NUNAVUT
COASTAL RESOURCE INVENTORY

Sanikiluaq

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Department of Environment
Avatiliqiyikkut
Ministère de l'Environnement

NCRI

Nunavut Coastal Resource Inventory – Sanikiluaq
September 2010

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EXECUTIVE SUMMARY

This document is a report derived from the Hamlet of Sanikiluaq, one component of the third 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, etc. This data is ultimately compiled in a spatial (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 strategic assessment. Informed assessments lead to promote economic development opportunities, coastal management, and conservation. In Nunavut, two additional applications support the coastal resource inventory: preserving traditional knowledge (IQ) and anticipating environmental changes, notably climate-driven changes.

The Fisheries and Sealing Division of the Department of Environment initiated this inventory by conducting a pilot project in the community of Iglulik, Nunavut. Upon the completion of this pilot project four additional communities (Kugluktuk, Chesterfield Inlet, Arctic Bay, and Kimmirut) were approached to assess their interest in participating in the program; of which all four communities agreed. The program was further refined through experience gained working with these communities, and a further two communities (Qikitarquaq, and Sanikiluaq) were approached and consented to participating in the inventory process. This report focuses on the Hamlet of Sanikiluaq, the hunters and elders of their community, and the information they provided.

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 Sanikiluaq, Nunavut;

During the course of this coastal resource inventory Sanikiluaq was visited twice by department of environment staff. The first visit was to conduct a consultation meeting with the community; the second was to conduct the interviews themselves, which took place from February 9th to 15th, 2011. A total of nine interviews were conducted for this report with six people present for each interview: interviewee, interviewer, translator, recorder, science consultant, and student intern. The interviewer followed a defined protocol of predetermined questions utilizing photo references of the species in question for ease of the interviewee. Interviews varied in length from 1.5 – 4 hours depending on the individual being interviewed. Data collected during the interview process was plotted on maps and digitized using ArcGIS to create the final maps the reader will see in this report.

An array of maps, drawn from the interviews is provided in this report. Data was organized into the following categories: Archaeological Sites; Marine Mammals; Fish; Birds; Invertebrates; Marine Plants; Areas of High Diversity; Other. In addition,a map of Nunavut is provided, along with other maps showing the extent of the study area, which are reproductions of the study area extracted from the Nunavut Atlas. The map format was chosen to provide a synoptic view of the collected data. A common scale (1:1,450,000) was used for all maps to allow convenient comparisons from one map to another. In addition, the maps are complimented by extensive tabular information.

A number of recommendations were provided both on the use of this study as well as for future initiatives. The recommendations include:

That the report be translated into Inuktitut and formally presented to the community of Sanikiluaq to be used as a resource tool

That a methodology be developed to train government officials and community residents in the delivery of future NCRI initiatives as this would be the most productive means of sustaining this program over the long-term.

That new methodologies also be developed in the collection and management of local data. For instance, these inventories should not simply be a snapshot in time but a temporal knowledge base that will grow and expand as new information becomes available. A good example of this is the GeoConnections program (www.geoconnections.org) which provides geospatial data and tools to establish goals for social, economic and environmental initiatives.

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INTRODUCTION

This document is one in a series of reports that has been 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. Each community is unique in terms of its physical environment, oceanographic setting, organisms present and the interests and approaches of its hunters and trappers. Though interviews with elders have become commonplace throughout the Territory, community differences are significant enough to warrant an individual and focused approach in the manner in which this information is derived. One might even suggest that each community should be and 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

"Coastal resource inventory", as the phrase is 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 themselves 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 ocean bottom. Defining the extent of resources discussed varies by community and "near the coast" can include species and activities 50 miles or sometimes up to 100 miles inland (mainly lakes and river systems).

The information obtained is then augmented with additional data obtained 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 Western 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 Qaujimajatuqangit) related to the animals that were the subject of these interviews and that occur throughout the coastal zone: on land; in intertidal areas; above and below the surface of the ocean; above and below sea ice; and on the ocean bottom. In addition, visual surveys of the coastline and the community can also provide diverse information on important coastal features such as: the types and condition of infrastructure, (for example, wharves and fish plants), and the location of a variety of coastal activities or impacts, (For example. such as town dumps or sewage sites).

Additional, and possibly important, uses for the information collected could be fisheries-related providing insights as to the potential for future fisheries development. Given the high unemployment rates that exist in many of Nunavut's coastal communities, it is increasingly important to identify areas of potential economic development. Establishment of a new fishery depends on reliable species-specific abundance information and locations 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 commercialization. Another potential use could be to identify and eventually establish coastal parks, and related tourism opportunities, that include sensitive coastal areas, breeding grounds, important species, and unique habitats.

In Nunavut, two additional important concerns are worthy of mention: the preservation of traditional knowledge (IQ) and suitable preparations for anticipated environmental changes, particularly climate-related changes. Some communities have expressed an interest in being able to explore 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 together of extant knowledge into a form that could assist informed decision-making. Fundamental to this process is the recognition that IQ embodies both historical and contemporary information that might help with future management plans. Hence, there is growing urgency throughout the Territory to identify, record, and conserve Nunavut's traditional coastal biological, cultural and ecological knowledge.

The second factor is the 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, and animal behaviour and population abundances, to mention but a few. The coastal resource inventory collects information on changes to the environment observed around communities.

ORIGIN OF THE COASTAL INVENTORY

The Fisheries and Sealing Division 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 a pilot community for a number of reasons. It possesses resources that were deemed to offer support to the project's success, including a satellite office of the Nunavut Research Institute (NRI) along with facilities and staff. NRI's Iglulik office is the home of 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 Inuit Qaujimajatuqangit (IQ). These interviews are presently available in a substantial 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, and also provided important administrative support for the project.

The pilot project was an intense learning process with goals of building a database comprising an assemblage of IQ knowledge that would contain depth and breadth; as well as, developing a process that was well-vetted in every respect, including interviews, modes of data recording, range of topics, data reduction, digitization, analysis, inclusion of GIS software and presentation. Upon completion of this entire process, the final product was judged reasonably successful, although subsequent outings have shown us unequivocally that it still requires continuous adjustment in order to improve its efficiency and ensure ever-greater adherence to the projects goals.

FUNDING, PERSONNEL AND PROJECT DELIVERABLES

The second phase of the Nunavut Coastal Resource Inventory received primary financial support from Indian and Northern Affairs, Government of Canada, the Departments of Environment (DoE) and Economic Development and Transportation (EDT), Government of Nunavut, and secondary funding from Fisheries and Oceans, Canada. The Nunavut Research Institute also generously gave in-kind GIS support services to the project team. The four communities selected for Phase II were Kugluktuk (Kitikmeot), October 2008; Chesterfield Inlet (Kivalliq), November 2008; Arctic Bay (Qikiqtaaluk), February 2009; and, Kimmirut (Qikiqtaaluk), March 2009.

Funding for this third phase (Qikiqtarjuaq and Sanikiluaq) came from the DOE, Government of Nunavut. The Coastal Inventory of Qikiqtarjuaq and Sanikiluaq was conducted by DOE staff with the assistance of the Marine Institute of Memorial University of Newfoundland. Qikiqtarjuaq was carried out in March 2010. This report focuses on the Hamlet of Sanikiluaq, which was worked on from January 2011 to August 2011.

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. The Fisheries and Sealing Division of the Department of Environment worked closely with the Parks Division on the project. The Parks Division of the Department of Environment is currently conducting a park feasibility study in the Belcher Islands area.

Project deliverables included:

- A final report;
- The Coastal Resource Inventory in a GIS database; and
- Large-format resource inventory maps.

Figure 1: Map of Nunavut

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 Appendix 5 for an in-depth Field Guide of all the methods employed.

AN OVERVIEW OF THE PROCESS

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

The interview team is made up of six individuals: the interviewer and interviewee, a translator, a recorder, a science consultant, and a student observer. The process varies from 1.5 - 4 hours, depending on the amount of detail in the interviewee's responses and the amount of clarification required. Each interview follows the same format (refer to Survey in Appendix 3). The first round of questions requests information about the interviewee's early life history as well as their general knowledge of and familiarity with the local area. This is followed by questions that refer to specific animals in a set order. Responses are documented using pre-prepared maps that can be annotated by the interviewee. The entire proceedings, with permission, are recorded using audio and video equipment. Upon completion of all the interviews planned for the community, data is compiled into spreadsheets, and the map information is 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 have improved. Community selection does not depend on receiving a suitable response to every single criterion, but rather on the general picture conveyed by the responses to these queries. The present criteria are as follows:

- Is the selected community willing to participate in the project?
- Is the community considered to be an important source of data on coastal resources?
- Are any other projects underway in the community that might be 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?

INITIAL COMMUNITY VISIT

During the course of the project, Sanikiluaq was visited on two occasions; an initial scoping meeting in January 2011, followed by the interview session in February 2011. The scoping session was designed to put into place all of the elements that were required to properly conduct the interviews. This process was strongly dependent upon the Sanikiluaq Hunter-Trapper Organization (HTO). The HTO formally agreed to support this initiative and provided 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 nine interviewees (Appendix 2) was made by NCRI project personnel. In addition, HTO personnel recommended the names of individuals who could be used as translators. These individuals were contacted, tentative interview schedules were established. In addition, HTO personnel recommended the names of individuals who could be used as translators. The potential translators were contacted and tentative plans were made. The next step was to select several venues that might accommodate the interview process. The final activity in this process was to meet with representatives of the Hamlet office in order to alert local officials of the planned activities and to engage their support.

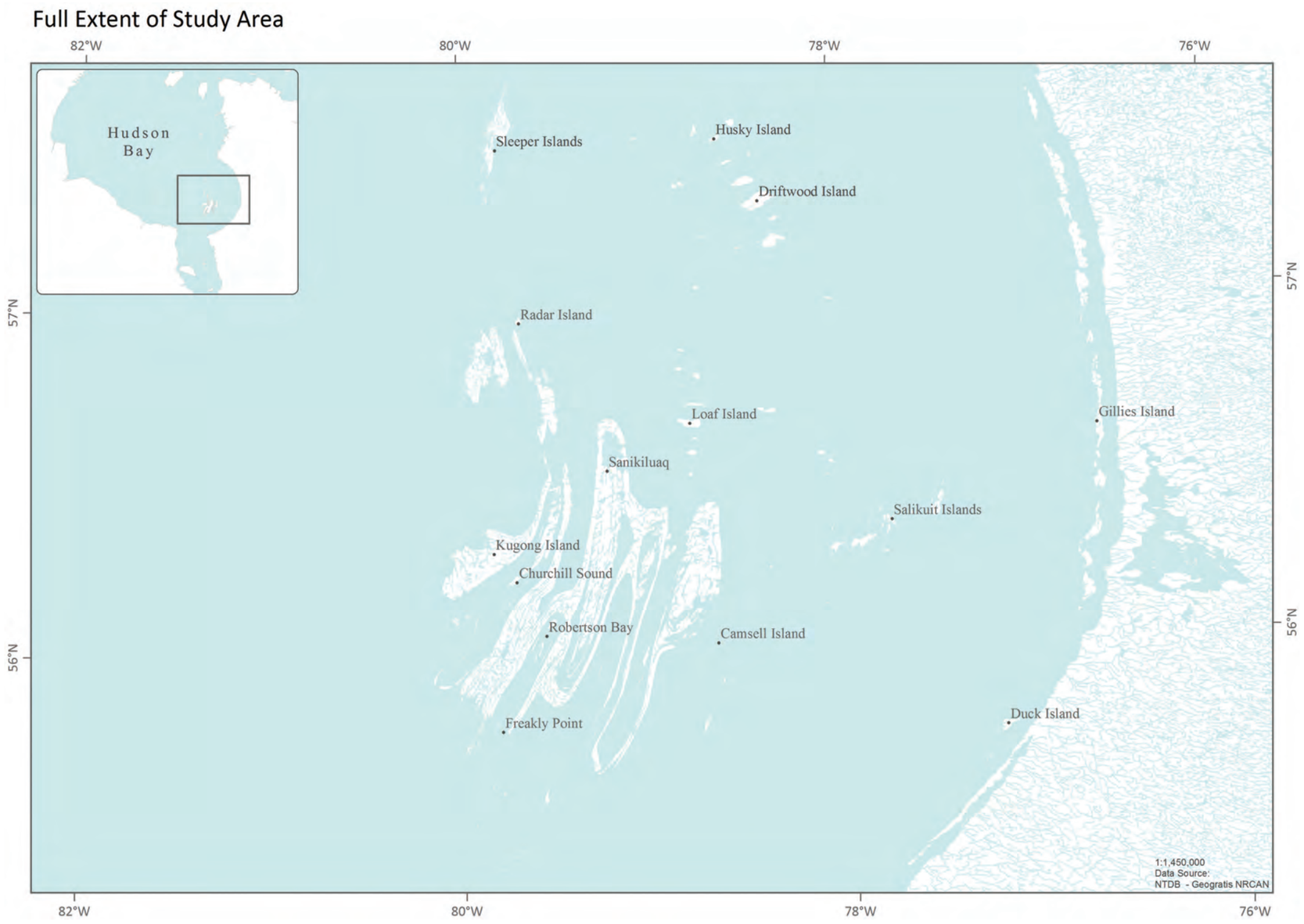
INTERVIEW PREPARATION

Preparations for the planned 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 onto maps of the area normally used by hunters and fishers (Fig. 2 page 9), into photos of the target species and used to develop relevant questions that would later be posed to interviewees (Species photo references available upon request).

INTERVIEW STRATEGY

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

Figure 2: The study area extent discussed in the Sanikiluaq interviews.



THE INTERVIEWS

Six persons were present during each interview; an interviewee, an interviewer, a translator, a recorder, a science consultant, and a student intern. 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, were provided for the interviewees to write directly on them and thereby 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; some discussion about the linkages between coastal resources, present and future environmental changes and potential economic development (e.g. the possibility of an emergent fishery).

Every annotation on the maps was coded to enable future identification and reference. Follow-up questions were askedof the interviewee, clarifications were elicited and, if appropriate, discussion ensued about the information presented. The entire process was recorded using audio and video equipment, while selective portions were simultaneously manually recorded. Manual recording was used to maintain a running record of all map annotations and codes so that later digital processing could 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 a coherent and workable database, which when used with the maps provides a complementary visualization of that data. From the outset the maps formed 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, four surveys with similar geographic breadth and goals have proven to be especially useful. There is the three-volume "Inuit Land Use and Occupancy Study", which was undertaken in the early 70's and published in 1976 by Indian and Northern Affairs. It grew out of the documentation required by the land claim process and was used to substantiate Inuit claims as to residency and land use. The resulting study contains detailed information on traditional land use up to that time, based on interviews with Inuit in each community. It focused on hunting, trapping and fishing and used topographic maps to outline fishing, hunting and trap line regions associated with each community in Nunavut over three periods: pre-contact, the trading period up to the 1950s, and the present (early 1970s). One of the volumes is an atlas that maps the results. 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 one-volume 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 (refer to Appendices).

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 [the then] current harvesting levels and patterns of Inuit use of wildlife resources." Once completed this information was to be used to manage wildlife resources in Nunavut.

The fourth document is Voices from the Bay a Traditional ecological Knowledge study of Inuit and Cree in the Hudson Bay Bioregion co-published by the Canadian Arctic Resources Committee and the Environmental Committee of Municipality of Sanikiluaq in 1997. Sanikiluaq co-odinated the research and interviewed individuals from 28 different communities in the Hudson Bay region on Traditional Knowledge of ecosystem components, environmental changes and its significance to Inuit and Cree, Indigenous perspective on development and future needs. It is hoped the governments and private industry will use this information when making decisions on development.

DATA MANAGEMENT AND ANALYSIS

Data collected through interviews and research were plotted, when appropriate, on working maps, while the final representations occur on all inventory maps. The scale is 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 9). 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 12 - for a sample of data release form).

GIS INTERFACE

Once the inventory maps and database were complete, 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.

INTERACTIVE ATLAS

The NCRI results are published in community-specific reports that are shared with project partners (community HTOs, Hamlets, high schools, and all interviewees) and that are publicly available in hard-copy and PDF formats.

Reports are currently produced in English and Inuktitut. The results from all communities are also displayed online in an interactive atlas, with this information available within a year of interviews in a community. The reports can take up to two years to produce. Links to access the Atlas: ncriatlas.ca and http://www.gov.nu.ca/environment/information/nunavut-coastal-resource-inventory

MARINE RESOURCES IN A PHYSICAL SETTING (SANIKILUAQ)

INTRODUCTION

The coastal communities of Nunavut are diverse. They extend over 27°of latitude and 60° of longitude – so 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. Consideration of 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. Many organisms may experience the impact of global warming directly through changes in their physiology and many may also receive indirect indications from 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 type and location of recurring open water sites, including large polynyas, pack ice edges, shore-fast leads, and smaller polynyas driven by upwelling or tidal mixing, reflects local geography and ice conditions. Positive correlations between open water in ice covered seas and abundance of marine organisms have been noted for some time. In fact, Stirling (1980, 1997) has specifically identified increases in abundance of birds, seals, and whales with approach 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). What they all have in common is that they encourage a non-homogeneous distribution of animals that is ultimately linked to greater biological productivity.

Ultimately, the availability of food, the product of primary production in phytoplankton or ice algae, is a major contributing force. Bradstreet and Cross (1982) believe that the aggregation of food items preferred by or acceptable to invertebrates and vertebrates, on the ice undersurface is also a factor of some significance. Once plant material is available it is grazed and enters into the food web where it becomes available to invertebrates (e.g. Copepods, Amphipods or shellfish), fish (e.g. Arctic Cod), mammals (e.g. seals, Narwhal, Walrus or Polar Bears) and birds (e.g. Thick-Billed Murres, Northern Fulmars, Black-Legged Kittiwakes or Black Guillemots). This results in a form of "oasis" or "hotspot" in an otherwise ice-covered area. Both algal groups are important, although their relative contributions can vary depending ice conditions and available light. In some locations, ice algae represents 5% of the total primary production while in other locations it can be as high as 30% (Alexander 1974, Harrisson and Cota 1991, Legendre et al 1992). With ice now thinning faster and earlier in the spring, sunlight sufficient to drive photosynthesis, especially of ice algae, is available sooner, thereby extending both the growing and grazing seasons, in some cases by as much as two months.

In addition, these open water sites appear to have been of some 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 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 that specialized in hunting marine mammals.

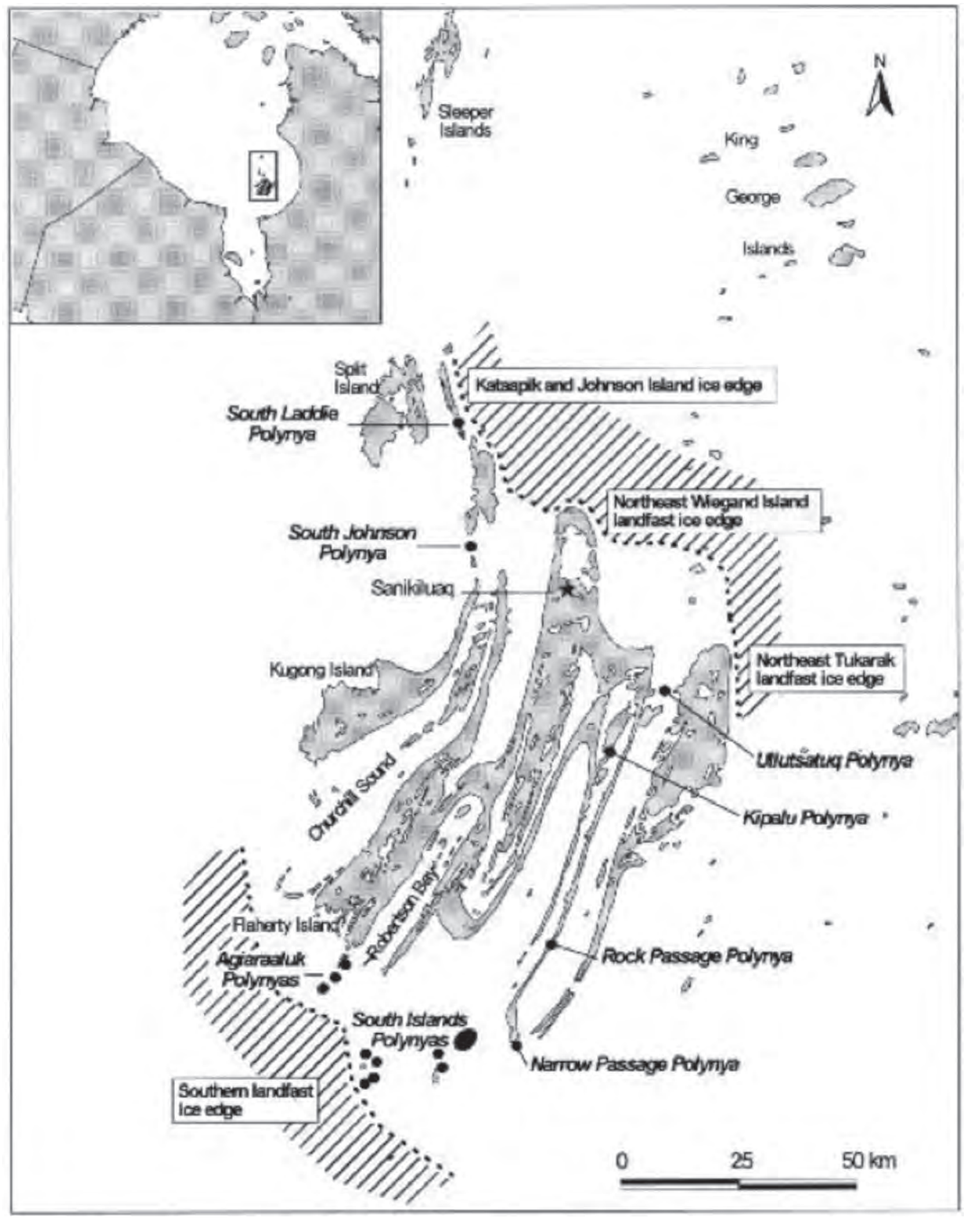


Figure 3: Locations of polynyas and ice edges within the Belcher Islands, Hudson Bay, Nunavut, in March 1998 and 1999.

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 contributing to this reliability are reviewed below.

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, such as the well-known polynyas in Fury and Hecla Strait at the head of Foxe Basin (Hannah et al 2009). A slow-moving tidal current that encounters a shallow and/or narrow strait increases in velocity and, in turn, promotes increased mixing. Mixing moves warmer subsurface waters to the surface where they can slow or eliminate ice formation. The subsurface waters also deliver nutrients, which promote plant growth when adequate light is available, especially in summer months.

LANDFAST LEADS (OR FLAW LEADS)

Extensive systems of land-fast leads occur throughout the Arctic. Stirling (1981) nicely summarizes their many characteristics. Land-fast ice is generally comprised of first year ice, possibly mixed with multi-year remnants, that is attached 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 such that circulation changes dramatically. At some point, a fracture or crack may develop between the attached ice and the free-floating pack ice due to wind blowing offshore, 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, shore-lead systems are of enormous biological importance.

The boundary between the ice edge and the beginning of the lead is an ecosystem that is very important and extremely interesting, and has been identified as biologically rich and diverse by many of the Sanikiluaq elders. Below is a sampling of observations from around Nunavut that testify to the importance of land-fast leads:

- The land-fast 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 land-fast ice (McLaughlin et al 2005)
- Ringed seals and Polar bears are the only marine animals that regularly occupy extensive land-fast coastal ice (Tynan and DeMaster 1997)
- Bearded seals prefer relatively shallow water (<150m) with thin shifting ice and leads kept open by strong currents (Tynan and DeMaster 1997)
- Along with polynyas, shore-lead systems and ice edges play key roles 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)
- Admiralty Inlet has the highest densities of Arctic cod immediately below the edge of land-fast sea ice, apparently due 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 was composed primarily of Arctic cod while Amphipods and Copepods were consumed in smaller numbers (Bradstreet and Cross 1982)

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

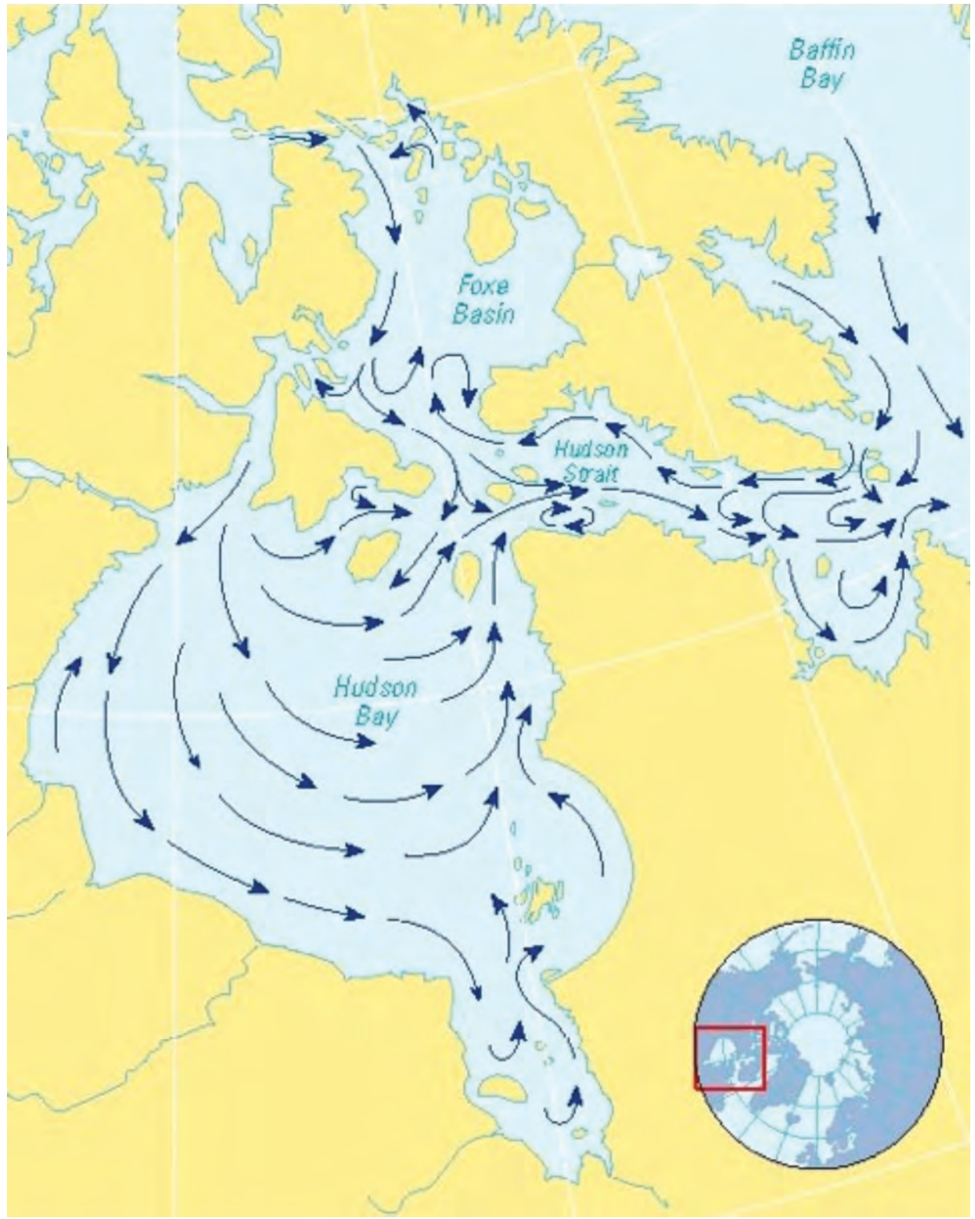


Figure 4: Sea surface circulation in Hudson Bay

the same as those outlined above for recurrent open water. However, upwelling is an additional mechanism that appears to occur at shore-fast or 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 is where a current moving through warmer subsurface water is deflected ("welled upward") toward the surface by a bottom structure such as a sill, bank, or ridge (Tee et al 1993).

Ice-edge upwelling has been observed in the Bering Sea (Alexander and Niebauer 1981), the Arctic Ocean (Buckley et al. 1979, Johannesen et al. 1983) and off the coast of Newfoundland (Tang and Ikeda 1989). It 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.

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.

OCEANOGRAPHIC FACTORS THATCONTRIBUTE TO OPEN WATER

Sanikiluaq is located on the northern tip of Flaherty Island and is the southern-most hamlet in Nunavut. Flaherty Island is one of many islands in the Belcher Island archipelago, which is located in the south-eastern region of Hudson Bay near the mouth of James Bay. Large volumes of freshwater enters Hudson Bay from numerous rivers, thereby creating an estuarine environment where less dense freshwater overlays the denser salt water.

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. In the Belcher Islands, most of these polynyas occur in water depths of less than 12 metres, where currents can exceed 1.5 m/s. 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 in the Belcher Islands as important over-wintering areas.

During the 1990's, many of the polynyas around the Belcher Islands exhibited increased ice cover as a result of weaker than usual ocean currents combined with calm wind conditions. Many of the residents of the islands linked this event to hydroelectric development in the James Bay region of the Province of Quebec. Generally, water is forced through the Belcher Island archipelago by the counter-clockwise circulation pattern in Hudson Bay. This creates very strong currents that vary in strength, depending on the tidal cycle, either increase or decrease in strength.

CIRCULATION IN HUDSON BAY

The surface water circulation pattern of Hudson Bay is influenced by wind, water density differences, and the inflow of water from Hudson Straight. The general sea surface circulation pattern is considered to be cyclonic, flowing south along the western side of the Bay and returning north along the eastern side. The Fury and Hecla Straight allow Arctic surface water to enter Foxe Basin, where some of it flows into Hudson Bay, and combines with the existing cyclonic water flow. The bay is essentially a large inland sea, being connected to the Atlantic Ocean by the Labrador Sea and the Hudson Straight. The general sea surface circulation pattern is considered to be cyclonic, flowing along the western side of the Bay and returning along the eastern side. The Fury and Hecla Straight provide entry for Arctic surface water to the Foxe Basin, where some of it flows into Hudson Bay, and combines with the existing cyclonic water flow. Water exiting this current flow is relatively fresh due to a high volume of river runoff. However, it is well mixed by large tides before it exits the Hudson Straight, it is well mixed by large tides prior to it becoming and becomes the Labrador Current.

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, Ingram and Harris, 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: GENERAL COMMENTS RECEIVED FROM SANIKILUAQ

MARINE ENVIRONMENT

The individuals interviewed in Sanikiluaq (having spent most of their lives hunting, fishing, and trapping in this area) produced annotated maps that identified organisms, abundances, and hunting locations common to the area. Local hunters and fishers depend on a broader array of animals to supply their country food needs than observed in previous communities. Five of the eight most prominent prey choices are strictly marine and included, ringed seal, bearded seal, beluga, polar bear, and mussels. The sixth, arctic char, migrates between fresh and salt water. The other prominent choices are caribou and eider ducks. This contrasts with Iglulik, for example, where the top three prey species (Walrus, seals and Polar Bear) are marine and only one (Caribou) is terrestrial.

ARCHAEOLOGICAL REMAINS

Evidence of previous habitation, in the form of stone tent rings, stone dwellings, buried human remains, tools, weapons and other artefacts can be found throughout most of the Belcher Islands.

- Identified campsites may have been visited and occupied over lifetimes and centuries. In general, coastal sites were used year-round, as coastal sites bridge marine and terrestrial environments and provide access to a reliable food supply.
- South Camp and the old Hudson's Bay Company post on Tukarak Island were identified as the main gathering places for celebration.
- Burial site locations are not random but reflect the site of former communities or habitations.
- Archaeological sites survive indefinitely unless disturbed by archaeologists, tourists or vandals. Disturbance is prohibited by law.

HUNTING/FISHING

- Sanikiluaq 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.
- Participants noted that traditional hunting/fishing species and sites are changing for various reasons. Some pointed to climate change as a driver of environmental change.

HEALTH, SIZE AND PRESENCE

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

- Certain species of fish appear to be deteriorating in health, with some exhibiting boils and scratches.
- The numbers of some fish species have decreased over the years.
- Some seals are thinner, and appear to be losing fur.
- The numbers of polar bears are reported to be increasing every year although some interviewees have noted that the bears are getting skinnier.
- Mussels are found in rocky areas, while scallops and clams grown on sandy bottoms. mussels, sea urchins and sea cucumbers were all mentioned as growing in areas with currents.
- Interviewees described several species that they believed were not included in the survey, including invertebrates and a possible sculpin species.

CHANGES UNDERWAY

- Hunters reported that ringed seals in recent years have been losing fur or have patches of fur missing.
- Polar bears appear to be thinner within the last ten years.
- Some hunters claim that they are becoming more abundant in the area.
- Most hunters noted that freeze-up is occurring later in the fall, and conversely that the spring break-up happens earlier. They were concerned that this impacts hunter safety.

ECONOMIC DEVELOPMENT

- The consensus was that commercial fishing is not viable as in other areas of Nunavut. Some respondents believed that over-fishing for commercial or community use had depleted fish populations in the Belcher Islands.
- Many interviewees thought mussels and Arctic Char could be more heavily utilized within the community but were unsure if the populations were high enough for commercial exploitation.
- Several respondents believed that tourism would be a good means of developing economic opportunities in Sanikiluaq, as long as it did not affect the wildlife.

GUIDE TO MAPS AND TABLES

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

MAPPING CODES

TABLE GUIDE TO MAP CODES

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.

In addition to being color-coded, specific locations are represented by a rectangular symbol in the legend, except when they are shown as a point indicating that no locations were drawn on a map. In those cases, the species represented has a distribution classified as "everywhere". 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.

Some species were described by a portion of the interviewees as being "everywhere" while others 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 for 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.

Table 1: Guide to map codes

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

Figure 5: Travel Routes and Areas of Greatest Familiarity

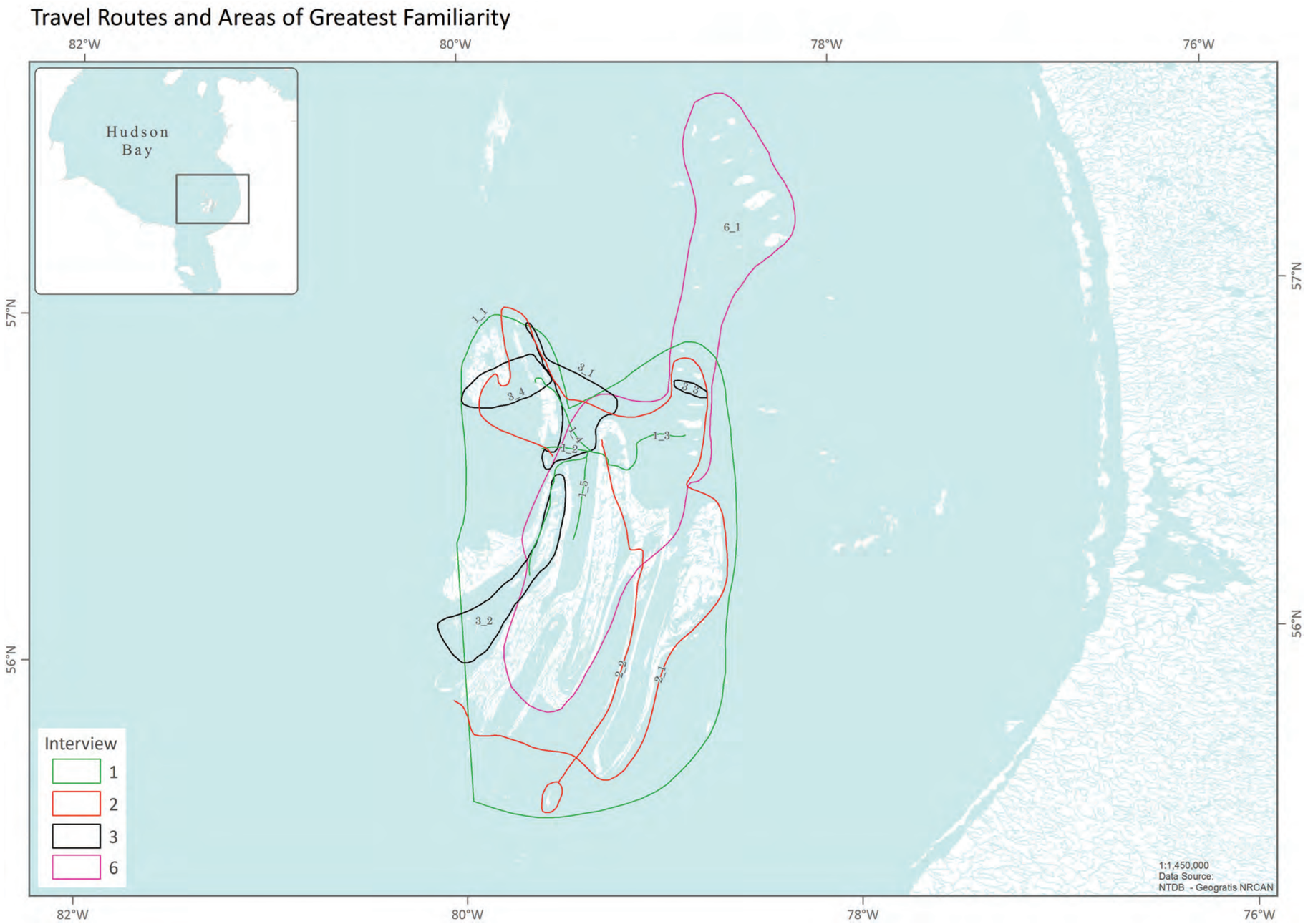


Table 2: Travel Routes and Areas of Greatest Familiarity

LABEL NUMBER	INTERVIEW CODE	MAP CODE	COMMENTS	PRESENT/HISTORIC
1_1	SANI_1_0211	AKB_1	Hunts closer to town due to more dangerous ice conditions	P
1_2	SANI_1_0211	AKB_2	Hunting Travel route by skidoo	P
1_3	SANI_1_0211	AKB_3	Travel route by skidoo when ice condition is good	P
1_4	SANI_1_0211	AKB_4	Travel route by skidoo when ice condition is good	P
1_5	SANI_1_0211	AKB_5	Travel route by boat to hunt molting geese	P
2_1	SANI_2_0211	AKB_1	Entire Belcher Islands for seal hunting	P
2_2	SANI_2_0211	AKB_2	Polar bear and seal hunting area	P
3_1	SANI_3_0211	AKB_1	Winter hunting area	P
3_2	SANI_3_0211	AKB_2	Spring hunting area for eider ducks	P
3_3	SANI_3_0211	AKB_3		P
3_4	SANI_3_0211	AKB_4	Spring hunting area	P
6_1	SANI_6_0211	AKB_1	Early summer on the Bakers Dozen Islands	P

Figure 6: Archaeological Sites and Areas of Cultural Significance

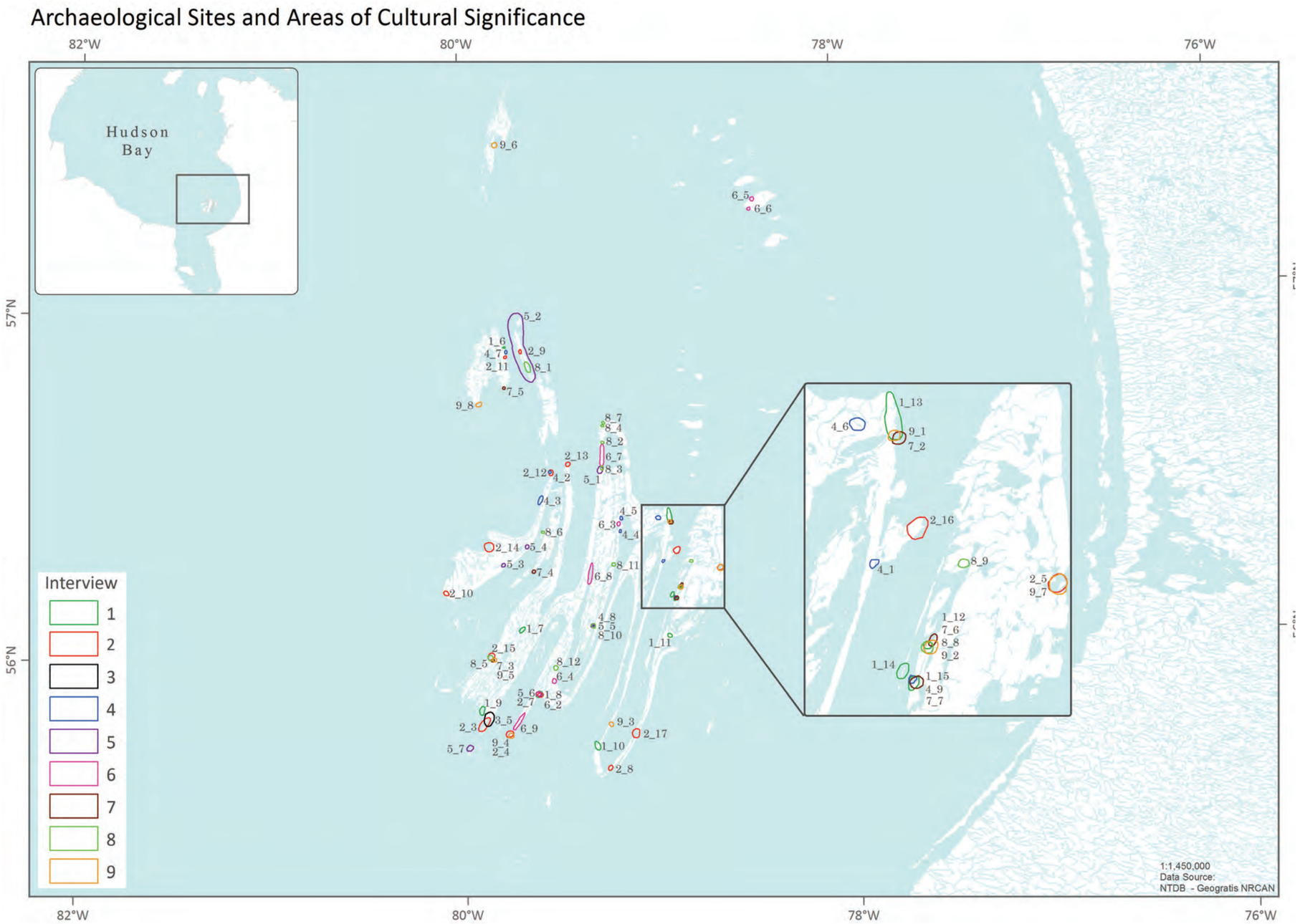


Table 3: Archaeological Sites and Areas of Cultural Significance

LABEL NUMBER	INTERVIEW CODE	MAP CODE	TYPE	PRESENT/HISTORIC
1_6	SANI_1_0211	Arch_1	Old walrus hunting camping area	H
1_7	SANI_1_0211	Arch_2	Old camp site	H
1_8	SANI_1_0211	Arch_3	Old camp site	H
1_9	SANI_1_0211	Arch_4	Old camp site	H
1_10	SANI_1_0211	Arch_5	Old camp site	H
1_11	SANI_1_0211	Arch_6	Old camp site	H
1_12	SANI_1_0211	Arch_7	Outpost camp at the Hudson's Bay post	H
1_13	SANI_1_0211	Arch_8	A gravesite of the man Sanikiluaq is named after	H
1_14	SANI_1_0211	Arch_9	Soapstone mine	H
1_15	SANI_1_0211	Arch_10	Soapstone mine	H
2_3	SANI_2_0211	Camp_1	Camp Site	P
2_4	SANI_2_0211	Camp_2	Camp Site	P
2_5	SANI_2_0211	Camp_3	Camp Site	P
2_7	SANI_2_0211	Camp_5	Camp Site	P
2_8	SANI_2_0211	Camp_6	Camp Site	P
2_9	SANI_2_0211	Camp_7	Camp Site	P
2_10	SANI_2_0211	Camp_8	Fishing camp, good fish in the area	P
2_11	SANI_2_0211	Arch_1		H
2_12	SANI_2_0211	Arch_2		H
2_13	SANI_2_0211	Arch_3		H
2_14	SANI_2_0211	Arch_4		H
2_15	SANI_2_0211	Arch_5		H
2_16	SANI_2_0211	Arch_6		H
2_17	SANI_2_0211	Arch_7		H
3_5	SANI_3_0211	Camp_1	Main camping area where he will also fish	P
4_1	SANI_4_0211	Camp_1	Camp Site	P
4_2	SANI_4_0211	Camp_2	Driftwood gathering area	P
4_3	SANI_4_0211	Camp_3	Driftwood gathering area	P
4_4	SANI_4_0211	Camp_4	Fishing camp	P
4_5	SANI_4_0211	Camp_5	Fishing camp	P
4_6	SANI_4_0211	Camp_6	Fishing camp	P
4_7	SANI_4_0211	Camp_7	Fishing camp	P
4_8	SANI_4_0211	Camp_8	Fishing camp	P
4_9	SANI_4_0211	Arch_1	Soapstone mine	H
5_1	SANI_5_0211	Arch_1	Tuniit camp site	H
5_2	SANI_5_0211	Camp_1	Camp Site, travel by dog team	H
5_3	SANI_5_0211	Camp_2	Fishing camp	H
5_4	SANI_5_0211	Camp_3	Fishing camp	H
5_5	SANI_5_0211	Camp_4	Fishing camp	P
5_6	SANI_5_0211	Camp_5	South camp	P
5_7	SANI_5_0211	Camp_6	Hunting Camp , Eider duck	P

Table 3: Archaeological Sites and Areas of Cultural Significance (continued)

LABEL NUMBER	INTERVIEW CODE	MAP CODE	TYPE	PRESENT/HISTORIC
5_8	SANI_5_0211	Camp_7	Seal hunting Camp	P
6_2	SANI_6_0211	Camp_1	South Camp	P
6_3	SANI_6_0211	Camp_2	Fishing camp	P
6_4	SANI_6_0211	Camp_3	Fishing camp	P
6_5	SANI_6_0211	Camp_4	Eider down gathering camp	P
6_6	SANI_6_0211	Arch_1	stone houses	H
6_7	SANI_6_0211	Arch_2	Tuniit camp site	H
6_8	SANI_6_0211	Arch_3	Tuniit camp site	H
6_9	SANI_6_0211	Arch_4	Tuniit camp site	H
7_2	SANI_7_0211	Camp_1	Spring hunting camp	P
7_3	SANI_7_0211	Camp_2	Spring hunting camp	P
7_4	SANI_7_0211	Camp_3	Spring hunting camp	P
7_5	SANI_7_0211	Camp_4	Summer hunting camp	P
7_6	SANI_7_0211	Camp_5	Summer hunting camp	P
7_7	SANI_7_0211	Camp_6	Summer hunting camp	P
7_8	SANI_7_0211	Camp_7	Summer hunting camp	P
8_1	SANI_8_0211	Arch_1	Tuniit camp site	H
8_2	SANI_8_0211	Arch_2	Tuniit camp site	H
8_3	SANI_8_0211	Arch_3	Tuniit camp site	H
8_4	SANI_8_0211	Arch_4	Tuniit camp site	H
8_5	SANI_8_0211	Camp_1	1977, first time camping with his cousin	P
8_6	SANI_8_0211	Camp_2	Spring camp	P
8_7	SANI_8_0211	Camp_3	Beluga hunting camp	P
8_8	SANI_8_0211	Camp_4	Camping area at Soapstone mine	P
8_9	SANI_8_0211	Camp_5	Camping area at Soapstone mine	P
8_10	SANI_8_0211	Camp_6	Camp Site, travel by ATV in the summer	P
8_11	SANI_8_0211	Camp_7	Fishing camp, nice char in the area	P
8_12	SANI_8_0211	Camp_8	Fishing camp	P
9_1	SANI_9_0211	Camp_1	Cabin, spring and fall	P
9_2	SANI_9_0211	Camp_2	Camp Site, fall	P
9_3	SANI_9_0211	Camp_3	Camp Site, spring	P
9_4	SANI_9_0211	Camp_4	Camp Site, summer	P
9_5	SANI_9_0211	Camp_5	Camp Site, summer	P
9_6	SANI_9_0211	Camp_6	Fishing camp, summer	P
9_7	SANI_9_0211	Camp_7	Camp Site	P
9_8	SANI_9_0211	Camp_8	Camp Site	P

Figure 7: Areas with Significant Diversity and Areas Important for Other Reasons

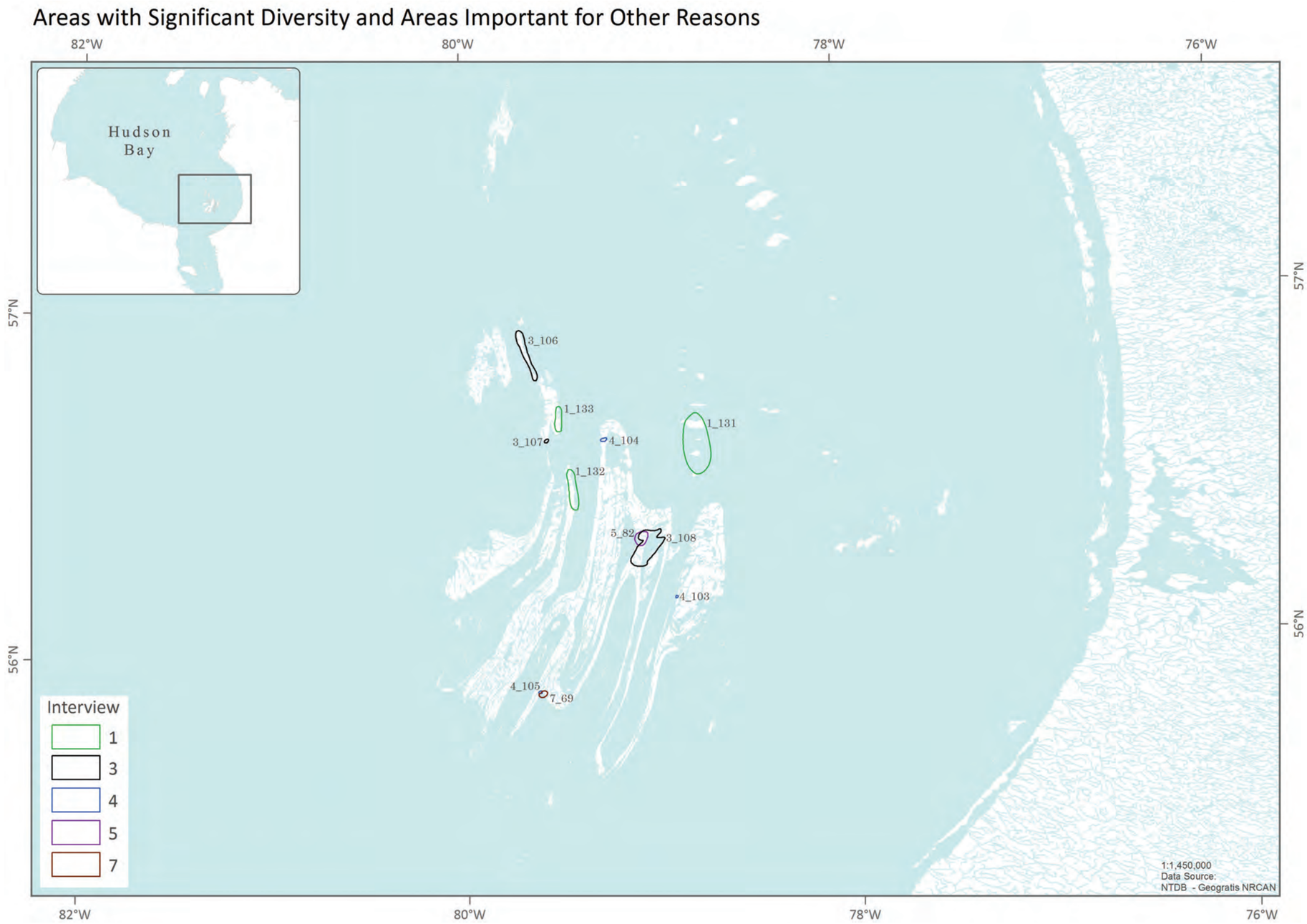


Table 4: Areas with Significant Diversity and Areas Important for Other Reasons

LABEL NUMBER	INTERVIEW CODE	MAP CODE	TYPE	CATEGORY	TIME OF YEAR
1_131	SANI_1_0211	SAOP_1	Favorite place for harvesting molting geese	Other Reason	June to August
1_132	SANI_1_0211	SAOP_2	Favorite place for harvesting molting geese	Other Reason	June to August
1_133	SANI_1_0211	SAOP_3	Favorite place for harvesting molting geese	Other Reason	June to August
3_106	SANI_3_0211	SAOP_1	25 tuniit houses - culturally important	Other Reason	Year Round
3_107	SANI_3_0211	SAOP_2	9 tuniit houses - culturally important	Other Reason	Year Round
3_108	SANI_3_0211	SAOP_3	Great sight seeing location	Other Reason	Year Round
4_103	SANI_4_0211	SAOP_1	This area is important to him	Other Reason	Year Round
4_104	SANI_4_0211	SAOP_2	Kataapik is important to him	Other Reason	Year Round
4_105	SANI_4_0211	SAOP_3	South camp - Important to him	Other Reason	Year Round
5_82	SANI_5_0211	SAOP_1	Nuluujaq - a beautiful spot. Saumialuq, an explorer put an inuksuk up made of metal	Other Reason	Year Round
7_69	SANI_7_0211	SAOP_1	South Camp - if any development were to happen in the area, all the fish would disappear. He does not want to see that happen	Other Reason	Year Round

Figure 8: Beluga Whale Areas of Occupation

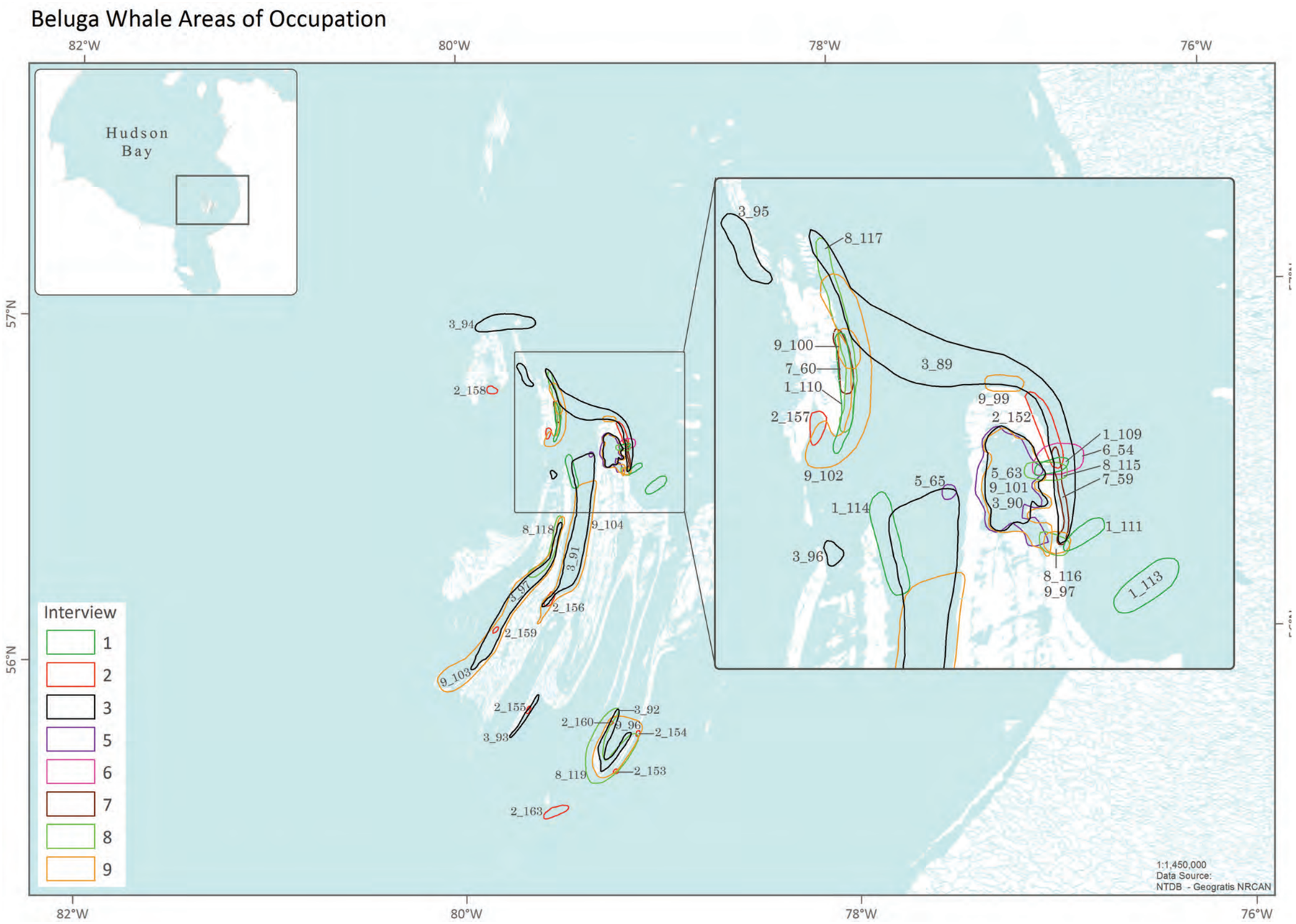


Table 5: Beluga Whale Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_109	SANI_1_0211	Bel_1	Beluga Whale	Mammal	April to June	
1_110	SANI_1_0211	Bel_2	Beluga Whale	Mammal	April to August	
1_111	SANI_1_0211	Bel_3	Beluga Whale	Mammal	April to August	
1_113	SANI_1_0211	Bel_5	Beluga Whale	Mammal	June to August	
1_114	SANI_1_0211	Bel_6	Beluga Whale	Mammal	June to August	
2_152	SANI_2_0211	Bel_1	Beluga Whale	Mammal	April to June	
2_153	SANI_2_0211	Bel_2	Beluga Whale	Mammal	April to June	
2_154	SANI_2_0211	Bel_3	Beluga Whale	Mammal	April to June	
2_155	SANI_2_0211	Bel_4	Beluga Whale	Mammal	April to June	
2_156	SANI_2_0211	Bel_5	Beluga Whale	Mammal	April to June	
2_157	SANI_2_0211	Bel_6	Beluga Whale	Mammal	April to June	
2_158	SANI_2_0211	Bel_7	Beluga Whale	Mammal	April to June	
2_159	SANI_2_0211	Bel_8	Beluga Whale	Mammal	April to June	
2_160	SANI_2_0211	Bel_9	Beluga Whale	Mammal	April to June	
2_163	SANI_2_0211	Bel_12	Beluga Whale	Mammal	March	The whales winter here
3_89	SANI_3_0211	Bel_1	Beluga Whale	Mammal	April to June	
3_90	SANI_3_0211	Bel_2	Beluga Whale	Mammal	July and August	
3_91	SANI_3_0211	Bel_3	Beluga Whale	Mammal	July and August	
3_92	SANI_3_0211	Bel_4	Beluga Whale	Mammal	July and August	
3_93	SANI_3_0211	Bel_5	Beluga Whale	Mammal	July and August	
3_94	SANI_3_0211	Bel_6	Beluga Whale	Mammal	July and August	
3_95	SANI_3_0211	Bel_7	Beluga Whale	Mammal	July and August	
3_96	SANI_3_0211	Bel_8	Beluga Whale	Mammal	July and August	
3_97	SANI_3_0211	Bel_9	Beluga Whale	Mammal	July and August	
5_63	SANI_5_0211	Bel_1	Beluga Whale	Mammal	July	Usually congregate here
5_65	SANI_5_0211	Bel_3_SP	Beluga Whale	Mammal	July	Saw a beluga giving birth
6_54	SANI_6_0211	Bel_1	Beluga Whale	Mammal	June to August	
7_59	SANI_7_0211	Bel_1	Beluga Whale	Mammal	June	Beluga hunting
7_60	SANI_7_0211	Bel_2	Beluga Whale	Mammal	October	Beluga hunting
8_115	SANI_8_0211	Bel_1	Beluga Whale	Mammal	April to July	
8_116	SANI_8_0211	Bel_2	Beluga Whale	Mammal	April to July	
8_117	SANI_8_0211	Bel_3	Beluga Whale	Mammal	July to November	
8_118	SANI_8_0211	Bel_4	Beluga Whale	Mammal	October and November	
8_119	SANI_8_0211	Bel_5	Beluga Whale	Mammal	April to July	
9_100	SANI_9_0211	Bel_5	Beluga Whale	Mammal	July	
9_101	SANI_9_0211	Bel_6	Beluga Whale	Mammal	September	
9_102	SANI_9_0211	Bel_7	Beluga Whale	Mammal	September	
9_103	SANI_9_0211	Bel_8	Beluga Whale	Mammal	September	
9_104	SANI_9_0211	Bel_9	Beluga Whale	Mammal	September	
9_96	SANI_9_0211	Bel_1	Beluga Whale	Mammal	July	
9_97	SANI_9_0211	Bel_2	Beluga Whale	Mammal	July	
9_98	SANI_9_0211	Bel_3	Beluga Whale	Mammal	July	
9_99	SANI_9_0211	Bel_4	Beluga Whale	Mammal	July	

Figure 9: Bearded Seal Areas of Occupation

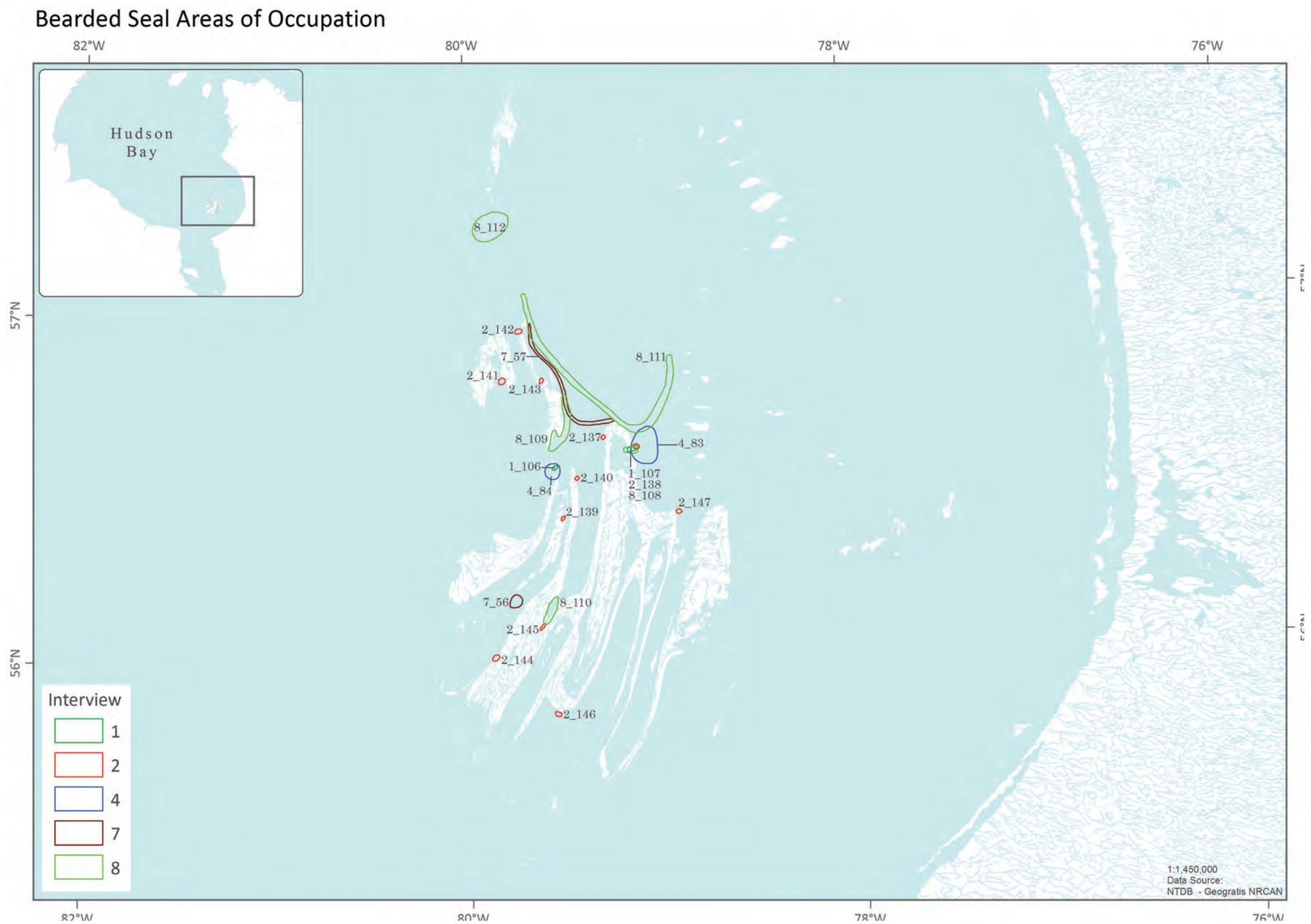


Table 6: Bearded Seal Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_106	SANI_1_0211	BS_2	Bearded Seal	Mammal	February	He caught a bearded seal here early February
1_107	SANI_1_0211	BS_3	Bearded Seal	Mammal	All year	
2_137	SANI_2_0211	BS_1	Bearded Seal	Mammal	June to October	
2_138	SANI_2_0211	BS_2	Bearded Seal	Mammal	June to October	
2_139	SANI_2_0211	BS_3	Bearded Seal	Mammal	June to October	
2_140	SANI_2_0211	BS_4	Bearded Seal	Mammal	June to October	
2_141	SANI_2_0211	BS_5	Bearded Seal	Mammal	June to October	
2_142	SANI_2_0211	BS_6	Bearded Seal	Mammal	June to October	
2_143	SANI_2_0211	BS_7	Bearded Seal	Mammal	June to October	
2_144	SANI_2_0211	BS_8	Bearded Seal	Mammal	June to October	
2_145	SANI_2_0211	BS_9	Bearded Seal	Mammal	June to October	
2_146	SANI_2_0211	BS_10	Bearded Seal	Mammal	June to October	
2_147	SANI_2_0211	BS_11	Bearded Seal	Mammal	June to October	
4_83	SANI_4_0211	BS_1	Bearded Seal	Mammal	All year	
4_84	SANI_4_0211	BS_2	Bearded Seal	Mammal	All year	
7_56	SANI_7_0211	BS_1	Bearded Seal	Mammal	February	
7_57	SANI_7_0211	BS_2	Bearded Seal	Mammal	December to March	
8_108	SANI_8_0211	BS_1	Bearded Seal	Mammal	October and November	
8_109	SANI_8_0211	BS_2	Bearded Seal	Mammal	July to November	
8_110	SANI_8_0211	BS_3	Bearded Seal	Mammal	October and November	
8_111	SANI_8_0211	BS_4	Bearded Seal	Mammal		At the floe edge
8_112	SANI_8_0211	BS_5	Bearded Seal	Mammal	March	He saw it on top of the ice while doing a aerial survey

Figure 10: Bowhead Whale, Harbour Seal, Harp Seal Areas of Occupation

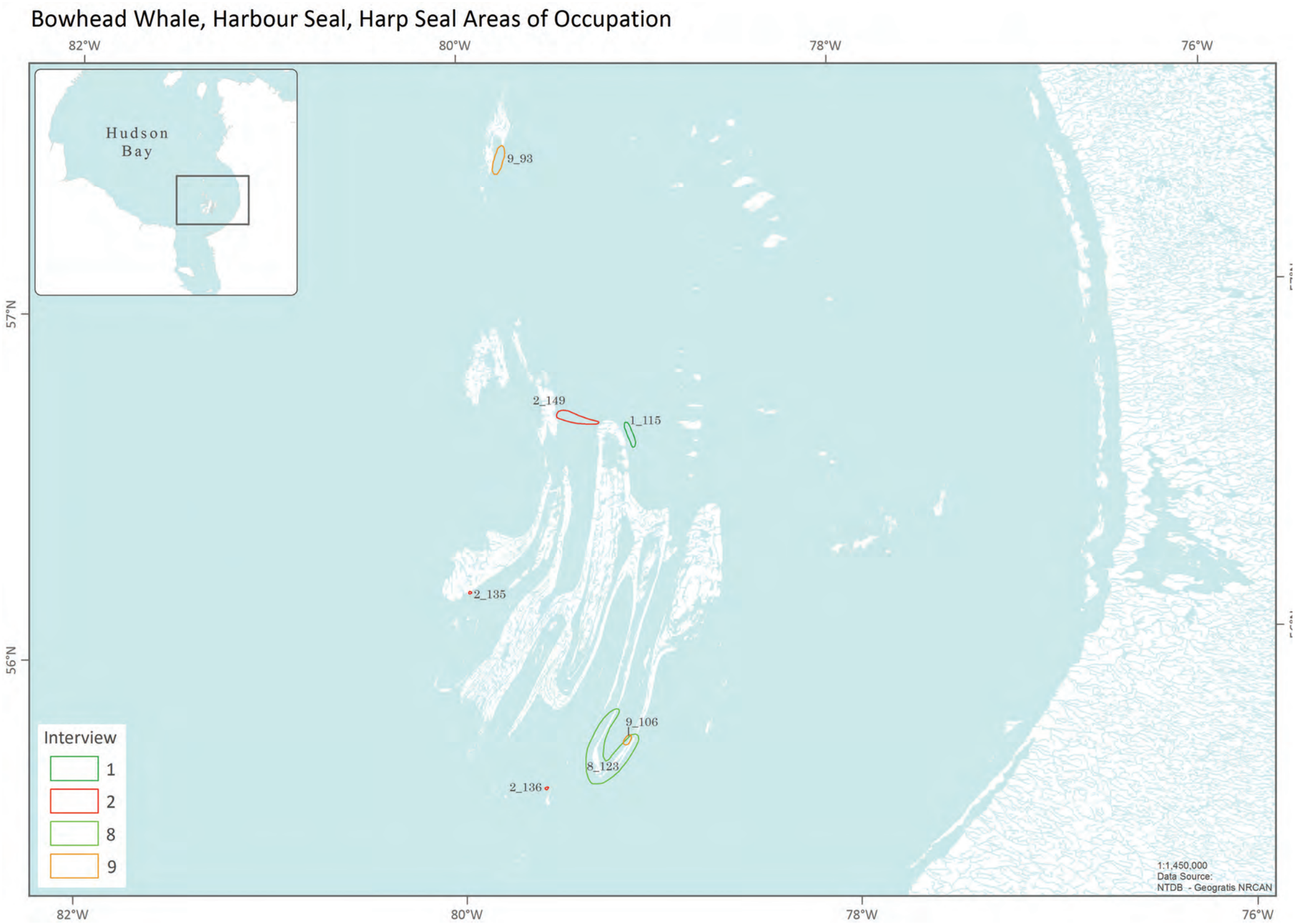


Table 7: Bowhead Whale, Harbour Seal, Harp Seal Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_115	SANI_1_0211	BW_1	Bowhead Whale	Mammal	June to August	Bowhead whales are seen rarely in the area
2_135	SANI_2_0211	HS_1	Harp Seal	Mammal	December to March	Only ever saw one here
2_136	SANI_2_0211	HS_2	Harp Seal	Mammal	December to March	Will rarely see harp seals
2_149	SANI_2_0211	HbS_1	Harbour Seal	Mammal	June to August	
8_123	SANI_8_0211	BW_1	Bowhead Whale	Mammal	April to July	
9_106	SANI_9_0211	BW_1	Bowhead Whale	Mammal	July	
9_93	SANI_9_0211	HS_1	Harp Seal	Mammal	July	

Figure 11: Polar Bear Areas of Occupation

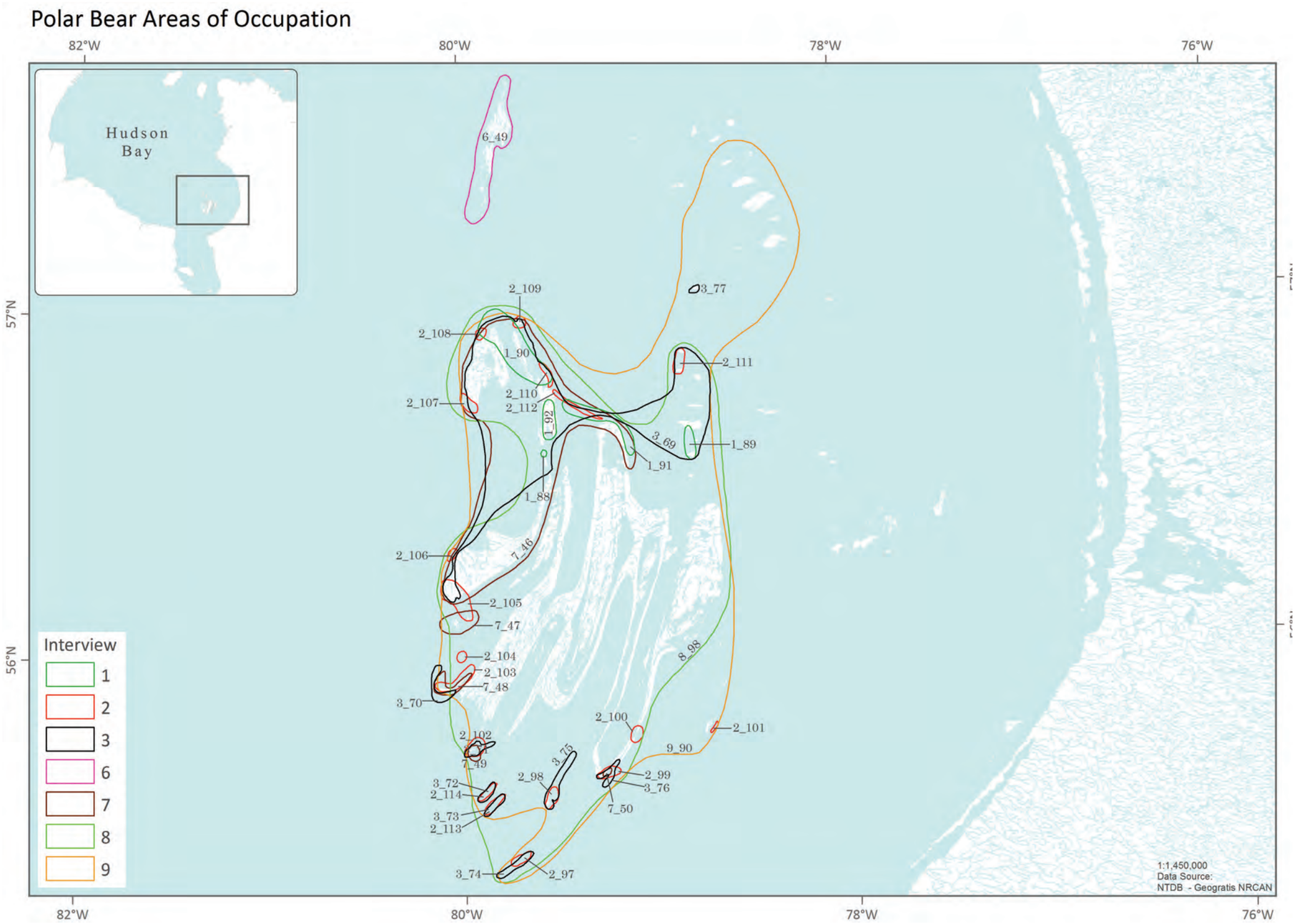


Table 8: Polar Bear Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_88	SANI_1_0211	PB_1	Polar Bear	Mammal	September to November	Polar bears in this area are hungry and unafraid of humans
1_89	SANI_1_0211	PB_2	Polar Bear	Mammal	December to March	
1_90	SANI_1_0211	PB_3	Polar Bear	Mammal	December to March	
1_91	SANI_1_0211	PB_4	Polar Bear	Mammal	December to March	
1_92	SANI_1_0211	PB_5	Polar Bear	Mammal	September to November	
2_100	SANI_2_0211	PB_4	Polar Bear	Mammal	December to March	
2_101	SANI_2_0211	PB_5	Polar Bear	Mammal	December to March	
2_102	SANI_2_0211	PB_6	Polar Bear	Mammal	December to March	
2_103	SANI_2_0211	PB_7	Polar Bear	Mammal	December to March	
2_104	SANI_2_0211	PB_8	Polar Bear	Mammal	December to March	
2_105	SANI_2_0211	PB_9	Polar Bear	Mammal	December to March	
2_106	SANI_2_0211	PB_10	Polar Bear	Mammal	December to March	
2_107	SANI_2_0211	PB_11	Polar Bear	Mammal	December to March	
2_108	SANI_2_0211	PB_12	Polar Bear	Mammal	December to March	
2_109	SANI_2_0211	PB_13	Polar Bear	Mammal	December to March	
2_110	SANI_2_0211	PB_14	Polar Bear	Mammal	December to March	
2_111	SANI_2_0211	PB_15	Polar Bear	Mammal	December to March	
2_112	SANI_2_0211	PB_16	Polar Bear	Mammal	December to March	
2_113	SANI_2_0211	PB_17	Polar Bear	Mammal	December to March	The ice is dangerous in this area
2_114	SANI_2_0211	PB_18	Polar Bear	Mammal	December to March	The ice is dangerous in this area
2_97	SANI_2_0211	PB_1	Polar Bear	Mammal	December to March	
2_98	SANI_2_0211	PB_2	Polar Bear	Mammal	December to March	
2_99	SANI_2_0211	PB_3	Polar Bear	Mammal	December to March	
3_69	SANI_3_0211	PB_1	Polar Bear	Mammal	December to March	
3_70	SANI_3_0211	PB_2	Polar Bear	Mammal	December to March	
3_71	SANI_3_0211	PB_3	Polar Bear	Mammal	December to March	
3_72	SANI_3_0211	PB_4	Polar Bear	Mammal	December to March	
3_73	SANI_3_0211	PB_5	Polar Bear	Mammal	December to March	
3_74	SANI_3_0211	PB_6	Polar Bear	Mammal	December to March	
3_75	SANI_3_0211	PB_7	Polar Bear	Mammal	December to March	
3_76	SANI_3_0211	PB_8	Polar Bear	Mammal	December to March	
3_77	SANI_3_0211	PB_9	Polar Bear	Mammal	December to March	
6_49	SANI_6_0211	PB_1	Polar Bear	Mammal	July to September	
7_46	SANI_7_0211	PB_1	Polar Bear	Mammal	December to March	
7_47	SANI_7_0211	PB_2	Polar Bear	Mammal	December to March	
7_48	SANI_7_0211	PB_3	Polar Bear	Mammal	December to March	
7_49	SANI_7_0211	PB_4	Polar Bear	Mammal	December to March	
7_50	SANI_7_0211	PB_5	Polar Bear	Mammal	December to March	
8_98	SANI_8_0211	PB_1	Polar Bear	Mammal	February and March	
9_90	SANI_9_0211	PB_2	Polar Bear	Mammal	February and March	

Figure 12: Ringed Seal Areas of Occupation

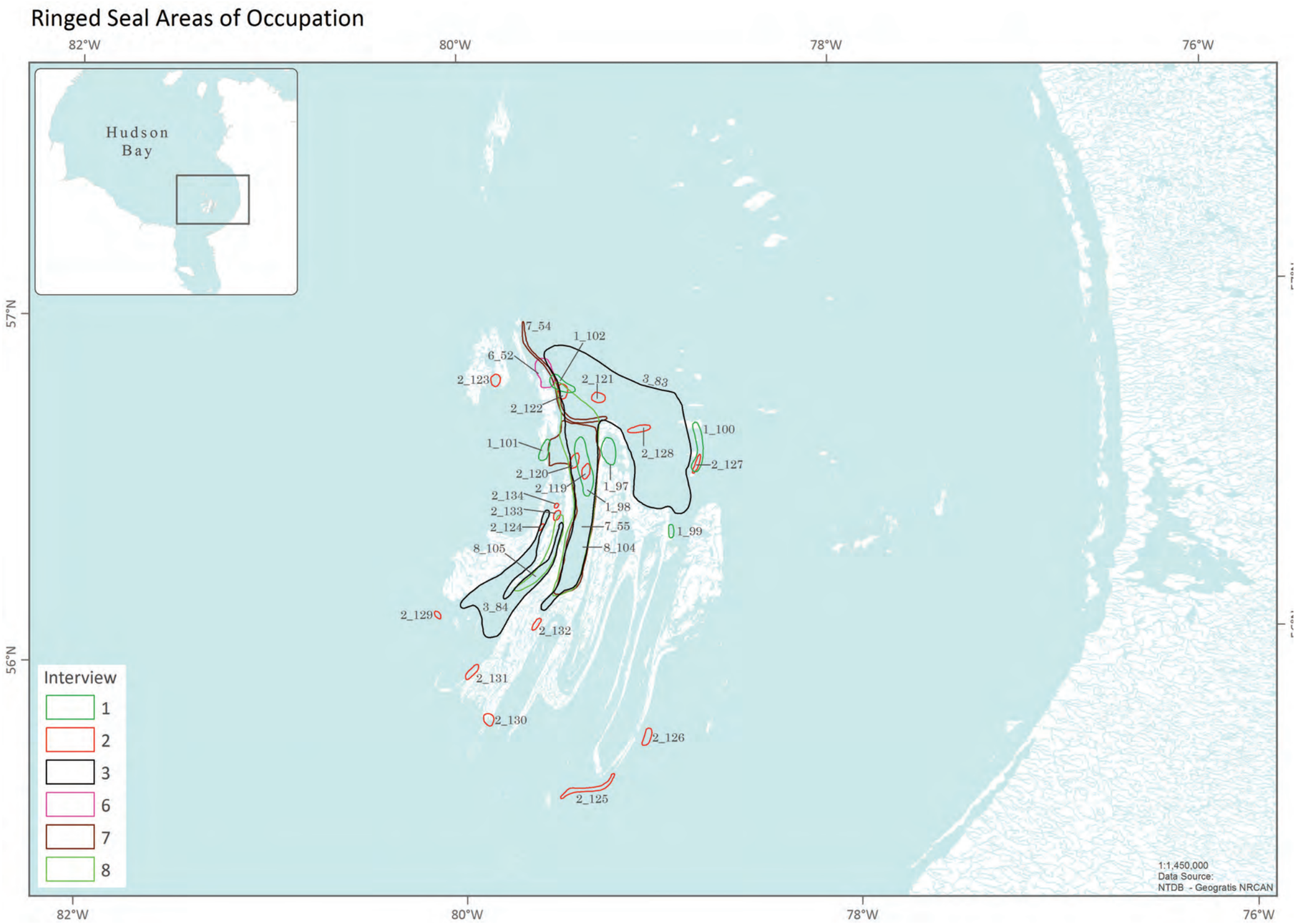


Table 9: Ringed Seal Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_100	SANI_1_0211	RS_4	Ringed Seal	Mammal	December to March	
1_101	SANI_1_0211	RS_5	Ringed Seal	Mammal	June to August	
1_102	SANI_1_0211	RS_6	Ringed Seal	Mammal	December to March, June to August	
1_97	SANI_1_0211	RS_1	Ringed Seal	Mammal	April, May, September to November	
1_98	SANI_1_0211	RS_2	Ringed Seal	Mammal	June to August	
1_99	SANI_1_0211	RS_3	Ringed Seal	Mammal	December to March	
2_119	SANI_2_0211	RS_2	Ringed Seal	Mammal	August to October	
2_120	SANI_2_0211	RS_3	Ringed Seal	Mammal	August to October	
2_121	SANI_2_0211	RS_4	Ringed Seal	Mammal	August to October	
2_122	SANI_2_0211	RS_5	Ringed Seal	Mammal	August to October	
2_123	SANI_2_0211	RS_6	Ringed Seal	Mammal	August to October	
2_124	SANI_2_0211	RS_7	Ringed Seal	Mammal	August to October	
2_125	SANI_2_0211	RS_8	Ringed Seal	Mammal	December to March	The ice is dangerous in the area
2_126	SANI_2_0211	RS_9	Ringed Seal	Mammal	December to March	
2_127	SANI_2_0211	RS_10	Ringed Seal	Mammal	December to March	
2_128	SANI_2_0211	RS_11	Ringed Seal	Mammal	December to March	
2_129	SANI_2_0211	RS_12	Ringed Seal	Mammal	December to March	
2_130	SANI_2_0211	RS_13	Ringed Seal	Mammal	August to October	
2_131	SANI_2_0211	RS_14	Ringed Seal	Mammal	August to October	
2_132	SANI_2_0211	RS_15	Ringed Seal	Mammal	August to October	Hunt seals in this area when the ice is just starting to freeze up
2_133	SANI_2_0211	RS_16	Ringed Seal	Mammal	August to October	Hunt seals in this area when the ice is just starting to freeze up
2_134	SANI_2_0211	RS_17	Ringed Seal	Mammal	August to October	
3_83	SANI_3_0211	RS_1	Ringed Seal	Mammal	August to October	The seals feed on shrimp in the area
3_84	SANI_3_0211	RS_2	Ringed Seal	Mammal	August to October	
6_52	SANI_6_0211	RS_2	Ringed Seal	Mammal	April to June	
7_54	SANI_7_0211	RS_2	Ringed Seal	Mammal	December to March	Seal hunting at the floe edge
7_55	SANI_7_0211	RS_3	Ringed Seal	Mammal	December to May	Seal hunting in breathing holes
8_104	SANI_8_0211	RS_2	Ringed Seal	Mammal	December to March	Hunt seals in breathing holes during winter and on the ice during spring
8_105	SANI_8_0211	RS_3	Ringed Seal	Mammal	December to March	

Figure 13: Walrus Areas of Occupation

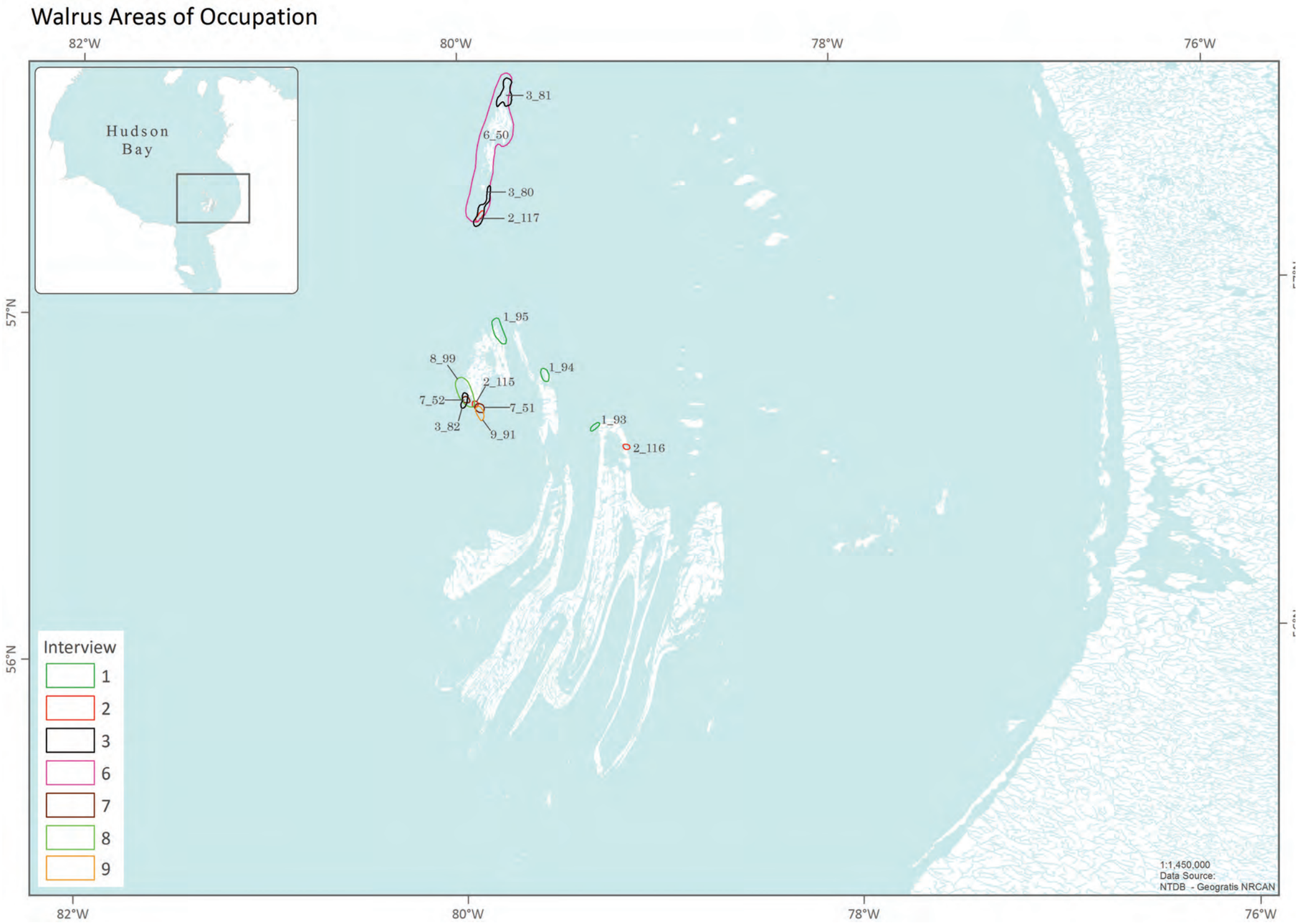


Table 10: Walrus Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_93	SANI_1_0211	Wal_1	Walrus	Mammal	June to November	He only saw one here in the past
1_94	SANI_1_0211	Wal_2	Walrus	Mammal	June to November	
1_95	SANI_1_0211	Wal_3	Walrus	Mammal	June to November	
2_115	SANI_2_0211	Wal_1	Walrus	Mammal	June to September	Haul out area
2_116	SANI_2_0211	Wal_2	Walrus	Mammal	June to September	Has seen them in the area once in a while
2_117	SANI_2_0211	Wal_3	Walrus	Mammal	June to September	Walrus' are usually in this area, but he hasn't been there lately
3_80	SANI_3_0211	Wal_1	Walrus	Mammal	September and October	
3_81	SANI_3_0211	Wal_2	Walrus	Mammal	September and October	
3_82	SANI_3_0211	Wal_3	Walrus	Mammal	September and October	
6_50	SANI_6_0211	Wal_1	Walrus	Mammal	July to September	
7_51	SANI_7_0211	Wal_1	Walrus	Mammal	October	
7_52	SANI_7_0211	Wal_2	Walrus	Mammal	October	
8_99	SANI_8_0211	Wal_1	Walrus	Mammal	July to October	
9_91	SANI_9_0211	Wal_1	Walrus	Mammal	October	

Figure 14: Hollow Stemmed Kelp, Edible Kelp, Dulse, Sea Colander, Sea Lungwort, Spiny Sour Weed Areas of Occupation

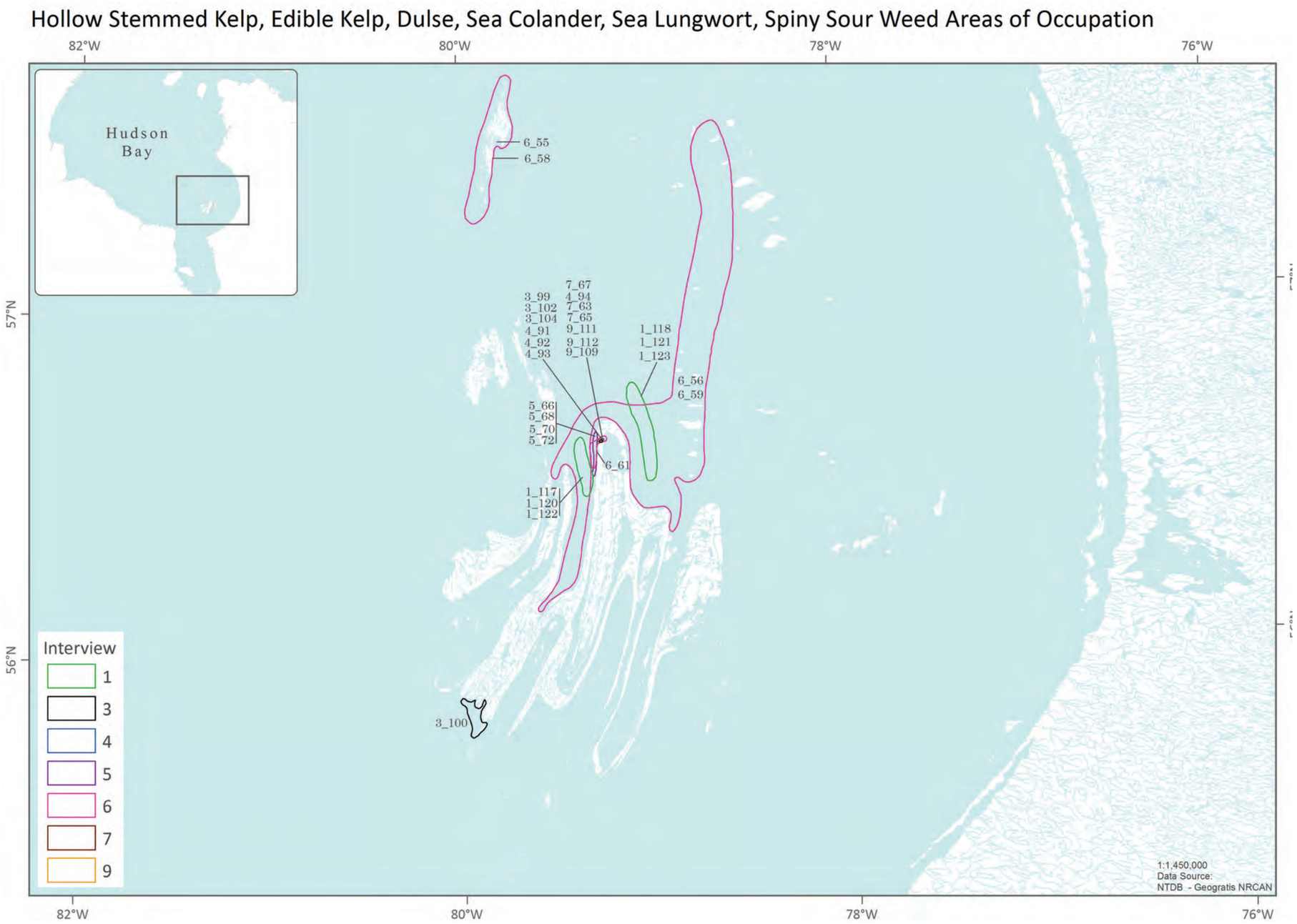


Table 11: Hollow Stemmed Kelp, Edible Kelp, Dulse, Sea Colander, Sea Lungwort, Spiny Sour Weed Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_117	SANI_1_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	August and September	Found with RS_1 near Kataapik. Found washed up on shore after a strong wind
1_118	SANI_1_0211	HSK_2	Hollow Stemmed Kelp	Marine Plant	August and September	
1_120	SANI_1_0211	EK_1	Edible Kelp	Marine Plant	June to September	Often caught in fish nets
1_121	SANI_1_0211	EK_2	Edible Kelp	Marine Plant	June to September	
1_122	SANI_1_0211	Scol_1	Sea Colander	Marine Plant	June to September	
1_123	SANI_1_0211	Scol_2	Sea Colander	Marine Plant	June to September	
3_100	SANI_3_0211	HSK_2	Hollow Stemmed Kelp	Marine Plant	All year	
3_102	SANI_3_0211	EK_1	Edible Kelp	Marine Plant	All year	
3_104	SANI_3_0211	Dul_1	Dulse	Marine Plant	All year	
3_99	SANI_3_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	All year	
4_91	SANI_4_0211	SCol_1	Sea Colander	Marine Plant	July to September	
4_92	SANI_4_0211	EK_1	Edible Kelp	Marine Plant	July to September	
4_93	SANI_4_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	All year	
4_94	SANI_4_0211	SLW_1	Sea Lungwort	Marine Plant	July to September	
5_66	SANI_5_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	September and October	Found washed up on shore
5_68	SANI_5_0211	EK_1	Edible Kelp	Marine Plant	September and October	Found washed up on shore
5_70	SANI_5_0211	SSW_1	Spiny Sour Weed	Marine Plant	All year	Found mostly in the summer
5_72	SANI_5_0211	SLW_1	Sea Lungwort	Marine Plant	July to September	
6_55	SANI_6_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	All year	
6_56	SANI_6_0211	HSK_2	Hollow Stemmed Kelp	Marine Plant	All year	
6_58	SANI_6_0211	EK_1	Edible Kelp	Marine Plant	All year	
6_59	SANI_6_0211	EK_2	Edible Kelp	Marine Plant	All year	
6_61	SANI_6_0211	Scol_1	Sea Colander	Marine Plant	All year	
7_63	SANI_7_0211	HSK_1	Hollow Stemmed Kelp	Marine Plant	All year	
7_65	SANI_7_0211	EK_1	Edible Kelp	Marine Plant	All year	
7_67	SANI_7_0211	Scol_1	Sea Colander	Marine Plant	All year	
9_109	SANI_9_0211	HSK_2	Hollow Stemmed Kelp	Marine Plant	June to October	Found in areas with strong currents
9_111	SANI_9_0211	EK_2	Edible Kelp	Marine Plant	June to October	Found in areas with strong currents
9_112	SANI_9_0211	Scol_2	Sea Colander	Marine Plant	June to October	Found in areas with strong currents

Figure 15: Alpine Pondweed, Robbin's Pondweed, Variableleaf Pondweed, Whitestem Pondweed Areas of Occupation

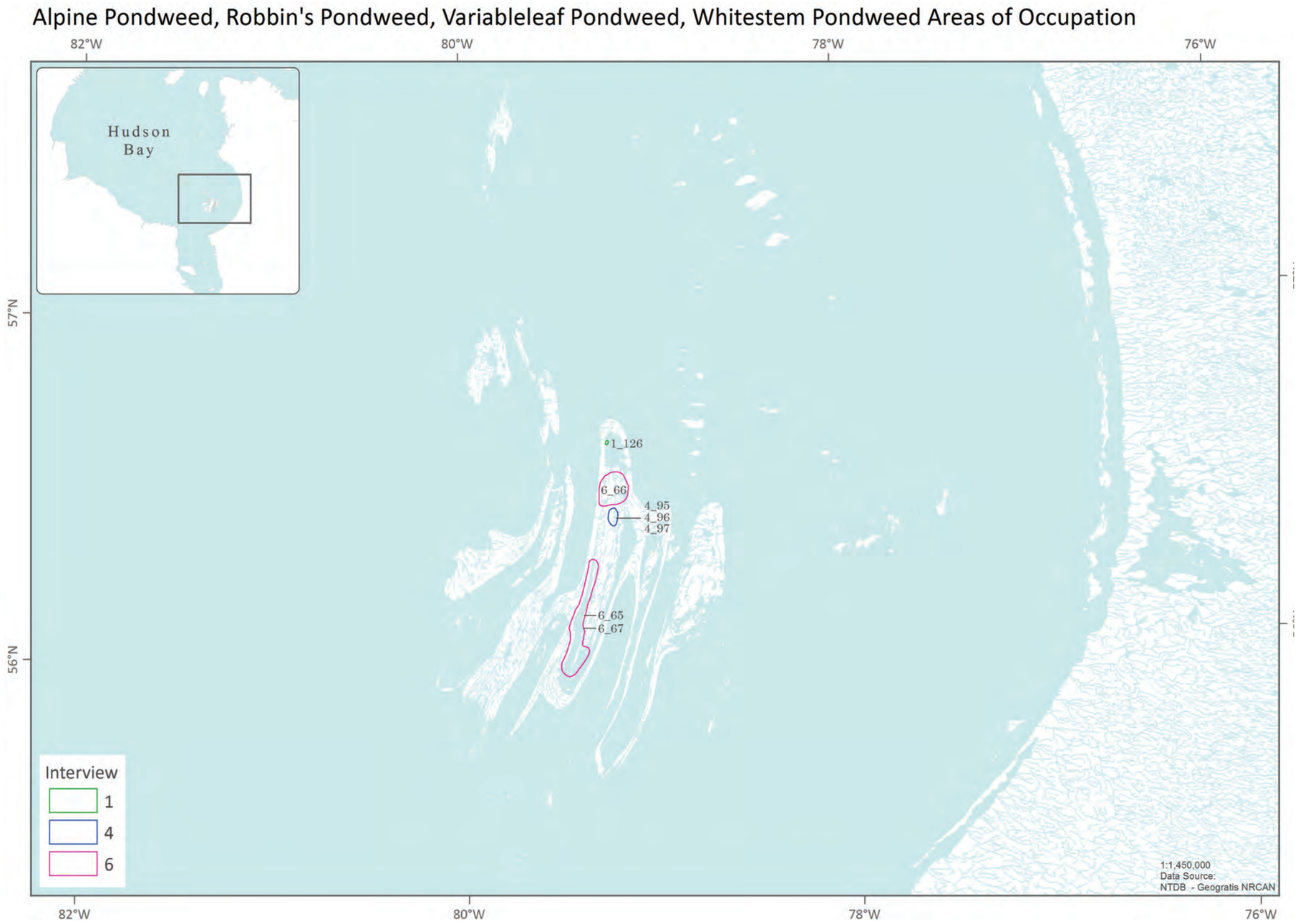


Table 12: Alpine Pondweed, Robbin's Pondweed, Variableleaf Pondweed, Whitestem Pondweed Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_126	SANI_1_0211	Vp_1	Variableleaf Pondweed	Marine Plant	June to August	Lots in this area
4_95	SANI_4_0211	WP_1	Whitestem Pondweed	Marine Plant	July to September	
4_96	SANI_4_0211	RP_1	Robbin's Pondweed	Marine Plant	July to September	
4_97	SANI_4_0211	APw_1	Alpine Pondweed	Marine Plant	July to September	
6_65	SANI_6_0211	WP_1	Whitestem Pondweed	Marine Plant	April to August	
6_66	SANI_6_0211	WP_2	Whitestem Pondweed	Marine Plant	April to August	
6_67	SANI_6_0211	RP_1	Robbin's Pondweed	Marine Plant	April to August	
6_68	SANI_6_0211	RP_2	Robbin's Pondweed	Marine Plant	April to August	

Figure 16: Cackling Goose, Ross' Goose, Snow Goose Areas of Occupation

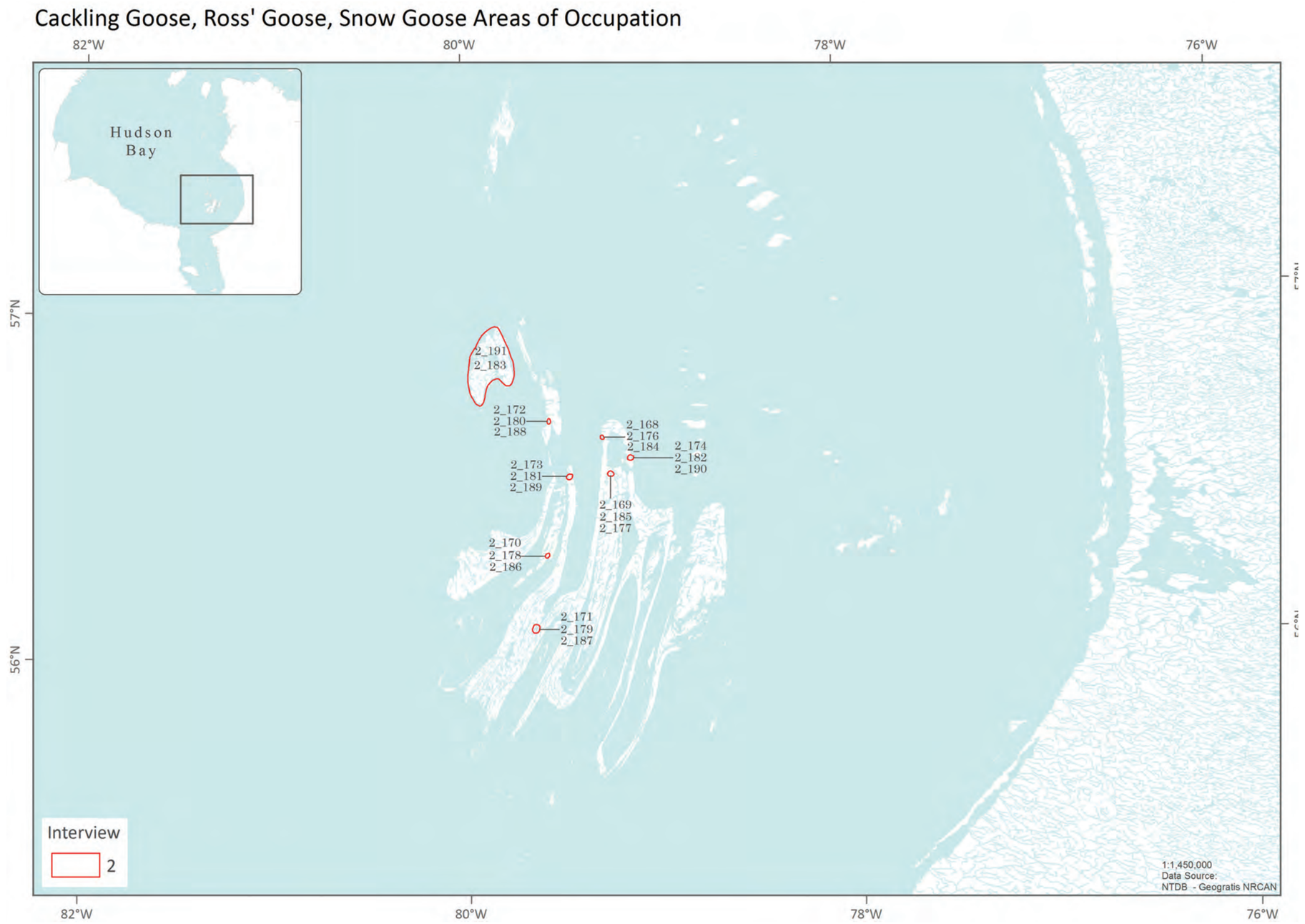


Table 13: Cackling Goose, Ross' Goose, Snow Goose Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_168	SANI_2_0211	SNGO_1	Snow Goose	Bird	June	
2_169	SANI_2_0211	SNGO_2	Snow Goose	Bird	June	
2_170	SANI_2_0211	SNGO_3	Snow Goose	Bird	June	
2_171	SANI_2_0211	SNGO_4	Snow Goose	Bird	June	
2_172	SANI_2_0211	SNGO_5	Snow Goose	Bird	June	
2_173	SANI_2_0211	SNGO_6	Snow Goose	Bird	June	
2_174	SANI_2_0211	SNGO_7	Snow Goose	Bird	June	
2_176	SANI_2_0211	ROGO_1	Ross' Goose	Bird	June	
2_177	SANI_2_0211	ROGO_2	Ross' Goose	Bird	June	
2_178	SANI_2_0211	ROGO_3	Ross' Goose	Bird	June	
2_179	SANI_2_0211	ROGO_4	Ross' Goose	Bird	June	
2_180	SANI_2_0211	ROGO_5	Ross' Goose	Bird	June	
2_181	SANI_2_0211	ROGO_6	Ross' Goose	Bird	June	
2_182	SANI_2_0211	ROGO_7	Ross' Goose	Bird	June	
2_183	SANI_2_0211	ROGO_8	Ross' Goose	Bird	June	
2_184	SANI_2_0211	CACG_1	Cackling Goose	Bird	June	
2_185	SANI_2_0211	CACG_2	Cackling Goose	Bird	June	
2_186	SANI_2_0211	CACG_3	Cackling Goose	Bird	June	
2_187	SANI_2_0211	CACG_4	Cackling Goose	Bird	June	
2_188	SANI_2_0211	CACG_5	Cackling Goose	Bird	June	
2_189	SANI_2_0211	CACG_6	Cackling Goose	Bird	June	
2_190	SANI_2_0211	CACG_7	Cackling Goose	Bird	June	
2_191	SANI_2_0211	CACG_8	Cackling Goose	Bird	June	

Figure 17: Common Eider, King Eider, Greater Scaup Areas of Occupation

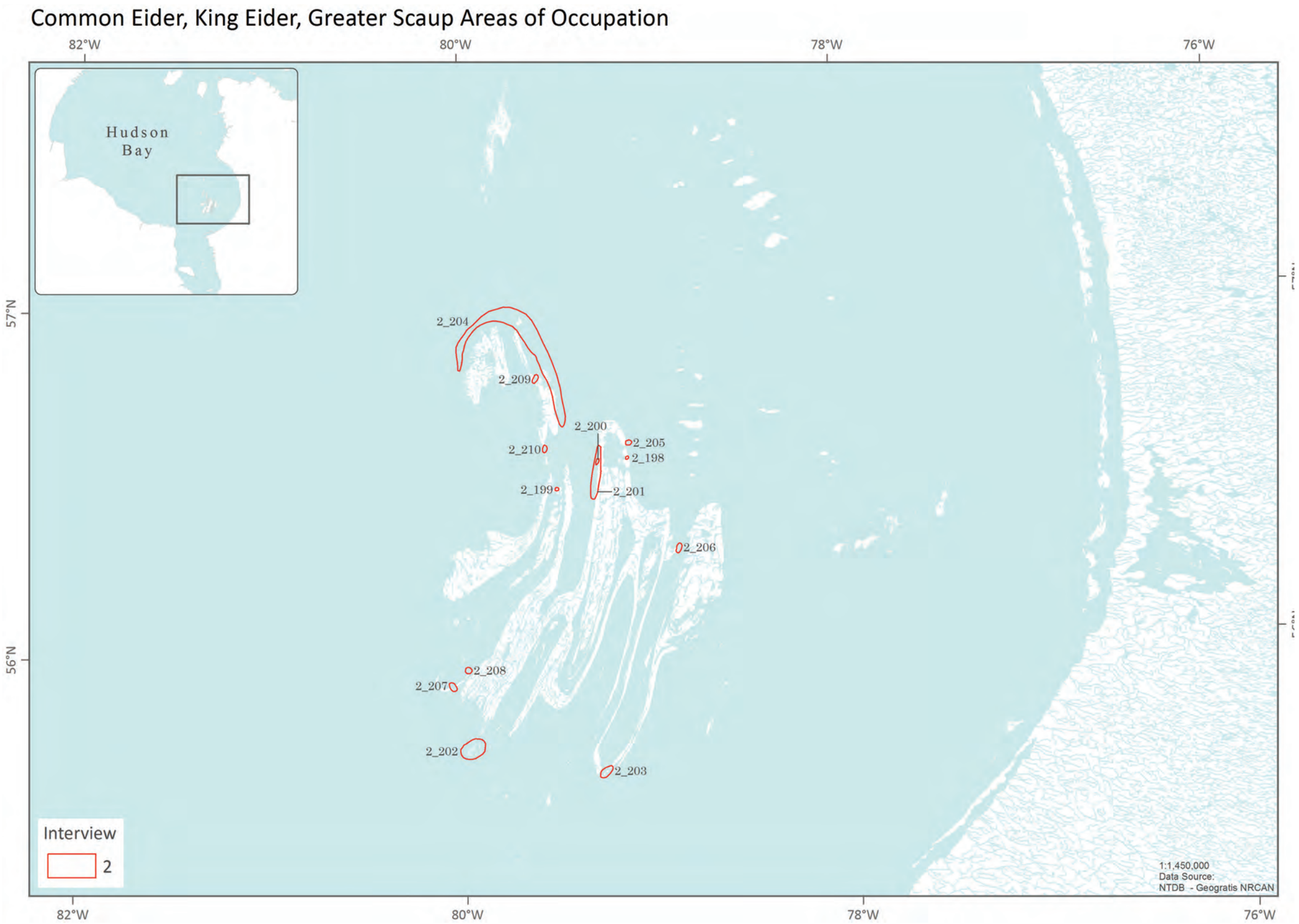


Table 14: Common Eider, King Eider, Greater Scaup Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_198	SANI_2_0211	GRSC_1	Greater Scaup	Bird	June to August	Feed in saltwater, go to freshwater to drink and rest
2_199	SANI_2_0211	GRSC_2	Greater Scaup	Bird	June to August	Feeding area
2_200	SANI_2_0211	GRSC_3	Greater Scaup	Bird	June to August	
2_201	SANI_2_0211	KIEI_1	King Eider	Bird	September to November	Occasionally shoot in the fall, not many in the area and the king eider do not nest here
2_202	SANI_2_0211	COEI_1	Common Eider	Bird	December to March	Nest here in the polynyas
2_203	SANI_2_0211	COEI_2	Common Eider	Bird	December to March	Nest here in the polynyas
2_204	SANI_2_0211	COEI_3	Common Eider	Bird	December to March	Found feeding along the floe edge
2_205	SANI_2_0211	COEI_4	Common Eider	Bird	December to March	
2_206	SANI_2_0211	COEI_5	Common Eider	Bird	December to March	Nesting in the area
2_207	SANI_2_0211	COEI_6	Common Eider	Bird	December to March	Nesting in the area
2_208	SANI_2_0211	COEI_7	Common Eider	Bird	December to March	
2_209	SANI_2_0211	COEI_8	Common Eider	Bird	December to March	
2_210	SANI_2_0211	COEI_9	Common Eider	Bird	December to March	

Figure 18: American Black Duck, Common Merganser, Long-Tailed Duck, Surf Scoter Areas of Occupation

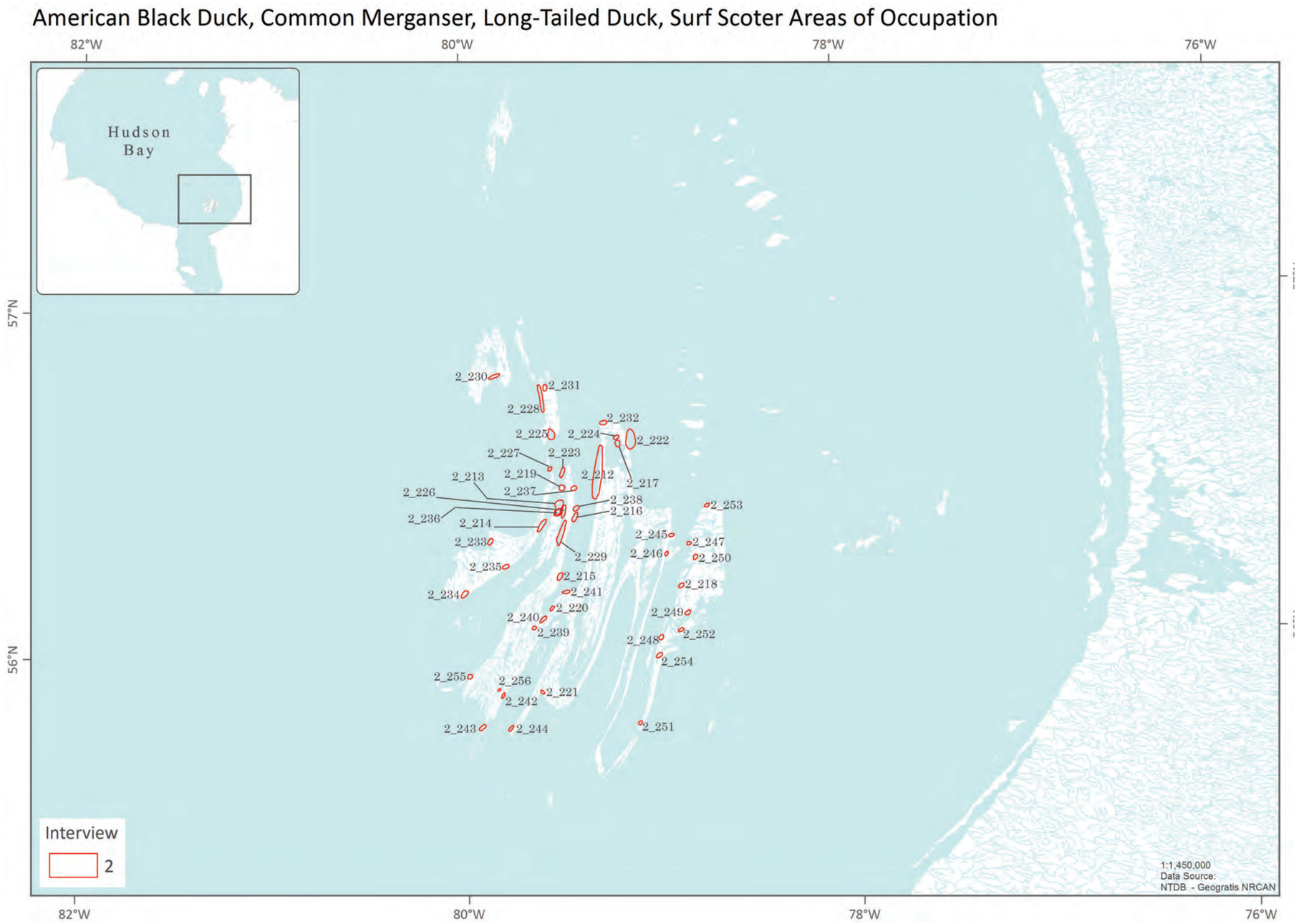


Table 15: American Black Duck, Common Merganser, Long-Tailed Duck, Surf Scoter Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_212	SANI_2_0211	SUSC_1	Surf Scoter	Bird	June to October	Molting happens on the islands
2_213	SANI_2_0211	SUSC_2	Surf Scoter	Bird	June to October	Molting happens on the islands
2_214	SANI_2_0211	SUSC_3	Surf Scoter	Bird	June to October	Molting happens on the islands
2_215	SANI_2_0211	SUSC_4	Surf Scoter	Bird	June to October	Molting happens on the islands
2_216	SANI_2_0211	SUSC_5	Surf Scoter	Bird	June to October	Molting happens on the islands
2_217	SANI_2_0211	SUSC_6	Surf Scoter	Bird	June to October	Molting happens on the islands
2_218	SANI_2_0211	ABDU_1	American Black Duck	Bird	June and July	
2_219	SANI_2_0211	ABDU_2	American Black Duck	Bird	June and July	
2_220	SANI_2_0211	ABDU_3	American Black Duck	Bird	June and July	
2_221	SANI_2_0211	ABDU_4	American Black Duck	Bird	June and July	
2_222	SANI_2_0211	LTDU_1	Long-Tailed Duck	Bird	August to October	A lot here in the fall
2_223	SANI_2_0211	LTDU_2	Long-Tailed Duck	Bird	August to October	Nest everywhere
2_224	SANI_2_0211	LTDU_3	Long-Tailed Duck	Bird	August to October	Nest everywhere
2_225	SANI_2_0211	LTDU_4	Long-Tailed Duck	Bird	August to October	Nest everywhere
2_226	SANI_2_0211	LTDU_5	Long-Tailed Duck	Bird	August to October	Nest everywhere
2_227	SANI_2_0211	LTDU_6	Long-Tailed Duck	Bird	August to October	Nest everywhere
2_228	SANI_2_0211	COME_1	Common Merganser	Bird	June to October	A lot here during molting season
2_229	SANI_2_0211	COME_2	Common Merganser	Bird	June to October	A lot here during molting season
2_230	SANI_2_0211	COME_3	Common Merganser	Bird	June to October	A lot here during molting season
2_231	SANI_2_0211	COME_4	Common Merganser	Bird	June to October	A lot here during molting season
2_232	SANI_2_0211	COME_5	Common Merganser	Bird	June to October	A lot here during molting season
2_233	SANI_2_0211	COME_6	Common Merganser	Bird	June to October	A lot here during molting season
2_234	SANI_2_0211	COME_7	Common Merganser	Bird	June to October	A lot here during molting season
2_235	SANI_2_0211	COME_8	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_236	SANI_2_0211	COME_9	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas

Table 15: American Black Duck, Common Merganser, Long-Tailed Duck, Surf Scoter Areas of Occupation (continued)

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_237	SANI_2_0211	COME_10	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_238	SANI_2_0211	COME_11	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_239	SANI_2_0211	COME_12	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_240	SANI_2_0211	COME_13	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_241	SANI_2_0211	COME_14	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_242	SANI_2_0211	COME_15	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_243	SANI_2_0211	COME_16	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_244	SANI_2_0211	COME_17	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_245	SANI_2_0211	COME_18	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_246	SANI_2_0211	COME_19	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_247	SANI_2_0211	COME_20	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_248	SANI_2_0211	COME_21	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_249	SANI_2_0211	COME_22	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_250	SANI_2_0211	COME_23	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_251	SANI_2_0211	COME_24	Common Merganser	Bird	June to October	These birds are found everywhere, but often molt in these areas
2_252	SANI_2_0211	COME_25	Common Merganser	Bird	June to October	
2_253	SANI_2_0211	COME_26	Common Merganser	Bird	June to October	
2_254	SANI_2_0211	COME_27	Common Merganser	Bird	June to October	
2_255	SANI_2_0211	COME_28	Common Merganser	Bird	June to October	
2_256	SANI_2_0211	COME_29	Common Merganser	Bird	June to October	

Figure 19: Rock Ptarmigan, Tundra Swan Areas of Occupation

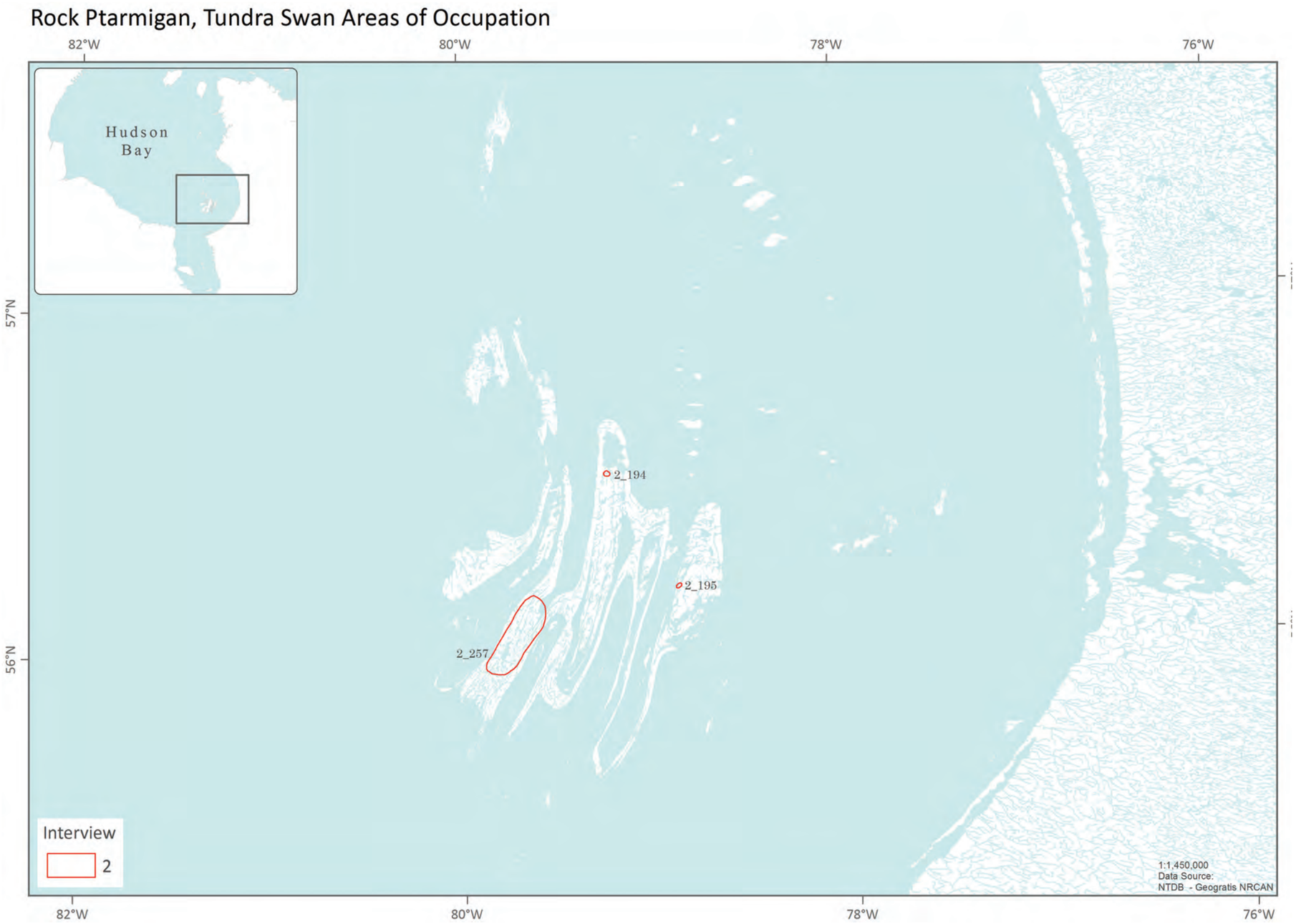


Table 16: Rock Ptarmigan, Tundra Swan Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_194	SANI_2_0211	TUSW_2	Tundra Swan	Bird	June	
2_195	SANI_2_0211	TUSW_3	Tundra Swan	Bird	June	Nesting site
2_257	SANI_2_0211	ROPT_1	Rock Ptarmigan	Bird	All year	They don't go on the islands as much as they used to

Figure 20: Historic Areas of Occupation - Invertebrates

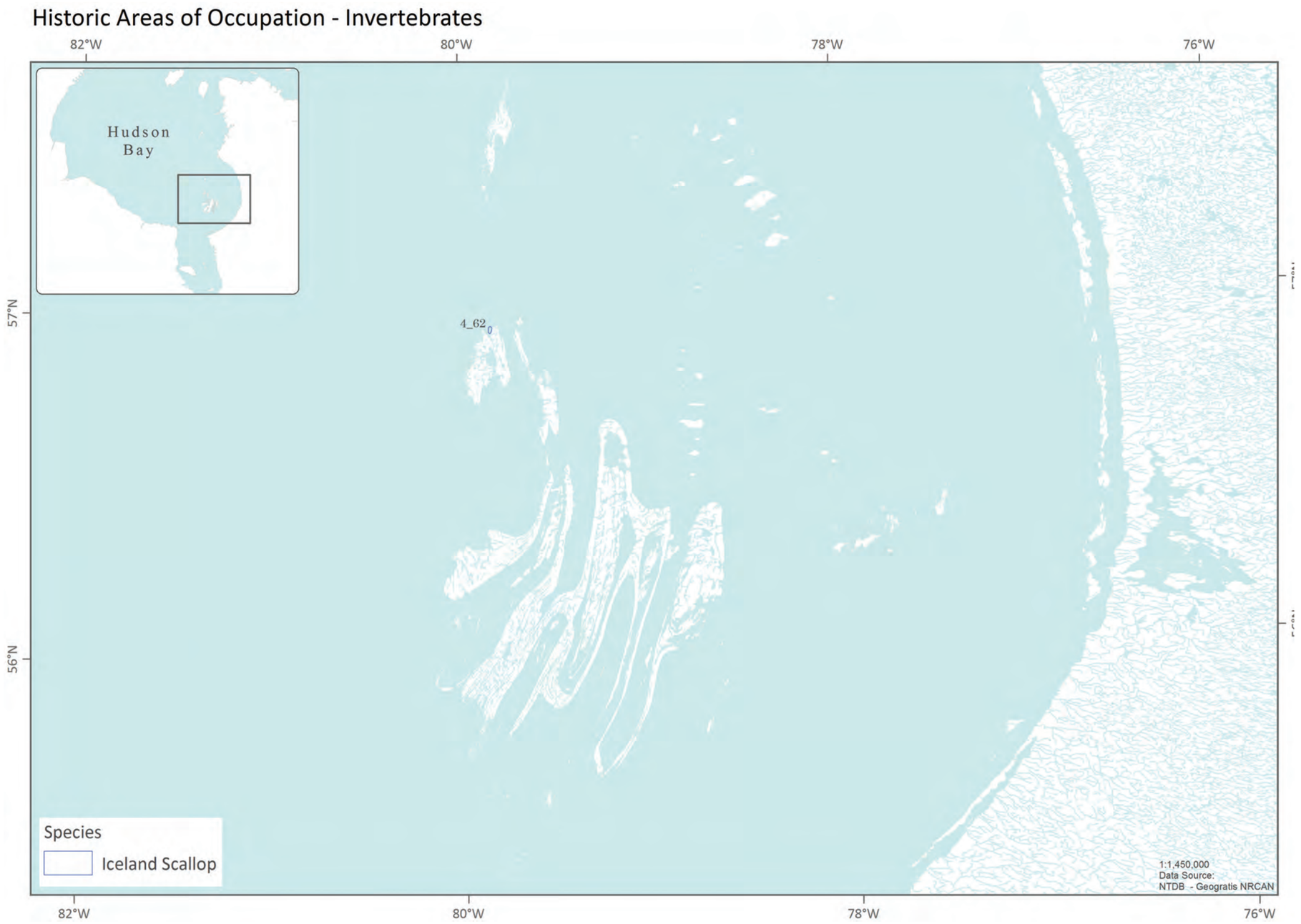


Table 17: Historic Areas of Occupation - Invertebrates

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
4_62	SANI_4_0211	Scal_1_H	Iceland Scallop	Invertebrate	All Year	

Figure 21: Historic Areas of Occupation - Marine Mammals

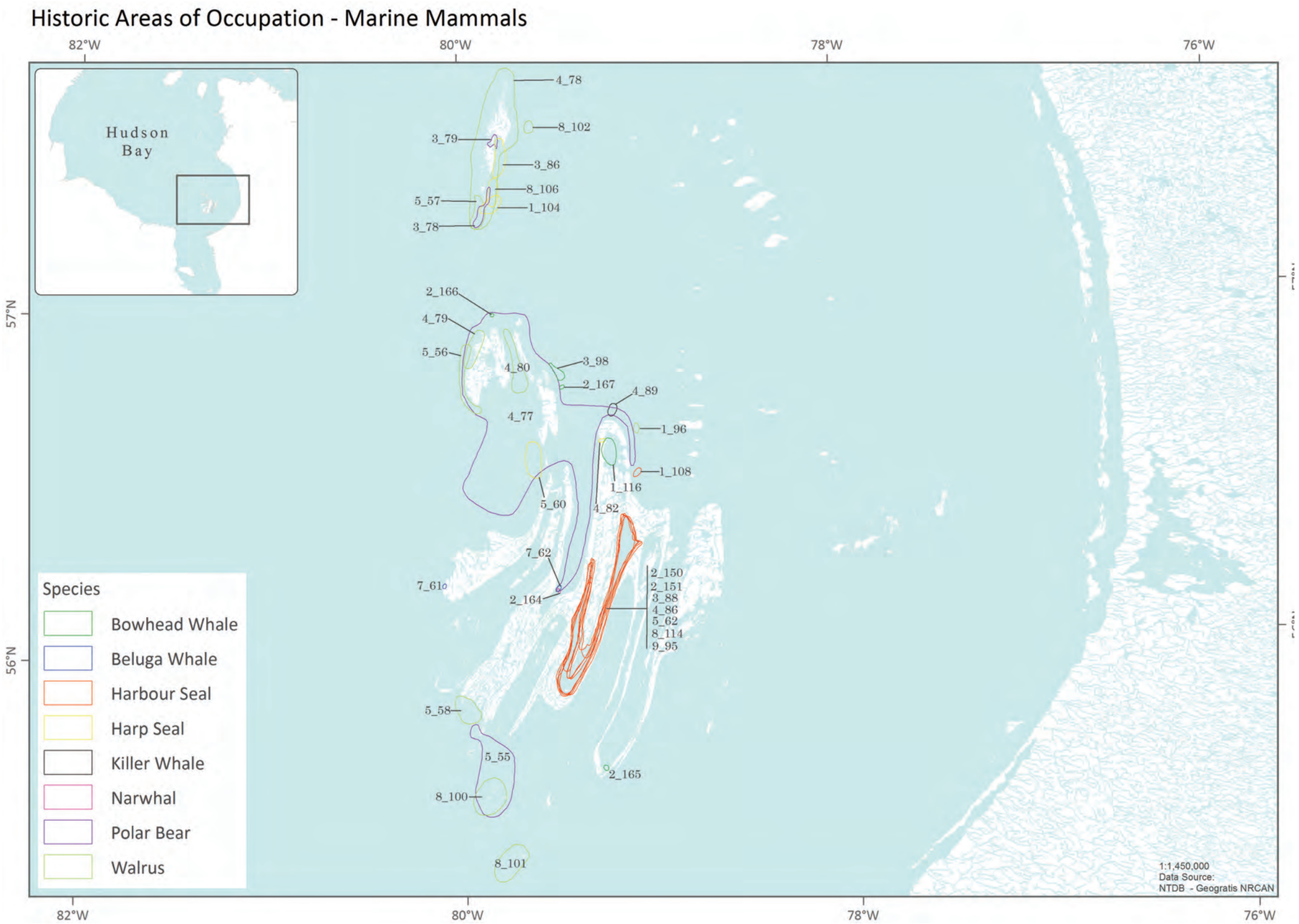


Table 18: Historic Areas of Occupation - Marine Mammals

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	YEAR	TIME OF YEAR	COMMENTS
1_104	SANI_1_0211	HS_1_H	Harp Seal	Marine Mammal		June to August	
1_108	SANI_1_0211	HBS_1_H	Harbour Seal	Marine Mammal		All year	
1_116	SANI_1_0211	BW_2_H	Bowhead Whale	Marine Mammal	<2000		
1_96	SANI_1_0211	Wal_4_H	Walrus	Marine Mammal		December to February	
2_150	SANI_2_0211	HbS_2_H	Harbour Seal	Marine Mammal		All year	These were freshwater seals that kept areas of the ice open during the winter. These seals are not seen often today.
2_151	SANI_2_0211	HbS_3_H	Harbour Seal	Marine Mammal		All year	These were freshwater seals that kept areas of the ice open during the winter. These seals are not seen often today.
2_164	SANI_2_0211	NW_1_H	Narwhal	Marine Mammal	1990's	December	He caught a young narwhal that was trapped in the ice here
2_165	SANI_2_0211	BW_1_H	Bowhead Whale	Marine Mammal		June to August	He saw a calf here but does not remember what year it was
2_166	SANI_2_0211	BW_2_H	Bowhead Whale	Marine Mammal		June to August	
2_167	SANI_2_0211	BW_3_H	Bowhead Whale	Marine Mammal		June to August	
3_78	SANI_3_0211	PB_10_H	Polar Bear	Marine Mammal		December to March	He hunted polar bears in this area in the 1970's
3_79	SANI_3_0211	PB_11_H	Polar Bear	Marine Mammal		December to March	He hunted polar bears in this area in the 1970's
3_86	SANI_3_0211	HS_1_H	Harp Seal	Marine Mammal		July to September	
3_88	SANI_3_0211	HbS_1_H	Harbour Seal	Marine Mammal	early 1980's	All year	The harbour seals were hunted out of the lake in the early 1980's because they were eating too much of the char supply
3_98	SANI_3_0211	BW_1_H	Bowhead Whale	Marine Mammal		July and August	
4_77	SANI_4_0211	PB_1_H	Polar Bear	Marine Mammal		November to March	
4_78	SANI_4_0211	Wal_1_H	Walrus	Marine Mammal		June to September	
4_79	SANI_4_0211	Wal_2_H	Walrus	Marine Mammal		June to September	
4_80	SANI_4_0211	Wal_3_H	Walrus	Marine Mammal		June to September	
4_82	SANI_4_0211	HS_1_H	Harp Seal	Marine Mammal		June to September	
4_86	SANI_4_0211	HbS_1_H	Harbour Seal	Marine Mammal		All year	
4_89	SANI_4_0211	KW_1_H	Killer Whale	Marine Mammal		July to September	
5_55	SANI_5_0211	PB_1_H	Polar Bear	Marine Mammal		November to March	
5_56	SANI_5_0211	Wal_1_H	Walrus	Marine Mammal		July to September	
5_57	SANI_5_0211	Wal_2_H	Walrus	Marine Mammal		July to September	
5_58	SANI_5_0211	Wal_3_H	Walrus	Marine Mammal		July to September	
5_60	SANI_5_0211	HS_1_H	Harp Seal	Marine Mammal		July to September	
5_62	SANI_5_0211	HbS_1_H	Harbour Seal	Marine Mammal		All year	
7_61	SANI_7_0211	Bel_3_H	Beluga Whale	Marine Mammal	1990's	January	
7_62	SANI_7_0211	Bel_4_H	Beluga Whale	Marine Mammal		December	Beluga were stuck in the ice in early winter
8_100	SANI_8_0211	Wal_2_H	Walrus	Marine Mammal		July to October	
8_101	SANI_8_0211	Wal_3_H	Walrus	Marine Mammal		July to October	
8_102	SANI_8_0211	Wal_4_H	Walrus	Marine Mammal		July to October	
8_106	SANI_8_0211	HS_1_H	Harp Seal	Marine Mammal			
8_114	SANI_8_0211	HbS_1_H	Harbour Seal	Marine Mammal		All year	Found in the lake in the 70's
9_95	SANI_9_0211	Hbs_1_H	Harbour Seal	Marine Mammal		All year	

Figure 22: Historic Areas of Occupation - Fish

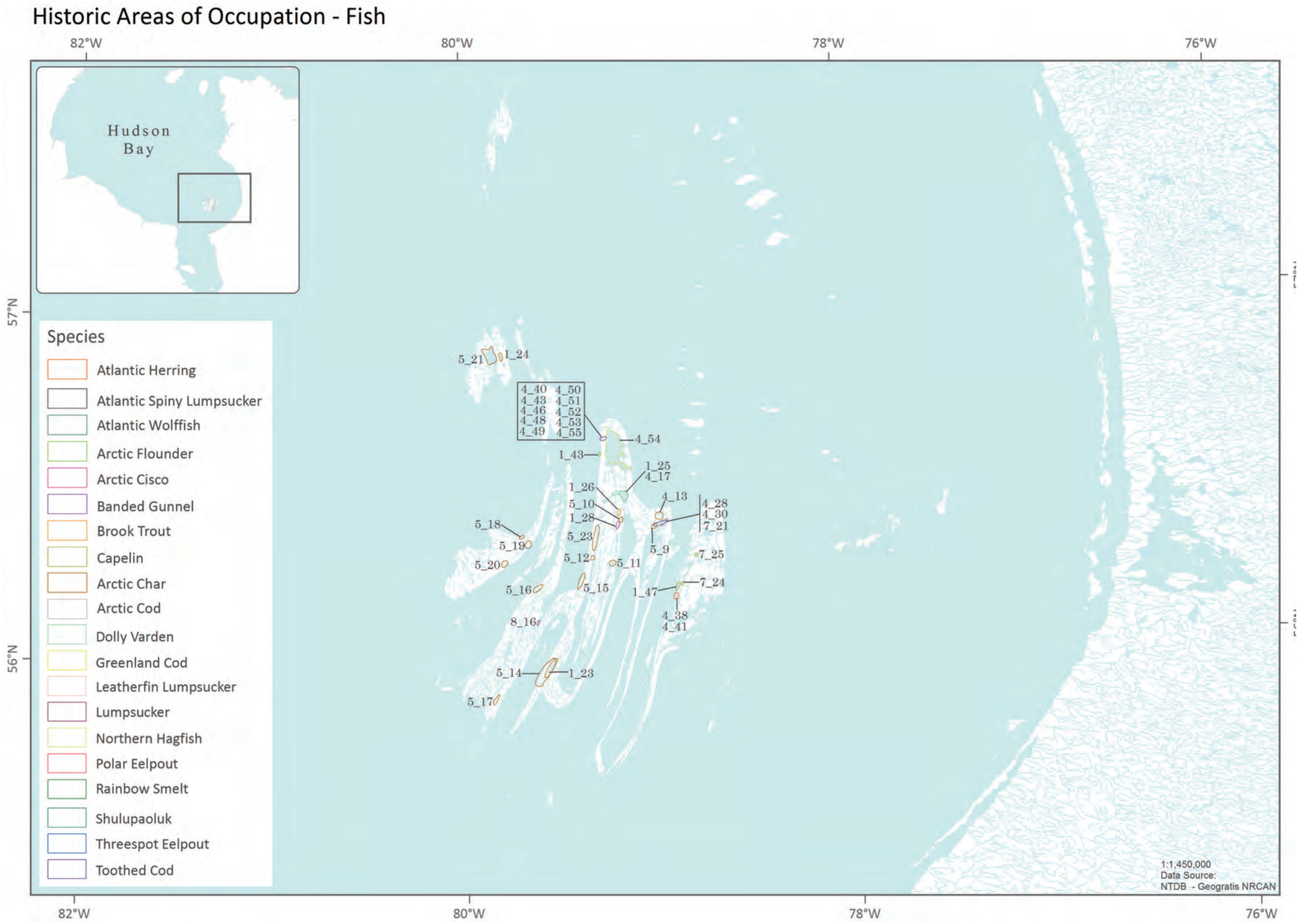


Table 19: Historic Areas of Occupation - Fish

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	YEAR	TIME OF YEAR	COMMENTS
1_23	SANI_1_0211	Char_8_H	Arctic Char	Fish	<1970	March to May	Fished in the area before 1970
1_24	SANI_1_0211	Char_9_H	Arctic Char	Fish	<2000	March to May	Caught a lot of fish one day and nothing the next
1_25	SANI_1_0211	DV_1_H	Dolly Varden	Fish	<2000	January, February, December	
1_26	SANI_1_0211	Btr_1_H	Brook Trout	Fish		March to May	
1_28	SANI_1_0211	Arcc_1_H	Arctic Cisco	Fish	<2000	March to May	Could also be Lake Whitefish, can not tell the difference
1_43	SANI_1_0211	Afl_1_H	Arctic Flounder	Fish	1980's	June to August	
1_47	SANI_1_0211	Cape_4_H	Capelin	Fish		April to June	People would catch a lot of capelin on the beach here
4_13	SANI_4_0211	Char_4_H	Arctic Char	Fish		April to June	
4_17	SANI_4_0211	DV_1_H	Dolly Varden	Fish		all year	
4_28	SANI_4_0211	Gcod_2_H	Greenland Cod	Fish		November to February	
4_30	SANI_4_0211	Tco_2_H	Toothed Cod	Fish		November to February	
4_38	SANI_4_0211	RBS_1_H	Rainbow Smelt	Fish		July and August	
4_40	SANI_4_0211	RBS_3_H	Rainbow Smelt	Fish		July and August	Might have moved because of noise pollution from boats
4_41	SANI_4_0211	AHerr_1_H	Atlantic Herring	Fish		July and August	
4_43	SANI_4_0211	AHerr_3_H	Atlantic Herring	Fish		July and August	Might have moved because of noise pollution from boats
4_46	SANI_4_0211	Shu_1_H	Shulupaoluk	Fish		June to September	
4_48	SANI_4_0211	PE_1_H	Polar Eelpout	Fish		June to September	
4_49	SANI_4_0211	TE_1_H	Threespot Eelpout	Fish		June to September	
4_50	SANI_4_0211	AWolf_1_H	Atlantic Wolffish	Fish		June to September	
4_51	SANI_4_0211	Lump_1_H	Lumpsucker	Fish		June to September	
4_52	SANI_4_0211	LL_1_H	Leatherfin Lumpsucker	Fish		June to September	
4_53	SANI_4_0211	ASL_1_H	Atlantic Spiny Lumpsucker	Fish		June to September	
4_54	SANI_4_0211	NHf_1_H	Northern Hagfish	Fish		June to September	
4_55	SANI_4_0211	BG_1_H	Banded Gunnel	Fish		June to September	
5_10	SANI_5_0211	Char_2_H	Arctic Char	Fish		April to September	
5_11	SANI_5_0211	Char_3_H	Arctic Char	Fish		April to September	
5_12	SANI_5_0211	Char_4_H	Arctic Char	Fish		April to September	
5_14	SANI_5_0211	Char_6_H	Arctic Char	Fish		April to September	
5_15	SANI_5_0211	Char_7_H	Arctic Char	Fish		April to September	
5_16	SANI_5_0211	Char_8_H	Arctic Char	Fish		April to September	
5_17	SANI_5_0211	Char_9_H	Arctic Char	Fish		April to September	
5_18	SANI_5_0211	Char_10_H	Arctic Char	Fish		April to September	
5_19	SANI_5_0211	Char_11_H	Arctic Char	Fish		April to September	
5_20	SANI_5_0211	Char_12_H	Arctic Char	Fish		April to September	
5_21	SANI_5_0211	Char_13_H	Arctic Char	Fish		April to September	
5_23	SANI_5_0211	Char_15_H	Arctic Char	Fish		July to September	
5_9	SANI_5_0211	Char_1_H	Arctic Char	Fish		April to September	
7_21	SANI_7_0211	Cod_3_H	Arctic Cod	Fish		November to March	
7_24	SANI_7_0211	Cape_1_H	Capelin	Fish		August	
7_25	SANI_7_0211	Cape_2_H	Capelin	Fish		August	
8_16	SANI_8_0211	Lump_1_H	Lumpsucker	Fish		October and November	

Figure 23: Arctic Cod, Atlantic Cod, Greenland Cod, Toothed Cod - Areas of Occupation

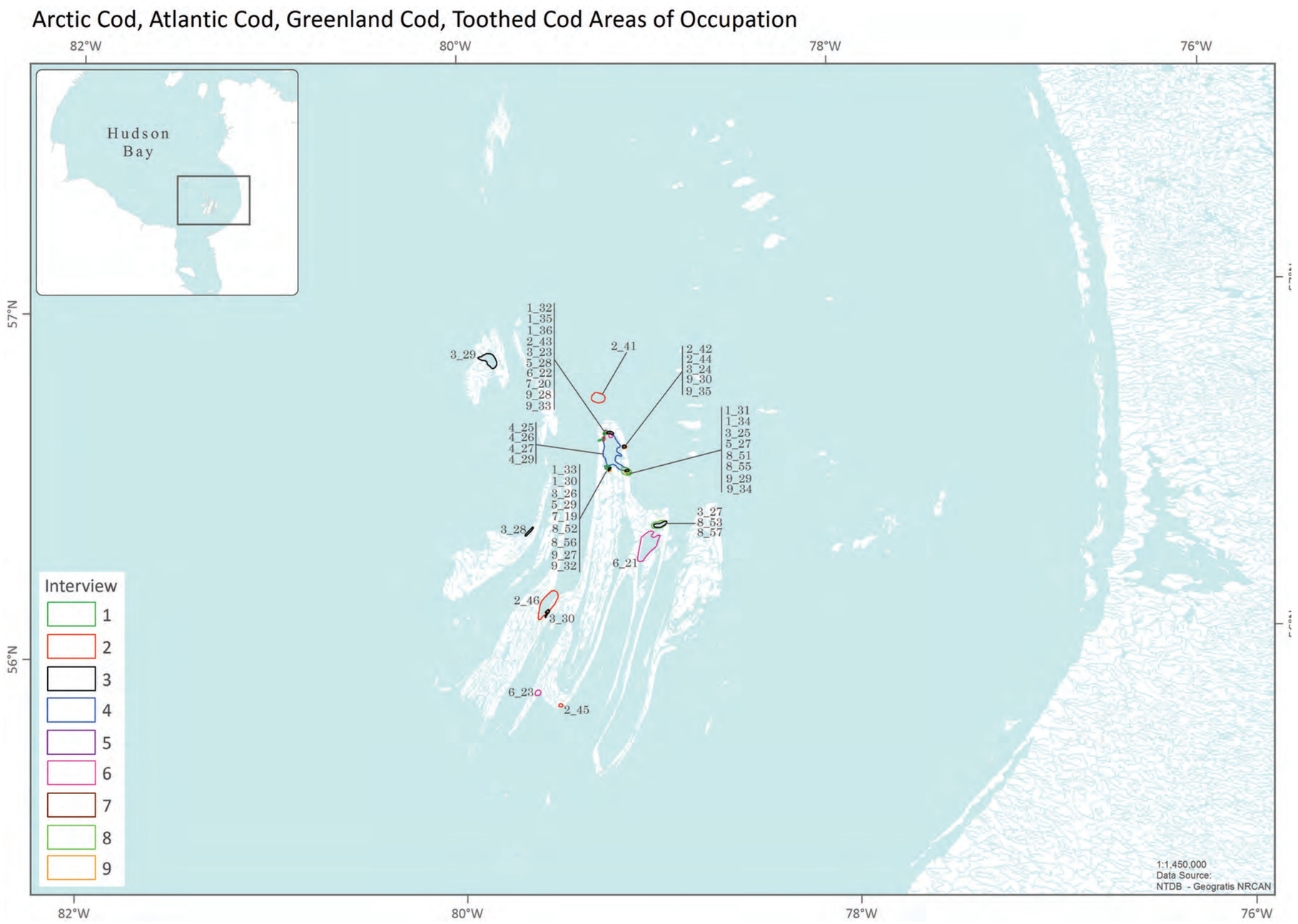


Table 20: Arctic Cod, Atlantic Cod, Greenland Cod, Toothed Cod - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_30	SANI_1_0211	Cod_1	Arctic Cod	Fish	September to November	
1_31	SANI_1_0211	Cod_2	Arctic Cod	Fish	June to November	
1_32	SANI_1_0211	Cod_3	Arctic Cod	Fish	All year	
1_33	SANI_1_0211	GCod_1	Greenland Cod	Fish	All year	Found with Arctic Cod
1_34	SANI_1_0211	GCod_2	Greenland Cod	Fish	All year	Found with Arctic Cod
1_35	SANI_1_0211	GCod_3	Greenland Cod	Fish	All year	Found with Arctic Cod
1_36	SANI_1_0211	Tco_1	Toothed Cod	Fish	All year	
2_41	SANI_2_0211	ACOD_1	Atlantic Cod	Fish	All year	
2_42	SANI_2_0211	ACOD_2	Atlantic Cod	Fish	All year	
2_43	SANI_2_0211	GCod_1	Greenland Cod	Fish	June to August	
2_44	SANI_2_0211	GCod_2	Greenland Cod	Fish	June to August	
2_45	SANI_2_0211	GCod_3	Greenland Cod	Fish	June to August	
2_46	SANI_2_0211	GCod_4	Greenland Cod	Fish	June to August	
3_23	SANI_3_0211	Gcod_1	Greenland Cod	Fish	All year	
3_24	SANI_3_0211	Gcod_2	Greenland Cod	Fish	All year	
3_25	SANI_3_0211	Gcod_3	Greenland Cod	Fish	All year	
3_26	SANI_3_0211	Gcod_4	Greenland Cod	Fish	All year	
3_27	SANI_3_0211	Gcod_5	Greenland Cod	Fish	All year	
3_28	SANI_3_0211	Gcod_6	Greenland Cod	Fish	All year	
3_29	SANI_3_0211	Gcod_7	Greenland Cod	Fish	All year	
3_30	SANI_3_0211	Gcod_8	Greenland Cod	Fish	July to September	
4_25	SANI_4_0211	Acod_1	Atlantic Cod	Fish	All year	
4_26	SANI_4_0211	Cod_1	Arctic Cod	Fish	All year	
4_27	SANI_4_0211	Gcod_1	Greenland Cod	Fish	All year	
4_29	SANI_4_0211	TCo_1	Toothed Cod	Fish	All year	
5_27	SANI_5_0211	Gcod_1	Greenland Cod	Fish	July to October	
5_28	SANI_5_0211	Gcod_2	Greenland Cod	Fish	July to October	
5_29	SANI_5_0211	Gcod_3	Greenland Cod	Fish	July to October	
6_21	SANI_6_0211	Gcod_1	Greenland Cod	Fish	July and August	
6_22	SANI_6_0211	Gcod_2	Greenland Cod	Fish	July and August	
6_23	SANI_6_0211	Gcod_3	Greenland Cod	Fish	May to October	
7_19	SANI_7_0211	Cod_1	Arctic Cod	Fish	November	
7_20	SANI_7_0211	Cod_2	Arctic Cod	Fish	November	
8_51	SANI_8_0211	Gcod_1	Greenland Cod	Fish	October and November	
8_52	SANI_8_0211	Gcod_2	Greenland Cod	Fish	October and November	
8_53	SANI_8_0211	Gcod_3	Greenland Cod	Fish	October and November	
8_55	SANI_8_0211	Cod_1	Arctic Cod	Fish	October and November	
8_56	SANI_8_0211	Cod_2	Arctic Cod	Fish	October and November	
8_57	SANI_8_0211	Cod_3	Arctic Cod	Fish	All year	
9_27	SANI_9_0211	Acod_2	Atlantic Cod	Fish	All year	
9_28	SANI_9_0211	Acod_3	Atlantic Cod	Fish	All year	
9_29	SANI_9_0211	Acod_4	Atlantic Cod	Fish	All year	
9_30	SANI_9_0211	Acod_5	Atlantic Cod	Fish	All year	
9_32	SANI_9_0211	Tco_2	Toothed Cod	Fish	All year	
9_33	SANI_9_0211	Tco_3	Toothed Cod	Fish	All year	
9_34	SANI_9_0211	Tco_4	Toothed Cod	Fish	All year	
9_35	SANI_9_0211	Tco_5	Toothed Cod	Fish	All year	

Figure 24: Atlantic Herring, Capelin, Rainbow Smelt - Areas of Occupation

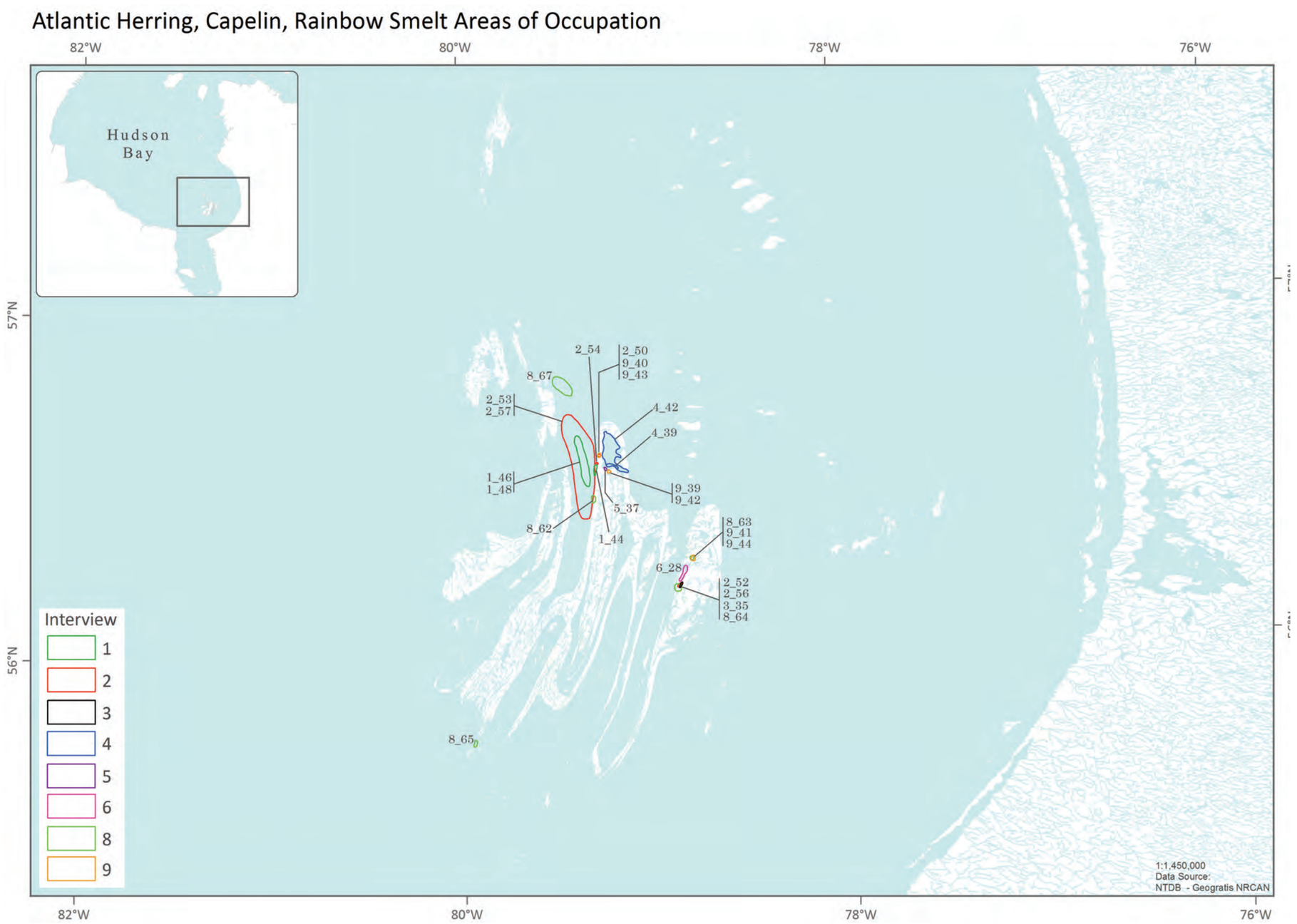


Table 21: Atlantic Herring, Capelin, Rainbow Smelt - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_44	SANI_1_0211	Cape_1	Capelin	Fish	April to June	
1_46	SANI_1_0211	Cape_3	Capelin	Fish	June to August	Many seals feed on capelin here
1_48	SANI_1_0211	RBS_1	Rainbow Smelt	Fish	June to August	
2_50	SANI_2_0211	RBS_1	Rainbow Smelt	Fish	June to August	
2_52	SANI_2_0211	RBS_3	Rainbow Smelt	Fish	June to August	
2_53	SANI_2_0211	RBS_4	Rainbow Smelt	Fish	June to August	Seal tend to feed a lot here
2_54	SANI_2_0211	Cape_1	Capelin	Fish	June to August	
2_56	SANI_2_0211	Cape_3	Capelin	Fish	June to August	
2_57	SANI_2_0211	Cape_4	Capelin	Fish	June to August	
3_35	SANI_3_0211	Cape_2_SP	Capelin	Fish	End of August and September	Spawning area for Capelin
4_39	SANI_4_0211	RBS_2	Rainbow Smelt	Fish	July and August	
4_42	SANI_4_0211	AHerr_2	Atlantic Herring	Fish	July and August	
5_37	SANI_5_0211	RBS_1	Rainbow Smelt	Fish	September	
6_28	SANI_6_0211	RBS_1	Rainbow Smelt	Fish	July and August	
8_62	SANI_8_0211	Cape_1	Capelin	Fish	July	Found in the sandy areas
8_63	SANI_8_0211	Cape_2	Capelin	Fish	July	
8_64	SANI_8_0211	Cape_3	Capelin	Fish	July	
8_65	SANI_8_0211	Cape_4	Capelin	Fish	July	
8_67	SANI_8_0211	Cape_6	Capelin	Fish	July	Found in seal stomach at floe edge
9_39	SANI_9_0211	Cape_2	Capelin	Fish	September	
9_40	SANI_9_0211	Cape_3	Capelin	Fish	September	
9_41	SANI_9_0211	Cape_4	Capelin	Fish	September	
9_42	SANI_9_0211	RBS_2	Rainbow Smelt	Fish	September	
9_43	SANI_9_0211	RBS_3	Rainbow Smelt	Fish	September	
9_44	SANI_9_0211	RBS_4	Rainbow Smelt	Fish	September	

Figure 25: Bull Trout, Lake Trout, Threespine Stickleback - Areas of Occupation

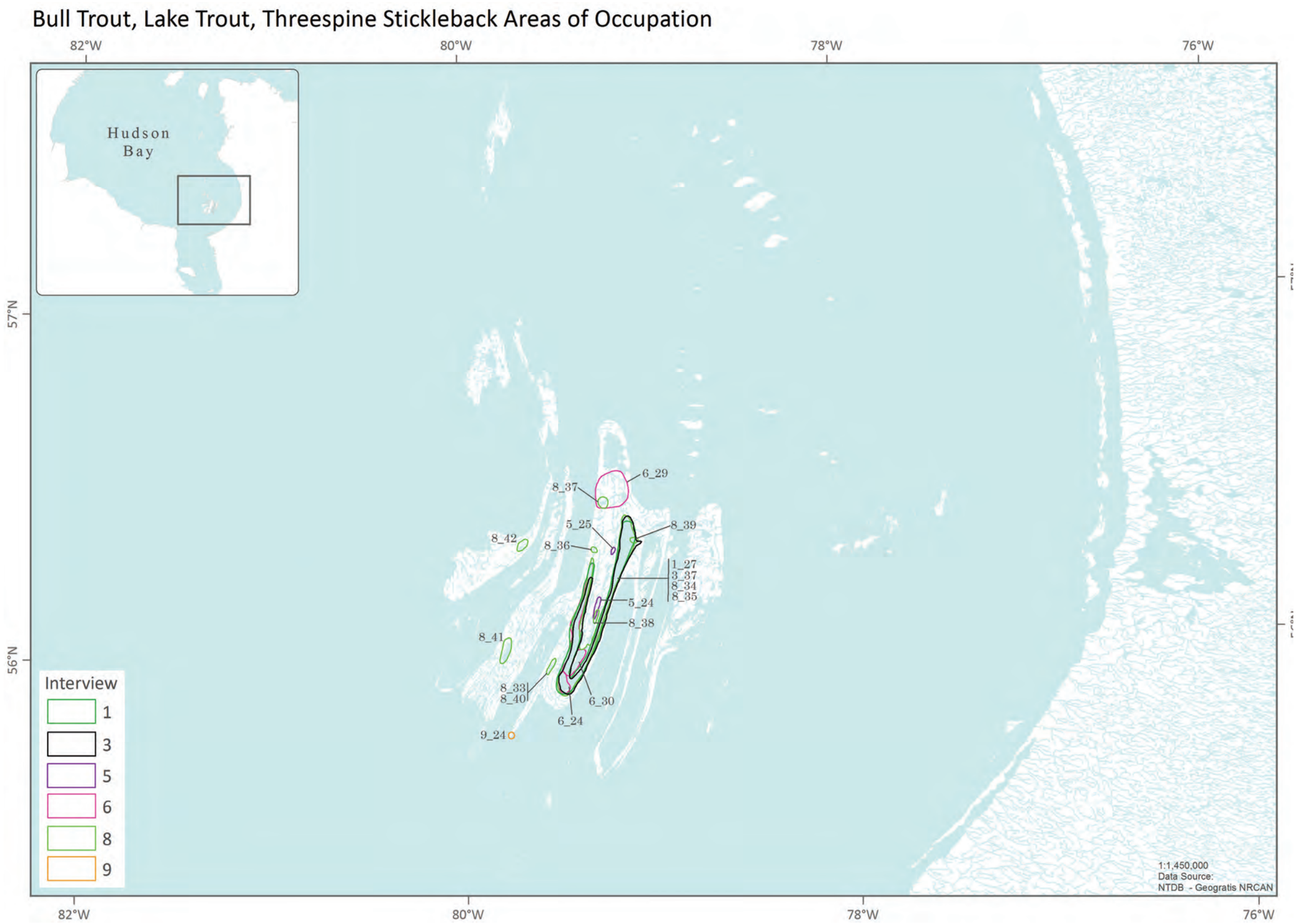


Table 22: Bull Trout, Lake Trout, Threespine Stickleback - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_27	SANI_1_0211	BT_1	Bull Trout	Fish	March to May	
3_37	SANI_3_0211	TStb_1	Threespine Stickleback	Fish	All year	
5_24	SANI_5_0211	LT_1	Lake Trout	Fish	April to June	
5_25	SANI_5_0211	BT_1	Bull Trout	Fish	April to June	
6_24	SANI_6_0211	LT_1	Lake Trout	Fish	May to September	Rarely catches Lake trout
6_29	SANI_6_0211	TStb_1	Threespine Stickleback	Fish	All year	
6_30	SANI_6_0211	TStb_2	Threespine Stickleback	Fish	July and August	
8_33	SANI_8_0211	LT_1	Lake Trout	Fish	All year	
8_34	SANI_8_0211	LT_2	Lake Trout	Fish	All year	
8_35	SANI_8_0211	BT_1	Bull Trout	Fish	All year	
8_36	SANI_8_0211	BT_2	Bull Trout	Fish	All year	
8_37	SANI_8_0211	BT_3	Bull Trout	Fish	All year	
8_38	SANI_8_0211	BT_4	Bull Trout	Fish	All year	
8_39	SANI_8_0211	BT_5	Bull Trout	Fish	All year	
8_40	SANI_8_0211	BT_6	Bull Trout	Fish	All year	
8_41	SANI_8_0211	BT_7	Bull Trout	Fish	All year	
8_42	SANI_8_0211	BT_8	Bull Trout	Fish	All year	
9_24	SANI_9_0211	LT_1	Lake Trout	Fish	July to September	

Figure 26: Arctic Cisco, Least Cisco, Lake Cisco, Round Whitefish - Areas of Occupation

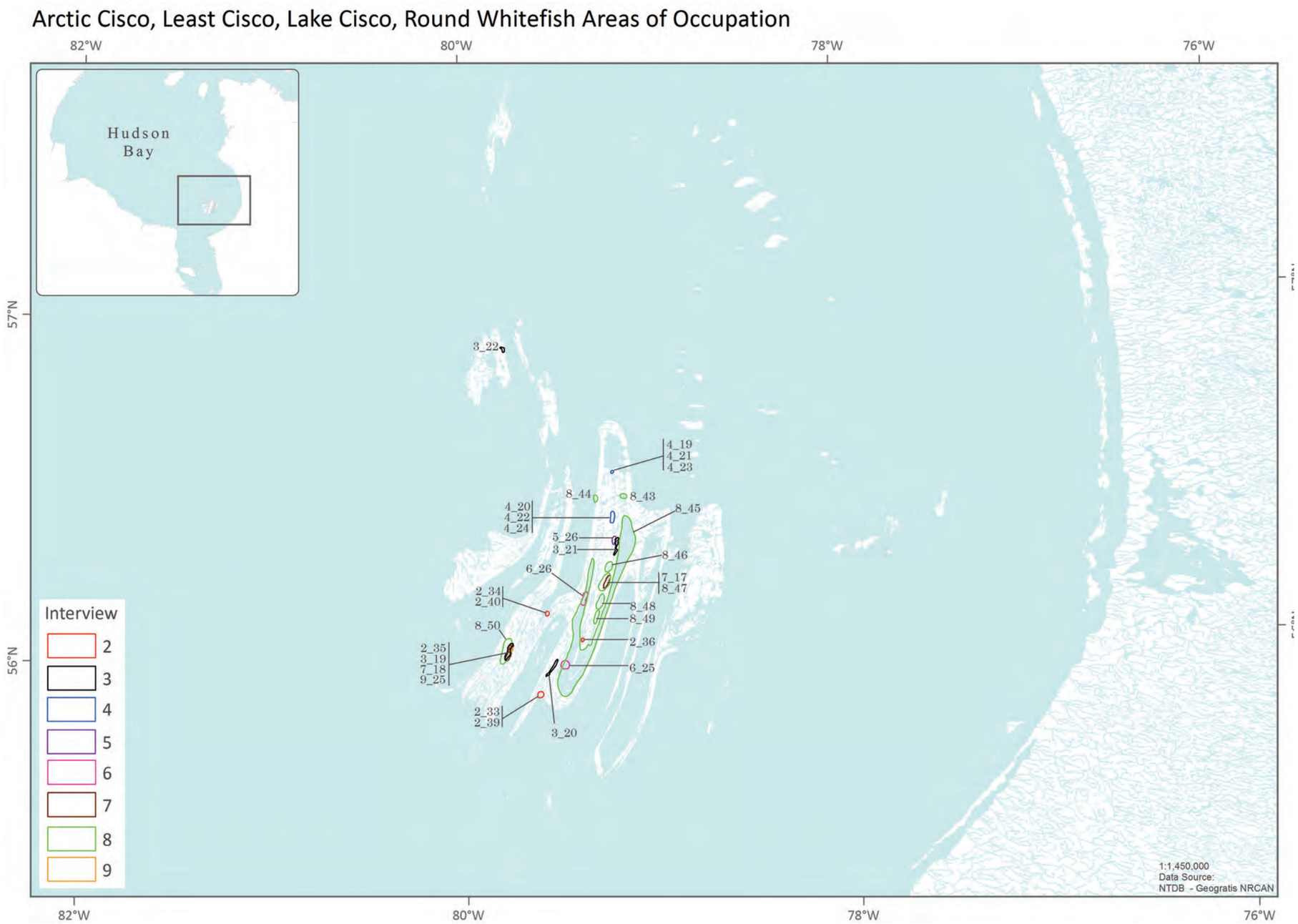


Table 23: Arctic Cisco, Least Cisco, Lake Cisco, Round Whitefish - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_33	SANI_2_0211	RWh_1	Round Whitefish	Fish	June to August	
2_34	SANI_2_0211	RWh_2	Round Whitefish	Fish	All year	
2_35	SANI_2_0211	RWh_3	Round Whitefish	Fish	December to March	
2_36	SANI_2_0211	RWh_4	Round Whitefish	Fish	December to March	
2_39	SANI_2_0211	LeC_2	Least Cisco	Fish	June to August	
2_40	SANI_2_0211	LeC_3	Least Cisco	Fish	June to August	
3_19	SANI_3_0211	ArcC_1	Arctic Cisco	Fish	November and December	
3_20	SANI_3_0211	ArcC_2	Arctic Cisco	Fish	November and December	Uses a fishing net in this area
3_21	SANI_3_0211	ArcC_3	Arctic Cisco	Fish	November and December	Uses a fishing net in this area
3_22	SANI_3_0211	ArcC_4	Arctic Cisco	Fish	May and June	
4_19	SANI_4_0211	LaC_1	Least Cisco	Fish	All year	
4_20	SANI_4_0211	LaC_2	Lake Cisco	Fish	All year	
4_21	SANI_4_0211	LeC_1	Least Cisco	Fish	All year	
4_22	SANI_4_0211	LeC_2	Least Cisco	Fish	All year	
4_23	SANI_4_0211	ArcC_1	Arctic Cisco	Fish	All year	
4_24	SANI_4_0211	ArcC_2	Arctic Cisco	Fish	All year	
5_26	SANI_5_0211	LaC_1	Lake Cisco	Fish	April to June	
6_25	SANI_6_0211	LaC_1	Lake Cisco	Fish	May to October	
6_26	SANI_6_0211	LaC_2	Lake Cisco	Fish	May to October	
7_17	SANI_7_0211	LaC_1	Lake Cisco	Fish	December	
7_18	SANI_7_0211	LaC_2	Lake Cisco	Fish	December	Spring hunting camp
8_43	SANI_8_0211	LaC_1	Lake Cisco	Fish	All year	
8_44	SANI_8_0211	LaC_2	Lake Cisco	Fish	All year	
8_45	SANI_8_0211	LaC_3	Lake Cisco	Fish	All year	
8_46	SANI_8_0211	LaC_4	Lake Cisco	Fish	All year	
8_47	SANI_8_0211	LaC_5	Lake Cisco	Fish	All year	
8_48	SANI_8_0211	LaC_6	Lake Cisco	Fish	All year	
8_49	SANI_8_0211	LaC_7	Lake Cisco	Fish	All year	
8_50	SANI_8_0211	LaC_8	Lake Cisco	Fish	All year	
9_25	SANI_9_0211	ArcC_1	Arctic Cisco	Fish	December to March	

Figure 27: Slimy Sculpin, Shorthorn Sculpin, Twohorn Sculpin - Areas of Occupation

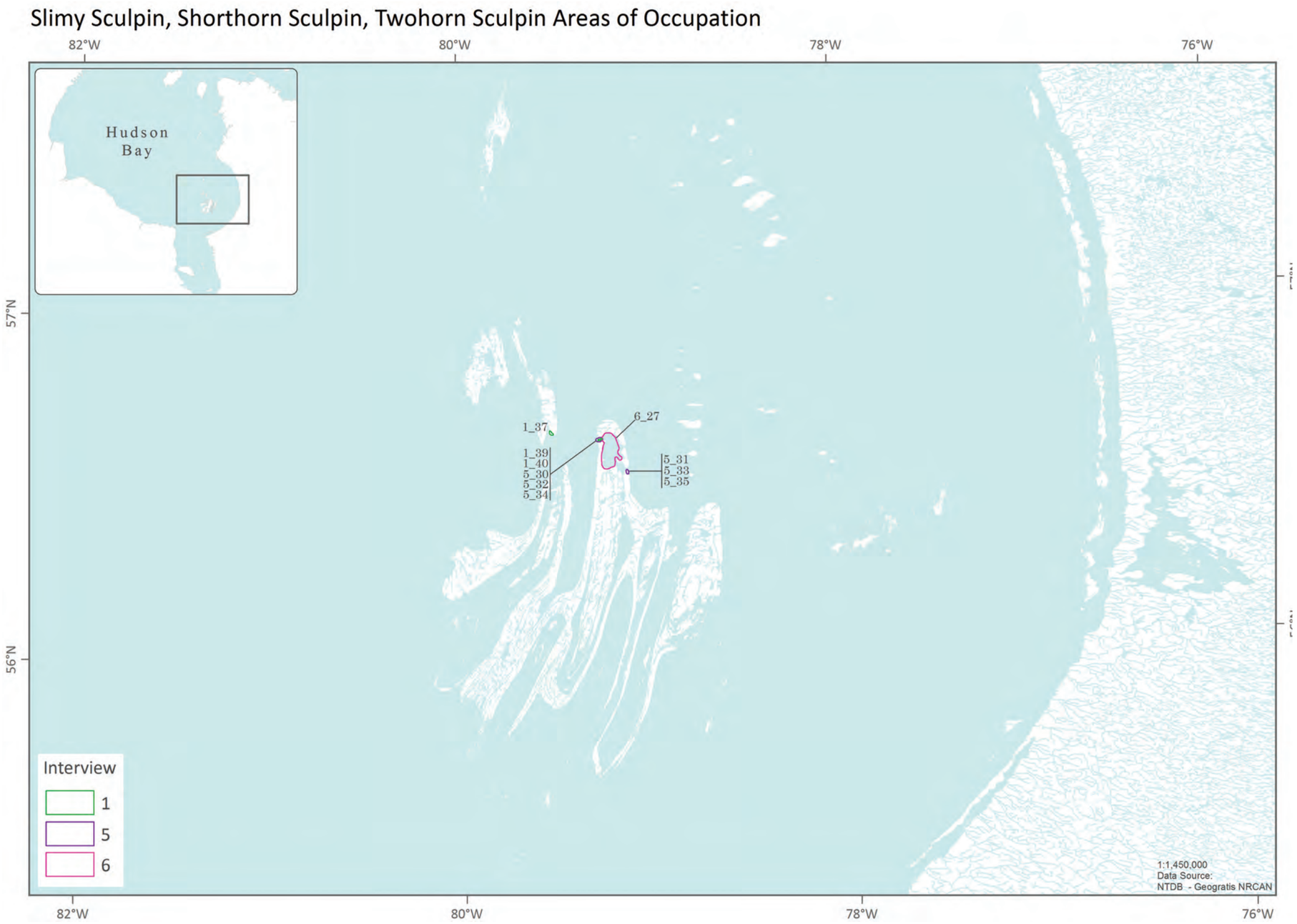


Table 24: Slimy Sculpin, Shorthorn Sculpin, Twohorn Sculpin - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_37	SANI_1_0211	Sscul_1	Slimy Sculpin	Fish	September and October	
1_39	SANI_1_0211	TS_2	Twohorn Sculpin	Fish	June to August	Has caught a lot of sculpin while netting for char in the summer
1_40	SANI_1_0211	Shs_1	Short-horned Sculpin	Fish	All year	
5_30	SANI_5_0211	Sscul_1	Slimy Sculpin	Fish	All year	
5_31	SANI_5_0211	Sscul_1	Slimy Sculpin	Fish	All year	
5_32	SANI_5_0211	ShS_1	Short-horned Sculpin	Fish	All year	
5_33	SANI_5_0211	ShS_2	Short-horned Sculpin	Fish	July to September	
5_34	SANI_5_0211	TS_1	Twohorn Sculpin	Fish	All year	
5_35	SANI_5_0211	TS_2	Twohorn Sculpin	Fish	July to September	
6_27	SANI_6_0211	ShS_1	Short-horned Sculpin	Fish	May to October	

Figure 28: Arctic Eelpout, Banded Gunnel, Lumpfish, Thorny Skate - Areas of Occupation

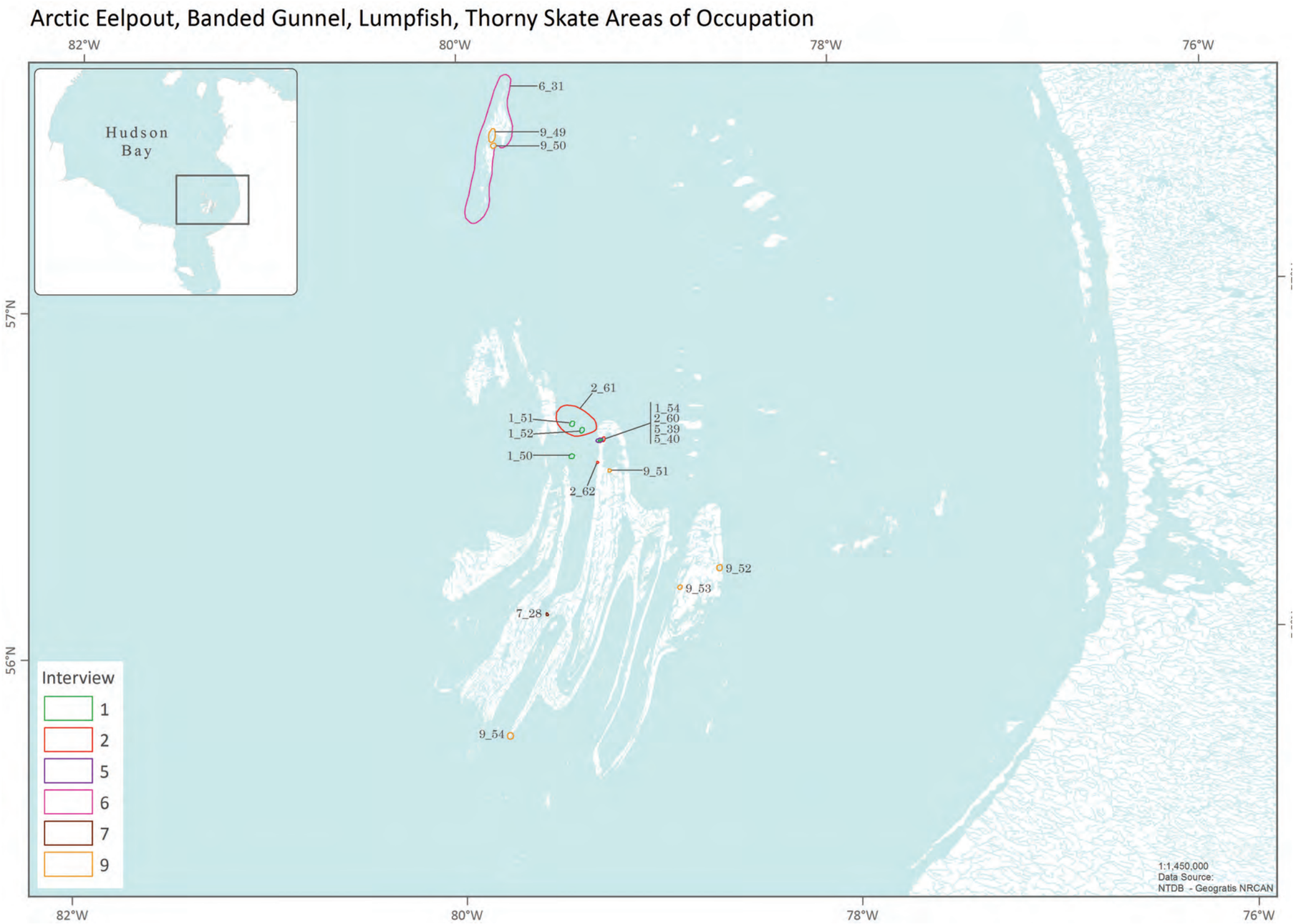


Table 25: Arctic Eelpout, Banded Gunnel, Lumpfish, Thorny Skate - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_50	SANI_1_0211	Lump_1	Lumpfish	Fish	January to May	Has found them dead near seal breathing holes
1_51	SANI_1_0211	Lump_2	Lumpfish	Fish	January to May	Has found them dead near seal breathing holes
1_52	SANI_1_0211	Lump_3	Lumpfish	Fish	January to May	Has found them dead near seal breathing holes
1_54	SANI_1_0211	BG_1	Banded Gunnel	Fish	June to August	
2_60	SANI_2_0211	Lump_1	Lumpfish	Fish	June to August	Has caught them in nets here
2_61	SANI_2_0211	Lump_2	Lumpfish	Fish	December to March	Has found them around breathing holes around here
2_62	SANI_2_0211	Tskate_1	Thorny Skate	Fish	June to August	Had found dead one on the shore
5_39	SANI_5_0211	AOP_1	Arctic Eelpout	Fish	July to September	
5_40	SANI_5_0211	Lump_1	Lumpfish	Fish	July to September	They get caught in nets every now and then during the summer
6_31	SANI_6_0211	Lump_1	Lumpfish	Fish	July and August	
7_28	SANI_7_0211	Lump_1	Lumpfish	Fish	July to September	
9_49	SANI_9_0211	Lump_1	Lumpfish	Fish	July to September	
9_50	SANI_9_0211	Lump_2	Lumpfish	Fish	July to September	
9_51	SANI_9_0211	Lump_3	Lumpfish	Fish	July to September	
9_52	SANI_9_0211	Lump_4	Lumpfish	Fish	July to September	
9_53	SANI_9_0211	Lump_5	Lumpfish	Fish	September and October	
9_54	SANI_9_0211	Lump_6	Lumpfish	Fish	September and October	

Figure 29: Greenland Halibut, Hamecon, Winter Flounder - Areas of Occupation

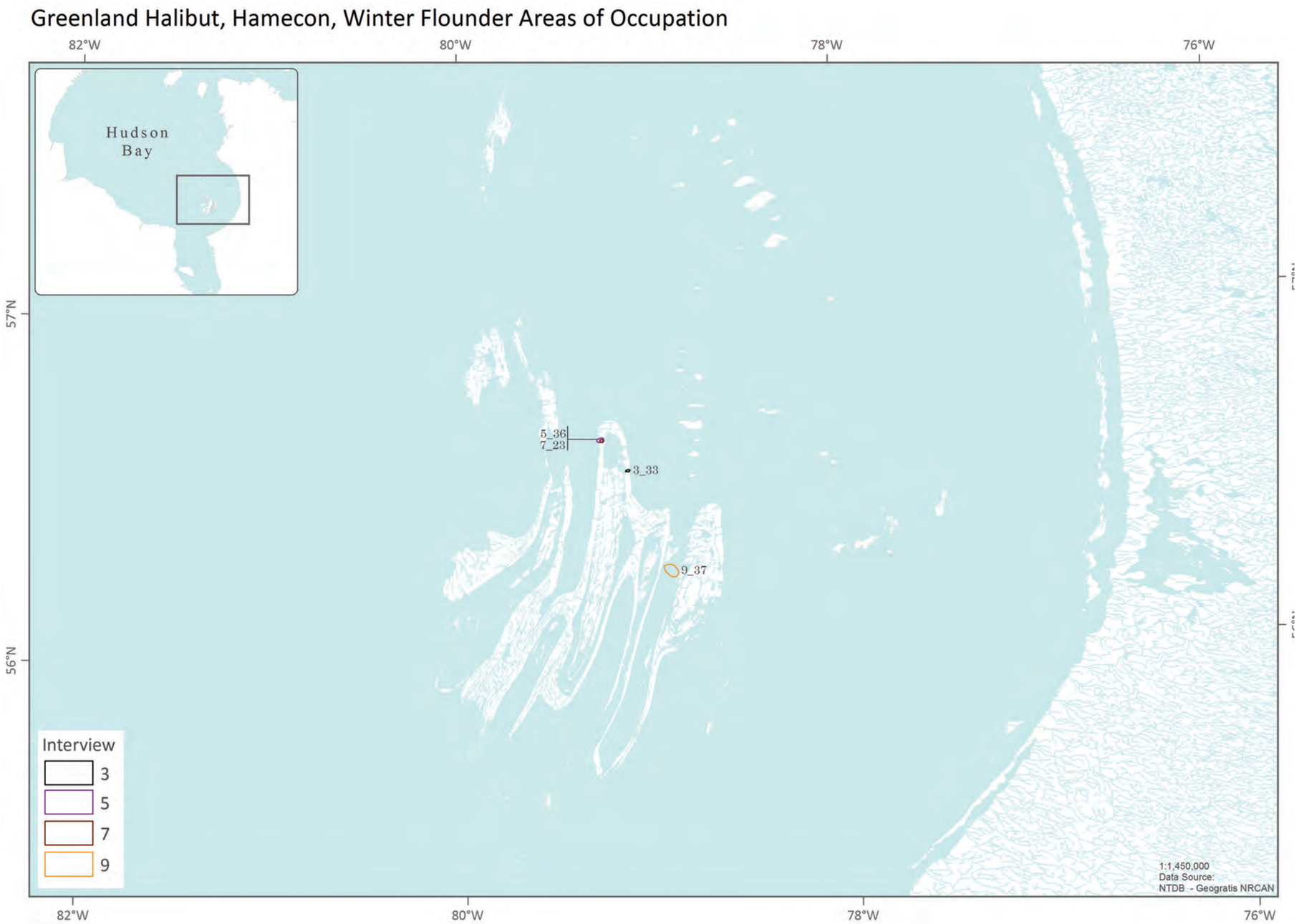


Table 26: Greenland Halibut, Hamecon, Winter Flounder - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
3_33	SANI_3_0211	Ghal_1	Greenland Halibut	Fish	October and November	Has seen one washed up on the shore
5_36	SANI_5_0211	Wfl_1	Winter Flounder	Fish	July to September	
7_23	SANI_7_0211	RHS_1	Hamecon	Fish	All year	
9_37	SANI_9_0211	Wfl_1	Winter Flounder	Fish	September	Has caught some while dragging for scallops

Figure 30: Arctic Char - Areas of Occupation

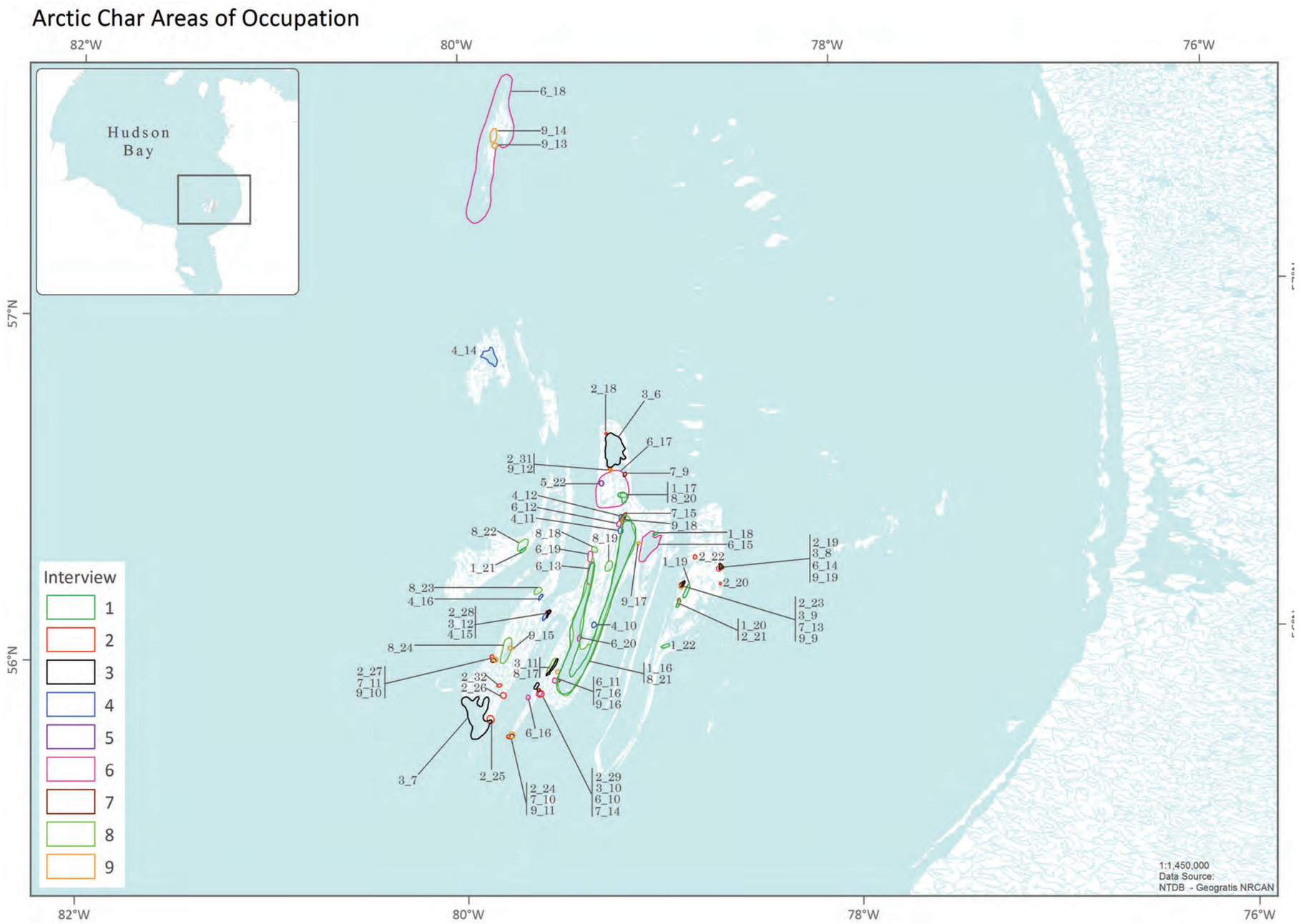


Table 27: Arctic Char - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_16	SANI_1_0211	Char_1	Arctic Char	Fish	All year	Char can be caught year round anywhere in the lake
1_17	SANI_1_0211	Char_2	Arctic Char	Fish	September to November	Noticed there isn't as much Char now then before - only fishes in the fall
1_18	SANI_1_0211	Char_3	Arctic Char	Fish	June to August	There used to be big fish in the area but they are smaller now
1_19	SANI_1_0211	Char_4	Arctic Char	Fish	June to August	Fishes here only in the summer with nets
1_20	SANI_1_0211	Char_5	Arctic Char	Fish	June to August	Fishes here only in the summer with nets
1_21	SANI_1_0211	Char_6	Arctic Char	Fish	March to May	Travels by skidoo to the fishing area
1_22	SANI_1_0211	Char_7	Arctic Char	Fish	June to August	Fishes here only in the summer but catches a lot of fish
2_18	SANI_2_0211	Char_1	Arctic Char	Fish	June to August	
2_19	SANI_2_0211	Char_2	Arctic Char	Fish	June to August	
2_20	SANI_2_0211	Char_3	Arctic Char	Fish	June to August	
2_21	SANI_2_0211	Char_4	Arctic Char	Fish	June to August	
2_22	SANI_2_0211	Char_5	Arctic Char	Fish	June to August	
2_23	SANI_2_0211	Char_6	Arctic Char	Fish	June to August	
2_24	SANI_2_0211	Char_7	Arctic Char	Fish	March to May	
2_25	SANI_2_0211	Char_8	Arctic Char	Fish	March to May	
2_26	SANI_2_0211	Char_9	Arctic Char	Fish	March to May	
2_27	SANI_2_0211	Char_10	Arctic Char	Fish	March to May	
2_28	SANI_2_0211	Char_11	Arctic Char	Fish	March to May	
2_29	SANI_2_0211	Char_12	Arctic Char	Fish	March to May	
2_31	SANI_2_0211	Char_14	Arctic Char	Fish	June to August	
2_32	SANI_2_0211	Char_15	Arctic Char	Fish	June to August	
3_10	SANI_3_0211	Char_5	Arctic Char	Fish	June to August	Fishes at the mouth of the river
3_11	SANI_3_0211	Char_6	Arctic Char	Fish	All year	Nice char in this area - Char go into the ocean in the summer
3_12	SANI_3_0211	Char_7	Arctic Char	Fish	July to September	
3_6	SANI_3_0211	Char_1	Arctic Char	Fish	June to August	
3_7	SANI_3_0211	Char_2	Arctic Char	Fish	June to August	
3_8	SANI_3_0211	Char_3	Arctic Char	Fish	June to August	
3_9	SANI_3_0211	Char_4	Arctic Char	Fish	June to August	
4_10	SANI_4_0211	Char_1	Arctic Char	Fish	April to June	
4_11	SANI_4_0211	Char_2	Arctic Char	Fish	April to June	
4_12	SANI_4_0211	Char_3	Arctic Char	Fish	April to June	

Table 27: Arctic Char - Areas of Occupation (continued)

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
4_14	SANI_4_0211	Char_5	Arctic Char	Fish	April to June	
4_15	SANI_4_0211	Char_6	Arctic Char	Fish	April to June	
4_16	SANI_4_0211	Char_7_Sp	Arctic Char	Fish	August	
5_22	SANI_5_0211	Char_14	Arctic Char	Fish	April to June	Fished using his shoelace to fish two years ago
6_10	SANI_6_0211	Char_1	Arctic Char	Fish	July to September	
6_11	SANI_6_0211	Char_2	Arctic Char	Fish	July to Spetember	
6_12	SANI_6_0211	Char_3	Arctic Char	Fish	May to September	
6_13	SANI_6_0211	Char_4	Arctic Char	Fish	May to September	
6_14	SANI_6_0211	Char_5	Arctic Char	Fish	July to Spetember	
6_15	SANI_6_0211	Char_6	Arctic Char	Fish	July to Spetember	
6_16	SANI_6_0211	Char_7	Arctic Char	Fish	July to Spetember	
6_17	SANI_6_0211	Char_8	Arctic Char	Fish	July to Spetember	
6_18	SANI_6_0211	Char_9	Arctic Char	Fish	July and August	
6_19	SANI_6_0211	Char_10_SP	Arctic Char	Fish	August to October	
6_20	SANI_6_0211	Char_11_SP	Arctic Char	Fish	August to October	
7_10	SANI_7_0211	Char_2	Arctic Char	Fish	July to September	
7_11	SANI_7_0211	Char_3	Arctic Char	Fish	July to September	
7_13	SANI_7_0211	Char_5	Arctic Char	Fish	July to September	
7_14	SANI_7_0211	Char_6	Arctic Char	Fish	July to September	
7_15	SANI_7_0211	Char_7	Arctic Char	Fish	November to March	
7_16	SANI_7_0211	Char_8	Arctic Char	Fish	November to March	
7_9	SANI_7_0211	Char_1	Arctic Char	Fish	July to September	
8_17	SANI_8_0211	Char_1	Arctic Char	Fish	All year	
8_18	SANI_8_0211	Char_2	Arctic Char	Fish	All year	
8_19	SANI_8_0211	Char_3	Arctic Char	Fish	June to August	
8_20	SANI_8_0211	Char_4	Arctic Char	Fish	October and November	
8_21	SANI_8_0211	Char_5	Arctic Char	Fish	All year	
8_22	SANI_8_0211	Char_6	Arctic Char	Fish	December to May	
8_23	SANI_8_0211	Char_7	Arctic Char	Fish	December to May	
8_24	SANI_8_0211	Char_8	Arctic Char	Fish	December to May	
9_10	SANI_9_0211	Char_2	Arctic Char	Fish	September and October	
9_11	SANI_9_0211	Char_3	Arctic Char	Fish	September and October	
9_12	SANI_9_0211	Char_4	Arctic Char	Fish	September and October	
9_13	SANI_9_0211	Char_5	Arctic Char	Fish	September and October	
9_14	SANI_9_0211	Char_6	Arctic Char	Fish	September and October	
9_15	SANI_9_0211	Char_7	Arctic Char	Fish	December to March	
9_16	SANI_9_0211	Char_8	Arctic Char	Fish	April to June	
9_17	SANI_9_0211	Char_9	Arctic Char	Fish	April to August	
9_18	SANI_9_0211	Char_10	Arctic Char	Fish	April to June	
9_19	SANI_9_0211	Char_11	Arctic Char	Fish	September and October	
9_9	SANI_9_0211	Char_1	Arctic Char	Fish	September and October	

Figure 31: Dolly Varden, Landlocked Char - Areas of Occupation

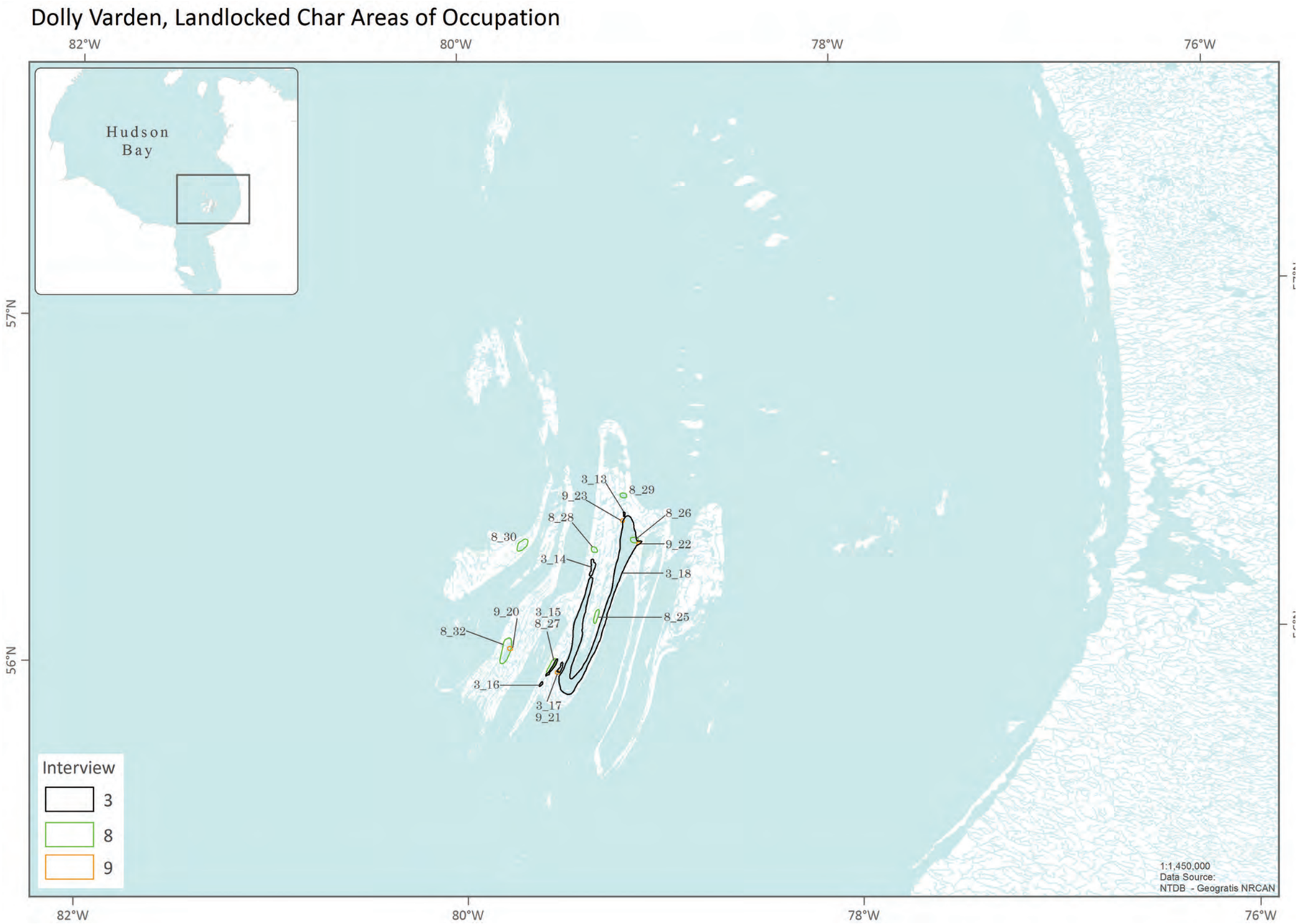


Table 28: Dolly Varden, Landlocked Char - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
3_13	SANI_3_0211	DV_1	Dolly Varden	Fish	June to August	
3_14	SANI_3_0211	DV_2	Dolly Varden	Fish	June to August	
3_15	SANI_3_0211	DV_3	Dolly Varden	Fish	All year	
3_16	SANI_3_0211	DV_4	Dolly Varden	Fish	All year	
3_17	SANI_3_0211	DV_5	Dolly Varden	Fish	All year	
3_18	SANI_3_0211	LLC_1	Landlocked Char	Fish	All year	Landlocked char are found in any big lakes in the area
8_25	SANI_8_0211	LLC_1	Landlocked Char	Fish	All year	
8_26	SANI_8_0211	DV_1	Dolly Varden	Fish	August and September	
8_27	SANI_8_0211	DV_2	Dolly Varden	Fish	All year	
8_28	SANI_8_0211	DV_3	Dolly Varden	Fish	All year	
8_29	SANI_8_0211	DV_4	Dolly Varden	Fish	All year	
8_30	SANI_8_0211	DV_5	Dolly Varden	Fish	All year	
8_32	SANI_8_0211	DV_7	Dolly Varden	Fish	All year	
9_20	SANI_9_0211	LLC_1	Landlocked Char	Fish	All year	Thinks they are bigger than Char
9_21	SANI_9_0211	LLC_2	Landlocked Char	Fish	All year	Thinks they are bigger than Char
9_22	SANI_9_0211	LLC_3	Landlocked Char	Fish	All year	
9_23	SANI_9_0211	LLC_4	Landlocked Char	Fish	All year	

Figure 32: Cockle, Clam, Scallop, Northern Hagfish, Northern Horesemussel, Sea Cucumber, Whelk, Snow Crab - Areas of Occupation

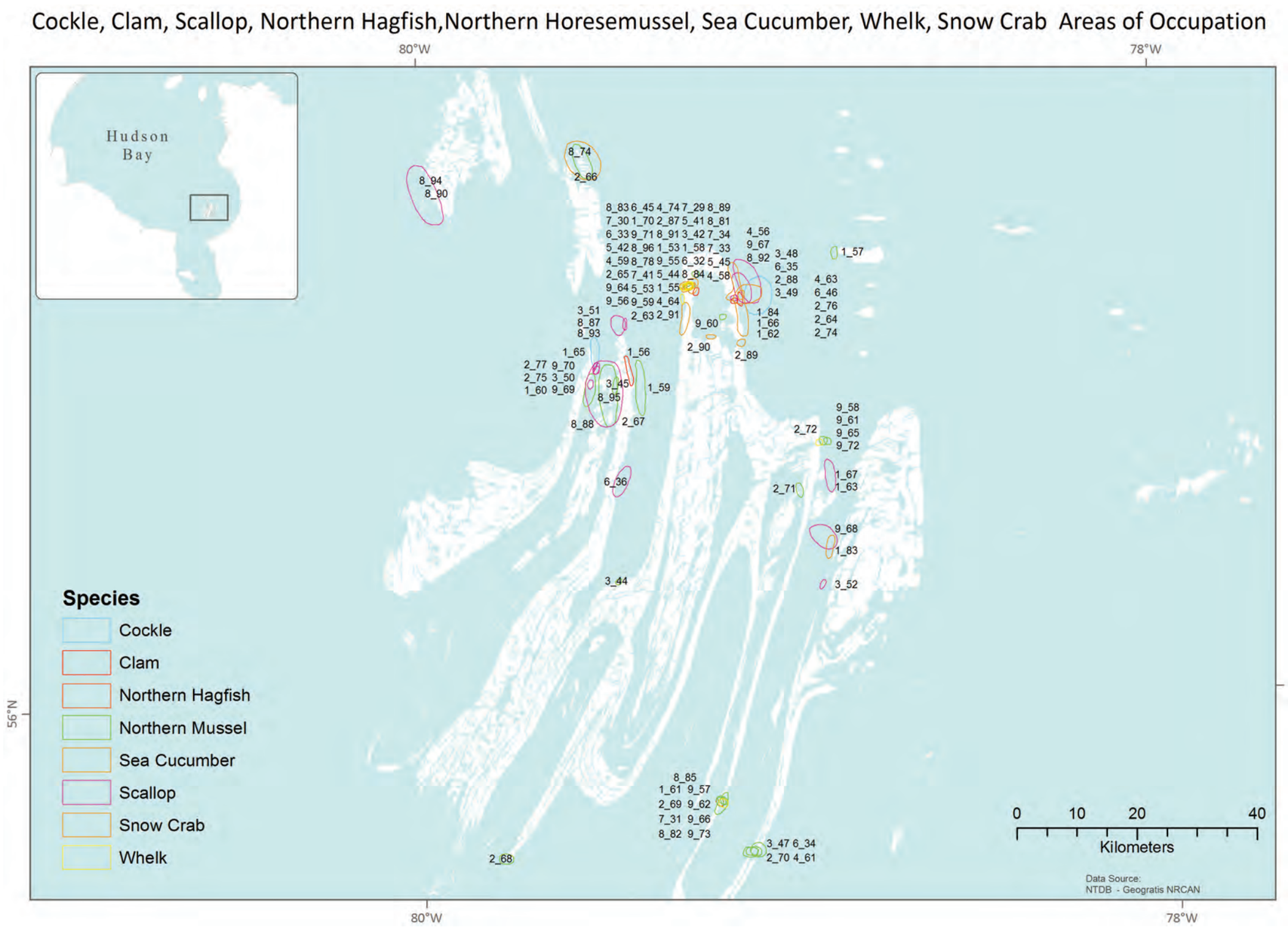


Table 29: Cockle, Clam, Scallop, Northern Hagfish, Northern Horesemussel, Sea Cucumber, Whelk, Snow Crab - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_53	SANI_1_0211	NHF_1	Northern Hagfish	Invertebrate	June to August	
1_55	SANI_1_0211	Clam_1	Clam	Invertebrate	June to August	Found along the shore under the sand
1_56	SANI_1_0211	Clam_2	Clam	Invertebrate	June to August	
1_57	SANI_1_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
1_58	SANI_1_0211	NH_2	Northern Horsemussel	Invertebrate	All year	
1_59	SANI_1_0211	NH_3	Northern Horsemussel	Invertebrate	All year	
1_60	SANI_1_0211	NH_4	Northern Horsemussel	Invertebrate	All year	
1_61	SANI_1_0211	NH_5	Northern Horsemussel	Invertebrate	All year	
1_62	SANI_1_0211	CKL_1	Cockle	Invertebrate	June to August	
1_63	SANI_1_0211	CKL_2	Cockle	Invertebrate	June to August	
1_64	SANI_1_0211	CKL_3	Cockle	Invertebrate	June to August	The beach here is white with shells - walrus feed here
1_65	SANI_1_0211	CKL_4	Cockle	Invertebrate	June to August	
1_66	SANI_1_0211	Scal_1	Scallop	Invertebrate	June to August	
1_67	SANI_1_0211	Scal_2	Scallop	Invertebrate	June to August	
1_68	SANI_1_0211	Scal_3	Scallop	Invertebrate	June to August	
1_70	SANI_1_0211	Whe_1	Whelk	Invertebrate	June to August	
1_83	SANI_1_0211	Scuc_2	Sea Cucumber	Invertebrate	June to August	
1_84	SANI_1_0211	Scuc_3	Sea Cucumber	Invertebrate	June to August	
2_63	SANI_2_0211	Clam_1	Clam	Invertebrate	All year	
2_64	SANI_2_0211	Clam_2	Clam	Invertebrate	All year	
2_65	SANI_2_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
2_66	SANI_2_0211	NH_2	Northern Horsemussel	Invertebrate	All year	
2_67	SANI_2_0211	NH_3	Northern Horsemussel	Invertebrate	All year	
2_68	SANI_2_0211	NH_4	Northern Horsemussel	Invertebrate	All year	
2_69	SANI_2_0211	NH_5	Northern Horsemussel	Invertebrate	All year	
2_70	SANI_2_0211	NH_6	Northern Horsemussel	Invertebrate	All year	
2_71	SANI_2_0211	NH_7	Northern Horsemussel	Invertebrate	All year	
2_72	SANI_2_0211	NH_8	Northern Horsemussel	Invertebrate	All year	
2_74	SANI_2_0211	Ckl_1	Cockle	Invertebrate	June to August	
2_75	SANI_2_0211	Ckl_2	Cockle	Invertebrate	June to August	
2_76	SANI_2_0211	Scal_1	Scallop	Invertebrate	June to August	

Table 29: Cockle, Clam, Scallop, Northern Hagfish, Northern Horesemussel, Sea Cucumber, Whelk, Snow Crab - Areas of Occupation (continued)

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
2_77	SANI_2_0211	Scal_2	Scallop	Invertebrate	June to August	
2_87	SANI_2_0211	SCuc_1	Sea Cucumber	Invertebrate	All year	
2_88	SANI_2_0211	SCuc_2	Sea Cucumber	Invertebrate	All year	Sea cucumbers are very large in this area
2_89	SANI_2_0211	SCuc_3	Sea Cucumber	Invertebrate	All year	
2_90	SANI_2_0211	SCuc_4	Sea Cucumber	Invertebrate	All year	
2_91	SANI_2_0211	SCuc_5	Sea Cucumber	Invertebrate	September to November	
3_42	SANI_3_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
3_44	SANI_3_0211	NH_3	Northern Horsemussel	Invertebrate	All year	
3_45	SANI_3_0211	NH_4	Northern Horsemussel	Invertebrate	All year	
3_47	SANI_3_0211	NH_6	Northern Horsemussel	Invertebrate	All year	
3_48	SANI_3_0211	Ckl_1	Cockle	Invertebrate	All year	
3_49	SANI_3_0211	Scal_1	Scallop	Invertebrate	All year	
3_50	SANI_3_0211	Scal_2	Scallop	Invertebrate	All year	
3_51	SANI_3_0211	Scal_3	Scallop	Invertebrate	All year	
3_52	SANI_3_0211	Scal_4	Scallop	Invertebrate	All year	
4_56	SANI_4_0211	Clam_1	Clam	Invertebrate	All year	
4_58	SANI_4_0211	Clam_3	Clam	Invertebrate	All year	
4_59	SANI_4_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
4_61	SANI_4_0211	NH_3	Northern Horsemussel	Invertebrate	All year	Polyna-passage
4_63	SANI_4_0211	Ckl_1	Cockle	Invertebrate	June to September	Found in deeper water
4_64	SANI_4_0211	Whe_1	Whelk	Invertebrate	All year	He usually finds empty shells when harvesting mussles
4_74	SANI_4_0211	Scuc_1	Sea Cucumber	Invertebrate	All year	
5_41	SANI_5_0211	NHf_1	Northern Hagfish	Invertebrate	July to September	
5_42	SANI_5_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
5_44	SANI_5_0211	Clam_1	Clam	Invertebrate	All year	
5_45	SANI_5_0211	Ckl_1	Cockle	Invertebrate	All year	
5_53	SANI_5_0211	Scuc_1	Sea Cucumber	Invertebrate	All year	
8_96	SANI_8_0211	Whe_1	Whelk	Invertebrate		

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
9_55	SANI_9_0211	NHf_1	Northern Hagfish	Invertebrate	All year	
9_56	SANI_9_0211	Clam_1	Clam	Invertebrate	All year	
9_57	SANI_9_0211	Clam_2	Clam	Invertebrate	All year	
9_58	SANI_9_0211	Clam_3	Clam	Invertebrate	All year	
9_59	SANI_9_0211	NH_1	Northern Horsemussel	Invertebrate	All year	
9_60	SANI_9_0211	NH_2	Northern Horsemussel	Invertebrate	All year	
9_61	SANI_9_0211	NH_3	Northern Horsemussel	Invertebrate	All year	
9_62	SANI_9_0211	NH_4	Northern Horsemussel	Invertebrate	All year	
9_64	SANI_9_0211	CKL_1	Cockle	Invertebrate	All year	
9_65	SANI_9_0211	CKL_2	Cockle	Invertebrate	All year	
9_66	SANI_9_0211	CKL_3	Cockle	Invertebrate	All year	
9_67	SANI_9_0211	Scal_1	Scallop	Invertebrate	September and October	
9_68	SANI_9_0211	Scal_2	Scallop	Invertebrate	September and October	
9_69	SANI_9_0211	Scal_3	Scallop	Invertebrate	All year	
9_70	SANI_9_0211	Scal_4	Scallop	Invertebrate	All year	
9_71	SANI_9_0211	Whe_1	Whelk	Invertebrate	All year	
9_72	SANI_9_0211	Whe_2	Whelk	Invertebrate	All year	
9_73	SANI_9_0211	Whe_3	Whelk	Invertebrate	All year	

Figure 33: Arctic Moonsnail, Boreal Armhook Squid, Hermit Crab, Barnacle, Basket Star, Flexed Gyro - Areas of Occupation

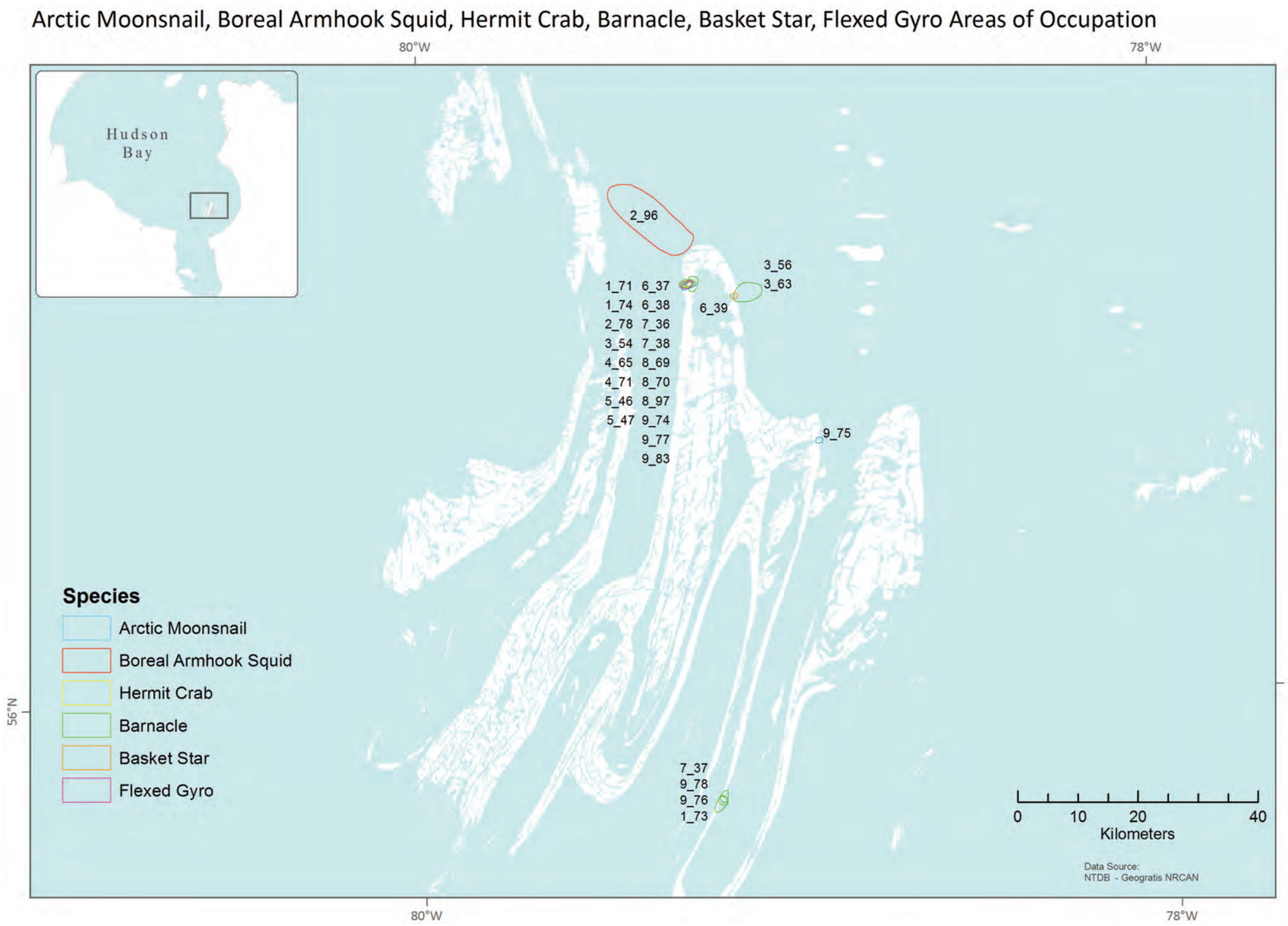


Table 30: Arctic Moonsnail, Boreal Armhook Squid, Hermit Crab, Barnacle, Basket Star, Flexed Gyro - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_71	SANI_1_0211	AMS_1	Arctic Moonsnail	Invertebrate	June to August	
1_73	SANI_1_0211	Barn_1	Barnacle	Invertebrate	All year	Found attached to mussles
1_74	SANI_1_0211	Barn_2	Barnacle	Invertebrate	All year	Barncale smaller then Barn_1
2_78	SANI_2_0211	AMS_1	Arctic Moonsnail	Invertebrate	June to August	
2_96	SANI_2_0211	BAS_1	Boreal Armhook Squid	Invertebrate		Saw a small one, about 10 cm
3_54	SANI_3_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
3_56	SANI_3_0211	Barn_1	Barnacle	Invertebrate	All year	Stuck to rocks and scallops
3_63	SANI_3_0211	Bstar_1	Basket Star	Invertebrate	All year	
4_65	SANI_4_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
4_71	SANI_4_0211	HC_1	Hermit Crab	Invertebrate	All year	
5_46	SANI_5_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
5_47	SANI_5_0211	Barn_1	Barnacle	Invertebrate	All year	
6_37	SANI_6_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
6_38	SANI_6_0211	Barn_1	Barnacle	Invertebrate	All year	
6_39	SANI_6_0211	Barn_2	Barnacle	Invertebrate	July to September	
7_36	SANI_7_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
7_37	SANI_7_0211	Barn_1	Barnacle	Invertebrate	All year	
7_38	SANI_7_0211	Barn_2	Barnacle	Invertebrate	All year	
8_69	SANI_8_0211	FG_1	Flexed Gyro	Invertebrate	July to October	
8_70	SANI_8_0211	Barn_1	Barnacle	Invertebrate	All year	
8_97	SANI_8_0211	AMS_1	Arctic Moonsnail	Invertebrate		
9_74	SANI_9_0211	AMS_1	Arctic Moonsnail	Invertebrate	All year	
9_75	SANI_9_0211	AMS_2	Arctic Moonsnail	Invertebrate	All year	
9_76	SANI_9_0211	AMS_3	Arctic Moonsnail	Invertebrate	All year	
9_77	SANI_9_0211	Barn_1	Barnacle	Invertebrate	All year	
9_78	SANI_9_0211	Barn_2	Barnacle	Invertebrate	All year	
9_83	SANI_9_0211	Bstar_1	Basket Star	Invertebrate	All year	Mostly summer-July to September

Figure 34: Naked Sea Butterfly, Northern Shrimp, Polar Sea Star, Sea Urchin, Toad Crab, Tortoiseshell Limpet, Unknown Shrimp - Areas of Occupation

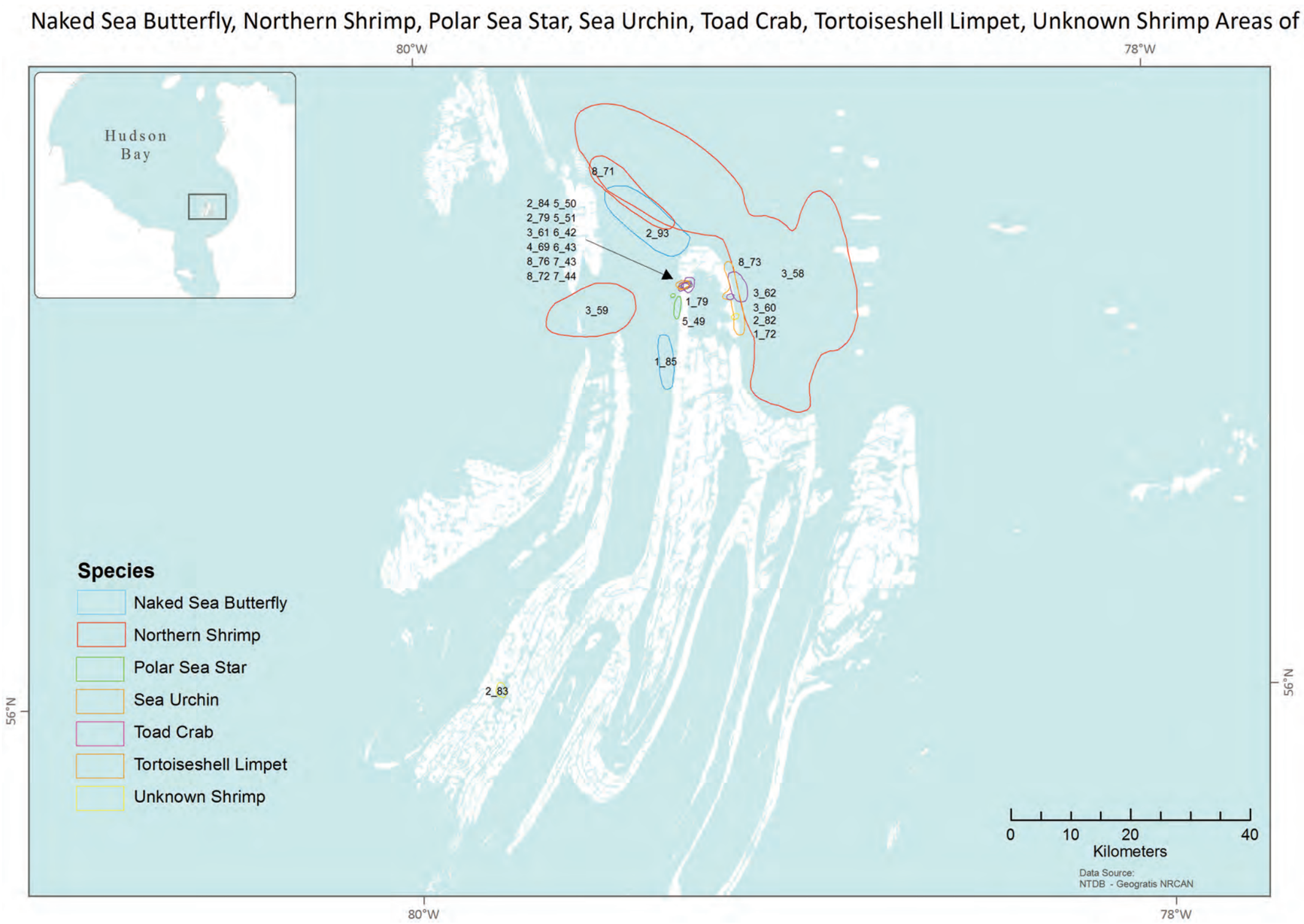
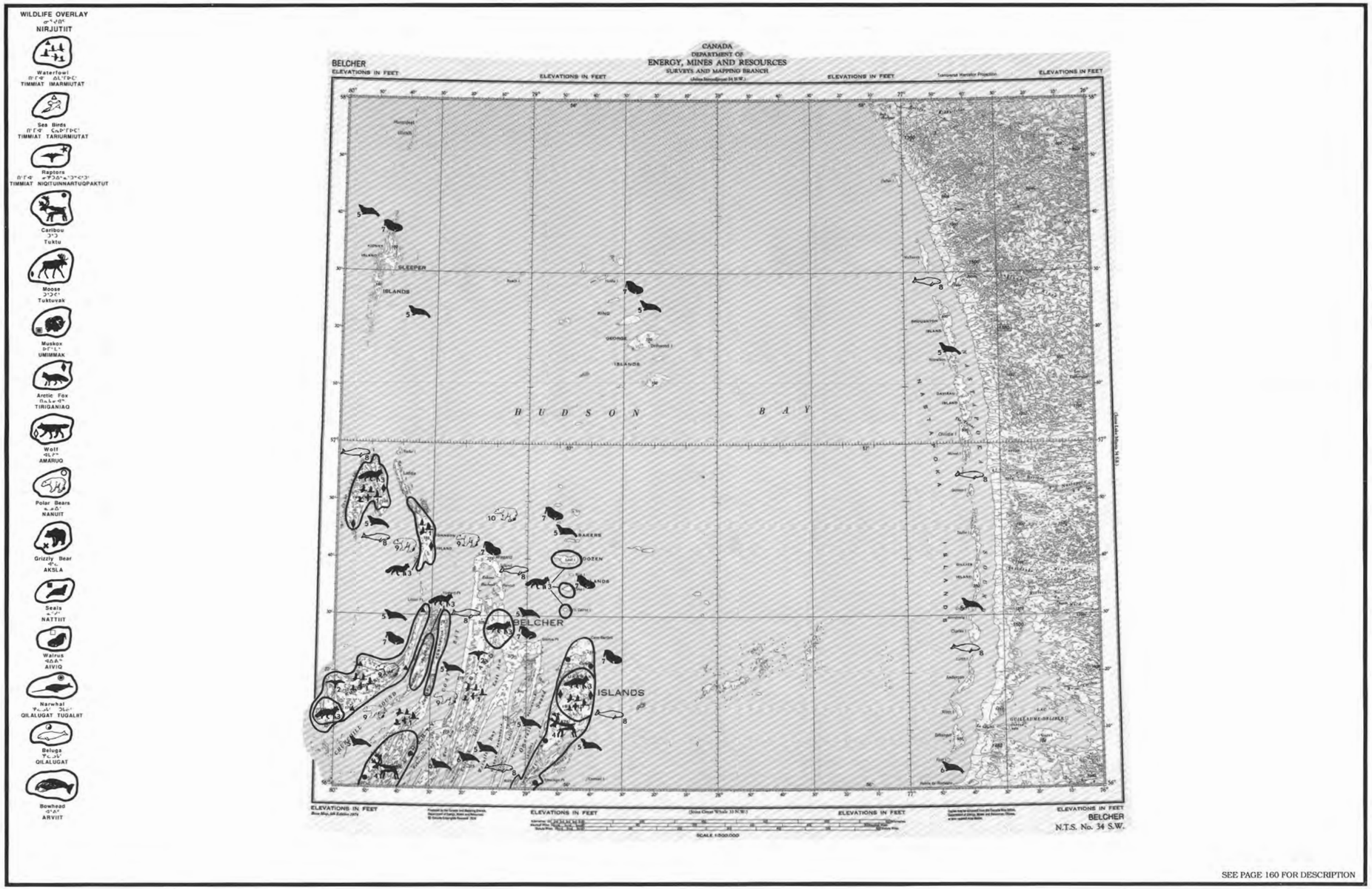


Table 31: Naked Sea Butterfly, Northern Shrimp, Polar Sea Star, Sea Urchin, Toad Crab, Tortoiseshell Limpet, Unknown Shrimp - Areas of Occupation

LABEL NUMBER	INTERVIEW CODE	MAP CODE	SPECIES	CATEGORY	TIME OF YEAR	COMMENTS
1_72	SANI_1_0211	TL_1	Tortoise Limpet	Invertebrate	Jun to Aug	
1_79	SANI_1_0211	Pstar_1	Polar Sea Star	Invertebrate	Jun to Aug	Some sea stars have up to ten arms
1_85	SANI_1_0211	NSB_1	Naked Sea Butterfly	Invertebrate	Jun to Aug	
2_79	SANI_2_0211		Tortoise Limpet	Invertebrate	Jun to Aug	
2_82	SANI_2_0211	UNK_1	Unknown	Invertebrate	All year	A common species of freshwater shrimp/Amphipod (not sure)
2_83	SANI_2_0211	UNK_2	Unknown	Invertebrate	All year	A common species of freshwater shrimp/Amphipod (not sure)
2_84	SANI_2_0211	TC_1	Toad Crab	Invertebrate	Dec to Mar, Jun to Aug	
2_93	SANI_2_0211	NSB_2	Naked Sea Butterfly	Invertebrate	All year	Seen sporadically
3_58	SANI_3_0211	NS_1	Northern Shrimp	Invertebrate	Aug and Sep	Juvenile northern shrimp are abundant in this area - also found in seal stomachs in the winter
3_59	SANI_3_0211	NS_2	Northern Shrimp	Invertebrate	Aug and Sep	Juvenile northern shrimp are abundant in this area - also found in seal stomachs in the winter
3_60	SANI_3_0211	TC_1	Toad Crab	Invertebrate	All year	
3_61	SANI_3_0211	Pstar_1	Polar Sea Star	Invertebrate	All year	He sees sea stars with 6 arms and 12 arms, similar in colour
3_62	SANI_3_0211	Pstar_2	Polar Sea Star	Invertebrate	All year	
4_69	SANI_4_0211	TC_1	Toad Crab	Invertebrate	Jun to Sep	
5_49	SANI_5_0211	Pstar_1	Polar Sea Star	Invertebrate	All year	Found washed up on shore after a windy day
5_50	SANI_5_0211	Pstar_2	Polar Sea Star	Invertebrate	All year	Found washed up on shore after a windy day
5_51	SANI_5_0211	SU_1	Sea Urchin	Invertebrate	All year	Used to be abundant at Kataapik, but there is less sea weed in the area so numbers have decreased
6_42	SANI_6_0211	TC_1	Toad Crab	Invertebrate	All year	
6_43	SANI_6_0211	Pstar_1	Polar Sea Star	Invertebrate	All year	
7_43	SANI_7_0211	TC_1	Toad Crab	Invertebrate	Jul to Sep	
7_44	SANI_7_0211	Pstar_1	Polar Sea Star	Invertebrate	All year	
8_71	SANI_8_0211	NS_1	Northern Shrimp	Invertebrate	Dec to Mar	Found in bearded seal stomach
8_72	SANI_8_0211	TC_1	Toad Crab	Invertebrate	All year	
8_73	SANI_8_0211	TC_2	Toad Crab	Invertebrate	Jul to Sep	
8_76	SANI_8_0211	SU_1	Sea Urchin	Invertebrate	All year	

Figure 35: Nunavut Atlas, Belcher Islands



SEE PAGE 160 FOR DESCRIPTION

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NUNAVUT ATLAS LEGEND
BELCHER ISLANDS

1. WATERFOWL
Canada geese commonly nest in the Belcher Islands, an estimated 1,200 birds make up a breeding population on Kugong Island. Lesser snow geese are abundant spring and fall migrants. Oldsquaw (Long-tailed duck) nest commonly on the islands, an estimated 500 birds nest on Kugong Island. An estimated 35,000 common eider winter among the islands; glacous gulls, herring gulls, Arctic tern and loons also nest on the islands.

2. RAPTORS
Peregrine falcons have been observed on the Belchers and are known to breed here.

3. ARCTIC FOXES
Arctic foxes commonly den in these areas

4. CARIBOU
In March 1978, 10 male and 50 female reindeer were transplanted from the Reindeer Reserve near Tuktoyaktuk to the Belcher Islands in Hudson Bay. The transplant was undertaken to replace native caribou which disappeared from the islands in the 1870's. It was hoped that the transplanted reindeer would become sufficiently established to provide the Inuit of Sanikiluaq with a sustainable harvest sometime in the future. The total cost of the transplant was $66,000.00. Observations of the herd remained inconclusive until March 1982 when an aerial survey produced an actual count of 222 reindeer. The herd is being managed with the community of Sanikiluaq, which had not permitted any hunting prior to 1983. The hunters mention that the reindeer occupy Walton Island during the summer and escape the heat and insects.

5. SEALS
The Belcher Islands and Nasktapoka Islands support excellent populations of sea-mammals. Ringed seal populations have been estimated at 15,000 and bearded seals at 13,000.

6. SEALS
A resident population of the Harbor seals occurs in Kasegalik Lake, which is some 65 km long and drains into Robertson Bay.

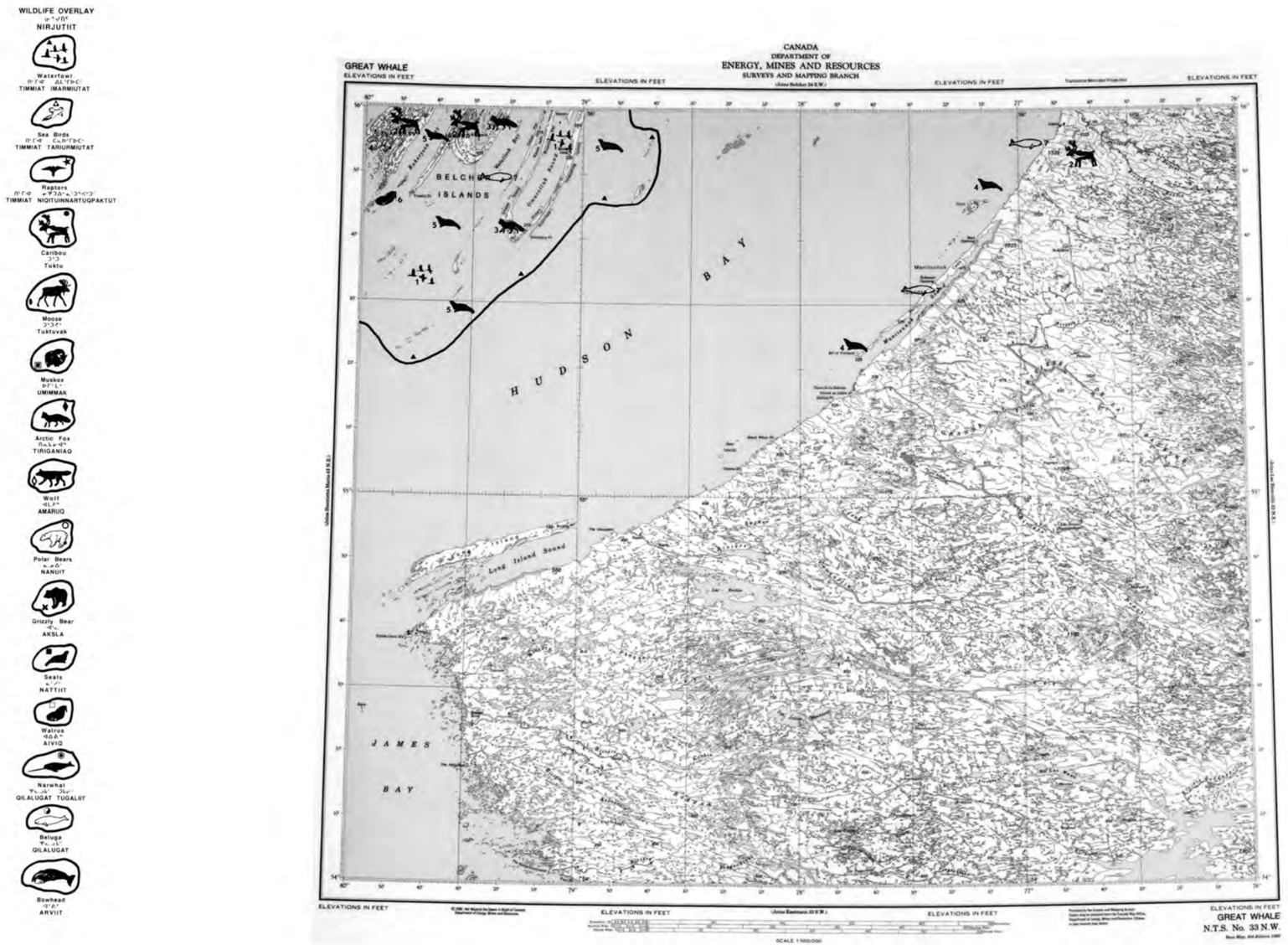
7. WALRUSES
Good populations on walrus occur around the Belcher Islands and Bakers Dozen Islands. Frequent walrus haulouts occur on Bakers Dozen Islands.

8. BELUGAS
There is a small but regular influx of beluga whales into this area during the summer.

9. POLAR BEARS
Kugong Island and the northern Belcher Islands provide summer sanctuary for polar bears. Populations are variable but number in the tens for each island group.

10. POLAR BEARS
Hunters have stated that polar bear winter range covers the open area between Johnson Island and Bakers Dozen Islands.

Figure 36: Nunavut Atlas, Great Whale



NUNAVUT ATLAS LEGEND
GREAT WHALE

1. WATERFOWL
Canada geese commonly nest on the Belcher Islands. Lesser snow geese are abundant spring and fall migrants. Oldsquaw nest commonly on the islands. An estimated 35, 000 common eider winter among the islands, glaucous gulls, herring gulls, Arctic terns and loons also nest on the islands.

2. CARIBOU
In March 1978, 10 male and 50 female reindeer were transplanted from the Reindeer Reserve near Tuktoyaktuk to the Belcher Islands in Hudson Bay. The transplant was undertaken to replace native caribou which disappeared from the islands in the 1870s. It was hoped that the transplanted reindeer would become sufficiently established to provide the Inuit of Sanikiluaq with a sustainable harvest sometime in the future. The total cost of the transplant was $66,000.00. Observations of the herd remained inconclusive until March 1982 when an aerial survey produced an actual count of 222 reindeer. The herd is being managed with the community of Sanikiluaq, which had not permitted any hunting prior to 1983. The hunters mention that the reindeer occupy Walton Island during summer to escape the heat and insects.

3. ARCTIC FOXES AND COLOURED FOXES
Coloured foxes are local but Arctic foxes usually come in across the ice fields in temporary migrations.

4. POLAR BEARS
Polar bears become more numerous on the Belchers when the coast is ice bound. The area southwest of Flaherty Island is especially important for polar bears. The islands are utilized by polar bears for winter denning and summer sanctuary.

5. SEALS
The Belcher Islands support excellent populations of sea-mammals. Ringed seal populations have been estimated at 50,000 and bearded seals at 13,000. Harp seals have also been reported in the area. Seals are also common along the Manitounuk Islands.

6. WALRUSES
Good populations of walrus occur around the Belcher Islands. Walrus are particularly common at the southeast extremity of Churchill Sound and at the southern extremity of Robertson Bay.

7. BELUGAS
There is a small but regular influx of beluga into the Belcher Islands and along the Quebec coast north of Poste-de-la-Baleine.

FINAL THOUGHTS

INTERVIEW PROCESS

The interview process was judged to be reasonably effective, even though both format and execution were quite relaxed. The process was well defined and the use of photos and maps ensured that the same material was considered from one interview to the next. This provided a solid, reproducible structure that encouraged rigor, permitted immediate interviewee inter-comparisons, and allows for future community assessments. Interviews took from 1.5 - 4 hours, depending on the depth of the individual's knowledge, the amount of marine-specific information they possessed, and the extent to which responses prompted supplementary questions. Since the process was focused on coastal resources, it generally excluded mammals considered primarily terrestrial, such as caribou, muskoxen or Arctic fox, while embracing polar bears and a broad array of birds that range widely over both.

Despite general satisfaction with the process, some prior reservations warrant comment. First, the interview process was initially conducted in the present tense, with the implicit assumption that all responses were addressing contemporary, immediate or very recent experience with the species under discussion. However, unless explicitly excluded, the information offered may represent temporal integration of experiences over some indeterminate period. 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, and data offered from observations before that date should be accompanied with an indication of the observation date. These latter observations were analyzed, identified, and archived independently of contemporary data.

A second issue addresses the designation "Everywhere". Sometimes an interviewee, in response to a question about an animal's distribution, indicated that they were observed to be present "Everywhere". Everywhere is a very subjective descriptor that, without additional qualifiers, is not very useful. Essentially, it refers to the geographic extent of the respondent's knowledge, and unless that knowledge is further defined, its utility is limited. Consequently, all interviewees were asked at some point to delineate the extent of their travels. That information was recorded and subsequently displayed (see Figure 5) where it can be located and used to identify what is meant by "Everywhere" for a specific interviewee.

MAPS AND DATA

The map format was chosen (given the broad geographic reach of the interviewee's responses) to provide a synoptic view of the collected data. A common scale of 1:1,700,000 was chosen for all maps in this document (with only a few exceptions), in order to permit easy comparisons. For some species, this 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 on 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 so it 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 (2004) is not represented in this report. The difference between these two studies is that the Coastal Inventory was attempting to ascertain the qualitative geographic distribution of species while the NWMB's primary concern was harvest statistics.

The present data set 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 data sets.

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

COMBINING TRADITIONAL ECOLOGICAL KNOWLEDGE (IQ) AND SCIENTIFIC KNOWLEDGE

Inuit Qaujimajatuqangit, or Traditional Inuit Ecological Knowledge, is unique in that it is qualitative, intuitive, holistic, spiritual, empirical, personal, and often based on a long time-series of observations (Berkes 2002). These characteristics are often cited as limitations, due to the reliance on long-term memory or that it is qualitative and subjective. Conversely, traditional ecological knowledge is particularly useful for recording historical data that are unattainable in anyother manner. Perhaps as the sole device to fully understand and manage coastal resources traditional knowledge could be challenged, while a complementary coupling with the scientific method could produce important synergies resulting in a very powerful tool.

The scientific approach embraces all available evidence and postulates a theory that attempts to predict future changes. The accuracy of the prediction is a measure of the completeness of scientific understanding. Understanding the reasons for change is important because that information is central to any attempt to mitigate or influence long term effects, such as climate change. Addressing the root cause is a more certain approach than attempting to influence the symptoms. A critical factor in the scientific method is the availability and reliability of data available for analysis. The Arctic, because of size, complexity, and manpower limitations, does not often have 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, a growing chorus of Arctic researchers has commented on the looming possibility of climate change, and the expected impacts on the marine environment (Tynan and DeMaster 1997; Michel, Ingram and Harris 2006; Ford et al 2008a, 2008b; Moore and Huntington 2008). Many positive and negative changes will occur in recurrent open water sites, undoubtedly influencing many coastal resources. Specific impacts can be expected on water stratification and its role in nutrient renewal, the balance between multi-year and annual ice, the duration and location of open water, and the impacts of tidal mixing and topographic upwelling. The impact of these physical changes could then influence some facet of the marine food web, such as the relative importance of ice algae, the timing and magnitude of primary and secondary production, and changes in the distribution, abundance, and success of traditional species. In other words, we can expect change to occur in our physical world that will, in turn, alter the biological system, including the human component.

The Nunavut Coastal Resource Inventory initiative was undertaken to provide information that could inform decision-making in the areas of resource management, economic development, conservation, environmental assessment, and the mitigation of anticipated climate change effects. In order to be effective, each intervention will require baseline resource information plus knowledge about the factors that are driving change. Change is divided between direct human alteration (resource extraction) and significant systemic changes (climate change). Climate change will exert its influence through warmer average temperatures, altered wind patterns, changes in precipitation, increasing fresh water input, and modified ocean circulation. These will, in turn, directly affect the physical marine environment which will then influence coastal marine resources. Mitigating, ameliorating, or influencing these anticipated changes will require considerable information about the factors that drive both the physical and biological environments, as well as their interconnectedness. There are two immediate sources for that information, traditional ecological knowledge and scientific knowledge.

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APPENDIX 1
SANIKILUAQ INTERVIEWEE BIOGRAPHIES

INTERVIEW	NAME	BACKGROUND
1	Lucassie Takatak	Born in 1942 at Qunilaaq. He grew up in the Kataapik area and at an outpost camp on Tikirak Island and Umiaqtalik. He has lived in Sanikiluaq for 41 years. Lucassie started hunting at the age of 13 and continues to be a very active hunter.
2	Jimmy Iqaluk	Born and raised at Kataapik. Jimmy moved to Sanikiluaq 41 years ago. He started hunting when he was very young and continues to hunt primarily for seals, birds, and fish.
3	Peter Kattuk	Born in 1950 at Upinngivialuk, Peter grew up at Kataapik with his parents. He moved to Sanikiluaq 41 years ago. Peter started actively hunting at the age of 13. He hunts certain animals depending on the season. He primarily hunts seals, geese, ducks, whales, and fish.
4	Johnny Tookalook	Born 1935 and raised in the Kataapik area, Johnny has lived in Sanikiluaq for 51 years. He started hunting at the age of five and learned by watching his father. Johnny stopped hunting five to ten years ago, but continues to fish occasionally.
5	Johnassie Iqaluk	Born and raised at Kataapik, Johnassie has lived in Sanikiluaq for 42 year. He goes hunting, depending on the season and primarily harvests seals, geese, eider ducks, fish, bearded seals, polar bear, and whales.
6	Annie Amitook	Born in 1953, Annie grew up at Kataapik, Kingaaluk, Tukara Island (during the summer) Itilliapik and Lukissee Islands which is an area abundant with eider ducks and drift wood. She started fishing at the age of five or six years old. Annie started hunting regularly when she was 16. She hunts seals in the summer and fishes for arctic char, cod, and sculpins.
7	Johnassie Ippak	Born and raised in Sanikiluaq, Johnassie started hunting when he was sixteen or seventeen years old. He hunts for every animal available.
8	Elijah Oqaituk	Born and raised in Sanikiluaq, Elijah started fishing at ten years of age and hunting at the age of sixteen or seventeen years old. He primarily hunted eider ducks, seals, geese, polar bears, and beluga, but rarely hunts now due to health problems.
9	Lucassie Ippak	Born in 1972, Lucassie has lived in Sanikiluaq his whole life. He started hunting on his own when he was nineteen years old. Lucassie primarily hunts birds, seals, belugas, fish, and polar bears.

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 (Government of Canada)

DOE - Department of Environment (Government of Nunavut)

DSD - Department of Sustainable Development (Government of Nunavut)

ED & T - Department of Economic Development and Transportation (Government of Nunavut)

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 (Government of Canada)

NRI - Nunavut Research Institute

NTI - Nunavut Tunngavik Incorporated

NWMB - Nunavut Wildlife Management Board

TK - Traditional Knowledge

TEK - Traditional Ecological Knowledge

APPENDIX 3
SANIKILUAQ BIRD COMMENTARY

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Snow Goose	N	Migrant; breeds	Abundant spring & fall migrant	Abundant spring & fall migrant					Resting stop during spring migration northward. Snow Geese do not nest or molt on the Belcher Islands	Seems accurate
Ross's Goose	N	Migrant; breeds	Not recorded	Not recorded					Ross's geese are smaller and fatter than the Snow geese. Found mixed with the Snow geese	His description is good, and I'm convinced he has seen them in spite of the lack of support in the literature
Cackling Goose	Y	Migrant	Uncommon fall migrant	Fairly common fall migrant					Migrate through with Snow geese	Seems accurate
Canada Goose	Y	Migrant; breeds	Abundant; breeds	Abundant; breeds					These geese nest and molt here	Seems accurate
Tundra Swan	Y	Migrant; breeds	Uncommon	Uncommon	Bred in the past, up to 1938				Nesting site	Seems accurate
American Black Duck	N	Migrant; breeds	Common in spring	Scarce. No breeding records					Black ducks are not very common here and are scattered widely	Seems accurate and in keeping with the published literature
Northern Pintail	Y	Migrant; breeds	Common; breeds	Not common					Found in small numbers in small lakes and ponds	Seems accurate
Green-winged Teal	N	Migrant; breeds	Not recorded.	Not recorded			Reported as seen by locals and one by Dr. I. McLaren in 1959.		No comments	I'm unsure of this record

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Greater Scaup	N	Migrant; possible breeder	Not recorded	Rare		Reported by Twomey			Feed in saltwater, go to freshwater to drink and rest	Seems accurate
King Eider	Y	Migrant; breeds; winter records	Uncommon; breeds	Uncommon; breeds			Overwinter if open water (Gilchrist & Robertson, 2000)		Sometimes shot in the fall. Not many in the area and do not nest here	His record of occurrence seems accurate, but I would question why he claims they do not nest there. Perhaps he has simply not seen a nest himself.
Common Eider	Y	Migrant; breeds; winter records	Abundant; breeds	Abundant; breeds			Overwinter if open water (Gilchrist & Robertson, 2000)		Abundant during molting season; found everywhere	Robertson and Gilchrist (1998) surveyed the islands in 1997 and note a sharp decline in eiders nesting since a similar survey in 1985-88. They conclude that the overall population was down by about 75%. They attribute a large die-off during the winter of 1991-2 as the most likely cause. The status as provided by the interviewee seems accurate.
Surf Scoter	N	Migrant; breeds	Not recorded	Rare	Abundant	Abundant			Molting happens on the islands	I would accept the claims of the interviewee
Long-tailed Duck	Y	Migrant; breeds; winter records	Common; breeds	Common; breeds			Overwinter of open water (Gilchrist & Robertson, 2000)		Abundant in the fall (August-October); nest everywhere	Seems accurate
Common Merganser	N	Migrant; possible breeder; winter records	Common migrant and summer resident; breeds	Common migrant; no breeding records					Abundant during molting season; found everywhere	Seems accurate
Rock Ptarmigan		Permanent resident; breeds	Fairly common permanent resident	Common resident; breeds			Seen in winter by Gilchrist & Robertson, 2000		Don't go on the islands as much as they used to. Mainly found feeding where reindeer have dug through the snow to feed	Seems accurate. Likely cause of lower numbers is due in part to hunting activities by locals.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Red-throated Loon	Y	Migrant; breeds	Uncommon	Common migrant and summer resident; breeds		Common breeder			Scattered on islands and rarely seen. More common where char are found	Seems accurate
Common Loon	Y	Migrant; breeds	Spring & fall migrant; breeds	Uncommon migrant and summer resident; breeds					Scattered on islands and rarely seen. More common where char are found	Seems accurate
Sharp-shinned Hawk	N	Migrant; possible breeder	Not recorded	Not recorded		Not recorded				Doubt very much if he has seen Sharp-shinned Hawks. He also suggests that they are to be expected (widely scattered?) and as well, they do not nest on cliffs. They only range as far north as treeline as a breeding species and they nest in trees. He may have seen a Merlin perhaps, but again, they nest in trees.
Northern Goshawk	N	Migrant; possible breeder	Not recorded	Not recorded		Not recorded				Doubt if he is actually seeing N. Goshawk. They only range as far north as the treeline as a breeding species, and, they nest in trees. He may have seen a Northern Harrier, but they nest in open meadows, on the ground.
Rough-legged Hawk	Y	Migrant; breeds	Common migrant, summer resident and breeder	Fairly common migrant and summer resident; breeds					Widely scattered; nest on hills and cliffs	Seems accurate
Peregrine Falcon	Y	Migrant; breeds	Fairly common summer resident	Uncommon; breeds		Breeds on the Belchers				Seems accurate.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
American Golden-Plover	N	Migrant	Uncommon migrant and a few summer records	Uncommon spring and fall migrant. Scarce summer resident. No breeding records	Rare fall migrant				Found everywhere; widely scattered	I suggest that he has in fact encountered this species, but his words would suggest they are more common than they may actually be.
Purple Sandpiper	Y	Migrant; breeds	Abundant migrant and summer resident; breeds	Abundant spring & fall migrant and abundant breeder					No comments	I accept he has seen this species as it is reported to be the most abundant shorebird on the Belcher's.
Red-necked Phalarope	Y	Migrant; breeds	Common migrant and summer resident; breeds	Common spring & fall migrant. Possible breeder					Found in small lakes	Seems accurate
Bonaparte's Gull	N	Migrant; possible breeder	Not recorded	Not recorded					Only seen in the fall	Has never been recorded by others. His claim that he sees it in the fall would suggest a fall migrant, but the fact is, this species nests further south and further east. I have no idea what he has seen unless it was a Sabine's Gull (also not reported by others) that is known to nest on Coats and Southampton islands to the north.
Purple Sandpiper	Y	Migrant; breeds	Abundant migrant and summer resident; breeds	Abundant spring & fall migrant and abundant breeder					No comments	I accept he has seen this species as it is reported to be the most abundant shorebird on the Belcher's.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Red-necked Phalarope	Y	Migrant; breeds	Common migrant and summer resident; breeds	Common spring & fall migrant. Possible breeder					Found in small lakes	Seems accurate
Bonaparte's Gull	N	Migrant; possible breeder	Not recorded	Not recorded					Only seen in the fall	Has never been recorded by others. His claim that he sees it in the fall would suggest a fall migrant, but the fact is, this species nests further south and further east. I have no idea what he has seen unless it was a Sabine's Gull (also not reported by others) that is known to nest on Coats and Southampton islands to the north.
Purple Sandpiper	Y	Migrant; breeds	Abundant migrant and summer resident; breeds	Abundant spring & fall migrant and abundant breeder					No comments	I accept he has seen this species as it is reported to be the most abundant shorebird on the Belcher's.
Red-necked Phalarope	Y	Migrant; breeds	Common migrant and summer resident; breeds	Common spring & fall migrant. Possible breeder					Found in small lakes	Seems accurate
Bonaparte's Gull	N	Migrant; possible breeder	Not recorded	Not recorded					Only seen in the fall	Has never been recorded by others. His claim that he sees it in the fall would suggest a fall migrant, but the fact is, this species nests further south and further east. I have no idea what he has seen unless it was a Sabine's Gull (also not reported by others) that is known to nest on Coats and Southampton islands to the north.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Glaucous Gull	Y	Migrant; breeds; winter records	Common migrant and summer resident; uncommon breeder	Common migrant and summer resident. Common breeder	Recorded as breeding		Overwinter if open water (Gilchrist & Robertson, 2000)		Only seen in the fall	All literature points to a very common spring and fall migrant and common breeding bird in the Belcher's. I cannot explain why he claims to only see it in the fall. Decline in population in the Belchers, no doubt in response to decline in Common Eider numbers which is a major food source (eggs and nestlings) for gulls (Gilchrist and Robertson, 1999)
Ross's Gull	N	Not recorded south of 60 in the 'Bay Islands'	Not recorded	Not recorded					Only seen in the fall	This would suggest a fall migrant. However, I doubt very much that this is what he actually seen; this a very rare bird in Canada.
Long-tailed Jaeger	N	Vagrant	Not recorded	Rare	Reported by Todd in 1938	Rare			Rare. Scattered all around the islands	Seems accurate
Thick-billed Murre	N	Vagrant	Not recorded	Rare vagrant					Seen only in the winter	Seems accurate
Snowy Owl	Y	Permanent resident; breeds	Common permanent resident and common breeder when lemmings present	Common; breeds		Very common in 1938	Overwinter if open water (Gilchrist & Robertson, 2000)		Uses Raven to find Polar Bears	Seems accurate
Common Raven	Y	Permanent resident; breeds	Uncommon resident., but no breeding records	Scarce. No breeding records	Todd reports two breeding records	Reported as breeding (one record) in 1938	Overwinter if open water (Gilchrist & Robertson, 2000)		Often sees them nesting	Seems accurate.
Lapland Longspur	Y	Migrant; breeds	Abundant migrant and summer resident; breeds	Abundant migrant and summer resident. Abundant breeder					No comments	I feel overly sure that he sees them in spite of the lack of comment on their status.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Snow Bunting	Y	Migrant; breeds; winter records	Common migrant and summer resident; breeds	Very common migrant and summer resident; breeds			Seen in winter by Gilchrist & Robertson, 2000		No comments	I feel overly sure that he sees them in spite of the lack of comment on their status.
Greater White-fronted Goose	N	Accidental	Not recorded	Not recorded	Recorded by Todd					
Brant	N	Migrant	Uncommon spring migrant	Irregular spring migrant	Becoming scarce	Fall migrant				Seems odd that he has never seen them
Harlequin Duck	N	Vagrant	Not recorded	Rare			Skin collected by Burwash (Sept. 2/27) in National Museum collection			
White-winged Scoter	N	Migrant	Regular spring migrant	Uncommon	Common summer resident; Todd	July records by Twomey & Herrick				Seems odd that he has never seen them
Black Scoter	Y	Migrant; may breed	Uncommon summer resident	Rare						Seems odd that he has never seen them
Common Goldeneye	N	Migrant; may breed	Common summer resident; spring & fall migrant. He suggests it breeds here.	Fairly common summer resident; no breeding records						Can't explain why he has not seen this species

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Willow Ptarmigan	Y	Permanent resident	Not recorded	Not recorded			Godfrey (1986) clearly shows this as a perm. Resident			
Gyrfalcon	Y	Permanent resident; breeds	Not recorded	Not recorded			Godfrey (1986) clearly shows this as a resident			
Sandhill Crane	N	Migrant; breeds	Uncommon and irregular spring migrant	Not recorded						
Black-bellied Plover	N	Migrant	Not recorded	Fall migrant						Seems odd that he has never encountered this species
Greater Yellowlegs	N	Migrant; breeds	Listed records by Flaherty and Todd only.	Seen by Manning; fall, 1944. Seen by locals in fall migration at least once.	Reported by Todd in 1938		Reported by Flaherty in 1918			Can't explain why he has never seen this species
Red Knot	Y	Migrant	Not recorded	Very rare summer record. No breeding evidence			Godfrey (1986) clearly shows this species in the Belcher's			
Semipalmated Sandpiper	Y	Migrant; breeds	Not recorded	Very common breeder						Suggest that he is actually seeing this species (Semipalmated Sandpiper) and not the Baird's Sandpiper that he claims.

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Least Sandpiper	Y	Migrant; breeds	Not recorded	Rare		Reported as breeding by Twomey & Herrick				
White-rumped Sandpiper	N	Migrant	Fall vagrant	Fall migrant only	Called abundant by Todd in fall of 1915 & 1938					He no doubt is not distinguishing between this species and the Semipalmated Sandpiper as they are very similar
Pectoral Sandpiper	N	Migrant	Fall vagrant	Not recorded			Collected by Murie			
Dunlin	N	Migrant; breeds	Rare	Uncommon or rare fall migrant						
Red Phalarope	Y	Vagrant	Not recorded	Not recorded			Godfrey (1986) clearly shows this species as occurring in the Belcher's			
Herring Gull	Y	Migrant; breeds	Very common spring and fall migrant, and common breeder	Very common summer resident; common breeder						Decline of this species as a breeding bird in the Belchers noted by Gilchrist and Robertson (1999) no doubt due to a decline in the numbers of nesting Common Eider. Eider eggs and nestlings form a major part of the gulls' diet. That the interviewee has not recorded thisspecies is no doubt because he has it confused with Black-legged Kittiwake which he claims to see.
Ivory Gull	N	Accidental	Not recorded	Not recorded			Flaherty reported one in 1918			

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Arctic Tern	Y	Migrant; breeds	Common migrant and breeder	Common breeder	Reported by Todd	Seen by Twomey	Listed by Murie as common			Decline of this species as a breeding bird in the Belchers noted by Gilchrist and Robertson (1999) due in part to egg collecting by local residents. Again, I would suggest that he is actually seeing Arctic Tern and not the Common Tern as he claims.
Black Guillemot	Y	Migrant; breeds; winter records	Not recorded	Uncommon. Several small breeding colonies			Overwinter if open water (Gilchrist and Robertson, 2000)			Odd that he has not seen this species
Short-eared Owl	N	Migrant; breeds	Not recorded	Rare						
Horned Lark	Y	Migrant; breeds	Uncommon breeder	Very common breeder	Listed by Todd as a casual breeder					Cannot explain why he did not claim to see this very common species in the Belcher's
Purple Martin	N	Accidental	One seen on May 29, 1959	Not recorded						
Brown Thrasher	N	Vagrant	Specimen in Nat. Museum, collected in Aug., 1960	Emaciated male found in 1971						
American Pipit	Y	Migrant; breeds	Common migrant and common breeder in specific habitat	Fairly common breeder						Seems odd that he has never encountered this species

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Tennessee Warbler	N	Migrant; may breed	Not recorded	Not recorded		Reported by Twomey in May, 1938				
Orange-crowned Warbler	N	Migrant; may breed	Two reported in spring,1959	Not recorded		Reported by Twomey after a late May storm in 1938				
Black-throated Blue Warbler	N	Accidental	Not recorded	Not recorded			Bird collected on Oct. 20, 1966 by Zazalenchuk			
Yellow-rumped Warbler	N	Migrant; breeds	Not recorded	Not recorded		Reported by Twomey in May, 1938				
Bay-breasted Warbler	N	Accidental	Not recorded	Not recorded		Reported by Twomey in May, 1938				
Common Yellowthroat	N	Migrant; may breed	Not recorded	Dead bird found May 16, 1971						
American Tree Sparrow	N	Migrant; breeds	Not recorded	One seen June 3, 1971		A few seen in May and June, 1938 by Twomey				
Savannah Sparrow	Y	Migrant; breeds	Not recorded	Uncommon summer resident; may breed						

BIRDS REPORTEDIN INTERVIEWS	IS THE BIRD WITHIN NORMAL BREEDING RANGE? BREEDING RANGE ACCORDING TO GODFREY, 1986	WHAT STATUS DOES THE BIRD HAVE WITHIN THE AREA? STATUS ACCORDING TO RICHARDS & WHITE, 2008	FREEMAN (1970)	MANNING (1976)	TODD (1963)	TWOMEY AND HERRICK (1942)	OTHER SIGHTINGS	WHEN WAS THE BIRD LISTED WITH THE NWT / NU BIRD CHECKLIST SURVEY?	COMMENTS BY THE INTERVIEWEE	COMMENTS FROM JIM RICHARDS ON THE LIKELIHOOD OF BIRD SIGHTING FREQUENCY AND INTERVIEW FINDINGS.
Lincoln's Sparrow	N	Migrant; breeds	Not recorded	Not recorded	Reported by Todd					
White-throated Sparrow	N	Migrant; breeds	Not recorded	Not recorded	Reported by Todd					
White-crowned Sparrow	Y	Migrant; breeds	Not recorded	Not recorded			Well within range as shown by Godfrey, 1986.			
Common Redpoll	N	Migrant; breeds	Uncommon	Rare		Seen in 1938 by Twomey				
Hoary Redpoll	N	Vagrant	Not recorded	Not recorded		Nest/4 eggs collected on July 14, 1938 by Twomey				

Other species I suspect could be found in the Belcher Islands as passing migrants only; especially in the fall:

Sandhill Crane
Pomarine Jaeger

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OVERVIEW OF THE LITERATURE:

Freeman (1970) – this article covers the period May 10-Sept. 2, 1959; April 19-Sept. 29, 1960; Feb. 28-April 16, 1961

Manning (1976) – this paper covers the period May 5-July 14, 1971 and Sept. 2-22, 1971; March 28-April 1, 1973

Twomey (1942) includes observations by him and others as follows: April 13-Aug. 30, 1938

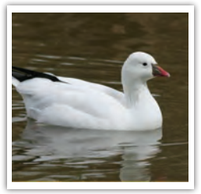
The ref. to Murie (O. J. Murie of the Carnegie Museum) refers to a trip from Aug. 14-30, 1915

APPENDIX 4
SPECIES PHOTOS

BIRDS

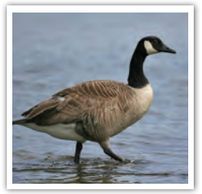

White-Fronted Goose

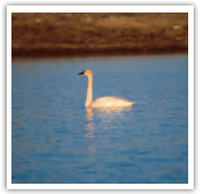

Snow Goose


Ross's Goose


Brant


Cackling Goose

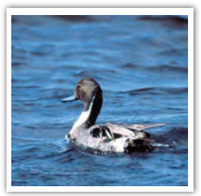

Canada Goose

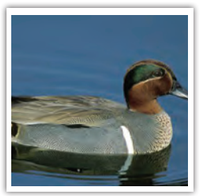

Tundra Swan

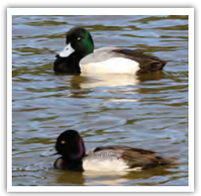

Northern Shoveler

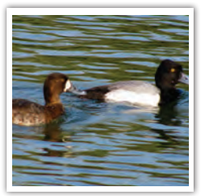

American Wigeon

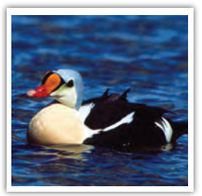

Mallard


Northern Pintail


Green Winged Teal

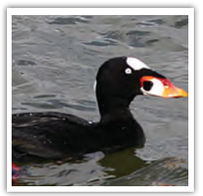

Greater Scaup


Lesser Scaup


King Eider


Common Eider

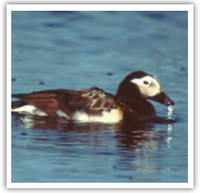

Harlequin Duck


Surf Scoter

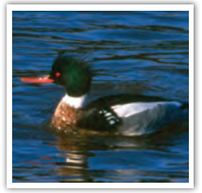

White-Winged Scoter

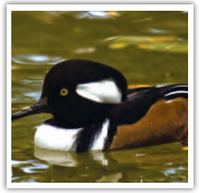

Black Scoter


American Black Duck


Long-Tailed Duck


Common Merganser


Red-Breasted Merganser


Hooded Merganser


Common Goldeneye


Barrow's Goldeneye


Willow Ptarmigan

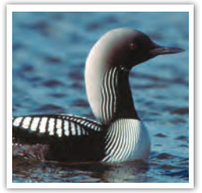

Rock Ptarmigan


White-Tailed Ptarmigan

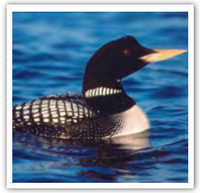

Spruce Grouse


Red-Throated Loon


Arctic Loon


Pacific Loon


Common Loon


Yellow-Billed Loon


Horned Grebe


Greater Shearwater


Northern Fulmar


Northern Gannet


Double-Crested Cormorant


American Bittern


Bald Eagle


Rough-Legged Hawk


Sharp-Shinned Hawk


Northern Goshawk


Northern Harrier


Golden Eagle

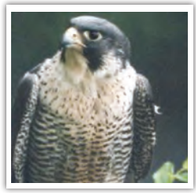

American Kestrel


Merlin


Gyrfalcon


Peregrine Falcon


Peregrine Falcon Anatum


Peale's Peregrine Falcon


Sandhill Crane


Whooping Crane


Black-Bellied Plover


American Golden-Plover


Common Ringed Plover


Semipalmated Plover


Piping Plover Melodus


Piping Plover

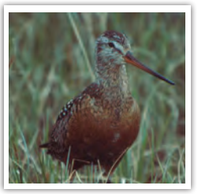

Killdeer


Lesser Yellowlegs

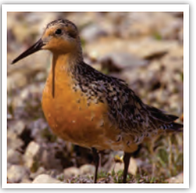

Greater Yellowlegs


Eskimo Curlew


Whimbrel


Hudsonian Godwit


Ruddy Turnstone


Red Knot


Sanderling


Short-Billed Dowitcher


Spotted Sandpiper


Semipalmated Sandpiper


Least Sandpiper

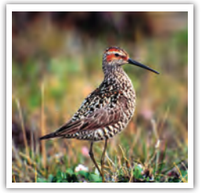

White-Rumped Sandpiper


Baird's Sandpiper

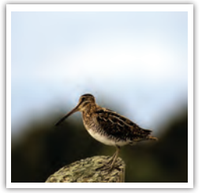

Pectoral Sandpiper

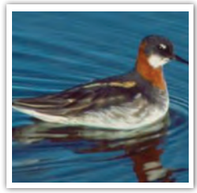

Purple Sandpiper

Dunlin


Stilt Sandpiper


Buff-Breasted Sandpiper


Wilson's Snipe


Red-Necked Phalarope


Red Phalarope


Black-Legged Kittiwake


Ivory Gull


Sabine's Gull

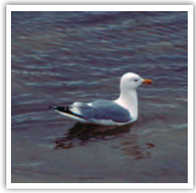

Bonaparte's Gull


Black-Headed Gull


Ross's Gull


Mew Gull


Herring Gull


Thayer's Gull


Iceland Gull


Glaucous Gull


Ring-Billed Gull


California Gull


Lesser Black-Backed Gull


Great Black-Backed Gull


Common Tern


Roseate Tern


Arctic Tern


Pomarine Jaeger


Parasitic Jaeger


Long Tailed Jaeger


Dovekie


Thick Billed Murre


Razorbill


Atlantic Puffin


Black Guillemot


Snowy Owl

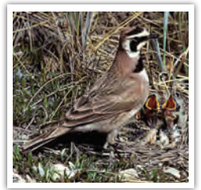

Short-Eared Owl


Common Nighthawk


Northern Shrike


Common Raven


Gray Jay


Horned Lark


Bank Swallow


Tree Swallow


Cliff Swallow


Barn Swallow


Northern Wheatear


Mountain Bluebird

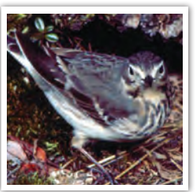

Swainson's Thrush


Hermit Thrush


Gray-Cheeked Thrush


American Robin


European Starling


American Pipit


Yellow Warbler


American Redstart


Wilson's Warbler


Palm Warbler


Yellow-Rumped Warbler


Prothonotary Warbler


Blackpoll Warbler


Northern Waterthrush


American Tree Sparrow


Savannah Sparrow

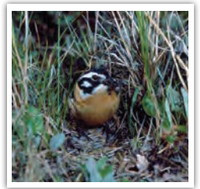

Fox Sparrow


Harris's Sparrow


White-Crowned Sparrow


Dark-Eyed Junco


Lapland Longspur


Smith's Longspur


Snow Bunting


Common Redpoll


Hoary Redpoll


White-Winged Crossbill


Rusty Blackbird


Yellow-Headed Blackbird


Bohemian Waxwing


Ruby-Crowned Kinglet


Belted Kingfisher


American White Pelican

FISH


Arctic Char


Dolly-Varden


Lake Trout


Brook Trout


Bull Turbot


Lake Whitefish


Broad Whitefish


Round Whitefish


Mountain Whitefish


Lake Cisco


Least Cisco


Arctic Cisco


Blackfin Cisco


Inconnu


White Sucker


Longnose Sucker


Atlantic Salmon


Arctic Geryling


Northern Pike


Walleye


Atlantic Cod


Arctic Cod


Greenland Cod


Toothed Cod

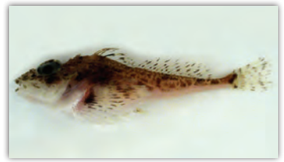

Arctic Staghorn Sculpin


Deepwater Sculpin


Slimy Sculpin


Spoonhead Sculpin


Twohorn Sculpin


Spatulate Sculpin


Arctic Sculpin


Shorthorn Sculpin

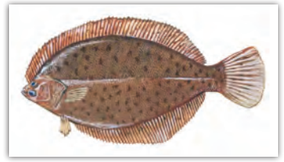

Bigeye Sculpin


Ribbed Sculpin


Mailed Sculpin


Hamecon


Starry Flounder


Winter Flounder


Arctic Flounder


Greenland Turbot

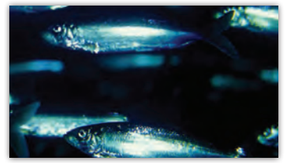

Trout Perch


Lake Chub


Rainbow Smelt


Capelin


Atlantic Herring


Pacific Herring


Ninespine Stickleback


Threespine Stickleback


Burbot


Shulupaoluk


Arctic Eelpout


Canadian Eelpout


Polar Eelpout


Threespot Eelpout


Longear Eelpout


Pale Eelpout


McAllister's Eelpout


Lutken's Eelpout

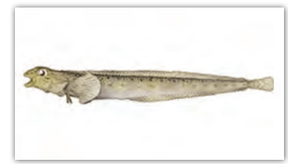

Paamiut Eelpout


Saddled Eelpout


Adolf's Eelpout


Arctic Lamprey


Sandlance


Slender Eelblenny


Stout Eelblenny


Aurora Unernak

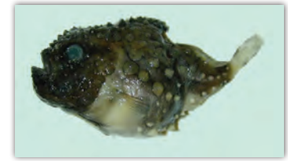

Fish Doctor

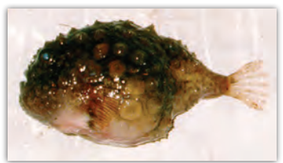

Northern Wolffish


Spotted Wolffish


Atlantic Wolffish


Lumpsucker


Leatherfin Lumpsucker


Atlantic Spiny Lumpsucker


Variegated Snailfish

Bartail Seasnail


Gelatinous Seasnail


Atlantic Seasnail

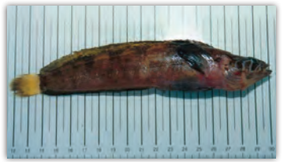

Threebeard Rockling


Arctic Rockling

Arctic Alligator Fish


Atlantic Sea Poacher


Daubed Shanny


Fourline Snakeblenny


Rock Grenadier


Black Dogfish


Deepwater Redfish

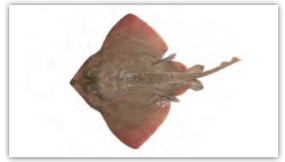

Ocean Perch


Northern Hagfish


Banded Gunnel


Glacier Lantern Fish


Arctic Skate


Thorny Skate


Greenland Shark

INVERTEBRATES

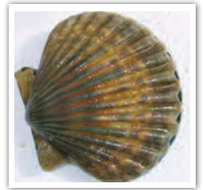

Truncate Softshell Clam


Mussel


Northern Horsemussel


Oyster


Cockle


Scallop


Whelk


Arctic Moonsnail


Flexed Gyro


Tortoiseshell Limpet


Barnacle


Ampipod


Northern Krill


Northern Shrimp


Striped Shrimp


Mysid Shrimp


Toad Crab


Deep Sea King Crab


Snow Crab


Crayfish


Hermit Crab


Polar Sea Star


Mud Star


Basket Star


Sea Urchin


Sea Cucumber


Sea Anemone


Naked Sea Butterfly


Shelled Sea Butterfly


Jellyfish


Ctenophore


Boreoatlantic Squid


Parchment Worm


Plankton Worm


Arrow Worm


Finger Sponge

MARINE MAMMALS


Polar Bear


Walrus


Ringed Seal


Harp Seal


Bearded Seal


Hooded Seal


Harbour Seal


Beluga


Narwhal


Common Minke Whale


Long-Finned Pilot Whale


Northern Bottlenose Whale


Atlantic White-Sided Dolphin


White-Beaked Dolphin


Harbour Porpoise


Killer Whale


Bowhead Whale


North Atlantic Right Whale


Fin Whale


Sei Whale


Sperm Whale


Blue Whale


Humpback Whale

MARINE PLANTS

Hollow Stemmed Kelp

Edible Kelp

Sea Colander

Dulse

Spiny Sour Weed

Bladder Wrack

Green Sea Fingers

Sea Lungwort

Variableleaf Pondweed

Whitestem Pondweed

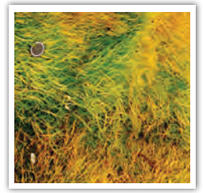
Robbin's Pondweed

Alpine Pondweed

Eel Grass

Floating Buttercup

Semaphore Grass



Goose Grass

Mare's Tail

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Department of Environment
Avatiliqiyikkut
Ministère de l’Environnement