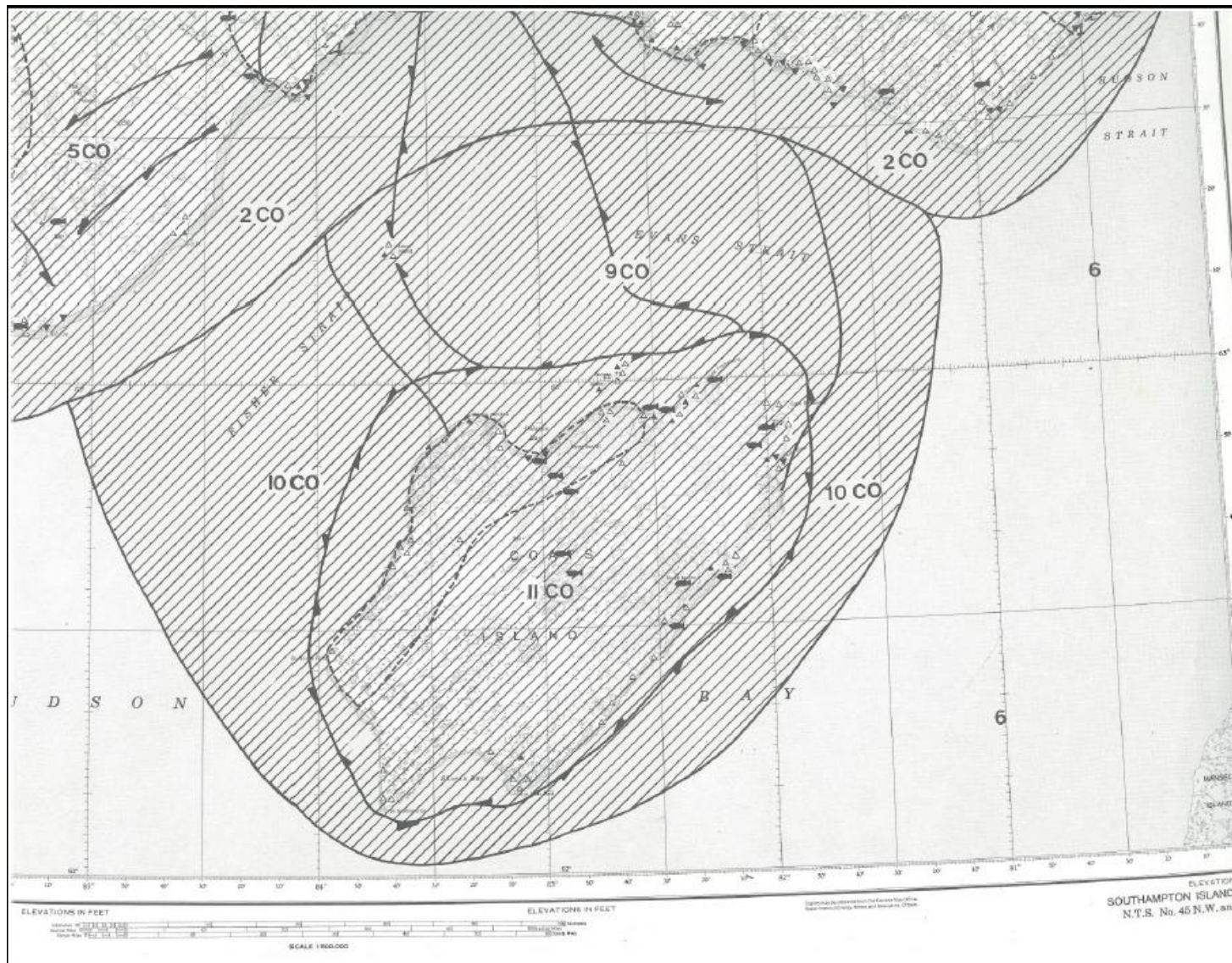


Figure 62. Nunavut atlas map for Southampton Island south

# SOUTHAMPTON ISLAND SOUTH

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## ***Inuit Land Use***

(See map page 136)

**1CO** – This large area, which includes the Boas River mouth and extends to Cape Kendall and Ell Bay, is a very productive area for summer goose hunting. Polar bears have been hunted in this area along the entire shore Arctic fox have been trapped, mainly along the south coast to Cape Kendall, in recent winters. The Boas River is an important fishing area.

**2CO** – Walrus, seals, whales, polar bears and waterfowl are all hunted throughout this area, which extends along the entire south coast of Southampton Island... Polar bears and walrus are hunted along the entire coast during winter. Beluga whales are hunted in the vicinity of Bear Cove, Gordon Bay and Maurice Point. Waterfowl are hunted along the coast south of Bear Cove. Ringed and bearded seals are hunted along the entire coast. Mussels are harvested by the Inuit all along the Southampton coastline.

**3CO** – Coral Harbour trappers use this western portion of Southampton Island for Arctic fox trapping. Traplines are set throughout this area, especially in the Boas and Sutton river valleys. The Boas River is an important fishing area.

**4CO** – This entire area is heavily used by the over 100 General License Holders of Coral Harbour. Most of the annual quotas of 70 caribou are harvested in this area. Spring sealing, fishing and waterfowl hunting camps are found along virtually the entire shore. Arctic char are fished throughout the summer at the numerous river mouths, especially at Sutton River and Sixteen Mile Brook. Arctic fox are heavily trapped throughout this area. The NWT Wildlife Service estimates that much of Coral Harbours annual Arctic fox take, which exceeds 50, many come from this large area. Geese are hunted and eggs collected during summer in the vicinity of the numerous camps, especially at Bear Cove, Maurice and Native Points.

**5CO** – Arctic fox are trapped throughout this area by Coral Harbour trappers. Polar bears are hunted south to Cape Low and throughout this area. Many rivers are used for Arctic char fishing along the south coast.

**6** – This Portion of Hudson Bay is currently unused for resource harvesting.

**7CO** South and Native bays are heavily used by Coral Harbour residents for marine mammal hunting. Many of Coral Harbours annual polar bear quota of 65 are harvested in this area each winter. The NWT Wildlife Service estimates that over 200 ringed, bearded and harp seals are harvested by Coral Harbour residents annually, many in this area. Ringed and bearded seals are hunted year-round, and harp seals are hunted during summer. The NWT Wildlife Service estimates that up to 40 beluga whales may be harvested in this area each August and September, plus the annual quota of 10 narwhals. Walrus are hunted during spring at the floe edge, and during summer, at Native and Ruin points. Inuit harvest mussels all along the Southampton Island coast.

**8CO** – The entire coast of the Bell Peninsula is important for Arctic fox trapping especially the north coast from Seahorse Point west to East Bay. Polar bears are hunted in October throughout the Peninsula. The area from Mount Minto to Leyson Point and Junction Bay is of special importance. Several rivers along the north coast are used for Arctic char fishing, notably those adjacent to Gordon Bay. Waterfowl are hunted each summer between Native and East bays on the west end of Bell Peninsula.

**9CO** – Walrus and Bencas islands are used as bases for hunting, mainly for walrus, belugas, seals and polar bears, throughout Fisher and Evans straits each summer. During recent years, 40-50 men travel through this area in August, in 4-5 boats to and from caribou hunting on Coats Island.

**10CO** – Walrus, whales, polar bears and seals are harvested annually throughout the area. Walrus are hunted all around Coats Island. Harp, ringed, bearded and harbour seals are hunted each summer around Coats Island as are geese, including egg gathering. Beluga whales are hunted each summer. Polar bears and ringed and bearded seals are hunted during winter. Arctic foxes are trapped around the coast of Coats Island.

**11CO** – Each summer, 40-50 men travel to Coats Island in 4-5 boats and harvest 100-150 caribou. Several walrus may also be taken at this time. Arctic foxes are often trapped on the island and along the coastline. Polar bears are also hunted all along the coastline. Coats Island is also an important area for fishing and waterfowl hunting.

## ***Notes on Domestic Fisheries***

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Residents of Coral Harbour gillnet and angle for anadromous Arctic char at the mouths of Bursting Brook, Sixteen Mile Brook and the Sutton River between late June and the end of August. In the past, Ranger Brook was also fished at that time.

Hunters and trappers from Coral Harbour visit a lake on the Boas River system (63°50'N, 85°10'W) in December to jig through the ice for landlocked Arctic char.

Hunters from Coral Harbour who visit Coats Island are seldom visited by domestic fishermen. Lakes in the area are generally shallow and freeze to the bottom in winter. Streams are seasonal and only flow for a short period in summer, remaining dry or frozen for the remainder of the year. The land is low-lying and marshy.

# **Wildlife**

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## **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 above 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 eiders 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 interior 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, totalling 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 islands within these lakes. Colonies range in size from approximately 10 to 20 breeding pairs.

#### **9 Seabirds**

A mixed colony totalling 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 eiders, 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 murres, black guillemots, common eider, some gulls, and possibly on occasion king eider and oldsquaw. Although most of the thick-billed murres associated with the breeding colonies on 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 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 Coasts Island.

## **12 Waterfowl and Seabirds**

The 1,142 km<sup>2</sup> East Bay Migratory Bird Sanctuary is one of two birds sanctuaries that were established on Southampton Island in June 1959 to protect important waterfowl nesting areas, primary lesser snow geese. The establishment of the sanctuaries provided the Canadian Wildlife Service with the means to regulate much of 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 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 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 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 number.

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 1270km<sup>2</sup> 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 Gibson 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 1958 the area supported an estimated 14,000 breeding pairs of lesser snow geese. Since that time, the population had 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 1950s; today (1983) it likely supports between 500-7—breeding pairs. The brant breeding population appears to have declined significantly in recent years. In 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 number. A few whistling swans occur in scattered locations throughout. Pintails are present in small number.

At least 30 avian species have been reported from the area. Some of the more common non-waterfowl species found breeding within the sanctuary include Arctic tern, Sabine's and herring gull, 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 that 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 deposit, usually along stream banks, provide for optimal denning habitat for foxes.

## **16 Waterfowl, Seabirds and Foxes**

This large area, which encompasses the near shore 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 being 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 within 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 site 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 site, but have been observed most frequently nesting in association with the murre colonies west of Cape Pembroke. Because of their relatively small overall 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 murres 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 boulder 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 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 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 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 lightless period of the molt when geese are most vulnerable to predators. Lowlands immediately adjacent to these water bodies are important feeding site 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 1930s 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 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 reintroduction, 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.

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 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.

## **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 pack ice.

## **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 molluscs such as *Mya truncata* 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 Walrus, Bencas and Coats islands, because of the recurrent appearance of the ice floes upon which the walruses prefer the haul-out. Food items in this area include molluscs and marine worms such as *Mya truncata* and *Saxicava arctica* sp. and annelids.

## **32 Walruses**

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

# FINAL THOUGHTS

## INTERVIEW PROCESS

Despite a relaxed format and execution the interview process was judged to be successful. The same series of photos and maps were utilized from one interview to the next, ensuring a consistent and reliable output. The interview process lasted from 3 to 8.75 hours depending on the individual interviewee, and the depth and extent of the knowledge they were conveying to the interview team. 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 coastal and terrestrial areas.

Although the process elicited the general satisfaction of the interviewers some reservations warrant comment. The first concern being that the interview was conducted implicitly in the present tense, and observations provided by the interviewees were assumed to be recent unless otherwise specified. Hunters who have traveled and hunted these areas for decades could provide responses drawn from observations made indiscriminately in the short, medium, or long term. For these reasons, interviewees were routinely informed that contemporary data was those observations made since 2000.

A second 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”. This 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 Figures 3 and 4) where it can be located and used to identify what is meant by “Everywhere” for a specific interviewee.

## MAPS AND DATA

Given the broad geographic reach of the interviewees’ responses, the map format was chosen 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 inter-connectedness of seemingly disparate locations; while for others, especially where distributions were modest or localized, the advantages were less obvious.

The scale used in maps obtained from the *Nunavut Atlas* (1992) is larger because the geographic area of interest is smaller. In addition, one must keep in mind that the data collected for the *Nunavut Atlas* was actually collected in the early 1970’s and represents conditions that were extant 35 years ago. Some comparisons are possible but they must be made with caution.

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

The present dataset was never conceived as a stand-alone product. It represents a snapshot in time of observations made by individuals within a community who have considerable experience hunting, fishing, and trapping in the region surrounding that community. These data are considered within the context provided by other studies but have limitations, just as those did that preceded it. For a full picture it is necessary to view these findings as one of many complementary datasets.

## GOVERNANCE

Collection of resource information through the process of IQ interviews can have many different values for a community, including cultural, social, historical, and economic. 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 consideration 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 attempts to identify the location and abundance of mammals, fish, birds, invertebrates, and plants for a number of reasons, including the potential for 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.

## COMBINING INUIT QAUJIMAJATUQANGIT AND SCIENTIFIC KNOWLEDGE

Inuit Qaujimaqatuqangit (IQ) is unique in that it is qualitative, intuitive, holistic, spiritual, empirical, personal, and often based on a long time-series of observations (Berkas 2002). Some of these characteristics are often cited as limitations, due to the reliance on long-term memory or that it is subjective. Conversely, IQ is particularly useful for recording historical data that are unattainable in any other manner. A complementary coupling of IQ and scientific knowledge may provide a means to better understand and manage coastal resources. This combination of knowledge may 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 accuracy of the prediction is a measure of the completeness of scientific knowledge. 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 the



symptoms. A critical factor in the scientific method is the availability and reliability of data available for analysis. The Arctic, because of its size, complexity, and manpower limitations, does not often have an adequate supply of scientific observations. However, one underutilized data source is traditional knowledge where species, locations, processes, and events have been monitored for generations. By bringing traditional knowledge and science together into a complementary working relationship there will be significant benefits for all stakeholders.

## CLIMATE CHANGE

Over the past 20 years, an increasing number of arctic researchers have commented on the possibility of climate change and global warming and the predicted impacts on the marine environment (Tynan and DeMaster 1997, Michel et al. 2006, Ford et al. 2008a and 2008b, Moore and Huntington 2008). Many changes may occur in recurrent open water sites, with the potential to affect various 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, and the impacts of tidal mixing and topographic upwelling. These physical changes could then influence the marine food web through the prevalence of ice algae, the timing and magnitude of primary and secondary production, and changes in the distribution, abundance, and success of traditional species. In other words, we expect changes to occur in our physical world that could 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. Assessment of environmental change will be considered for both direct human activity (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 freshwater input, and modified ocean circulation. Alteration of these factors will directly affect the physical marine environment and, ultimately, coastal marine resources as well. 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.

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## **The Community of Coral Harbour**

Hamlet of Coral Harbour

Coral Harbour HTO Board Members and Chairpersons

## **Department of Environment, Government of Nunavut**

### **Interviewees — Coral Harbour**

Johnny Kataluk, Thomassie Nakollak, Lizzie Pootoolik, Evksuktuk Eetuk, Josiah Nakoolak, Elijah Shapa, Jonathon Emiktowt, Greg Ningeocheak, and Noak Kadlak

## **Inuit Heritage Trust (IHT), Iqaluit**

Jim Richards, Arctic Bird Specialist, Ontario, Canada Jim is credited with providing valuable advice as well as many of the bird photos.

## **Fisheries and Marine Institute of Memorial University of Newfoundland, Newfoundland**

## **Nunavut Wildlife Management Board, Iqaluit**

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## APPENDIX 1 INTERVIEWEE BIOGRAPHIES

CORAL_01_0214	Johnny Kataluk	Johnny was born in 1937 in the province of Quebec. His family settled in Coral Harbour after his father died in 1948. He has been hunting and fishing since the age of five learning to fish at AKB_1_4. He is not currently actively hunting and fishing but expects that he will be getting back out on the land in the future.
CORAL_02_0214	Thomassie Nakollak	Thomassie was born in 1931, in the area of Nunavik (then Northern Quebec). He grew up on Nottingham Island and moved to Southampton Island as a young man. He began hunting and fishing when he was 8 years old and continues to actively hunt and fish in the area.
CORAL_03_0214	Lizzie Pootoolik	Lizzie was born in 1934 in Salluit, Quebec. She grew up in the area of AKB_3_4 and moved around depending on season. She moved to Coral Harbour in 1952. She has been hunting age fishing since the age of 8. Although her hunting and fishing activity is reduced she still actively participates in local fishing derbies.
CORAL_04_0214	Evksuktuk Eetuk	Evksuktuk was born 1934 at AKB_4_1, and grew up in the same area. He moved to Coral harbour in 1958 and began hunting and fishing at 10 years old. He is still actively hunting and fishing although not as much as when he was younger.
CORAL_05_0214	Josiah Nakoolak	Josiah was born in July of 1960 in Coral Harbour, and has lived there all of his life. He began hunting and fishing at 9 years old. He spent 23 years working with biologists at Coats Island and 11-12 years working with biologists at East Bay. He continues to be an active hunter and fisher in the community.
CORAL_06_0214	Elijah Shapa	Elijah was born in 1967 in Churchill, Manitoba. He grew up in Coral Harbour and was too young to remember moving to the community. He began hunting and fishing at 8 years old. He continues to actively hunt and fish.

CORAL_07_0214	Jonathon Emiktowt	Jonathon was born in 1979 in Churchill, Manitoba. He grew up in the community of Coral Harbour. He has lived in Coral Harbour most of his life with a brief period living in Iqaluit. He was very young when he began hunting and fishing and is still a very active hunter.
CORAL_08_0214	Greg Ningeocheak	Greg was born in 1988 in Churchill, Manitoba. He grew up in the community of Coral Harbour and has spent his entire life living there. He began fishing at 10 years old and is still actively hunting and fishing.
CORAL_09_0214	Noak Kadlak	Noak was born in 1964 in Coral Harbour and has lived in the community all his life. He was 6 years old when he began to hunt and fish, and continues to actively do so.



## APPENDIX 2 ACRONYMS AND ABBREVIATIONS

CRI – COASTAL RESOURCE INVENTORY

CLEY – DEPARTMENT OF CULTURE, LANGUAGE, ELDERS AND YOUTH

CWS – CANADIAN WILDLIFE SERVICE

DFO – DEPARTMENT OF FISHERIES AND OCEANS

DOE – DEPARTMENT OF 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 BIRD EVALUATION

Species	Godfrey (1986)		CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Greater White-fronted Goose</b>			x									
<b>Snow Goose</b>	B	B	x	B		B	B	B	B	B	x	ok
<b>Ross's Goose</b>		B	x					B			x	ok
<b>Brant</b>	B	B	x	B		B		B	B	B		very surprised there were no observations reported
<b>Barnacle Goose</b>				x					x		x	ok
<b>Cackling Goose</b>		B		B					B	B		Should have been seen...
<b>Canada Goose</b>	B	B	x				B	B	B		x	they seem to have lumped Canada and Cackling as one, as is a common practice
<b>(Ruddy Shelduck)</b>				x								
<b>Tundra Swan</b>	B	B	x	B		B	B	B	B	B	(x)	what they have listed as Trumpeter Swan is undoubtedly the Tundra Swan in my opinion
<b>American</b>			x								x	ok. rare

Species	Godfrey (1986)	CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Wigeon</b>											
<b>Northern Shoveler</b>		x	x							x	ok. rare
<b>Northern Pintail</b>	B	x	x	B	B	b	x		x	x	surprised there were no reports of this species
<b>Green-winged Teal</b>		x	x								
<b>Greater Scaup</b>			x					x			
<b>Stellar's Eider</b>		x	x							x	ok. uncommon
<b>King Eider</b>	B B	x	B	B	B	B	B		B	x	ok
<b>Common Eider</b>	B B	x	B		B	B	B	B	B	x	ok
<b>Long-tailed Duck</b>	B B	x	B		B	B	B	B	B	x	ok
<b>Bufflehead</b>		x								x	ok. rare
<b>Red-breasted Merganser</b>	b	x	x			b				x	ok
<b>Willow Ptarmigan</b>	B B	x				B	B	B	B	x	ok
<b>Rock Ptarmigan</b>	B B	x				x	B	B	B	x	ok
<b>Red-throated Loon</b>	B B	x	B		B	B	B	B	B	x	ok
<b>Pacific Loon</b>	B B	x	B		B	B	B	B	B	x	ok
<b>Common Loon</b>		B	x	x		x			x		
<b>Red-necked Grebe</b>			x						x		
<b>American Wigeon</b>		x								x	ok. rare
<b>Northern</b>								x		x	no doubt newly

Species	Godfrey (1986)	CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Fulmar</b>											established
<b>Rough-legged Hawk</b>	B B	x	B			B		B	B	x	ok
<b>Merlin</b>								x			
<b>Gyr Falcon</b>	B B	x						x	x	x	ok
<b>Peregrine Falcon</b>	B B	x	B			x	x	B	B	x	ok
<b>Sandhill Crane</b>	B B	x	x		B	B		B	x	x	ok
<b>Black-bellied Plover</b>	B B	x	x			x	B	B	B	x	ok
<b>American Golden-Plover</b>	B B	x	x	B		B	B	B	b	x	ok
<b>Semipalmated Plover</b>	B B	x	x	B		B	B	B	B	x	ok
<b>Greater Yellowlegs</b>			x								
<b>Solitary Sandpiper</b>		x									
<b>Whimbrel</b>	b B	x	b			x	x	b		x	ok
<b>Hudsonian Godwit</b>	b B		x				x	b	x		surprised this species not reported
<b>Ruddy Turnstone</b>	B B	x	B			x	B		B	x	ok
<b>Red Knot</b>	B B	x	x	B		b	B	b	b	x	ok
<b>Sanderling</b>	B B	x	B	B		x	B	b	x	x	ok
<b>Semipalmated Sandpiper</b>	B B	x	B	B		B	x	B	B	x	ok

Species	Godfrey (1986)	CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Least Sandpiper</b>	B	x	x								
<b>White-rumped Sandpiper</b>	B B	x	B	B		B	B	B	x	x	ok
<b>Baird's Sandpiper</b>	B	x		B		B	B	b	x		surprised this species not reported
<b>Pectoral Sandpiper</b>	B B	x	B				x	B	B		surprised this species not reported
<b>Purple Sandpiper</b>	B B	x	B	B		x		b	b	x	Ok
<b>Dunlin</b>	B B	x	B	B		B	B	B	b	x	ok
<b>Stilt Sandpiper</b>		x									
<b>Buff-breasted Sandpiper</b>						x					ok
<b>Red-necked Phalarope</b>	B B	x	B			x		b		x	ok
<b>Red Phalarope</b>	B B	x	B			B	B	B	B	x	ok
<b>Black-legged Kittiwake</b>			x					x	x		interesting this species not reported
<b>Ivory Gull</b>		x	x					x			
<b>Sabine's Gull</b>	B B	x	B		B	x	B	B	B	x	ok
<b>Bonaparte's Gull</b>			b								
<b>Ross's Gull</b>		x	x								
<b>Franklin's Gull</b>		x									
<b>Ring-billed Gull</b>		x								x	ok. rare
<b>Herring Gull</b>	B B	x	B		B	B	B	B	B	x	ok

Species	Godfrey (1986)	CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Thayer's Gull</b>	B	x			B	x	x	x	B		
<b>Iceland Gull</b>	B	x						x		x	ok
<b>Glaucous Gull</b>	B B	x	x		B	x	x	B	B	x	ok
<b>Great Black-backed Gull</b>		x	x								
<b>Arctic Tern</b>	B B	x	B	B	B	x	B	B	B	x	ok
<b>Pomarine Jaeger</b>	B B	x	B			B		B	x	x	ok
<b>Parasitic Jaeger</b>	B B	x	B		B	B	B	B	B	x	ok
<b>Long-tailed Jaeger</b>	B B	x	B	B		B	B	B	B	x	ok
<b>Dovekie</b>			x					x			
<b>Thick-billed Murre</b>	B	x						x	x	x	ok
<b>Black Guillemot</b>	B B	x			B		B	B	B	x	ok
<b>Snowy Owl</b>	B B	x	B		B	B	x	B	b	x	ok
<b>Short-eared Owl</b>	b	x	x							x	ok. uncommon
<b>Eastern Kingbird</b>			x								
<b>Common Raven</b>	B	x	x			x	x	B	x	x	ok
<b>Horned Lark</b>	B B	x	x			b	B	B	x	x	ok
<b>Tree Swallow</b>		x	x					x			
<b>Bank Swallow</b>		x								x	ok. rare
<b>Barn Swallow</b>		x									
<b>Northern Wheatear</b>		x									
<b>Hermit Thrush</b>			x					x			
<b>American Robin</b>		x								x	ok. rare
<b>European</b>			x								

Species	Godfrey (1986)	CWS	Misc.	Peck (2003)	Gaston <i>et al</i> 1986	Parker and Ross (1973)	Abraham and Ankney (1986)	Sutton (1932)	Bray (1943)	NCRI interview	Comments: J. Richards
<b>Starling</b>											
<b>American Pipit</b>	B B	x				x		B	B	x	ok
<b>Lapland Longspur</b>	B B	x	B	B		B	B	B	B	x	ok
<b>Snow Bunting</b>	B B	x	B			B	B	B	B	x	ok
<b>Yellow Warbler</b>			x								
<b>Palm Warbler</b>		x									
<b>Yellow-rumped Warbler</b>		x	x					x		x	ok. uncommon
<b>Savannah Sparrow</b>		x	x					x			
<b>Lincoln's Sparrow</b>		x	x								
<b>White-throated Sparrow</b>		x									
<b>White-crowned Sparrow</b>		x								x	ok. uncommon
<b>Dark-eyed Junco</b>		x	x					x	x	x	ok
<b>Common Redpoll</b>	B B	x	B					x	x	x	ok
<b>Hoary Redpoll</b>	B B		B					B	x		They don't seem to differentiate between Common and Hoary as expected



### **Richards & White codes:**

P = Present: all or part of the population present throughout the year

M = Migrant: migrates to/from or through the region on a regular basis

V = Vagrant: uncommon migrant, or outside of normal range

A = Accidental: rare; very few records

E = Extinct

B = Breeding confirmed: active nest or flightless young

b = Breeding suspected: pair in suitable habitat or in courtship

w = Winter records available when /where open water, ice floe-edge, polynyas exist

### **Codes for species list:**

B = breeding

b = breeding suspected

x = reliably observed

### **Baseline Bibliography**

**CWS NWT/NU Checklist Survey** (hosted by CWS, Yellowknife)

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**Richards and White. 2008.** Birds of Nunavut: A Checklist. 22 pp

**Snyder, L. L. 1957.** Arctic Birds of Canada. University of Toronto Press. 310 pp

**Godfrey & Snyder** – ‘B’ in these two columns denote breeding range for each species. It does not mean that the species has actually been recorded as breeding in the specific checklist area itself.

**Richards & White** (2008) – denotes general status for the geographic area (ie; Arctic Islands (north of 60), James Bay Islands, or Mainland), and does not imply that a record exists for each species in the specific checklist area.

**Names and arrangement according to:** American Ornithologists Union Check-List of North American Birds, 1998, and annual Supplements.

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polynyas exist

### **Codes for species list:**

B = breeding (active nest w/eggs or yg., or flightless yg. located)

b = breeding suspected (pair in suitable habitat; display/courtship behaviour)

x = reliably observed

**Canada Goose** was split by the AOU in 2004 into Canada Goose and Cackling Goose. The literature prior to 2004 does not always differentiate between the two. For current breeding range, I have used a map presented by Mallory, *et al*, 2005, as well as a map presented by Sibley, 2004.

**Mallory, M. L., A. J. Fontaine, and H. Boyd. 2005.** 'Breeding and non-breeding range of Canada, *Branta canadensis*, and Cackling geese, *Branta hutchinsii*, in the eastern Canadian arctic. *Canadian Field-Naturalist* 119(4):483-489.

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[www.sibleyguides.com/canada\\_cackling.htm](http://www.sibleyguides.com/canada_cackling.htm)

**Note:** this report covers the Harry Gibbons Migratory Bird Sanctuary, the East Bay Migratory Bird Sanctuary and part of the

Ukkusiksalik National Park area.

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Ruddy Turnstone and 29 nests of Red Phalarope at East Bay)

**Eifrig, Rev. C. W. G. 1905.** Ornithological results of the Canadian 'Neptune' Expedition to Hudson Bay and northward. 1903-1904

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Goose, Snow Goose B, Tundra Swan B, Sandhill Crane, Red Phalarope B, Dovekie, Whimbrel b, Ruddy Turnstone)

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Basin and northern Hudson Bay, Canada. *Arctic* 39(4):285-296

**Godfrey, W. E. 1986.** Birds of Canada.....birds recorded at Southampton but not listed as breeding (Common Loon, Red-necked Grebe,

Red-breasted Merganser, Greater Yellowlegs, Hudsonian Godwit, White-rumped Sandpiper, Eastern Kingbird, Tree Swallow, Yellow-rumped Warbler,

Hermit Thrush, European Starling, Yellow Warbler, Savannah Sparrow, Dark-eyed Junco, Snow Bunting,

**Jonkle, C. J. 1970.** A new northern record for the Eastern Kingbird. *Canadian Field-Naturalist* 84(3):309-10

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26:247-256

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Southampton: Snow Goose, Canada Goose, Herring Gull, Sabine's Gull, Arctic Tern, King Eider, White-rumped Sandpiper, Red-throated Loon, Dunlin,

Red Phalarope, Ruddy Turnstone, Cackling Goose, Brant, Parasitic Jaeger, Semipalmated Sandpiper, Lapland Longspur) also Red Knot seen.

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**Shortt, T. M. and H. S. Peters. 1942.** Some recent bird records from Canada's eastern arctic.  
*Contribution of the Royal Ontario*

*Museum* No. 22. (Red-throated Loon, Tundra Swan, Long-tailed Duck B, Common Eider, King Eider, Semipalmated Plover, American Golden-

Plover, Ruddy Turnstone B, Hudsonian Godwit, White-rumped Sandpiper, Semipalmated Sandpiper, Parasitic Jaeger, Long-tailed Jaeger, Glaucous Gull,

Herring Gull, Sabine's Gull, Lapland Longspur,)

**Smith, P. 2011.** Breeding conditions survey: East Bay, Southampton Island. *Arctic Birds* 12:41 (Rough-legged Hawk, Peregrine Falcon

Short-eared Owl, Common Raven, Herring Gull, Parasitic Jaeger)

**Snyder, L. L. 1957.** Arctic birds of Canada....birds listed for Southampton as non-breeders (Red-necked Grebe, Greater Scaup, Eastern

Kingbird, Least Sandpiper, Black-legged Kittiwake, Ivory Gull, Dovekie, Tree Swallow, Hermit Thrush, Dark-eyed Junco, Savannah Sparrow, Yellow-

rumped Warbler)

**Soper, J. D. 1928.** A faunal investigation of southern Baffin Island. Canada Dept. of Mines. *National Museum of Canada Bull.* No. 53,

Biol. Ser. No. 15:76-123 (Pacific Loon B, Parasitic Jaeger B, Sabine's Gull B, Arctic Tern B, Canada Goose B, Tundra Swan B, Red Phalarope B,

Cackling Goose B, Sandhill Crane, Barnacle Goose,

**Stenhouse, I. J., K. Truman and K. Allard. 2001.** Sightings of Steller's Eider at East Bay, Southampton Island, Nunavut. *Birders*

*Journal* 10(3):160-3 (Common Eider, King Eider, Steller's Eider, Northern Shoveler, Green-winged Teal, Great Black-backed Gull, Ross's Gull)

**Sutton, G. M. 1931.** The Blue Goose and Lesser Snow Goose on Southampton Island, Hudson Bay. *Auk* 48(3):335-364 (Brant,

Cackling Goose, Tundra Swan)

**Sutton, G. M. 1932.** The exploration of Southampton Island, Hudson Bay. *Memoirs of the Carnegie Museum* Vol. 12, Part 2

(Zoology) Section 2 The birds of Southampton Island: vii-viii; 1-275

**Taverner, P. A.. 1934.** Birds of the eastern arctic. (*in Canada's Eastern Arctic*) Dept. of the Interior. Pp 113-128 (Northern Pintail,

Rough-legged Hawk, Sandhill Crane, Black-bellied Plover, Ruddy Turnstone, Hudsonian Godwit, Red Knot, Purple Sandpiper B, Pectoral Sandpiper B,

Dunlin B, Sanderling B, Red-necked Phalarope B, Pomarine Jaeger B, Herring Gull B, Bonaparte's Gull b, Tree Swallow, Horned Lark, American Pipit,

Common Redpoll B, Hoary Redpoll B, Dark-eyed Junco, Snow Bunting B)

**Taverner, P. A. and G. M. Sutton. 1934.** The birds of Churchill, Manitoba. *Annals of the Carnegie Mus.* 23(1):1-83 (Parasitic Jaeger,

Sandhill Crane)

**Note:** Parker & Ross (1973) reported 'Redpolls', but did not specify which species.

**Note:** the origin of the Ruddy Shelducks reported by Allard *et al* (2001) has not been determined and thus this species remains as hypothetical in Canada. It was not accepted due to unknown origin by Robbins, M. B., *et al* 2004. ABA Checklist Committee 2003

Annual Report. (*Birding* 36(1):38-41), nor was it accepted for the same reason by Banks, R. C., *et al* in the Forty-fifth Supplement to the AOU Check-List of N. Am. Birds (*Auk* 121:985-995).

**Note:** Sutton (1932, p. 168) records what he felt was a Great Skua, but without a specimen, this species shall remain off the main list for now.