

CHAPTER 2: VILLAGES



Deering, Alaska, 1925. Photo credit: University of Alaska Anchorage, Thomas Sexton collection, UAA-hmc-0219-136, Alaska Digital Archives.

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Beluga meat drying at Kotzebue in early 1960s. Photo credit: Wien Collection, Anchorage Museum, B1985.027.1469, Alaska Digital Archives.

Modern day subsistence camp near Kotzebue. Photo credit: Peter Metcalfe.



Introduction

While most residents live in the Borough's 11 villages, historically, the people of the region lived in family-based groups, migrating to seasonal camps in the spring and back to more protected upriver areas during the fall. Today, this seasonal cycle repeats each year as people spend extended periods away from their homes at camps along the coast and on the sides of inland rivers.

Each of the Borough's communities has its own story of why it was selected for a permanent settlement, which local resources are most valued, and what kinds of changes are currently shaping daily life.

Working under a federal Coastal Impact Assistance Program (CIAP) grant, the Borough included the seven communities closest to the Chukchi Sea for this initial study. Kivalina, Kotzebue and Deering are located immediately adjacent to the coast, and Noatak, Noorvik, Buckland, and Selawik are located along rivers. The four communities not included in this project, Kiana, Ambler, Shungnak, and Kobuk, are no

less important, and they will likely be included in future mapping projects initiated by the Borough.

Although unique in many ways, the communities share much in common. All are located on a waterway, none is connected to the outside world by road, all have local governments (tribal and/or city), and they all reside within and are part of the Northwest Arctic Borough.

At 39,000 square miles, the Borough is the second largest municipality in Alaska—larger than many states in the Lower 48. Incorporated in 1986 as a home-rule municipality, the Borough has all powers not specifically limited by its charter or state or federal law. Other than for Kotzebue, the Borough has responsibility for land use planning, permitting and zoning, which are administered by the mayor through the Planning Department with some approvals assigned to the Planning Commission. The 11 elected members of the Borough Assembly have the ultimate authority for the comprehensive plan, zoning changes, and permit appeals.

Every community in the Borough is incorporated as a second class city, except Noatak, which has no municipal government, only a tribal government. All registered voters of a community elect a seven-member city council and a city

mayor. Other than Kotzebue, which has a city manager, all communities have a strong mayor form of government where the mayor is responsible for administration—even though some hire city administrators to address day-to-day affairs. City governments are often responsible for managing certain utilities such as laundromats and water and sewer facilities.

Each village in the Borough is a federally recognized tribe governed by a seven-member tribal council that elects a president and appoints an administrator to manage day-to-day affairs. The tribes have a special government-to-government relationship with federal agencies designed to ensure consultation during federal decision-making processes. Tribes also have some authority to address certain kinds of social issues, such as adoption and domestic violence. A recent (2014) final rule by the Bureau of Indian Affairs gives Alaska tribes the ability to have lands they own held in trust by the federal government. That rule gives tribes more sovereignty because lands held in trust generally are exempt from local and state regulation, and such lands also enable the tribes to apply for special funding.¹ Native allotments are also held in trust by the federal government and are exempt from local and state regulation.

Throughout most parts of the state, Alaska Natives hold shares in both regional and local Native corporations organized under the Alaska Native Claims Settlement Act of 1971 (ANCSA). Other than Kikiktagruk Iñupiat Corporation (KIC) in Kotzebue, all of the local Native corporations in the Borough merged with the NANA Regional Corporation in 1972. Both KIC and NANA operate a number of subsidiaries and provide dividends to their shareholders.

As the regional hub for Northwest Alaska, Kotzebue provides many goods and services to the Borough's villages, including jet transportation, a hospital and elder care facility, and a variety of businesses. Its residents, however, continue their hunting and gathering traditions like people in the smaller villages.

Many of the Borough's villagers wear many hats today, from working as government officials to serving on a variety of local, state, and federal committees, to sitting on the boards of NANA, KIC, or Maniilaq (a regional private nonprofit health care provider). Many people are as comfortable running a meeting with Roberts Rules of Order as they are dropping nets through the ice in the manner of their ancestors.

In Part 1 of this chapter, for each of the seven participating villages, we begin by providing a brief history of some of the events that have influenced Iñupiaq traditional food harvesting patterns in and around the village over the past 125 years. The village history is followed by a table showing results of Alaska Department of Fish and Game surveys of the amounts and kinds of traditional foods people are eating in each village today alongside the results of our interviews with village participants who identified their search areas for the maps in this atlas. A brief narrative summary of the foods people are harvesting and eating today accompanies the

table. Next, we hear about villagers' harvesting, processing, preservation, and sharing routines, and the significance of these routines in modern village life, in the words of local people. Each village section then concludes with a set of maps showing local harvesters' search areas, preceded with a short summary titled "What the maps tell us . . ." Each village's maps are divided by season and subsistence species.²

Atlas users should bear in mind that the maps in the first part of this chapter indicate the areas in which borough residents reported to us they *search for* various traditional food resources (*see* ch.1, pp. 12-19). They should therefore not be taken to demarcate the full extent of a species' habitat. Borrowing language from geographic information systems (GIS), individual search areas are frequently referred to as "polygons" throughout the atlas.

Although we took steps to ensure data were statistically representative of each community as a whole, only a subset of the population in each village provided data, so it is possible that some important search areas have been missed. Furthermore, although these data represent the search areas over the life spans of the people we interviewed, ecosystems, including both the plants and animals in the region, are not static. Habitat changes with the times—especially in times of climate change—and Iñupiaq subsistence practices will continue to evolve. Therefore, the maps should be considered a snapshot of the areas people go to hunt, trap, fish, and gather at this point in history.

The study-area-wide maps provided in Part 2 of this chapter are based solely on local and traditional knowledge gathered in researchers' interviews with local villagers. The maps combine search areas from all of the village maps in the first part of the chapter in order to present a picture of where people go to hunt, fish, trap, and gather all across the region of the Borough covered by this study. The maps in the second part of this chapter also incorporate input from local advisory group members regarding where species are



Borrowing language from geographic information systems (GIS), individual search areas are frequently referred to as “polygons” throughout this atlas, even though search areas are circumscribed with curved lines, rather than appearing as geometric polygons, on the maps in this chapter.

located during different times of the year. Please *see* p. 15 for a more detailed explanation of the methods used to create study-area-wide maps. These chapter 2 maps augment those in chapter 4 showing important areas for coastal and marine species, which in some cases were informed by local and traditional knowledge gathered in this study but in general take into account findings of outside studies and sources.

A note about seasonal map divisions— In the Arctic, seasonality is closely related to the ice conditions at sea and in the rivers. Generally, fall time is designated as the time when freeze up begins, winter is when most bodies of

water are frozen solid, spring is associated with the break-up of ice, and summer is the time of open water. However, because this usage is somewhat different from how seasonal boundaries are thought of in other regions of the world, for this atlas, and for the sake of communicating to people in other climates, seasons are defined as follows; Spring: Mar – May; Summer: Jun – Aug; Fall: Sep – Nov; Winter: Dec – Feb. Recognizing that people in the Arctic usually speak of the annual subsistence cycle as beginning at break-up, we organized seasonal maps on the page beginning with spring at the upper left.



Photo credit: U.S. Fish and Wildlife Service.

1. While the Alaska Native Claims Settlement Act extinguished aboriginal title and claims based on aboriginal title, the new rule allows those tribes that own lands to have them held in trust by the federal government.
2. A complete list of species included in this study, along with the category in which each is grouped, is provided at Appendix J.

Ipnatchiaq (Deering)



Photo credit: Northwest Arctic Borough.

Ipnatchiaq (Deering)



Deering. Photo credit: Sarah Betcher.

The People of the Ipnatchiaq

Long before the first miner dropped the first shovel of Ipnatchiaq gold-rich gravel into a sluice box, the Ipnatchiaġmiut (“people of the Ipnatchiaq River”) harvested food from a diverse supply of fish, plants, and small and large land animals that lived in and migrated through the river basin, and marine mammals and fish from the water and sea ice off the nearby coast. Much has happened in the lives of the Ipnatchiaġmiut over the years between that first gold strike and the time of the study that led to the maps in this atlas. Like the histories of all of the Borough’s communities, the story of the village now called Deering testifies to the ability of the region’s original people to adapt by finding ways to continue to harvest traditional food resources even during long periods of cultural and economic upheaval.

Most Iñpi aq families moved around during the year, but it is believed that, up to the time the first foreign ships arrived on the shores of the Northwest Arctic in the late 100s ,¹ the Ipnatchiaġmiut, once one of the largest groups on the Seward Peninsula, lived most of their year upriver from the spit where Deering is currently located, southeast of Cape Deceit on the southern coast of Kotzebue Sound. Although the international whaling industry and fur trade would greatly reduce the traditional ocean resources available to them, the Ipnatchiaġmiut remained in their traditional dwellings on



Drying salmon at Deering, 1912. Photo credit: Alaska State Library Historical Collections, ASL-P11-007 Alaska Digital Archives.

the river well into the 1800s. After gold was found on the northern side of the Seward Peninsula, though, the number and size of mining operations on the Ipnatchiaq would grow rapidly, bringing permanent economic change to the region.



Ernie Fox at nozzle on No. 8 claim on Inmachuk.
Photo credit: Alaska State Library Historical Collections,
ASL-P112-089, Alaska Digital Archives.

By the end of the 1800s, a new settlement had sprung up near the mouth of the river to supply the mining operations. In 1901, the community of Deering (believed to have been named after the 90-ton schooner *Abbie Deering*, in the area around that time²) was assigned its own U.S. Post Office. During this early mining era, the Native economy started to shift from seasonal subsistence and trading to year-round paid labor, as the river's longtime residents began to take work in the industry. While the underlying economy changed, the Iñupiaq cycle of hunting, fishing, and gathering continued. Following the arrival of gold-seekers, the U.S. federal government and evangelists from the continental states and Southeast Alaska began to take notice of the northern people, beginning a long period of schoolhouse education in non-Native ways of thinking, being, and eating.

With the consent of Presbyterian evangelist Sheldon Jackson, who served as the U.S. General Agent for Education, the Northwest Arctic's schools, in their earliest days, were operated by Christian groups. In Deering, missionaries of the Evangelical Society of Friends (Quakers) would build the first church and become the town's first school teachers. Although Jackson had begun to bring reindeer to the region to provide a new protein source and draw more indigenous people into the market economy, with so many miners moving into the area, competition for food resources was getting tight in the Ipnatchiaq basin. Increasingly finding themselves at risk, the people of the Ipnatchiaq region turned to churches and schools where they were given medicine and food. Teachers often complained about students' lack of regular attendance, however, as families continued to travel away from the spit to find traditional foods at various times of the year.

In many of the writings of white educators during this period, Iñupiaq people of all ages were referred to as children, with well-meaning missionaries and other federally dispatched teachers seeing their own role as protectors.

In a letter to the U.S. Senate committee on Indian Affairs about Alaska Natives in 1901, missionary William Duncan, in condemning a proposed government policy that aimed to “leave natives to themselves, to fight their own way, work out their own destiny, and take the same chances as whites,” argued that that kind of approach failed to take into consideration fundamental differences between the two races:

When we contrast the condition of the two peoples—whites with centuries, and the Indians, still as children making their first lessons in civilized life—then the seeming fairness of this proposal vanishes. For a race to be a fair one the competitors should be equally matched. A struggle between a full-grown man and a child leaves no room for speculation as to the results of the contest.³

In 1914, in a particularly dramatic act of this kind of protectionism, the missionaries and U.S. government officials decided Natives, especially women, should be removed from proximity to the white men working the camps in the area. Deering's population would be reduced significantly after a campaign was launched to get the Ipnatchiaqmiut to move away from the miners—and the Ipnatchiaq—and resettled at a new location 60 miles away on the Kobuk River. The teacher Charles Replogle reported to his Bureau of Education superiors in Washington, D.C., that “[a]t a vote taken in Deering this place was

We refer to Deering

I pna chiq 'h d the people a the
“Ipnatchiaqmiut” to be consistent
with modern sta da diza ion of
the Iñupiaq la g g . In older
tek s, a d ee n in some modern
writing ,t he terms I nma huk” a d
I nma hukmiut’ in sb e found.

In some published works,s uch a
Ernest Burch’s *Iñupiaq Eskimo
Nations of Northwest Alaska* (1911),
the term “Pittaḡmiut” is also used
to describe the people who once
liv d in the Deering a d Goodhope
Riv r a ea(see mp on p.6 .



Friends' Church at Deering, 1929. Photo credit: Alaska State Library Historical Collections, ASL-P45-0057, Alaska Digital Archives.

named Noorvik, which means ‘transplanted.’⁷⁴ People were reluctant to move, so the Deering school was closed, removing an important safety net for many locals at that time. Many relented and moved inland. A couple of years later, a nightmare flu epidemic would work its way up the west coast of Alaska and take the lives of over half of the Arctic’s Iñupiat.

In time, the mining would run out, just as the whaling and fur trades had, leaving local Iñupiat, who had survived epidemics, occupation, and the near depletion of many of their traditional food resources, to continue their cycle of seasonal hunting, fishing, and gathering on the northern edge of the Seward Peninsula. But things had changed in a big way for the people of the north.

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Though non-Native educators never could quite get Deering’s Natives to give up their way of looking at and living in the world,⁵ the years between the peninsula’s early-20th century mining boom and the discovery of oil on Alaska’s North Slope, which would lead to the Alaska Native Claims Settlement Act, were not easy.⁶ But, against immense odds, the Iñupiat had lived through a perilous century and a half.

Although still one of the smallest villages in the Borough, Deering’s population has been increasing for many years now—from 95 in 1960⁷ to 122 in 2010⁸ to an estimated 152 in July of 2014.⁹ While the population continues to rebound from disease and relocation, and many of the traditional food resources so nearly depleted during a hundred years of outside occupation have come back, the sandy spit the village sits on now faces new threats of flooding and erosion. Because the highest point of land is less than 10 feet above sea level, Deering has become vulnerable to storms that roll



Deering classroom, early 20th century. Photo credit: University of Alaska Fairbanks, Cordelia L.M. Noble Collection, UAF-1973-203-7, Alaska Digital Archives.

in across the sound from the Chukchi Sea. Before a sea wall was constructed in 1984, high tides would flood the village.¹⁰ In addition to the sea wall, in the 1980s a bridge was built across the channel behind the village, connecting the community to a state-run airstrip. The road continues past the airport, south out of town through abandoned reindeer corrals and processing sites and old gold mining to some of the places locals like to go to hunt and gather upriver. Another road extends west from the village for a couple of miles to a high bluff overlooking Kotzebue Sound.



Utica, an abandoned mining town near Deering. Photo credit: Department of Commerce, Community and Economic Development; Division of Community and Regional Affairs' Community Photo Library.

The modern Native Village of Deering is a federally recognized tribe. In 1900, the community incorporated as a second-class city under state law. It is governed both by the municipality and the tribe. The Mayor and City Council oversee day-to-day government functions and the Tribal President and Council govern tribal affairs. Like other communities in the Northwest Arctic Borough (with the exception of Kotzebue), Deering's local ANCSA corporation merged with the NANA Regional Corporation in 1972.

A combination of state, city, tribal, and federal entities serves the needs of the local people. Maniilaq Association, a private nonprofit, provides medical care at the local clinic. The tribe owns the grocery store and fuel service and the Borough runs the school. The city operates the sewage system, the landfill, and a washeteria where community members can do laundry and use showers though many still go to the river or to two nearby springs to get water, in addition to collecting rainwater off their roofs.¹¹ The federal government also has a presence in Deering—the 2.7 million-acre federally protected Bering Land Bridge National Preserve borders the community.¹²

The people of Deering are used to long, cold winters and cool summers, with temperatures generally ranging from -18° Fahrenheit in January to 65° in July. Rainfall averages 11-12 inches a year, with about three feet of snow falling in a typical winter. Historically, the cooler temperatures in this region kept the sea frozen over from about mid-October

until early July. Depending on ice levels, bearded seals are usually hunted on the ice in late June. In the summer, locals take their boats up the river and out into the sound. In the wintertime, snow machines traverse the tundra, frozen rivers, and sea ice.¹³



Deering sea wall, constructed in 1984. Photo Credit: Department of Commerce, Community and Economic Development; Division of Community and Regional Affairs' Community Photo Library.



Fishing at Deering. Late 1940s. Photo credit: University of Alaska Fairbanks, George A. Morlander photographs, UAF-19997-108-364, Alaska Digital Archives.

Traditional hunting, fishing, and gathering activities still provide the mainstays of the local Iñupiat diet. Non-native foods are brought in from outside and sold in the local store. Since, like the other villages in the Northwest Arctic Borough, Deering has no road access, supplies come in on

planes or barges. Freight can get in by barge only during ice-free summer months, though, so, for much of the year, locals rely on planes that come and go on the state-run gravel airstrip to get goods and people in and out. The high cost of air transport is reflected in steep local prices for both goods and services. In July 2015, a gallon of gas cost \$6.95.¹⁴

The history of the Iñupiat is a tale of pragmatism and endurance. Elders who witnessed the near extinction of food resources by outside industry and the near extinction of the Iñupiat people by outside diseases in the first part of the 1900s would live to see their communities and their region rebound. Despite over 150 years of outside pressure, the traditional food resources, and the Iñupiat people of the Iñupiat River region who had always relied on those resources to live, managed to avoid extinction. As they always have, Deering's citizens continue to hunt, fish, and gather today, as illustrated on the maps and heard in the voices speaking in this atlas. The history of the Iñupiat, some of whom would find a new home in Noorvik and others who stayed or returned to build the sand spit village of Deering, tells of but one example of the ability of the people of the Northwest Arctic not only to adapt to change but, in the process of adapting, turn history to their region's advantage by achieving new forms of self-governance and gaining greater influence over the management of local resources.¹⁵

1. NANA website. Deering. <http://nana.com/regional/about-us/overview-of-region/deering/>
2. Orth, Donald J. 1967. Deering. *Dictionary of Alaska Place Names*. Geological Survey Professional Paper 567
3. Wexler, Lisa. 2006. Learning Resistance: Iñupiat and the U.S. Bureau of Education 1885-1906—Deconstructing Assimilation Strategies and Implications for Today. *Journal of American Indian Education*, Vol. 45, No. 1, p. 24.
4. Replogle, Charles. 1916. Annual Report of the United States Public School at Deering, on Kotzebue Sound, Arctic Ocean. Report on the Work of the Bureau of Education for the Natives of Alaska, 1914-15. Department of the Interior, Bureau of Education, Bulletin 1916, No. 47p. 50.
5. Ibid at 51. Replogle lamented in his report how the students would “soon drop into the regular Eskimo habits” after leaving school at the end of the day.
6. Joe Senungetuk chronicled life in the Bering Sea region during the mid-1900s in his book *Give or Take a Century*, written after oil was discovered and before ANCSA.
7. U.S. Department of Commerce, Bureau of the Census. 1960. Census of the Population: 1960. Vol. 1, Part 3, Alaska. <http://laborstats.alaska.gov/census/hist.htm>.
8. U.S. Department of Commerce, Bureau of the Census 2010. <http://laborstats.alaska.gov/census/hist.htm>. Note: 2010 census data were used for village and borough population references in many places in this atlas.
9. State of Alaska, Department of Labor and Workforce Development. 2014. Population Estimates. <http://laborstats.alaska.gov>.
10. Moto, Calvin. 2013. Interview with Sarah Betcher on September 17
11. Iyatunguk, Alvin. 2013. Personal communication with Sarah Betcher dated September 18.
12. U.S. Department of the Interior, National Park Service. 2015. <http://www.nps.gov/bela/planyourvisit/upload/Visitor-Guide-pdf-FINAL-web.pdf>.
13. Nana.com
14. State of Alaska, Department of Commerce, Community, and Economic Development. Community Database, Deering. <https://www.commerce.alaska.gov/dcra/DCRAExternal/community/Details/a4fffa30-0aa6-4d10-8399-d86e555a9182>. Accessed 22 Aug. 2015.
15. See, e.g., Hensley, William L., Iggiagruk. 2009. *Fifty Miles From Tomorrow: A Memoir of Alaska and the Real People*. New York. Picador.

Iñuuniatigput Iilugu Nunannguanun: Documenting Our Way of Life through Maps 40



Deering garden box. Photo credit: Sarah Betcher.

Deering Voices

It is September in the Northwest Arctic, but the air is still warm.¹ A young boy tends a wooden greenhouse box. “My family grows vegetables here every summer,” he says, opening the lid and pointing out the remaining green shoots. By August, the growing season is usually finished, but, this year, several tenacious green shoots can still be seen sprouting from the soil.

Up the Ipñatchiaq, the caribou are on the move to their winter habitat. They are at their prime—fat, with thick, full skins. Caribou provide important protein for the local diet. This evening, a few people in the village are planning to go out into the country on four-wheelers in hopes of getting fat caribou.

Raymond Lee Jr., a Northwest Arctic Borough Village Coordinator who is visiting from Buckland, sets out with a group of hunters, their rifles slung over their shoulders. They cross knee-deep channels of the Ipñatchiaq several times on their four-wheelers. The younger men hold back, waiting to proceed until the older, more experienced, hunters have picked a spot to cross. After several hours out, and with darkness approaching, they have yet to get a caribou.

The daylight has almost completely escaped by the time the hunters return to the village. A group of evening fishermen are trying their luck for late-run silver salmon at the mouth of the river. Utilizing the glow from the headlights of their four-wheelers, the hunters stop to help out. People are cutting up the fish with their *ulus*, tossing the meat into a giant plastic tub. This time of year, it takes more than darkness to shut down the fishing. There’s a lot to get done.

Calvin Moto Sr. is a respected Deering elder. Born in the 1930s, he has lived in the village most of his life. He doesn’t hunt anymore, but others “always make sure the elders have fresh seal oil and stuff like that.”

“Late June, we get *ugruk* (bearded seal). We’ve been getting them for thousands of years . . . an opening—a passage through the ice—that’s what we have to wait for.” When there is no ice for the *ugruk* to haul out on, nobody bothers to try to hunt them.

“We get caribou. Muskox—by permit. Right now it’s moose season. West of here, geese, crane, brant. We go to where they lay their eggs. That point out here (he points to the west) we get what we call crowbill or arctic murre. We get *mitiq* (eiders). We used to have one or two loons, but not anymore. Around the first part of July, we go get our eggs from there; seagull eggs, used to be puffins.” In May and June, Deering residents also harvest goose eggs. “Mostly the young guys do it now, but they distribute to the elders.” Calvin points to a wall that bears a gallery of family photos. “I have four, five grandsons who hunt all the time, so I am never without caribou and trout. Or fall time, when it freezes, they get tomcods and . . . seals.”

Salmon fill the stomachs of Deering’s residents most of the year. “We get our salmon run. First we get the humpies², then we get the dogs or the chums. Right now it’s silvers. We fish along the river. Not far—just by the airport.” He points in the direction of the state landing strip, just a short distance outside the village.

Like most everybody else in the Northwest Arctic, Calvin also eats food brought in from the outside. “But when I eat Native foods, I am more satisfied,” he says. “I sleep longer. If I eat mostly *nalaugmiut* (white person) meat, cattle and stuff, it don’t stay with me as much as seal and stuff like that.” As he speaks, the room fills with the warm and enticing aroma of a crock-pot full of caribou and cut vegetables he’s got going.



Calvin Moto Sr.’s Caribou Stew.
Photo credit: Sarah Betcher.

“When I eat Native foods, I am more satisfied,” says Calvin. “I sleep longer. If I eat mostly *nalaugmiut* (white person) meat, cattle and stuff, it don’t stay with me as much as seal and stuff like that.”

Down the road from Calvin's house is the Deering Native Store, which Susie Fleming manages. She's one of the hunters who went out with Raymond the evening before. After managing the village store for several years, she's witnessed firsthand the changes in the ways people are eating.

“Our customers rely on what we can’t come up with locally—starches, vegetables, fruit.” People don’t generally buy meat and fish at the store. “I never order fish except fish sticks. Most of the households use a lot of caribou meat. We have a lot of hunters in our community and we basically prefer caribou meat and, more recently, moose meat. In the last few years, some people get a muskox permit and collect a muskox.”

Susie walks around the store pointing out various items—boxed and canned milk that will survive the long trip to the village. Most of what is in the store is either packaged or frozen. Very little red meat can be found in the freezers.

Susie is concerned about the cost of getting meat the traditional ways. "I realized that over time my husband and I had spent more on fuel. But we were using it more to subsist. Not only did fuel prices rise, but everything else went up." In today's world, the costs must be taken into account, she says. It's becoming more and more expensive to hunt.

Maniilaq has a support program that helps out local hunters who bring back food for elders, reimbursing expenses for gas and ammunition. Alvin Iyatunguk Sr., a long time hunter, is an advocate for the program. “If it wasn’t for that support, there would be a lot of hunters that can’t afford to get ten gallons of gas because a lot of people depend on seasonal work...sometimes there is no work for two or three years. That Hunter Support...I am very happy for that and it gives everyone an opportunity to hunt for an elder.”

Alvin describes where he usually goes hunting: “We have to go to where the caribou herd is; same as with the birds—geese, ducks. During the winter, ptarmigan. We do a lot of caribou hunting. Once in a great while, if there is an opportunity to get a wolf or a wolverine, we might take advantage of that. My son wants to get a moose every fall. During the springtime, right after it breaks up, we get

trout, arctic char, here by the mouth. I also set a net. We get grayling. That run isn't very long. Maybe three weeks. Right after the trout is done, we wait for the salmon. We have two runs—one run that comes early in the summer and a second one that comes kind of late during the fall, before it starts freezing up. We try to do a lot of seining to get as much salmon as we can. That salmon is pretty important for wintertime. We've got to fish for my parents, my wife's parents, for other elders, and for us."

The Ipnatchiagmiut wait for breakup to get *ugruk*. “Third week or second week of June is when we mainly do our *ugruk* hunting—our bearded seals. It all depends on the ice conditions, the weather, the wind. It all depends on where the *ugruks* are and if we can find them. Three *ugruks* would be enough for us to make seal oil, black meat, and blubber.” Alvin eats the oil about every other day.

"I would rather live off the land than buy a \$20 or \$30 roast from the store, because that's pretty expensive. If we could have caribou every day, that would be great."

He puts up a lot of the food he brings in to eat during the winter months, including dried meat. “Springtime is when we make a lot of our jerky. We try to make enough to last during the summer and fall time—then do it again.” There’s also gathering plants. “Oh yeah, a couple weeks ago, me and my family went up to get *masu*, underground roots. We put them in seal oil.” The berries are “a big thing . . . the women take that pretty seriously. Blueberries, cranberries, crowberries.”

Alvin says going out to get food is “more important to a person than anything else. Where else can you live and just go off into the land and get a caribou and bring it home? Or



Typical village grocery store shelves of *nalaugmiut* (“white person”) food. Photo credit: University of Alaska Anchorage, Miriam Bell papers, uaa-hmc-1074-b2-f4-b-10-32, Alaska Digital Archives.



Loading the ATV for caribou hunting. Photo credit: Sarah Betcher.

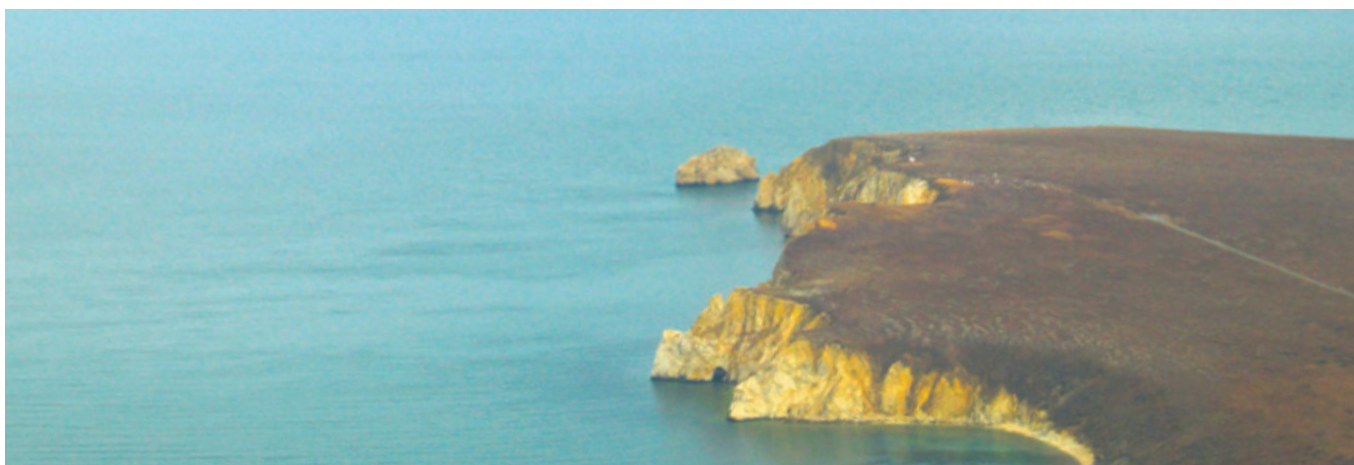
get your fish? There aren't many places that you can do that and depend on it. We depend on it three hundred and sixty five days during the year. We got our season hunts; we got our gatherings during the summer. If we didn't have it, a lot of families would be struggling."

He voices concerns about the rapid changes he is seeing in the weather and about industrial development. "If we don't protect our oceans and our land, a lot of these animals won't migrate through, and they won't have the vegetation they

need to live. If we don't have a clean ocean, we won't have salmon or trout or tomcods come back." He connects all of the hunting, fishing, and gathering people do to the future survival of his village. "If we didn't have it, how could we survive? If we didn't have it, I don't think there would even be villages. People would just have to move on and live where it's cheaper to buy a hamburger."

1. The "Voices" sections for each of the villages in this chapter are based on interviews conducted by Sarah Betcher in 2013 and 2014.
2. For English, Iñupiaq, and scientific names of species mentioned by local speakers in the "Voices" sections, refer to Appendix J.

Bluff near Deering. Photo credit: Sarah Betcher.



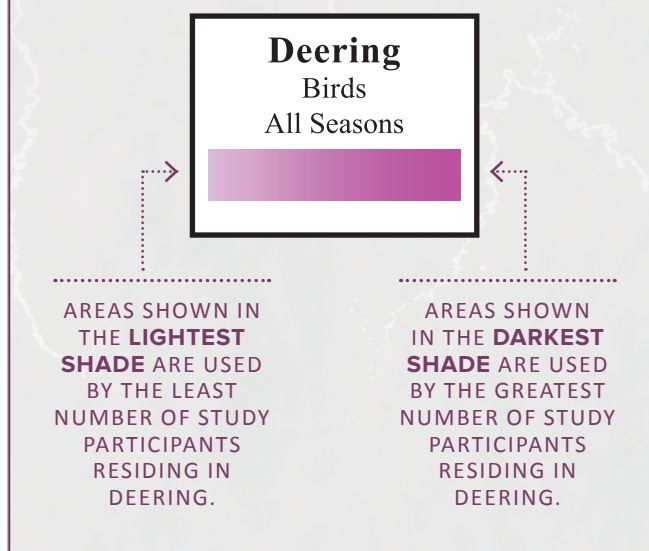
What the maps tell us...

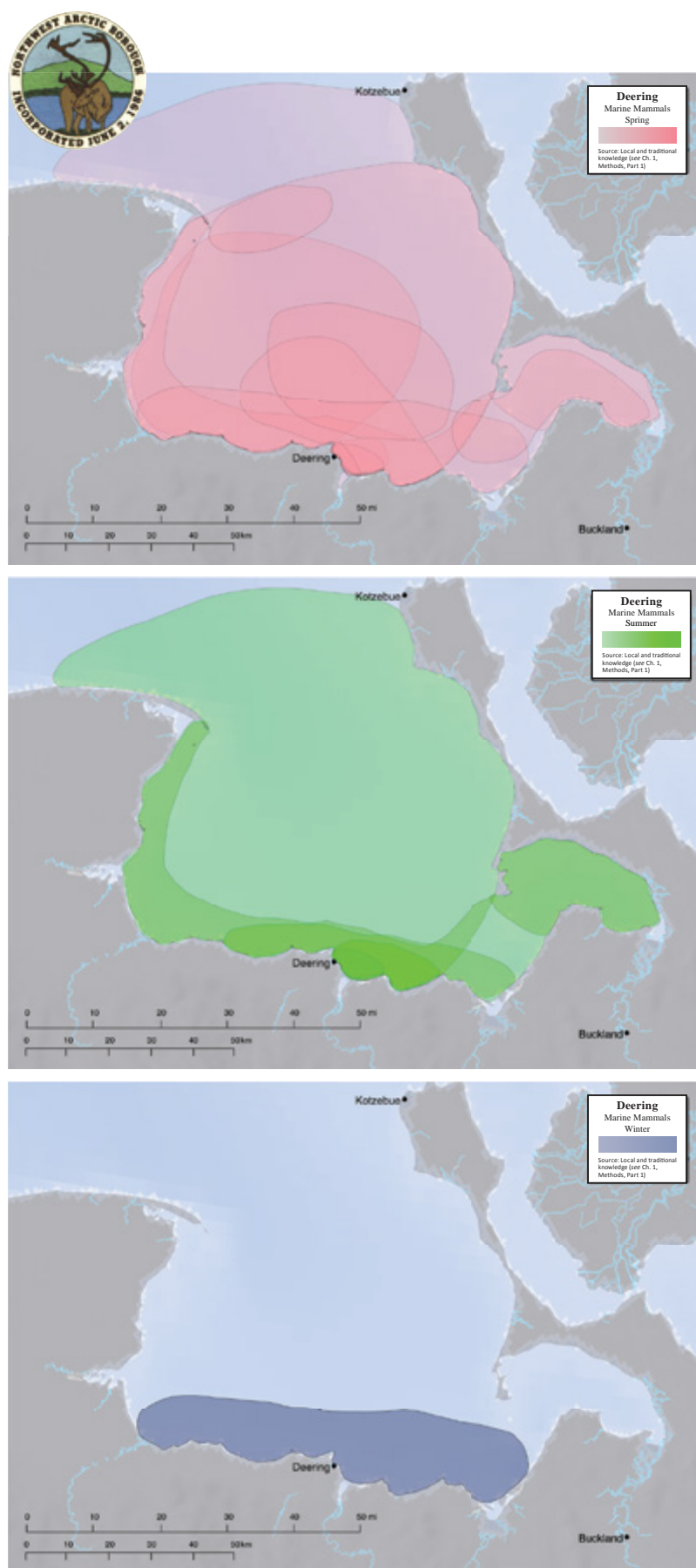
As has been the case for so long, Deering's hunters, fishers, and gatherers frequent the water and land around the nearby Ipnotchialq River. Fish, including pink and chum salmon, are caught from near where the river pours out into Kotzebue Sound close to the village. Caribou hunters usually drive out of town, past the airport, through old placer mining and reindeer sites, to where the caribou migrate through. Berries, roots, and herbs are found at traditional gathering locations throughout the area around the village and at Cape Deceit. Chamisso Island is a longtime popular egg gathering location. Villagers take snow machines out on the ice in late June to get *ugruk* (bearded seals), and some Deering residents hold state muskox permits.

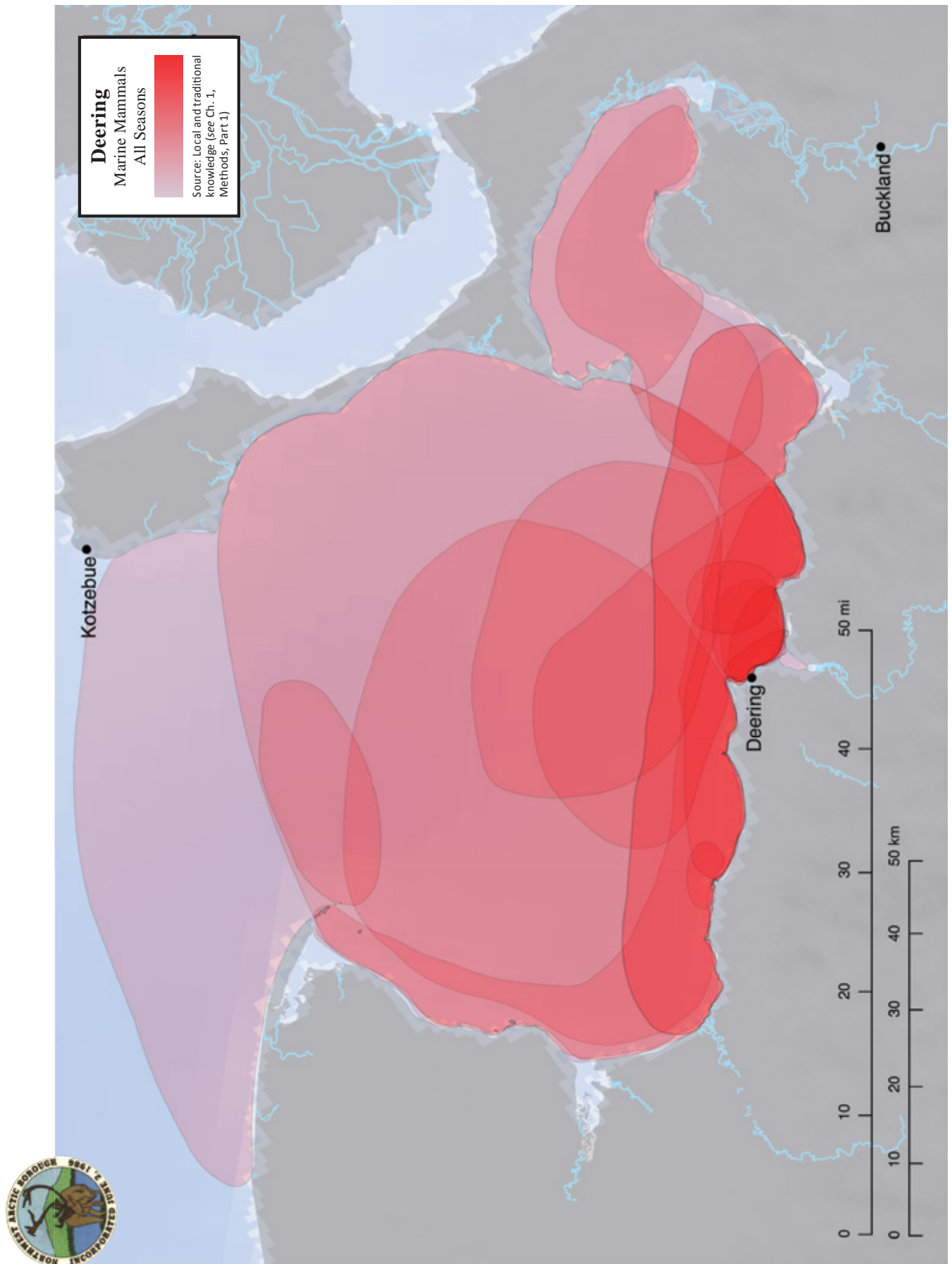
The following search area maps, organized by plant and animal species and season, show the places around Deering local people who participated in the study told researchers they like to go to hunt, trap, fish, and gather.

Interpreting the Color Scale on Maps in this Chapter

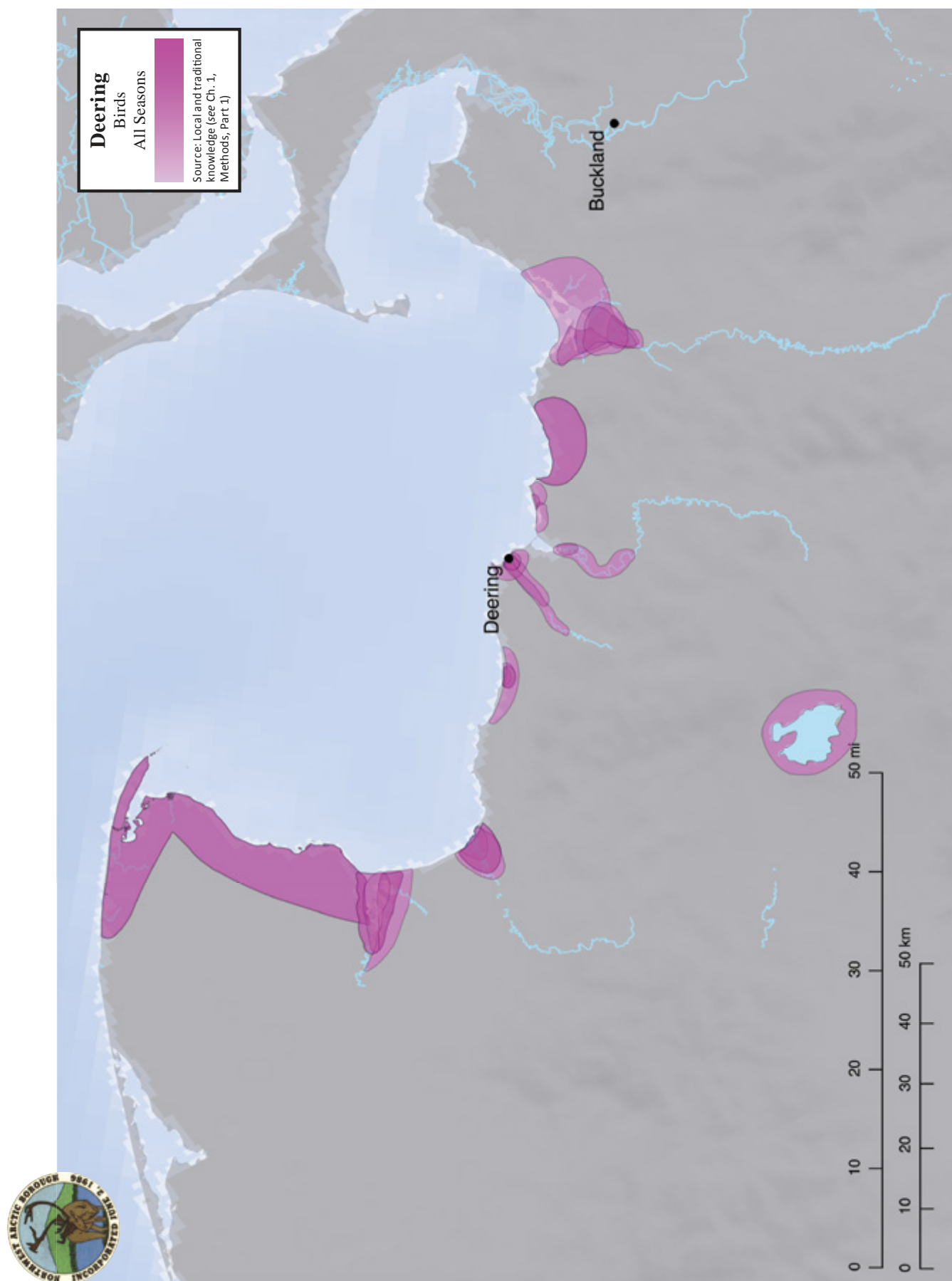
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.

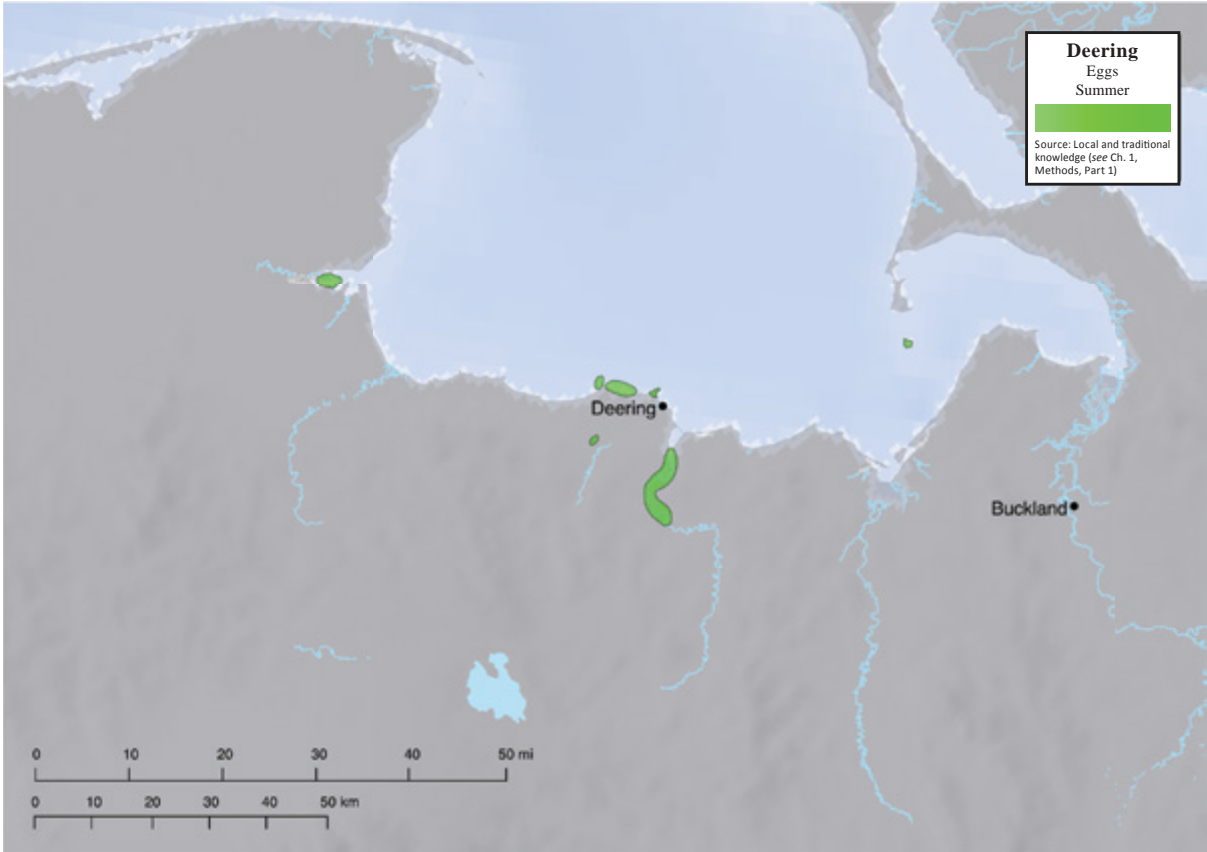
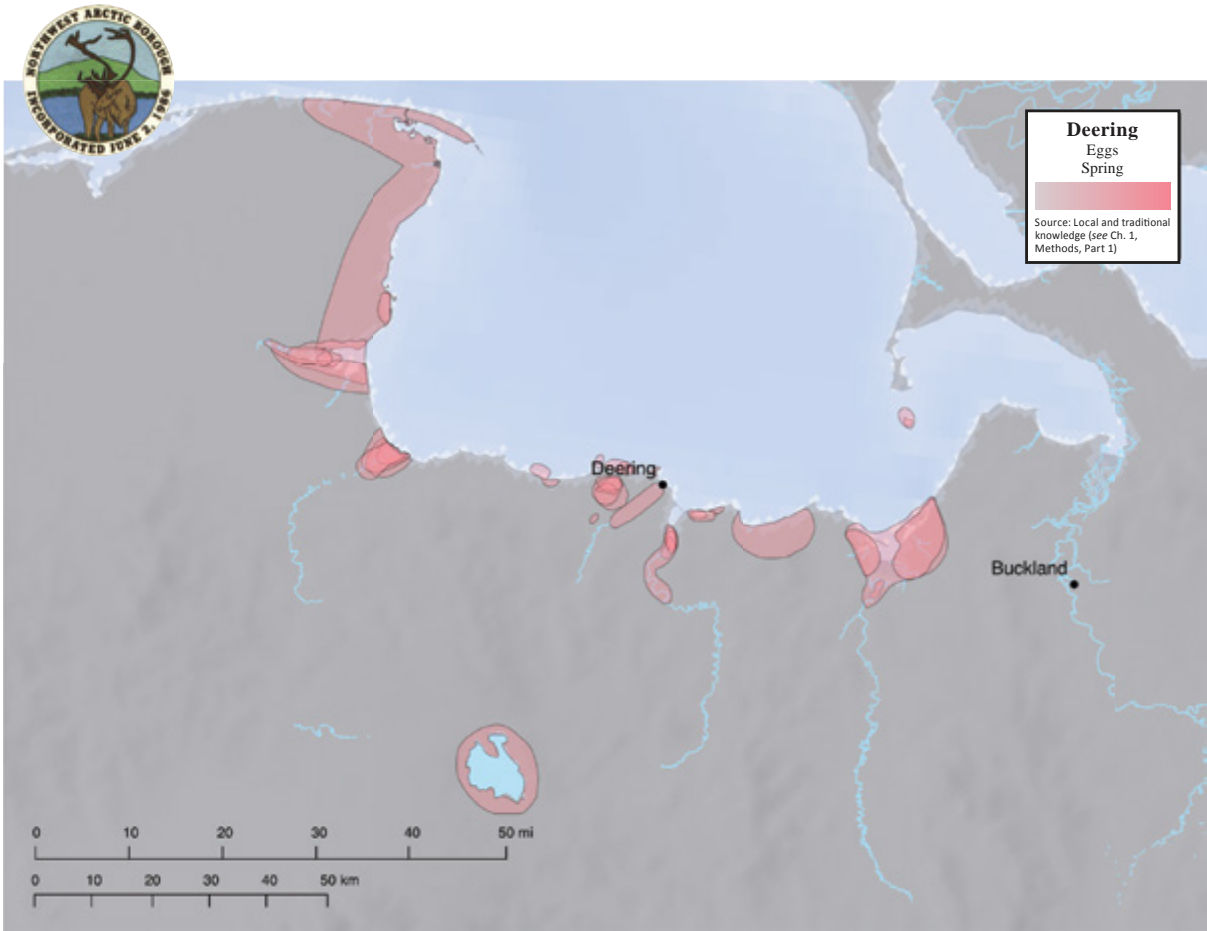


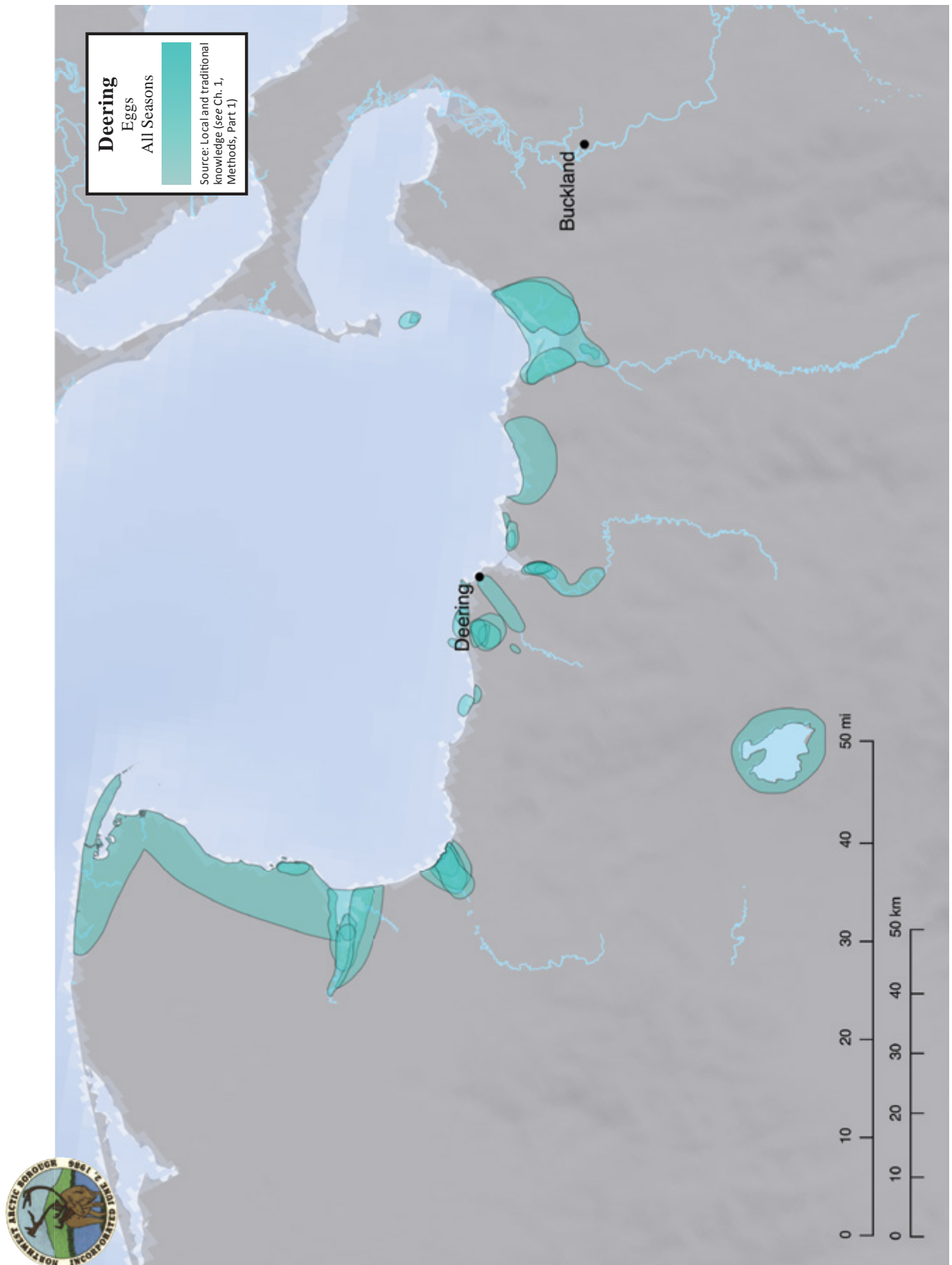


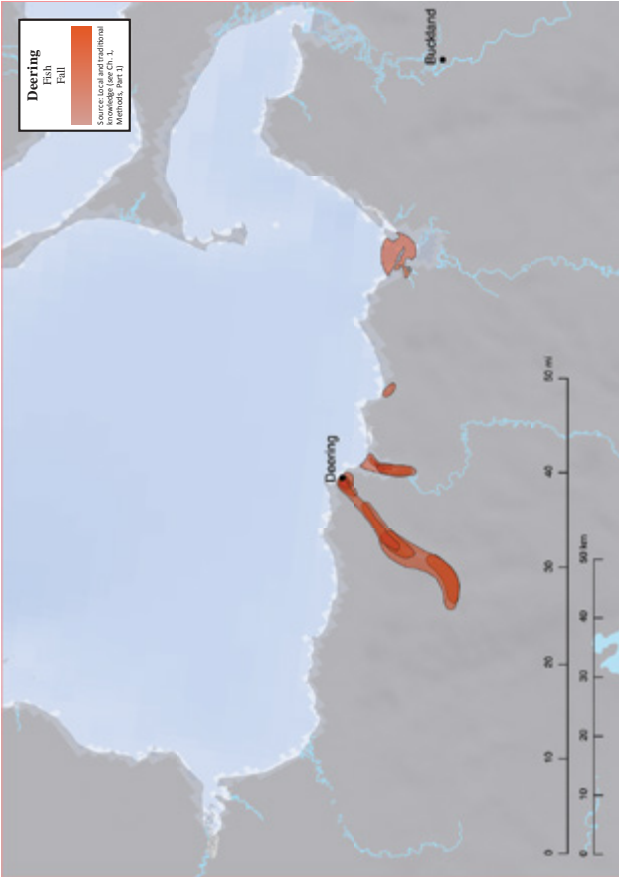
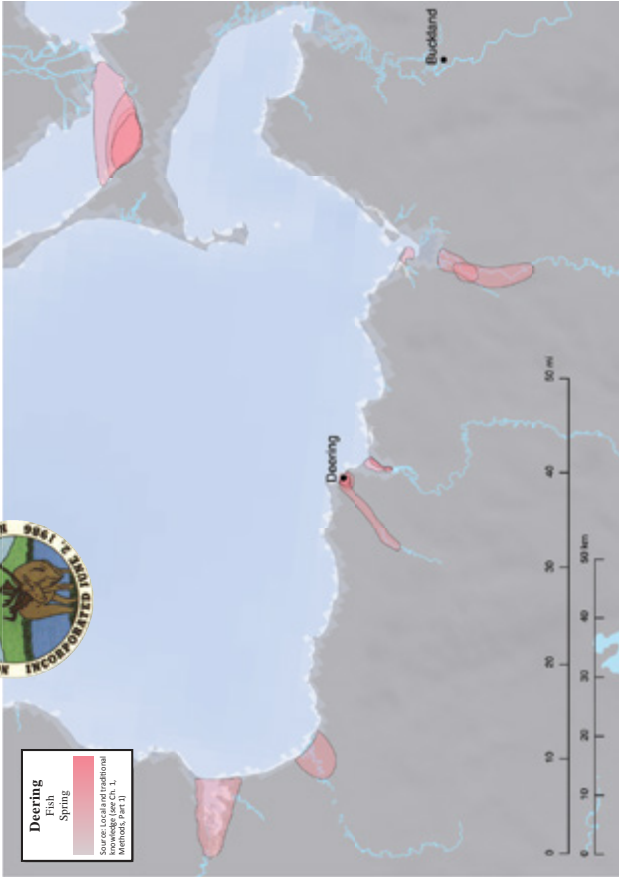
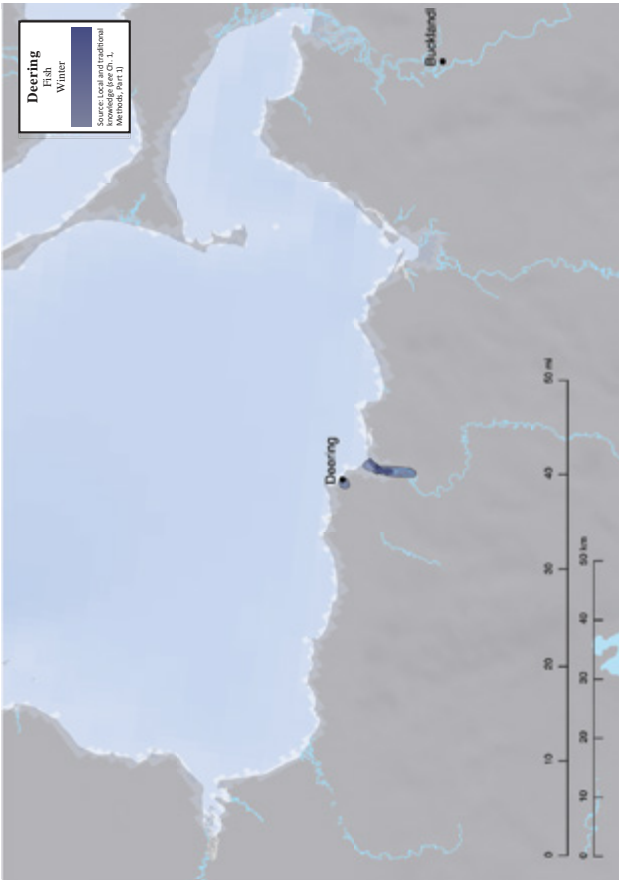
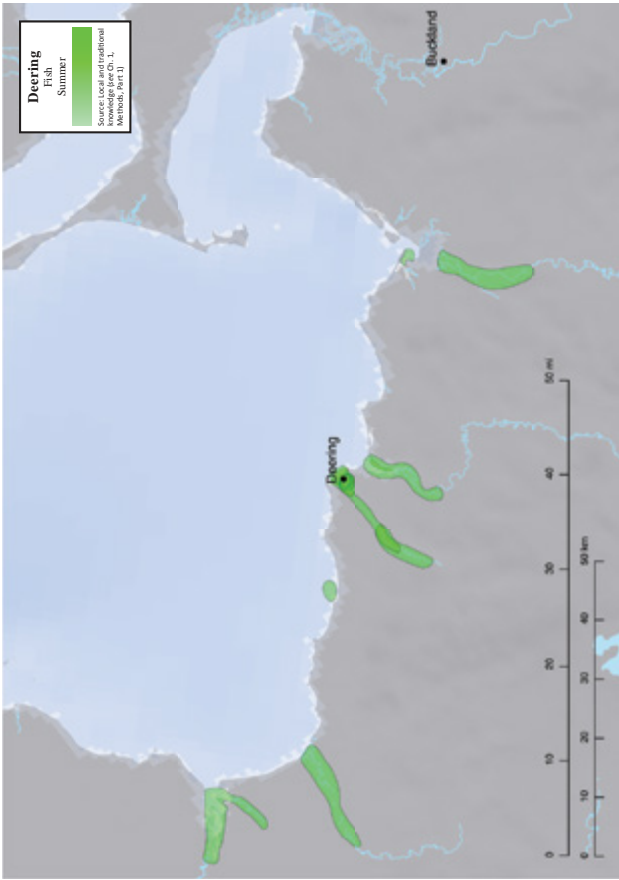


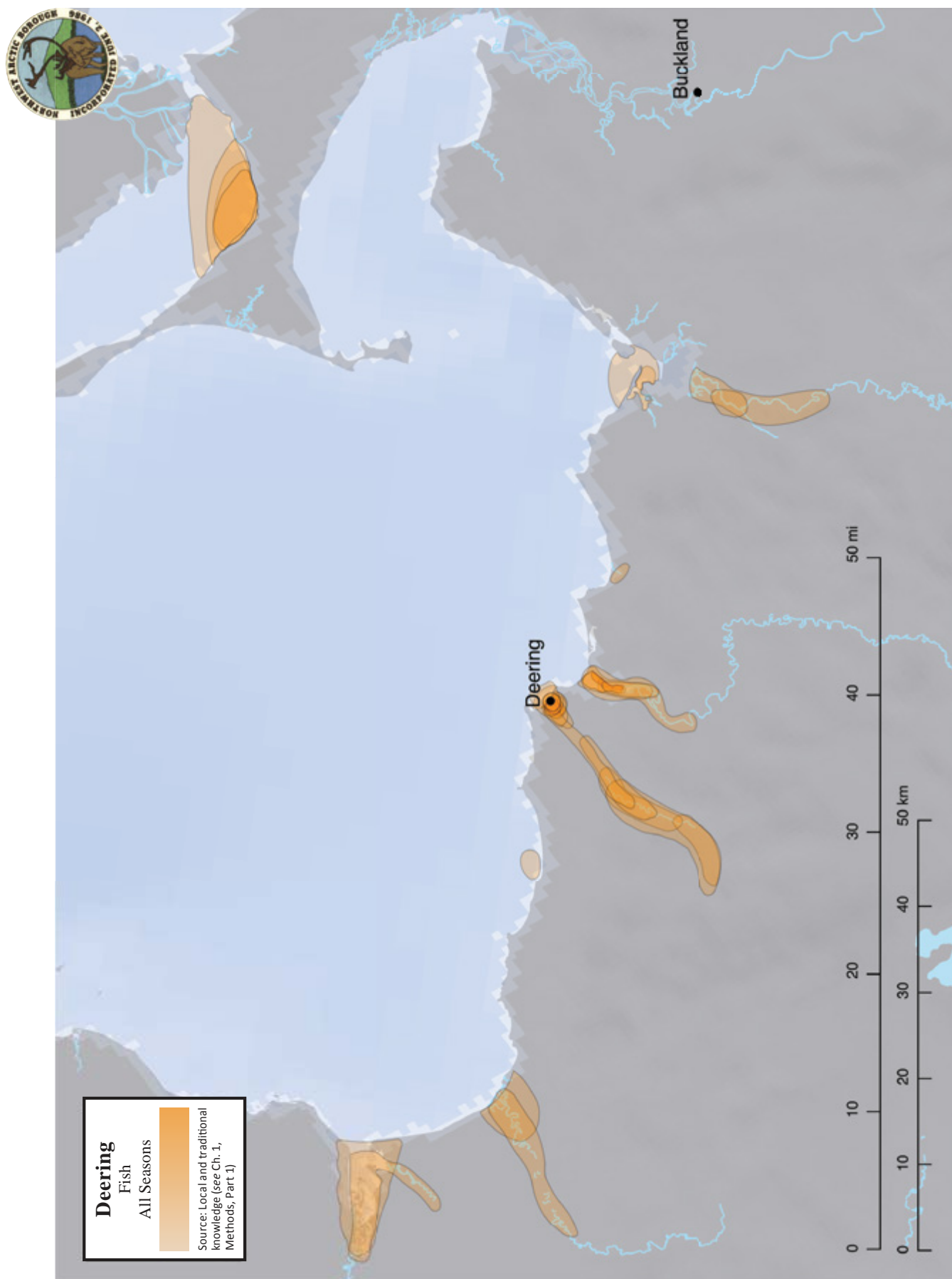




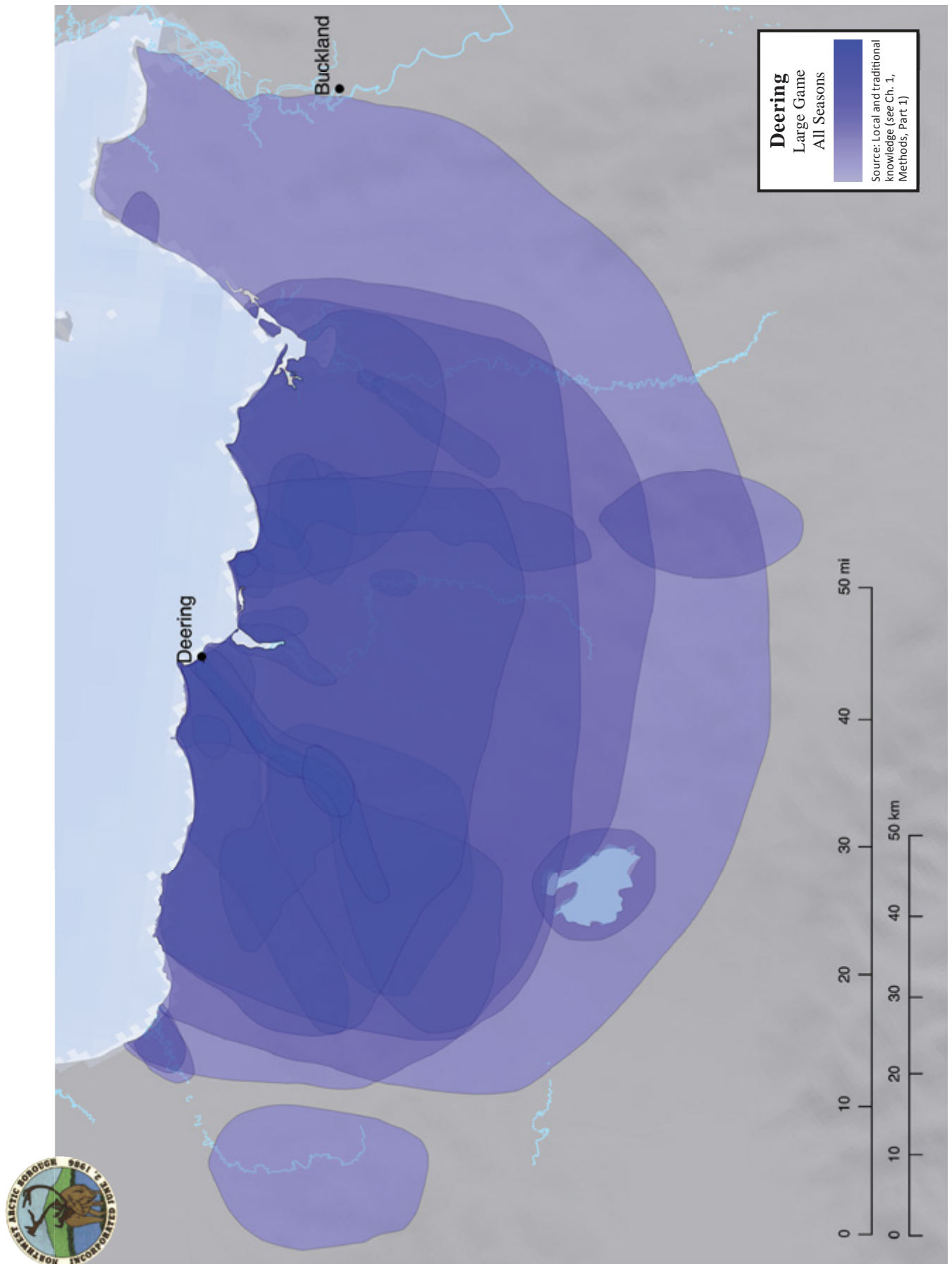


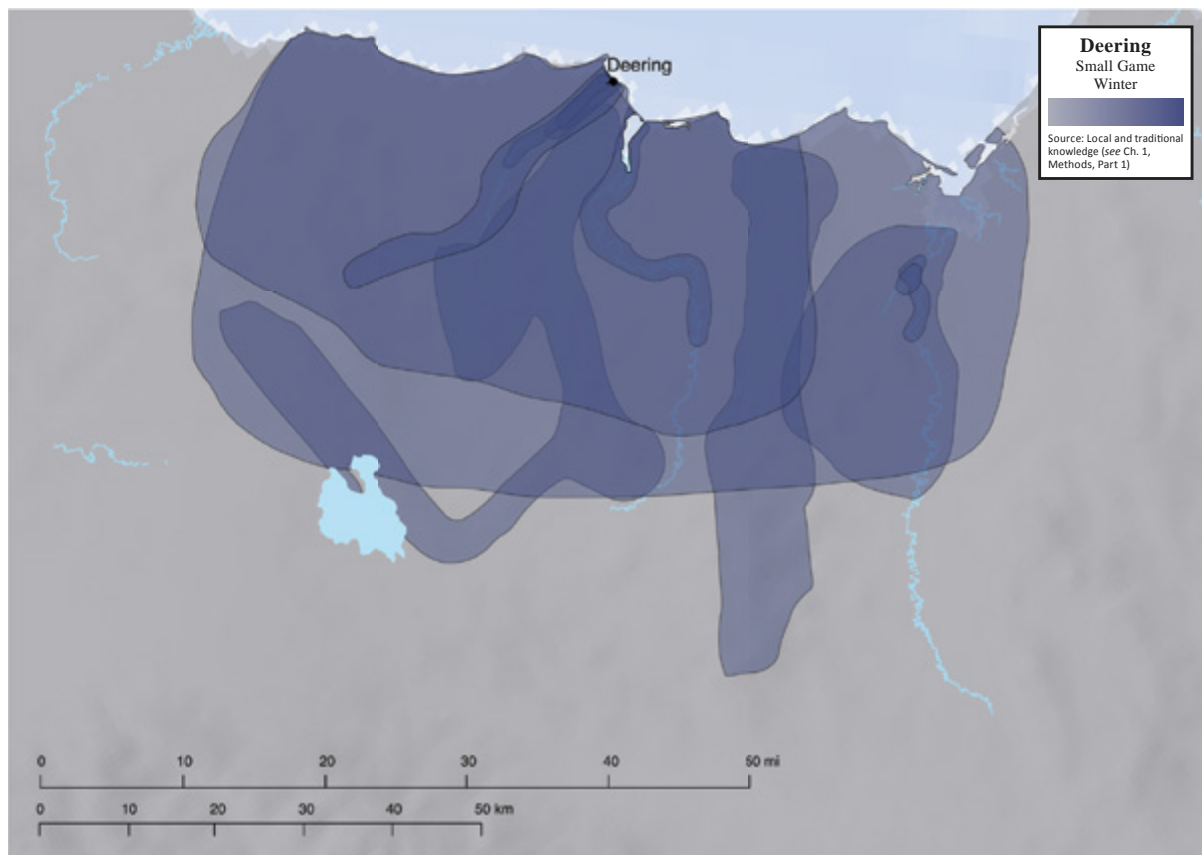


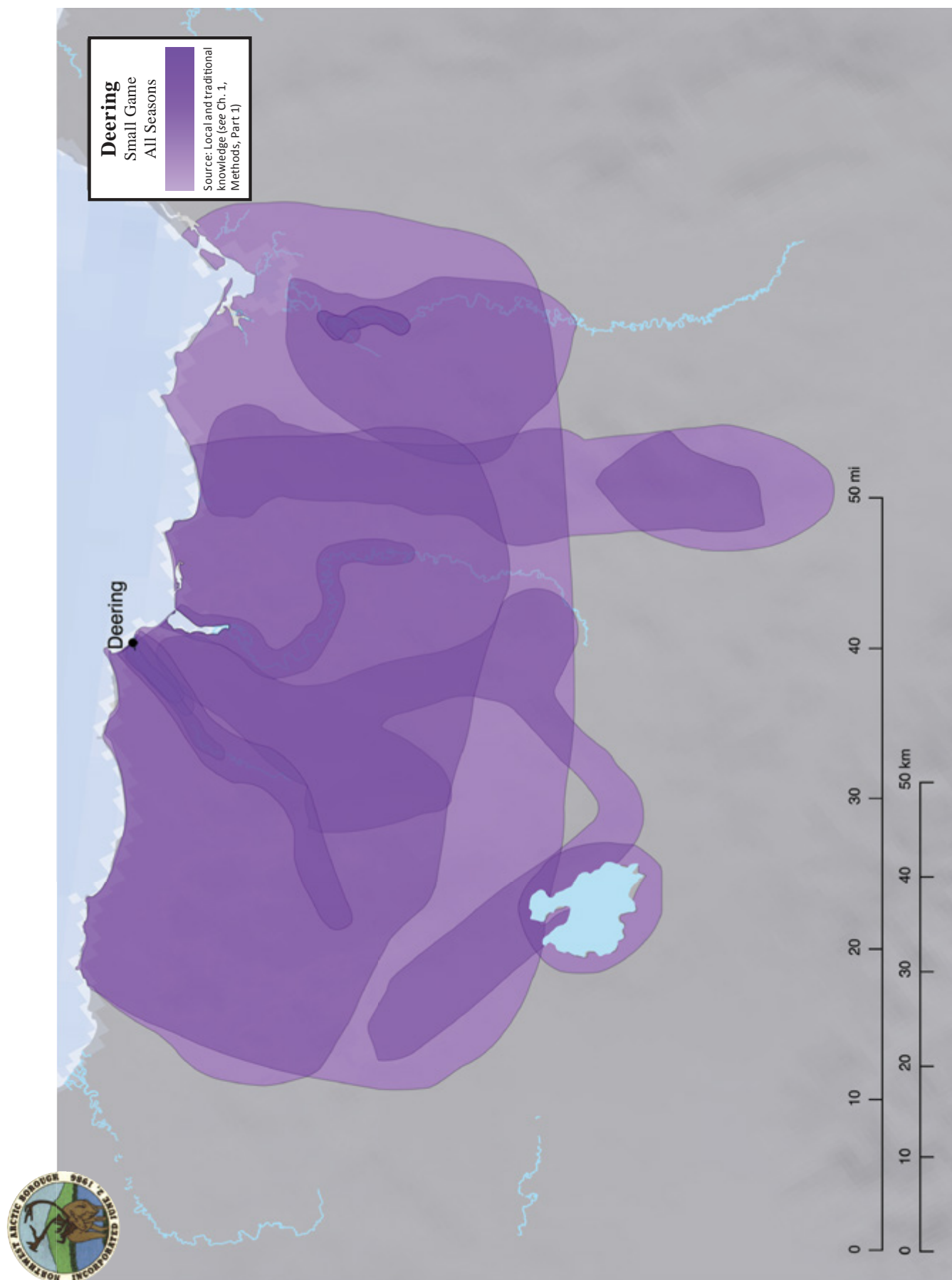


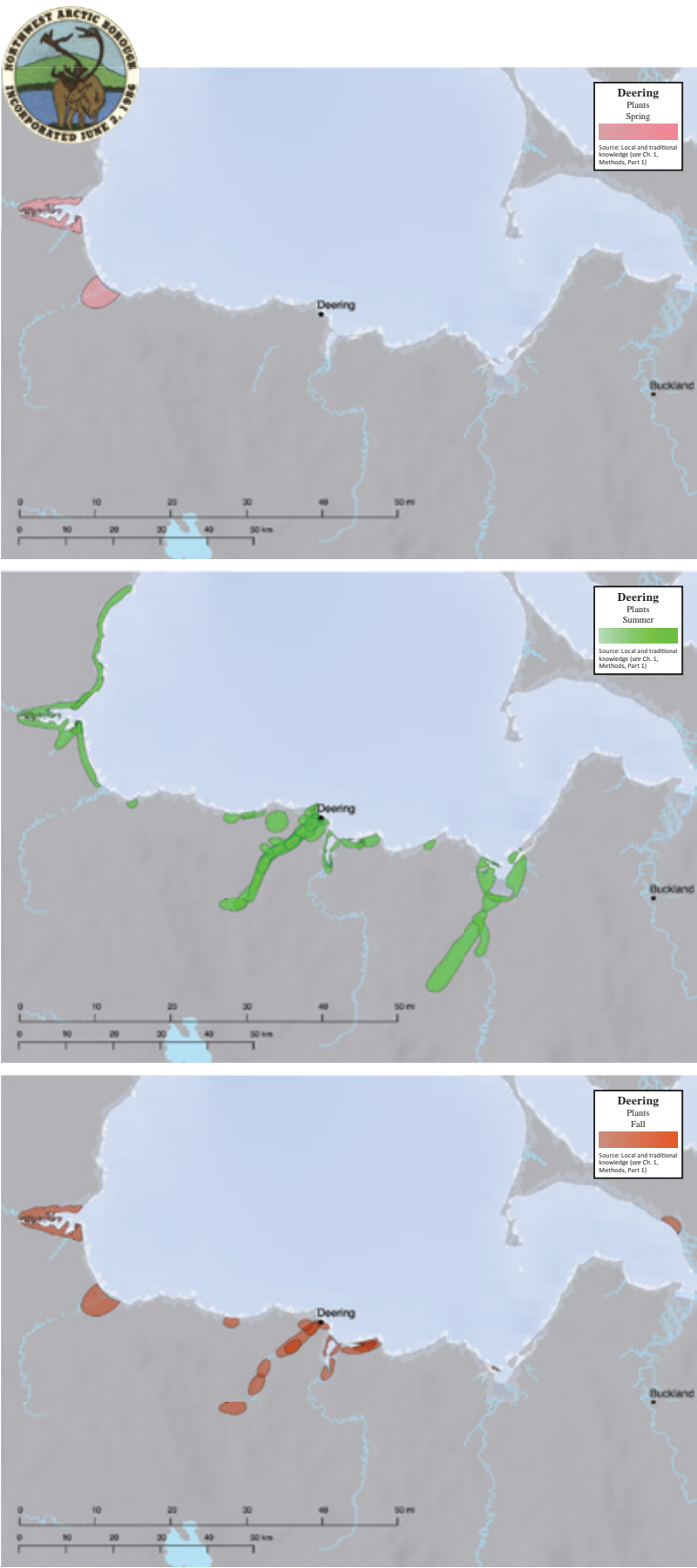


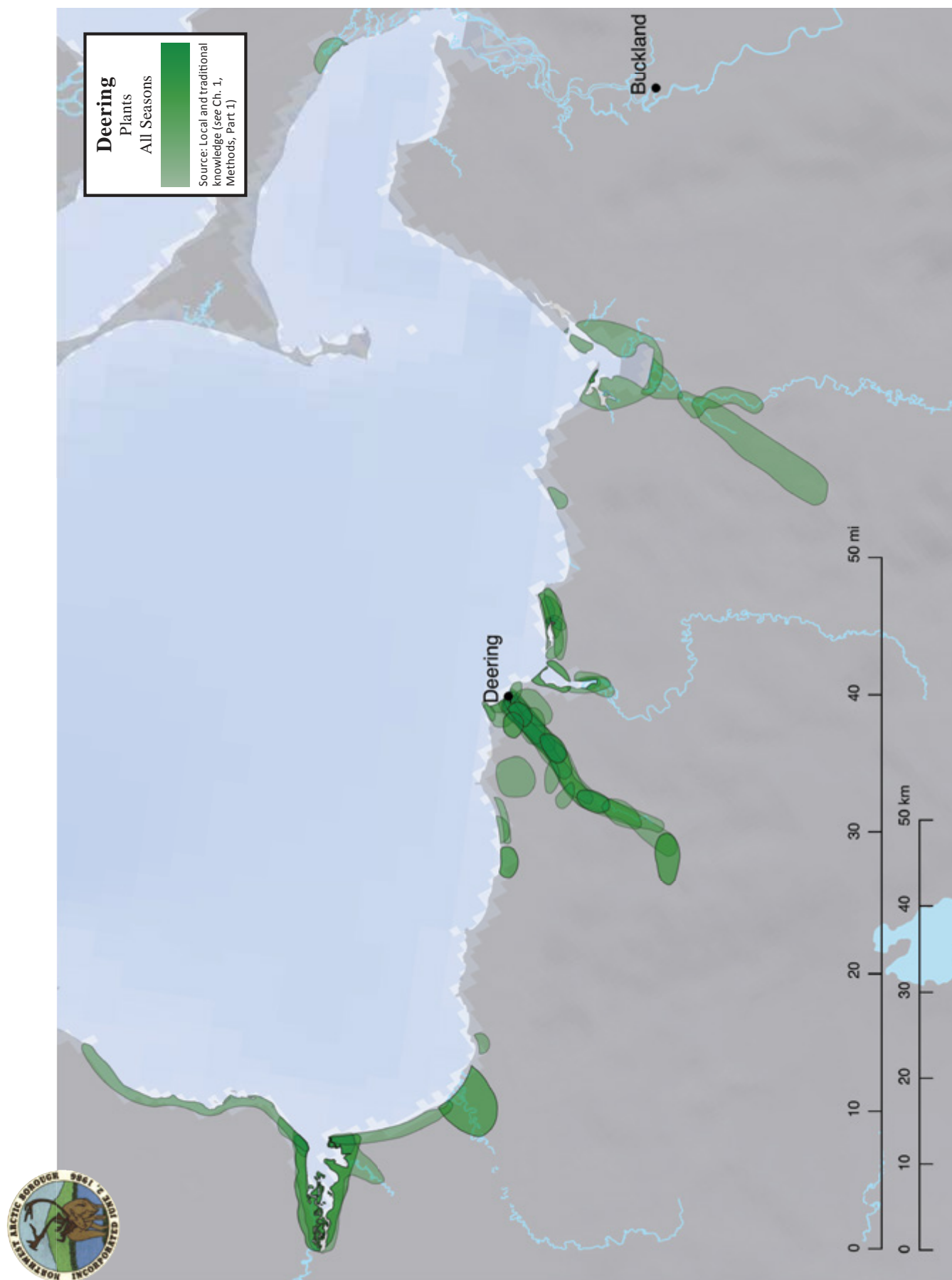


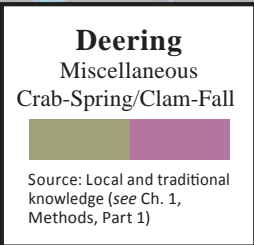


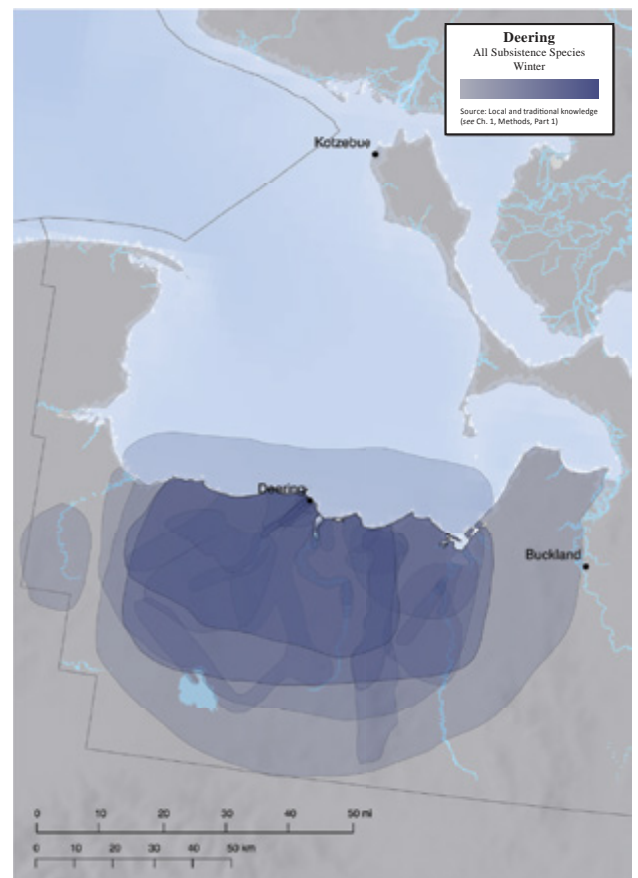
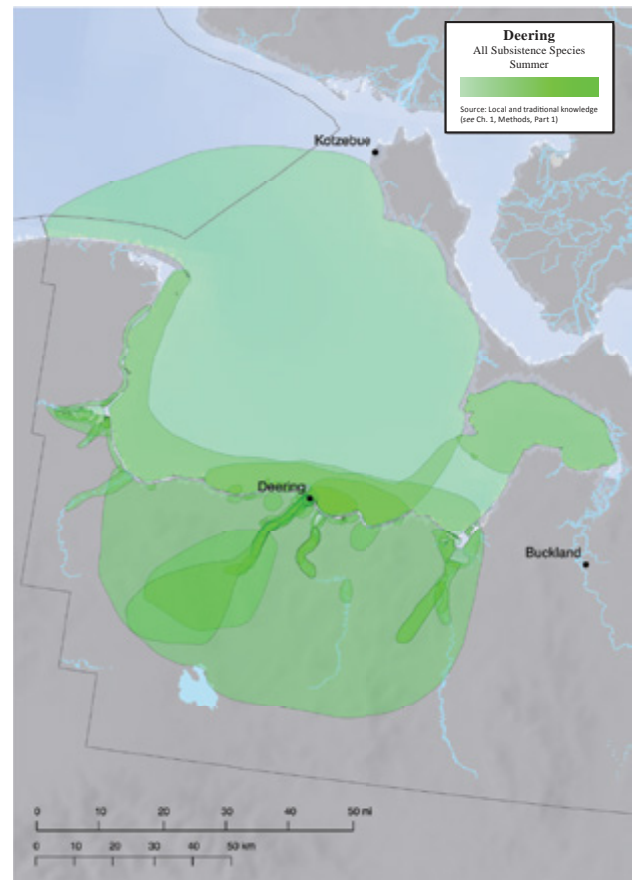


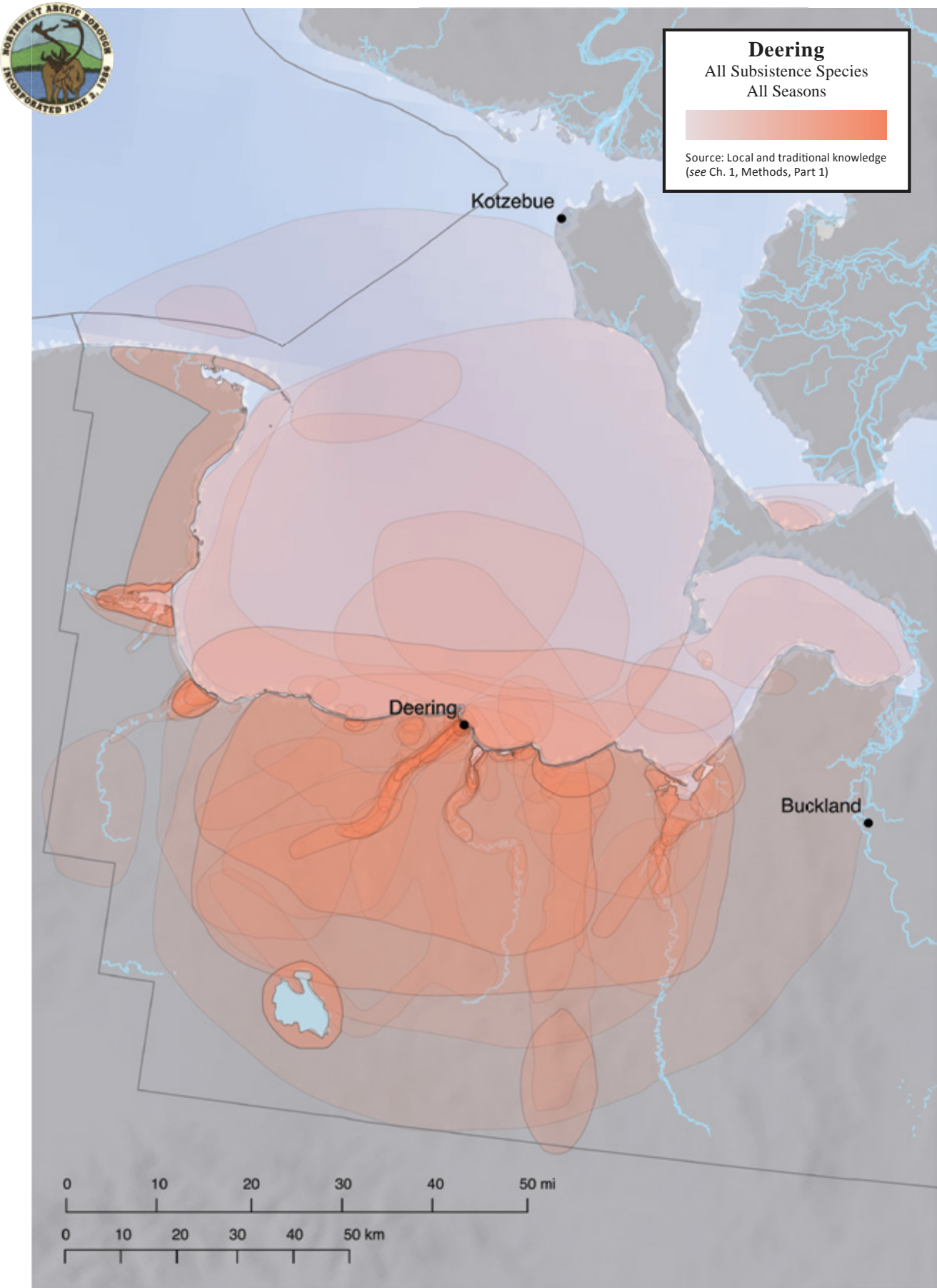












Nuurvik (Noorvik)



Photo credit: Northwest Arctic Borough.

Nuurvik (Noorvik)



Nuurvik shore with subsistence camps in the distance. Photo credit: Sarah Betcher.

New Site, Ancient Traditions

Built by Iñupiat from the Pittagmiut and Kuuyumiut regions¹ who moved to the current village site at the urging of Quaker missionaries 100 years ago, Nuurvik, which is said to mean “a place that is moved to” in Iñupi aq,² is home to 639 people today.³ The third largest village in the Northwest Arctic Borough, Noorvik remains a productive subsistence community.

Deering residents who, in 1914, were brought by Quaker missionary Charles Replogle to the new village site on the south side of the Nazuruk Channel of the Kobuk River—a distance of about 3 miles across Kotzebue Sound—were joined by another group of Iñupi at from Oksik, a community farther up the Kobuk River. The historical record shows that many people from the Kobuk region were already well-acquainted with Replogle at the time of the move.⁴ Minutes of the California Yearly Meeting of the Friends Church from 1915 show 130 church members registered in Oksik, but the same document shows that community’s population to be only 87 at the time, indicating that missionaries had successfully engaged with many Iñupi at who, up to the point of joining the new settlement, had been dispersed around the Kobuk River area.⁵

The Nazuruk Channel is one of the larger of several strands that run through the broad Kobuk delta. The area, home territory of the Kuuyumiut nation, is bounded on the west



Church lets out in Noorvik. 1907. Photo credit: University of Alaska Anchorage, Philip and Retta Reed papers, UAA-hmc-0401-album1-8a, Alaska Digital Archives.

by the waters of Hotham Inlet, known to locals as “Kobuk Lake.” The inlet is shallow—usually less than 20 feet deep, but its waters are known to rise significantly during major storm events.⁶ Inarguably, though, Noorvik’s site in the curve



Noorvik teacher's house, early 1920s. Photo credit: University of Alaska Anchorage, Philip and Retta Reed papers, UAA-hmc-0401-album1-34b, Alaska Digital Archives.

of the channel provided a person much greater shelter from the elements than did the Deering spit.

As discussed earlier in this chapter's history of Deering (see p. 36), in their reports to back-east superiors, teachers argued for relocation as a means to separate the Iñupi at from the corrupting influences of non-Native workers in the Goodhope mining region. The teachers also frequently made clear their wishes to get off of the exposed coast, where they had hastily constructed school houses and churches in an effort to consolidate the dispersed and nomadic Iñupi at in permanent communities. As one visitor to the region reported in 1914, "The frame houses are comparatively recent departures [from sod houses] and but few in number... These frame dwellings were built by the natives of lumber purchased from the States at an exorbitant price[... A]lthough, perhaps more pleasing to the eye, these dwellings really possess no advantage over the sod igloos in utility. They are colder and therefore require more fuel."⁷ And fuel, limited to driftwood and seal oil at the time, was hard to come by.

An article on Iñupi aq evangelical and telegraph operator Isaac Newlin published in the national periodical *Sins et Magazine* in 1922 provides a candid glimpse of outsiders' perceptions of the "bleak Arctic sea coast" at the time—and the superior situation perceived for the "colonists" of the new Noorvik:

Young Newlin, with other progressive natives, is now seeking civic improvements in his village. Noorvik is the historic Eskimo village that was built overnight. The Noorvik natives originally lived at Deering on the bleak Arctic sea coast where they made their homes in

the semi-underground hovels of their ancestors because of lack of timber. Food was also scarce, so the populace one day packed up and drove their dogs and reindeers nearly two hundred miles up the Kobuk River, where the Government presented them with a domain fifteen miles square abounding in game, fish, and timber. On this tract in the Arctic wilderness Isaac and his parents and the other colonists under the leadership of the Government teachers built a village with well laid out streets, neat single-family houses, gardens, a mercantile company, a sawmill, an electric light plant, and a wireless telegraph station which keeps them in touch with the outside world.⁸

Over the first three years after the move, the Bureau of Indian Affairs spent more than \$18,000 to build Noorvik—many times over what it was spending on any other community in the region. The Bureau re-routed lumber and other resources allocated to Oksik to the new settlement and provided money for a Native cooperative store. Walter Shields, superintendent of the northern district, called Noorvik "the most important project we have ever undertaken in the region."⁹ In 1920, the first hospital in the area was constructed.¹⁰

Quaker historian A.O. Roberts, in his book *Tomorrow Is Growing Old*, writes that, in 1926 (four years after the *Sins et* article), when the explorer Knud Rasmussen¹¹ visited villages on the Noatak and the Kobuk, "[h]e found Noorvik to be a remarkable place, well worth the visit. There were three schoolteachers, a government inspector, a doctor and two nurses to attend to the various departments of the hospital. He found 'everything arranged on the most modern lines' with a fine hospital . . . It seemed almost too good to be true although he thought lights out at 9 o'clock¹² . . . and the prohibition of smoking were a little bit restrictive."¹³



Muskrat hunting, early 1900s. Photo credit: Alaska State Historical Library Edward Sheriff Curtis Collection, ASL-P49-18, Alaska Digital Archives.

As Rasmussen himself wrote of the new village in his book *Across Arctic America*,

Much could be said for and against such an arrangement. Theoretically, it looks excellent, as an experiment in systematic popular education. But it is always risky to interfere overmuch in the private life of grown men and women.¹⁴

The curfew and smoking ban were not the only constraints placed on the Iñupiat people who were brought to the new settlement. In a history of the community included in Noorvik's *Community Comprehensive Development Plan* 2006-2016 (rev. May 2006), today's local planners recount that "Noorvik experienced [a] language shift to English from Iñupiat with schools and western institutions utilizing duress with families and children to use English as their first language."¹⁵ Even though the community gained tribal status early on, in 1939, it did not lift its ban on Native dancing until 2010, when it took the national stage that year as the first community in the U.S. to be counted in the federal decennial census. According to one article, "Tribal leaders formally approved the proposal [to lift the dancing



Noorvik Post Office. Photo credit: Sarah Betcher.

ban] after it received the blessing of the Noorvik Friends Church, despite opposition from a few elders."¹⁶ In studying the dynamics surrounding the evolution of religious beliefs in the North, Ernest Burch observed that "the Iñupiat carried out the Christianization of most of Arctic Alaska themselves."¹⁷ In Noorvik, at the same time the community's first residents were adapting to not just an earlier bedtime but new ways of worshipping, speaking, and eating, traditional hunting, trapping, fishing, and gathering routines continued to occupy a central place in villagers' lives.

Though President Wilson had allotted land for the Noorvik settlement, unlike reservations in the Lower 48, the government imposed no limitation on Natives' movement in and out of the reserve.¹⁸ The seasonal Iñupiat food-harvesting cycle continued on uninterrupted after the relocation, though terrestrial mammals would come to play a more predominant role in the diets of those who'd grown up on seal and whale in the Ipitchiaq region. Rasmussen observed that Noorvik's men "have to leave the settlement and scatter in distant camps throughout the forest, while women and children are left behind out of regard to the schooling."¹⁹ In time, this would change, as summer camp living reassumed its central role in Iñupiat family life (*see pp. 7- 3*).

In 1926, the village of Noorvik's population had reached 27, with an estimated 7 additional Iñupiat scattered around the area.²⁰ The government school had 96 students enrolled. But by 1930 the local population had decreased by almost 100 people.²¹ Notably, over those 10 years, Deering's population rebounded from 3 to 183, a few more than the number of people who live there today.²²

As a result of the significant investment the federal government made in Noorvik when it was first settled, unlike other villages in the Borough, a good deal of infrastructure, including a telegraph, was already in place by the time Noorvik got its U.S. Post Office in 1937. Today, as is true of most of the Borough's communities, various governmental entities play a role in running the village. As noted above, back in 1939, the Native Community of Noorvik became a recognized tribe under the Indian Reorganization Act

i

First to be counted ...

On a quiet day in the village of Noorvik, a nation's news as the city welcomed the entire country to town for the first enumeration, or counting of an American citizen as part of the 2010 Census. Noorvik Elder and WWII Veteran, Clifton Jackson, was the first person to be counted in the 2010 Census.

Federal and state dignitaries as well as national media attended cultural events over a two-day period in the village.

From *The Hunter*, Vol. 2, No. 1

June 4, February



Subsistence resource commissions have been established for most native parks and monuments in Alaska to provide meaningful participation and involvement of local subsistence users in planning and management decisions affecting subsistence.

Native Park Service

<http://www.nps.gov/noah/learn/history/culture/loa/erc/fm2/sModule=security/getfile&PageID=114585>.

(IRA). The community incorporated as a second-class city in 1964.²³ Noorvik's village ANCSA corporation merged with NANA, the regional corporation, in 1972.

Noorvik sits downriver from the 1.7 million-acre Kobuk Valley National Park, one of the four large federally protected reserves in the surrounding area. Subsistence activities are allowed in the park at all times of the year.

Historically, the Kobuk River has been navigable from early June to mid-October. In 2015, break-up is forecasted to occur around May 18.²⁴ Temperatures range between 10 below zero to 16 degrees above Fahrenheit in the winter and between 40 and 65 degrees during the summer months. Total snowfall averages about five feet.²⁵

Though its Western-style economy got a head start on many of the other villages in the Borough, Noorvik's employment picture today resembles that of most of the other arctic villages. According to the 2010 census report, 61% of residents over the age of 16 work jobs during the peak employment quarter of the year while only 50% work during all four quarters of the year. Out of those listed as employed in the state's labor database 31% earn less than \$5,000 annually.²⁶ Here, as elsewhere in the region, subsistence hunting, trapping, fishing, and gathering help fill the gap created by the absence of regular paychecks.

The majority of local employment opportunities are found with the Borough's school district, at Noorvik Elementary or Aqaluk High School. Most of the good jobs are with the city, the tribe, and the Maniilaq health clinic. Some residents take rotation employment with the Red Dog Mine and some join firefighting crews, work in the commercial

fishing industry, or find other seasonal work out of Kotzebue. Going afield to find summer work can get in the way of food gathering. Sometimes working full time in Noorvik itself cuts into the time needed for subsistence harvesting, as Lee Ballot, Sr., mentions on p. 8.

Noorvik is not connected to any other village by road. There are a few gravel roads in the area, including those to the airstrip, waterfront boat launch, the landfill—all used mostly by four-wheelers, though there are some cars and trucks in Noorvik. A 7.5-mile-long road runs out to a gravel pit. The Kobuk River serves as the major transportation corridor for boats in the summer and snow machines in the winter.

Passenger aircraft and cargo planes come and go all year, using the state-operated landing strip. The village has a bulk fuel storage facility, and the city, tribe, and a few private entities sell heating oil, propane, and gasoline at prices indicative of the village's high transportation costs (gas was \$7.87 a gallon and heating fuel \$6.56 in January of 2015).²⁷ Large freight and bulk goods come in on shallow-draft barges during the summer months.

Noorvik's electricity is supplied by the Alaska Village Electric Cooperative (AVEC), which generates power with diesel generators and three wind turbines that help to reduce diesel consumption. The local water and sanitation system is better than in many arctic villages, with pretty much every home having indoor plumbing. The city operates a Class 1 treatment plant, which uses a vacuum removal system less vulnerable to freezing to deliver sewage and wastewater to a stabilization pond located a few miles from the village. Noorvik has trash pick-up and a landfill. You can call a cab to help get your luggage to the airstrip and shop at the sporting goods store or local bible shop. The Noorvik Native Store, established at the time the village was built, is still serving its local customers. Overall, Noorvik's early introduction into the ways of American small town living endowed the village with the kinds of infrastructure that make life in an arctic village easier in today's world.



Noorvik school. Photo credit: Sarah Betcher.



Maniilaq Association Community Health Clinic. Photo credit: Sarah Betcher.

As we hear in the Noorvik voices speaking later in this chapter, “the place moved to”—a place laid out according to the unfamiliar urban planning conventions of the early 20th century, where children were required to attend school and everyone was expected to go to sleep early in a new kind of bed and get up and do new kinds of work—retained at its core the way of life its residents had acquired over centuries in the places they moved from. While much of the local Iñupiat year-round diet now comes from upriver animals and fish, people in Noorvik still crave the foods their ancestors ate routinely before the move to the Kobuk region. Residents like Edith Pungalik often trade with shore-side communities for marine foods, like the whale meat she gets from Savoonga and Point Hope and herring eggs from Shaktoolik (*see p. 3*).

As James Ducker said of the relocations that went on in the region during the late 1800s and early 1900s, “[t]he Iñupiat ability to gain a subsistence from traditional fish and game abetted by Western technology left them free to choose their future—a future enriched by options offered in the white towns and in the school centered villages. The natives exercised that essential freedom in choosing their personal and collective futures.”²⁸ The personal and collective future chosen by the Iñupiat who arrived at the new settlement of Noorvik would bear a strong resemblance to their ancestral past, and the local people continue to carry forward those same hunting, fishing, trapping, gathering, preservation, and sharing traditions today.

“

“We, the Inupiaq Community of Noorvik Guided with Spirituality and Utilizing Our Respect for Elders and Each Other, Strive to Ensure a Safe and Healthy Community While Preserving Our Heritage and Culture With Unity.”

“Community Vision” stated in Noorvik Community Comprehensive Plan 2006-2016.



Salmon drying on Noorvik beach. Photo credit: Steve McCutcheon, McCutcheon Collection; Anchorage Museum, B1990.014.5.AKNative.15.27, Alaska Digital Archives.

1. See map on p. 6.
2. When missionary Charles Replogle reported to superiors on the new village location, he translated “Nuurvik” to mean “transplanted”—not an insignificant difference from the meaning used by local Iñupiat today (cf. NANA and Maniilaq Assn. websites). Replogle, C. 1916. Annual Report of the United States Public School at Deering, on Kotzebue Sound, Arctic Ocean. Report on the Work of the Bureau of Education for the Natives of Alaska, 1914-15. Department of the Interior, Bureau of Education, Bulletin 1916, No. 47, p. 50.
3. Alaska Dept. of Labor. 2014 population estimates. <http://labor.state.ak.us/research/pop/popest.htm>. Accessed 4 Apr 2015.
4. Burch, E. 1994. The Iñupiat and the Christianization of Arctic Alaska. <https://play.google.com/books/reader?id=-n0CAAAAYAAJ&printsec=frontcover&output=reader&hl=en&pg=GBS.PA41>. Accessed 15 Apr 2015.
5. See <https://play.google.com/books/reader?id=-n0CAAAAYAAJ&printsec=frontcover&output=reader&hl=en&pg=GBS.PA41>. Accessed 12 Apr 2015.
6. Burch, Ernest. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press, p. 198.
7. Krulish, Emil. 1919. Home Conditions among Natives of Alaska. The Indian School Journal. December, 1914. From records of the Bureau of Indians Affairs Juneau Area Office, Record Group 75, Box 8, National Archives--Pacific Alaska Region, Regional Archives, Anchorage, AK, p. 180.
8. Gordon, G. 1922. *Sunset Magazine*. Vol 48, February. <https://books.google.com/books/reader?id=mUZEQAAMAAJ&printsec=frontcover&output=reader>. Accessed 5 May 2015.
9. Ducker, J. Out of Harm’s Way: Relocating Northwest (Alaskool.org), quoting Walter Shields to chief, 27 March 1914. Records of the Bureau of Indians Affairs Juneau Area Office, Record Group 75, Box 6, National Archives--Pacific Alaska Region, Regional Archives, Anchorage, AK.
10. Ibid.
11. Roberts, A.O. 1978. *Tomorrow Is Growing Old: Stories of the Quakers in Alaska*. Newburg, OR: The Barclay Press. The author mistakenly identifies Knud Rasmussen as Elmer Rasmuson. See Index—Persons.
12. Here, Roberts adds the parenthetical “(probably because of the need to conserve fuel for the generator)” —a questionable assumption, given the extended daylight at the time of the visit in early August.
13. Ibid. p. 288.
14. Rasmussen, Knud. 1927. *Across Arctic America*. Fairbanks: U of Alaska Press, p. 338.
15. Noorvik Community Comprehensive Development Plan 2006-2016. <http://nwabor.org/forms/noorvikplan07.pdf>. Accessed 6 April 2015.
16. D’oro, Rachel. 2010. Native dancing ban lifted in Alaska village. Manataka American Indian Council Tribal News, February 21. <http://www.manataka.org/page2041.html>.
17. Burch 1994.
18. See Ducker, J.
19. Rasmussen 1927, p. 339.
20. Ducker writes that “Although Noorvik never succeeded in luring all the Inupiat from Deering, and bureau employees would continue to bewail the degradation of some natives who remained at Deering, it did grow to number 281 by 1920, easily outstripping Kotzebue as the largest predominantly native community in the region. Oksik emptied completely as its people moved to Noorvik. And the new village drew so many from Deering and Kiana, another white settlement up the Kobuk River, that whites in the communities complained they were left with few natives to take the poorer paying jobs the local economies required.”
21. Roberts, p. 289.
22. Alaska Department of Labor Historical Census Data. <http://labor.alaska.gov/research/census/cenhist.htm>. Accessed 10 May 2015.
23. NANA.com.
24. NOAA. 2015. Alaska Spring Breakup Summary. <http://aprfc.arh.noaa.gov/products/fcst.php?product=SR4K48PACR>. Accessed 12 May 2015.
25. NANA.com.
26. State of Alaska, Department of Labor and Workforce Development. 2014. Population Estimates. <http://laborstats.alaska.gov>.
27. Alaska Dept. of Commerce. Community database, Noorvik. <http://commerce.state.ak.us/cra/DCRAExternal/community/Details/c70ceaa1-b8dc-4f8b-8c49-1c38db04015d>. Accessed 10 May 2015.
28. Ducker, J., p. 7.

Traditional foods important to the people of Noorvik today

NOORVIK TRADITIONAL FOODS BY EDIBLE MASS, UNIQUE AREAS AND PEOPLE			
SPECIES	BY EDIBLE MASS (% OF TOTAL FOOD HARVESTED ¹)	BY NUMBER OF UNIQUE AREAS (% OF 627 MAPPED POLYGONS)	BY PROPORTION OF PARTICIPANTS (% OF 25 NOORVIK RESIDENTS IN STUDY)
Tuttu Caribou (<i>Rangifer tarandus</i>)	33	15.8	84
Sii Sheefish (<i>Stenodus leucichthys</i>)	19	12.9	80
Qualugruaq Chum Salmon (<i>Oncorhynchus keta</i>)	16	4.6	92
Berries: Asriavik (Blueberries), Aqpik (Salmonberries) and others	1 (all berries)	15.5	100
Whitefish (excluding sheefish)	13	8.9	100
Siulik Pike (<i>Esox lucius</i>)	5	6.9	84

In Noorvik today, *tuttu* (caribou) provides the greatest portion of traditional food in the local diet. According to Alaska Department of Fish and Game (ADF&G) surveys,¹ it makes up a full 1/3 of the wild food consumed by Noorvik's residents. All but four of the people who participated in this study reported hunting for *tuttu*. Out of all of the search area polygons we placed on maps, the largest number are used for caribou hunting (15.8%), though almost as many map polygons were recorded for berry picking (15.5%).

Qalugruaq (chum salmon) is the locally available fish caught by the most people, but more *sii* (sheefish) is consumed overall by edible mass. Next to *tuttu*, *sii* represents the second largest portion of subsistence foods by mass consumed, according to ADF&G. All of the people we talked to said they eat whitefish, too. *S ulik* (pike) is another popular local fish—all but a few people we interviewed said they fish for pike.

A hundred percent of the Noorvik residents we interviewed reported harvesting berries, with all but two bringing home *aqpik* (salmonberries) and all but three collecting *asriavik* (blueberries).



Photo credit: Sarah Betcher.

1. Unless otherwise indicated, subsistence harvest numbers in this chapter are from as-yet-unpublished 2014 data generously provided to our researcher by ADF&G staff.

Edith Pungalik of Noorvik hangs fish to dry. Photo credit: Sarah Betcher.



Noorvik Voices

It's a mild mid-July day in Noorvik.¹ Several skiffs are pulled up along the bank of the Nazuruk Channel. People are busy loading and unloading supplies. Across the channel, fish hang drying on racks at family fish camps.

A gravel road runs along the river, then turns up to the village. Closer to the river, houses are raised on tall posts, ready for the next time the river comes up over the banks. Houses farther back look like many of the homes in other villages in the Borough, their foundations raised only slightly off the permafrost.

Outside one of the houses, next to a small shed, Lee Ballot, Sr. and two of his sons are busy repairing a net. Lee spent his early years in Selawik and moved to Noorvik in the 1980s. Growing up, his family stayed at their camp for the whole summer and came back in the fall. "That's how I learned everything I know," he says. "I've been taking these boys out since they were babies," he nods toward his sons. "I would take them out everywhere we went—fishing wintertime, summer."

Back in Selawik, his family "did everything Iñpi aq and hardly ate any white man food. There was only one store in the whole community to get the basics. We lived off fish. With fish, berries, caribou, moose, you won't starve!"

These days, Lee is working as a tribal manager at the Noorvik community office—a job that's been keeping him from going out as much as he used to. "It's hard out here when you live on subsistence and then try to have a job at the same time. It provides gas, though." He gestures

to the river running past the small trees behind his house "Especially this time of year. I would prefer to be off work and be out there salmon fishing. We have a salmon camp 10 or 15 minutes out from here." Families in the area share the camp, located in an especially good fishing spot.

He traces his annual hunting and fishing routine: "We go with the season. Fall, you do your caribou hunting and fur-bearing animals. Spring, that is when everybody goes out to the lake to hook for sheefish. After springtime you do your geese hunting, summertime catching whitefish, July you get your salmon. August, maybe September, you get whitefish again that are coming back from up river, and then there's



Noorvik residents work together to repair a hanging rack. Photo credit: Sarah Betcher.



Lee Ballot, Sr. works on his net.
Photo credit: Sarah Betcher.

freeze up. We put our nets underneath the ice. We get out there soon as the ice gets thick to walk enough to put the net under the ice.”

Although people in Noorvik continue the cycle he describes, Lee says he has noticed people aren’t living as long as they used to. “They were living to 90s, 100s. You don’t see that nowadays. You’re lucky to hit 80.” Middle-aged himself (by the old measure), he suspects it has to do with people’s changing diets. From his current situation, he knows all too well how circumstances can change what a person can get to eat. The food is “free,” he says, “it’s in the water, it’s on the land. And you can survive on it.” But it costs gas money to go out, so that makes it important to bring something back. If a hunting trip doesn’t result in food in the freezer, there will be more trips to the store. “It’s expensive to try to live with what the store has,” he says.

Even in lean times, though, people share what they get. You’ll find the traditional foods in a house even though no one there is able to go out. “Sharing is a big thing out here. My wife’s sisters, they don’t have a boat to set their net, so we share with them. One of them the other day helped us cut fish. You cut ‘em, you take them home.

“That’s just how we do it out here . . . when they go out fishing in the springtime, they’ll get them a sled-load at a time. They’ll call on VHF: ‘anybody want fish?’ You don’t expect anything back. It’s an Inupiaq value we have out here, sharing with those that can’t get it or don’t have the transportation to get it.”

These days, Lee eats mostly caribou, moose, and fish. “I don’t have a snow machine to go geese hunting springtime, so we get by with what we have.” He’s got quite a bit of food put away in his deep freeze and a rack of salmon still drying. “These are half-dried salmon. You don’t want to dry these too much. The elders love this stuff. I love them too.” Shifting the food around in his freezer, he grabs a bag of fish.

“These are dry. These are smoked salmon!” he says with a song in his voice as he displays a dark, narrow strip. “I have more at camp; I just brought some.

“I filet them half dry. And we freeze them whole, too,” he says as he holds up a large fish. Grabbing a bag of dried fish, he remarks, “I like to give these away. I got a lot of relatives over at Selawik and, whenever they come in, I give them salmon.”

Lee continues to rummage around in his freezer. “Caribou!” he announces, holding up a leg bone. “Salmon eggs!”—a full Ziploc bag. “These are good boiled,” he comments. He raises the midsection of a very large fish. “This is what we caught. This is a sheefish.” He extracts another bag: “Salmon heads!” As he puts the bag back in, he mentions some things he’s run out of. “I don’t have any berries. I didn’t get out yet. But I hope to get out there soon and go pick some berries.”

“Where I was born, in Selawik, they don’t get salmon at all. Lucky if they get one maybe. I’ll share these with them,” he explains, holding up a bag full of fish. He’s got jars of grease, too. “This seal oil,” he explains, “was sent here from Point Hope. Somebody sent them fish. Out here it’s a trading thing. Over there, they get the whales and seals, so we trade. You send them a little fish, they’ll send a bunch of seal oil. Because it’s abundant there.”

“Here is some dried meat, caribou meat, that I keep in the freezer,” he says, holding up a long strip of dried meat. He puts it back and shuts the freezer. “We were lucky last winter. They stuck around for the winter.” He pauses, remembering. “That really helped us to get by. Normally, they’d move on and we had to go miles and miles. Or go without meat. There was lots across on the Buckland side, and my sons went out there and caught a whole bunch. That got us through the winter.” Back outside, he gets back to helping the boys repair the net.

Others in his neighborhood are busy doing the same. People of all ages are walking around with berry-picking buckets. Several people down by the river and in town are in various stages of preparing fish to dry.

66

“The food is free. It’s in the water; it’s on the land. And you can survive on it. It’s expensive to try to live with what the store has.”

Lee Ballot Sr.

Edith Pungalik sits near a little shed down the hill from her house. She's made a nice spot to work, next to a covered drying rack where she has a smoky fire going to keep the summer flies off her winter dinner. Her young granddaughters stand by, watching her work. "I keep putting fire on my fish out here so the rain won't let them spoil. That warm smoke and fire keep them from getting spoiled and they are drying right now. When we see starters (larvae) in our drying fish, we always take them off. The flies don't like the smoke."

Edith's sons catch the fish and she does the cleaning and cutting. She dries some and wraps up some to be put in the freezer. "I cut the fish right away." She describes how sometimes she'll fill a bucket with water and rock salt to salt the fish. "I make dried fish right now," she explains, adding "springtime, right after ice break, we set net. There's lots of whitefish and pikes, especially in our camp. That's when they really start running. And salmon. We freeze them, too, for winter. And dry and make salted salmon."

She continues to cut fish with her *ulu* while her granddaughters quietly watch. When she's got all of the fish cut up, she takes a break and goes to the house, where she changes out of her fish cutting clothes into a purple *atikluk*. On the kitchen table, Edith has laid out an assortment of traditional food (see p. 3). Her husband sits nearby before a muted TV as she recounts her years growing up in the area: "We mostly stayed at camp. That is why we learned to put away food for winter. When we start having kids, able to help us at camp, we start to bring them down to camp and let them scale fish and let them learn what we learned from our parents. Right now, they know what to hunt, how to fish."



Edith Pungalik uses an *ulu* to cut fish for drying.
Photo credit: Sarah Betcher.

Her father died when she was very young, so her mother took on the role of both parents, teaching her and her siblings how to hunt, trap, fish, and pick. "When the water freezes and there was snow, we set snares. We got rabbits and sometimes ptarmigan and weasel. Summertime, my sisters, we cut fish, we go seining, hang and put away for the winter, right across the river." She points to the spot below her house where she had been cutting and hanging fish earlier. "Mom used to put 20 whitefish strings together and tie them and put them away in an [underground] cache." She says the fish lasted longer then, when it was colder.

"I make a bucket of salmon heads and bellies and salt them. I have a bucket under the house right now. I put water in it before I cover it." Salmon heads are baking in the oven, and the faint smell of fish is in the air.

She goes back to talking about her childhood: "From our camp, we'd go pick berries. Salmonberries, blueberries, cranberries, blackberries. Right across our camp in an area where we always go to pick." Edith speaks about other things they would gather in the summer, including, "Sourdock. We call them *quaḡaq*. And rhubarbs."¹

She explains how people are still getting these foods like they did when she was a child. "Next month, last part of August and September, that's when they start getting caribou, when they cross the rivers. People wait for August to start hunting for moose. That's when the season is open

Springtime, right after ice break, we set net. There's lots of whitefish and pikes, especially in our camp. That's when they really start running. And salmon. We freeze them, too, for winter. And dry and make salted salmon."

Edith Pungalik

1. This section is based on interviews conducted by Sarah Betcher.

2. The speaker is referring to "wild rhubarb" (*Polygonum alaskanum*), which is very different than the rhubarb (*Rheum rhabarbarum*) commonly found in Southeast Alaska and the Lower 48.

again for hunting. That is when everybody is happy.” Edith pauses with a big smile. “They can’t wait to hunt again.” She points at her husband, sitting on the couch. “He hunt everything. Once in a great while we get bear. I get him ready to hunt for birds in springtime.”

“Mostly we eat what we hunt and fish. Those are the main foods we have. When we have money to buy groceries, we buy.” Edith uses the foods she has on the table as an example of some of the foods she eats. She holds an old jar of mayonnaise now filled with seal oil. “This one is bearded seal I buy from a lady last summer. Every day I can’t go without seal oil. Main menu,” she laughs as she puts down the jar. She grabs a plate of fish and pulls one piece off and puts in on a tray in front of her. “This is salmon I baked.”

Out in another building near the main house, Edith opens a freezer full of large freezer bags packed with wild foods. Pointing to a group of purple and pink filled Ziploc bags, she says, “These are berries from last summer.” She points to a group of dark colored bags: “some are caribous, and goose, and fish.” She reaches in and pulls up a vacuum-sealed package. “This one is from Savoonga. I think it’s whale meat or walrus meat. They half dry it.” She says they trade a lot of their foods with seaside communities. She selects a bag to bring back into the house.

At the table, she pulls out the contents. “These are whitefish. And this one is part of a pike that a friend brought me not too long ago.” We used to put this kind of fish into seal oil along with Eskimo potato, what you get from the ground.” She pulls off small pieces of fish. “Eat it like this, Iñupiaq style.”

She uses an ulu to cut a piece of pink meat from a bone. “Beluga *maktak*. From Point Hope.” She points to a colander of small white eggs. “These are herring eggs from Shaktoolik.” A large cast iron pot of what looks a bit like



Dried whitefish. Photo credit: Sarah Betcher.



Edith’s traditional sampler, with bowhead and beluga, salmon, and herring eggs.
Photo credit: Sarah Betcher.

macaroni and meat goulash sits on the table nearby. Edith picks up a large spoon and starts stirring the contents. “This one is caribou meat. I fry the caribou in one pot and the vegetables in the other pot. I sauté veggies, and when they are done, I just put together.”

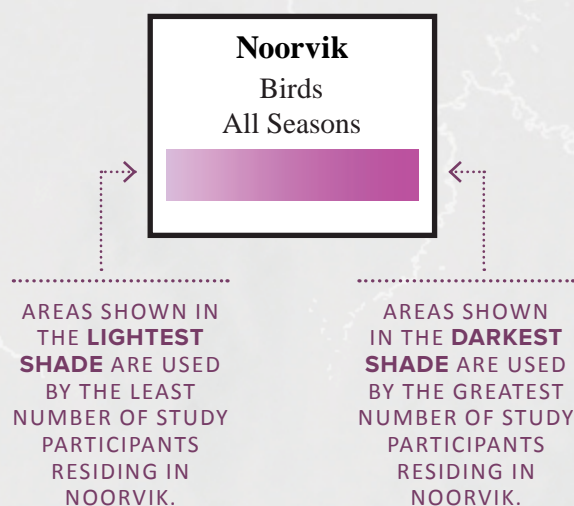
Edith shows off a big bag of berries. “I was thinking to make jam out of these.” She stirs some in a bowl. “That’s the only thing we have for dessert—or sourdocks or rhubarbs. There are a lot of people picking right now. People are going up the river in boats to go pick salmonberries.”

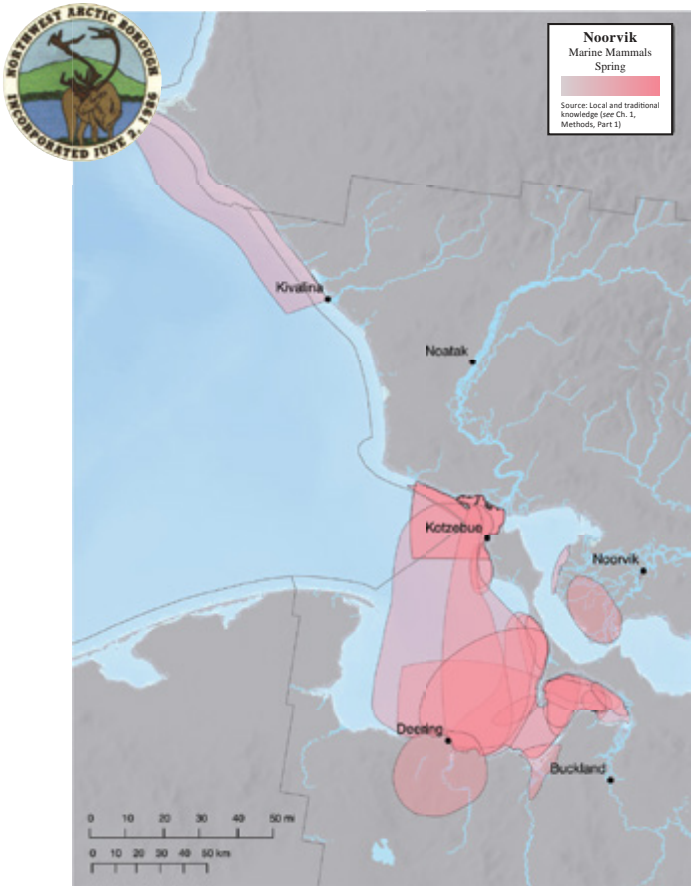
“I keep food on the table all the time. People come every day to eat. Our children, their children. I never put it away.”

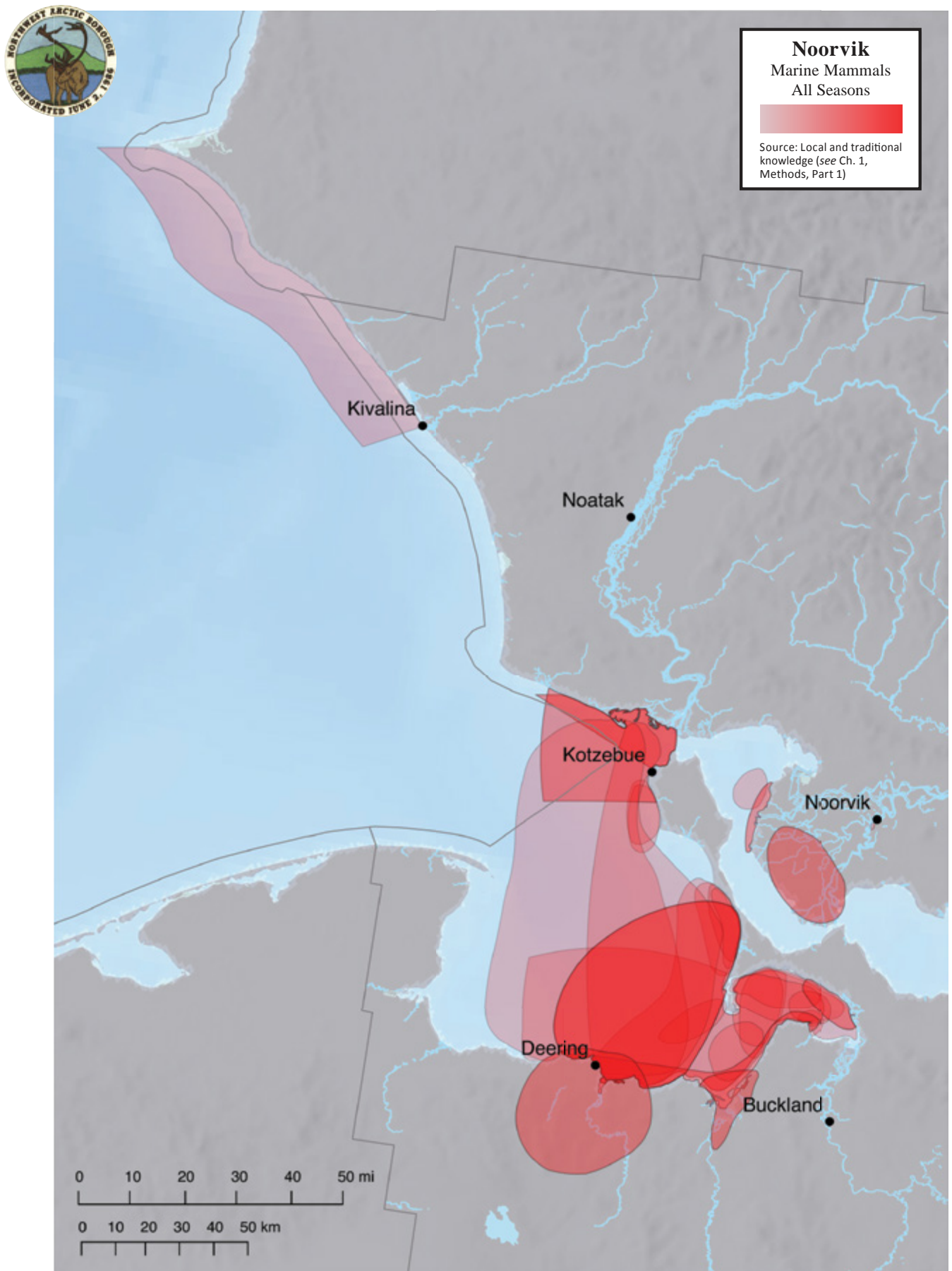


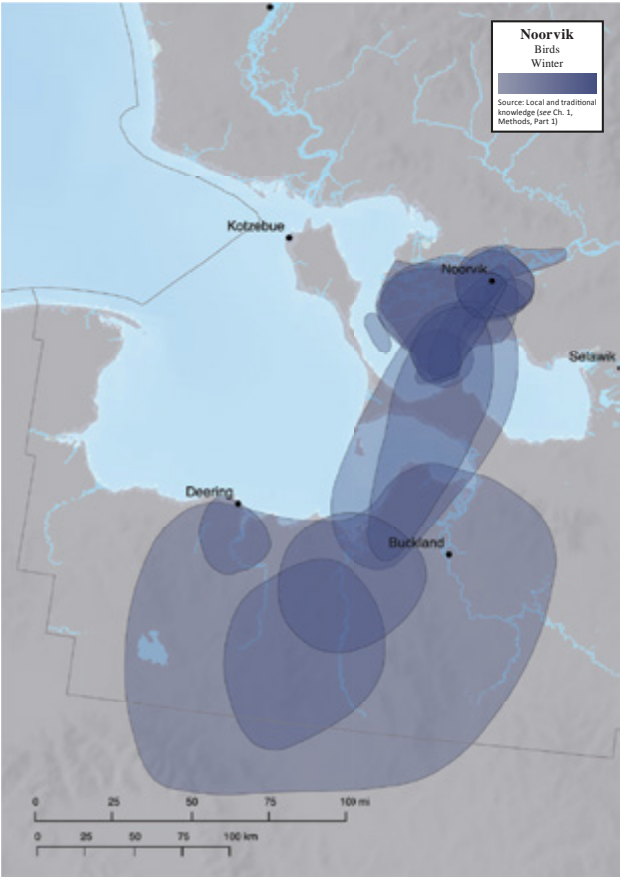
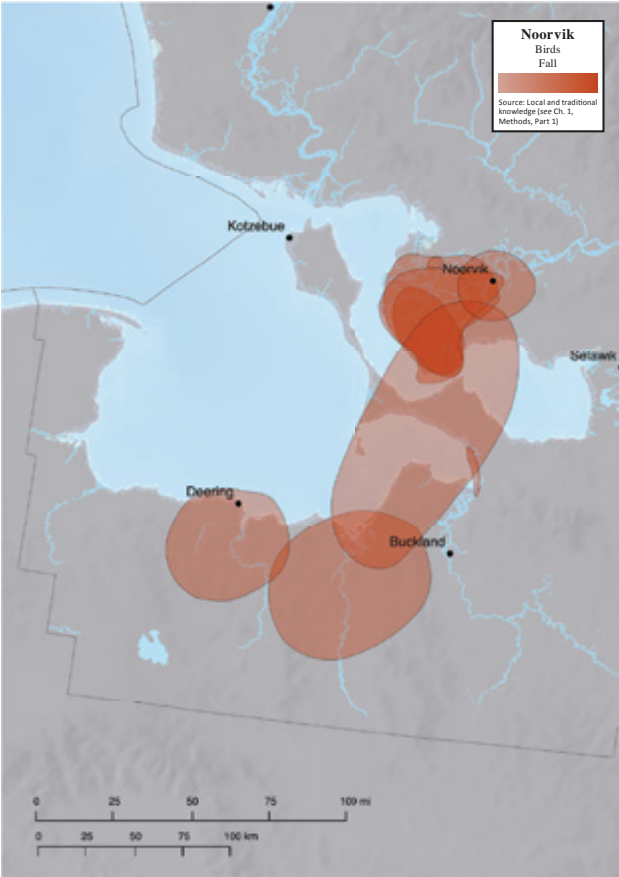
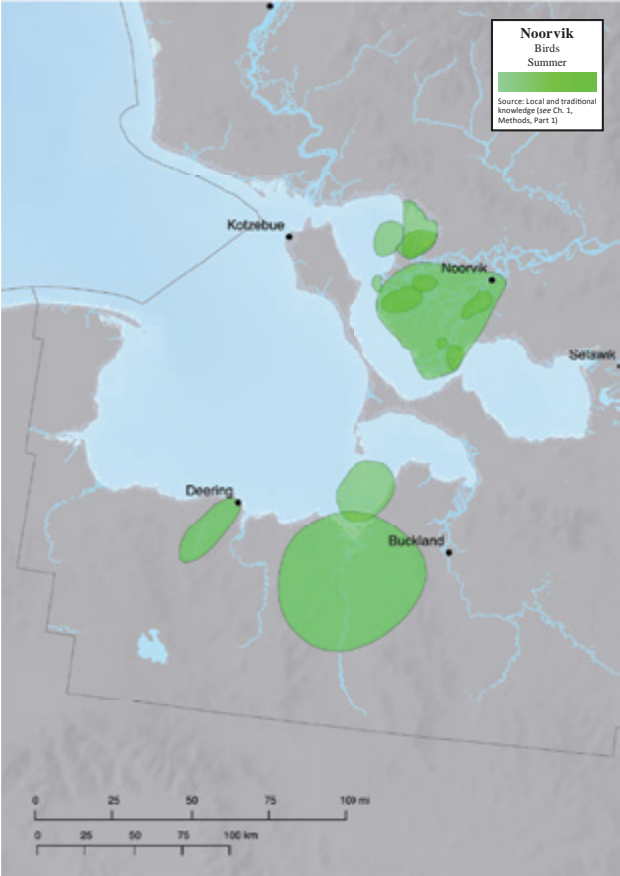
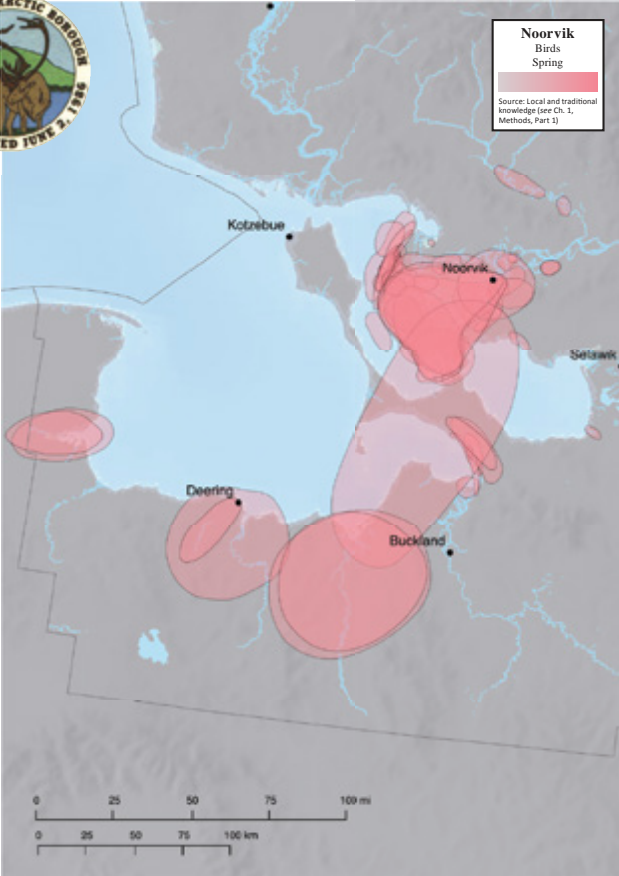
Noorvik can be distinguished from other villages in this study in that it has fewer distinct “hot spots” for subsistence foods. While traditional food-harvesting activities take place along the Kobuk River, and especially the river delta, throughout the year, many families have their own camps on the delta and tend to do a lot of harvesting in the areas immediately around their camps. The Kobuk delta, with its countless sloughs and small lakes, is full of fish at just about any location, and the wetlands also make ideal habitat for waterfowl. The Kobuk River flows into Kobuk Lake (Hotham Inlet), which is rich in sheefish, especially along the shallower waters near the coast. A good deal of fishing is done along the Kobuk River very near the village for a variety of species, including salmon and whitefish, and some of the larger islands in the river are popular spots for harvesting different types of roots and greens. At times when caribou are scarce, people will go upriver to Onion Portage, where caribou can be found crossing the river during their migrations most years. People will also frequent the areas around Buckland and Kiwalik for caribou in years when they are present there longer than elsewhere.

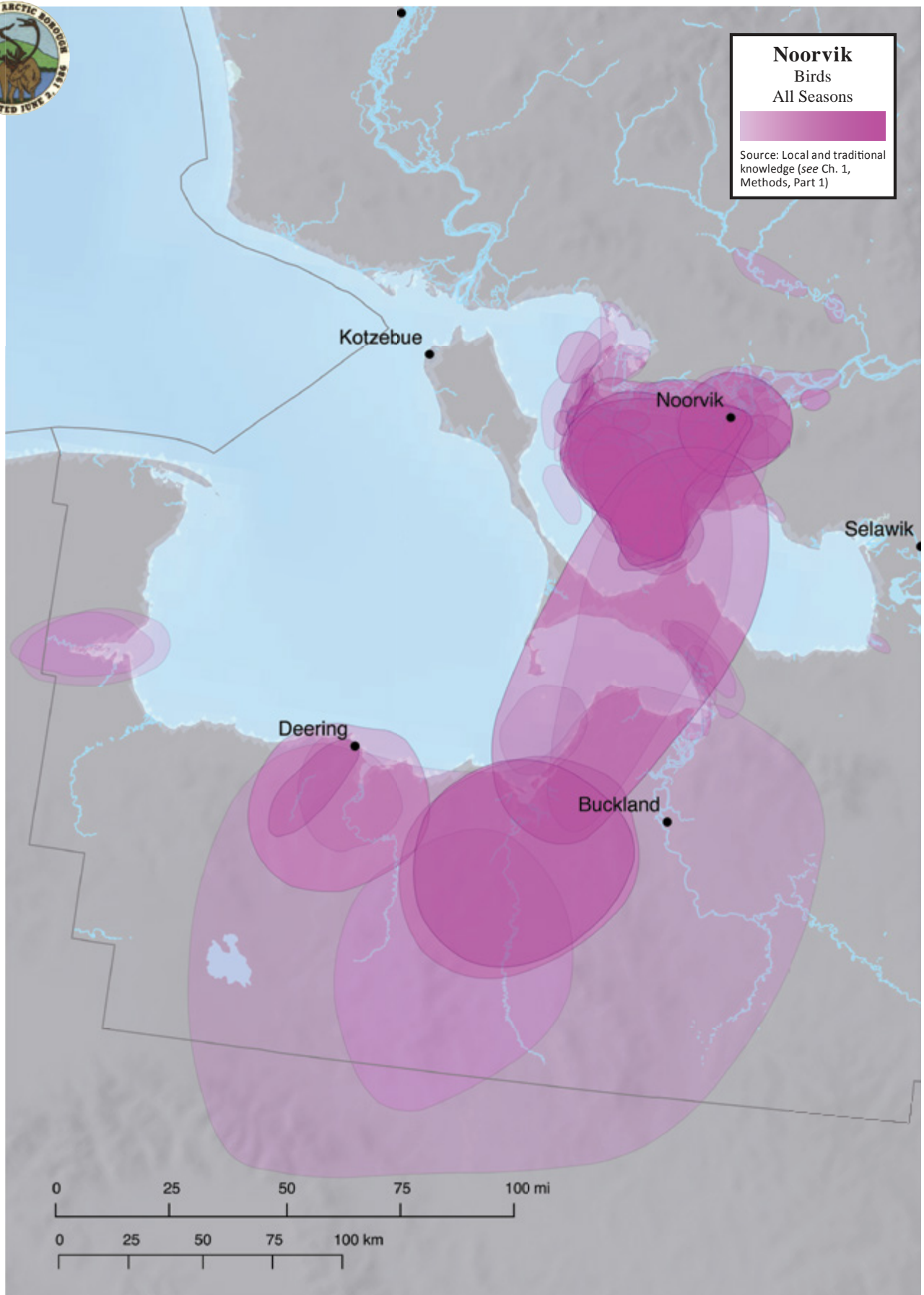
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.

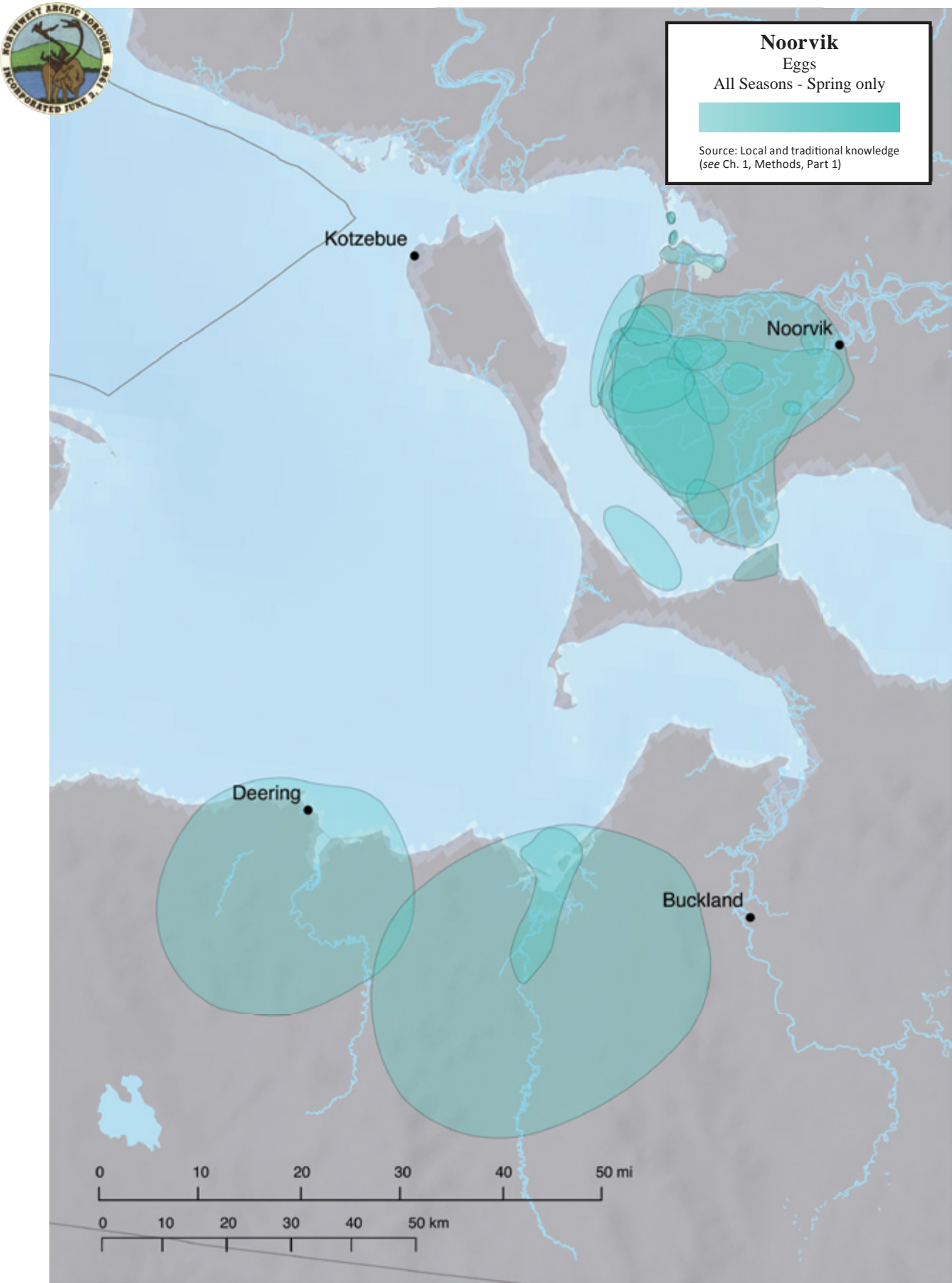


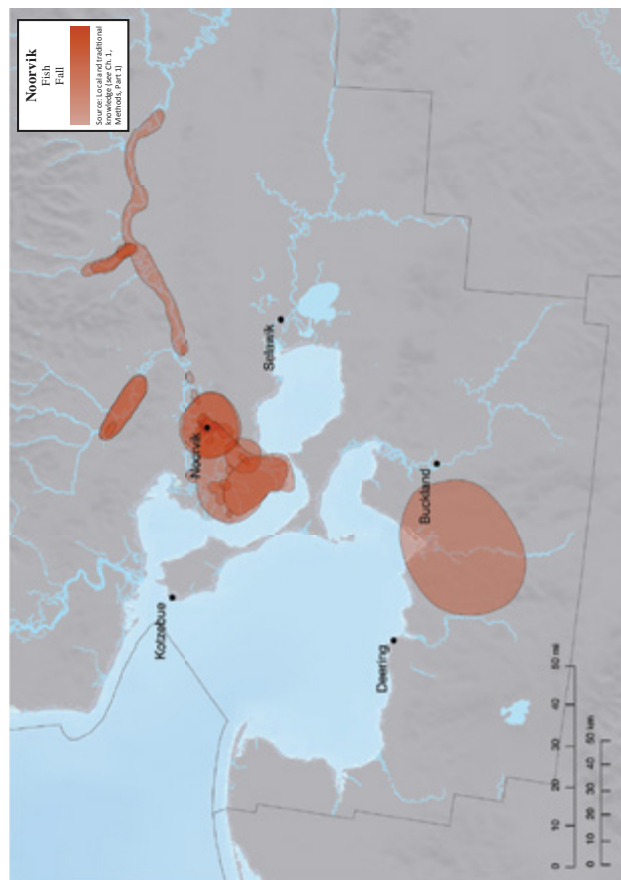
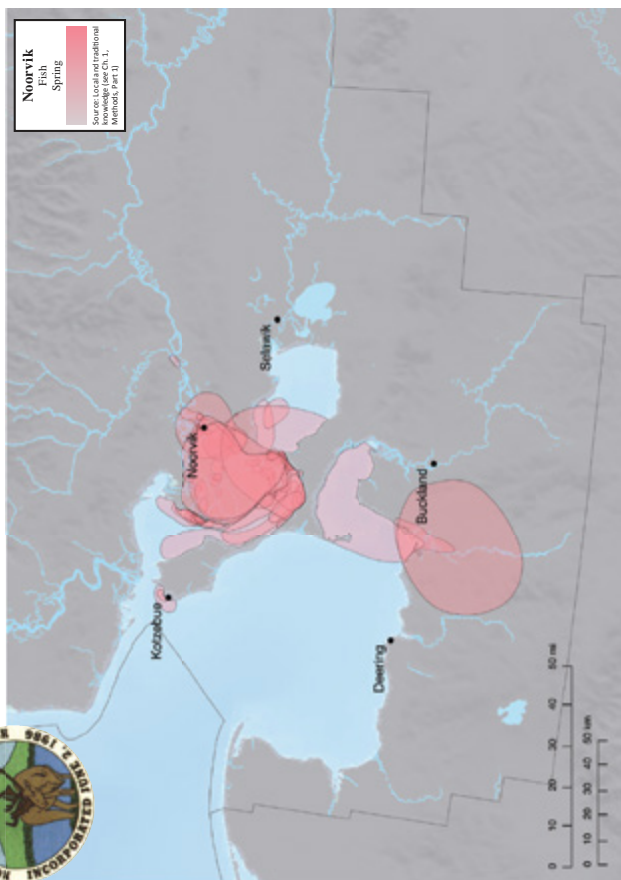
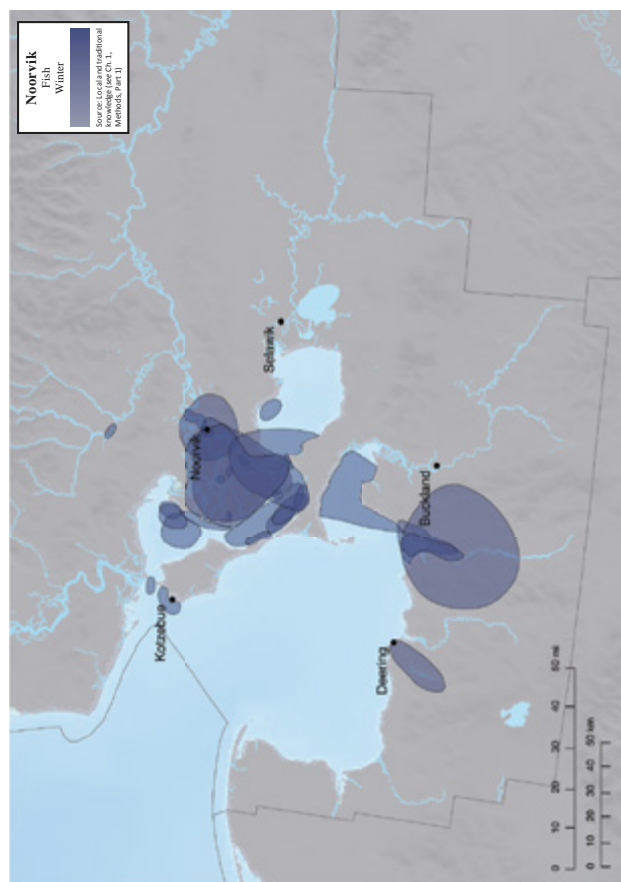
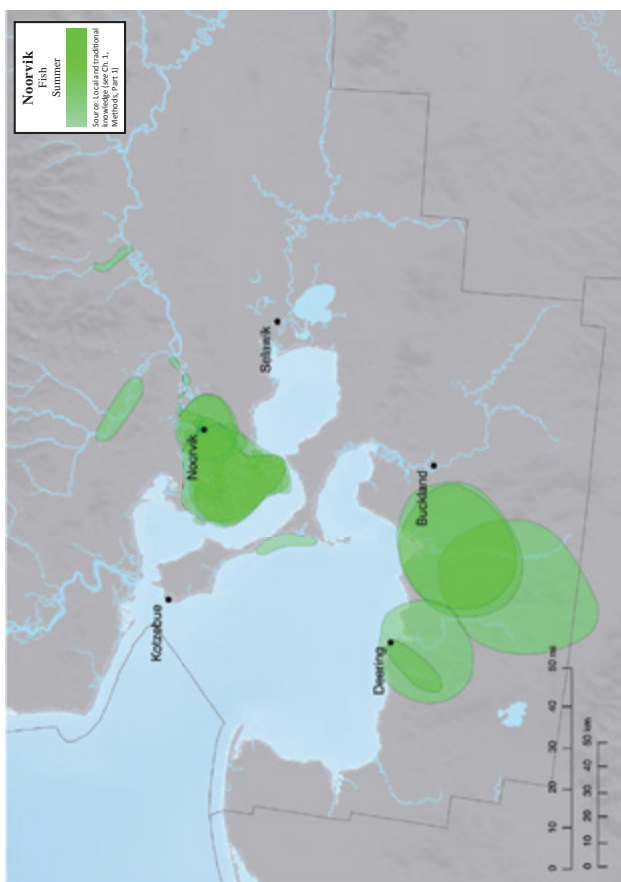


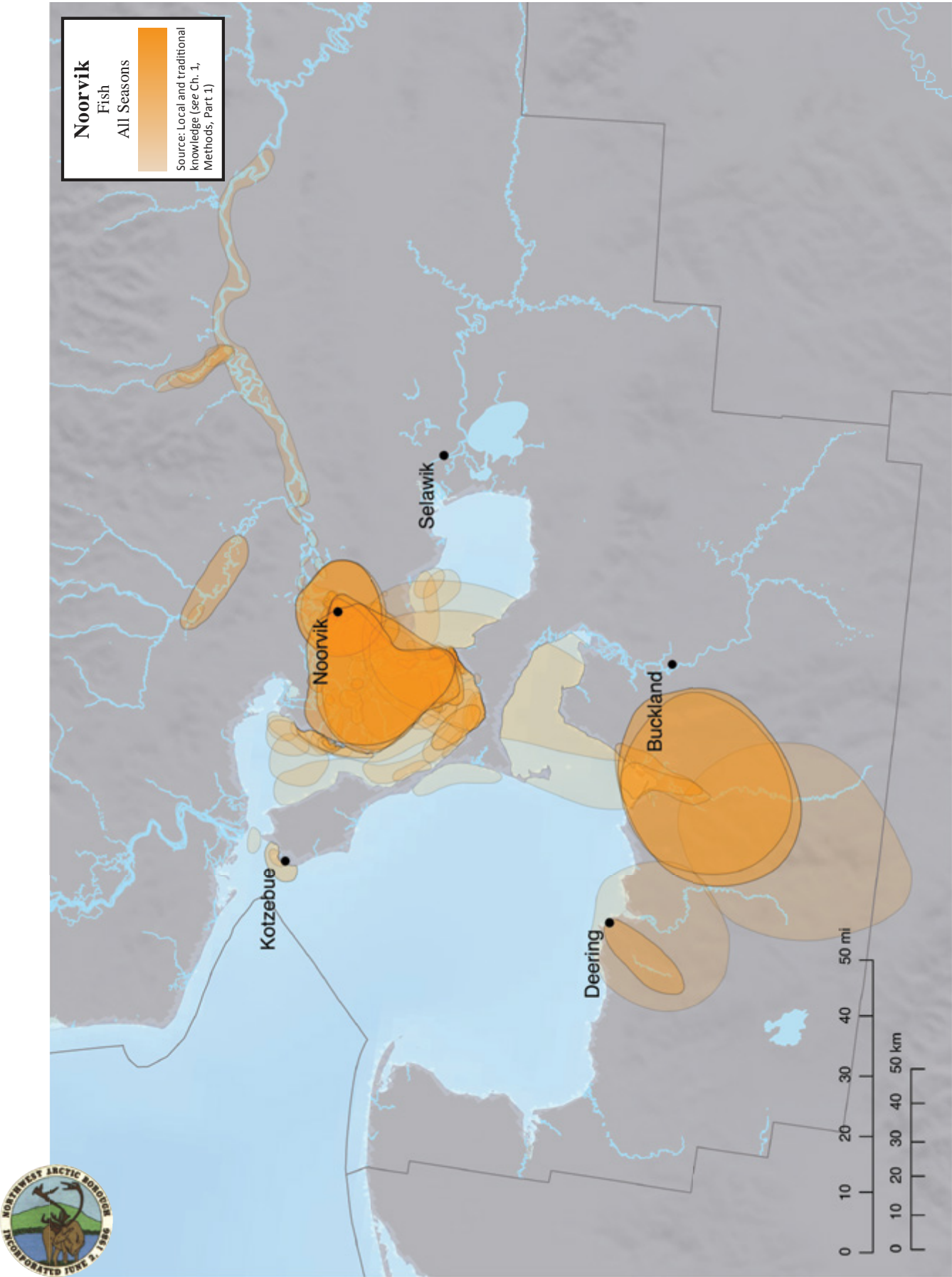


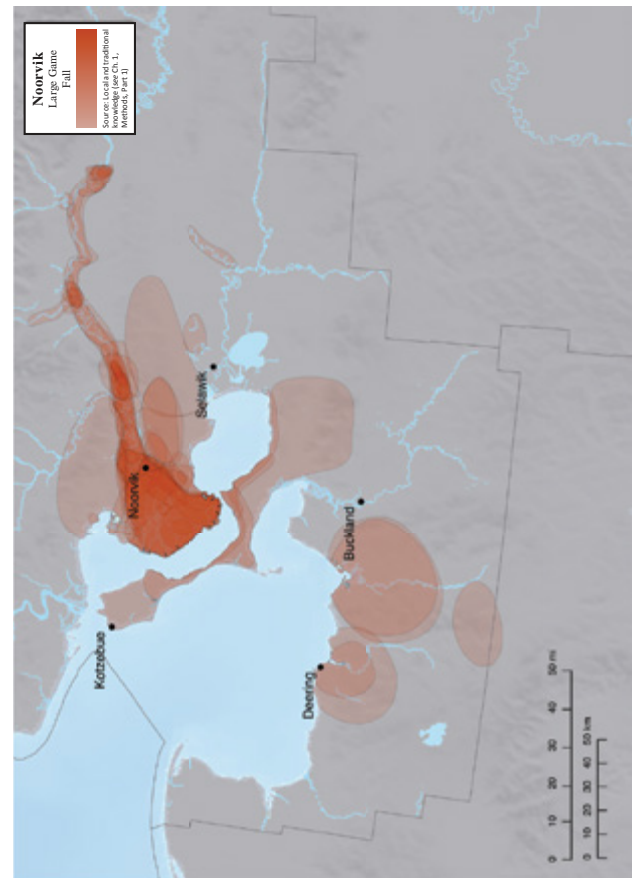
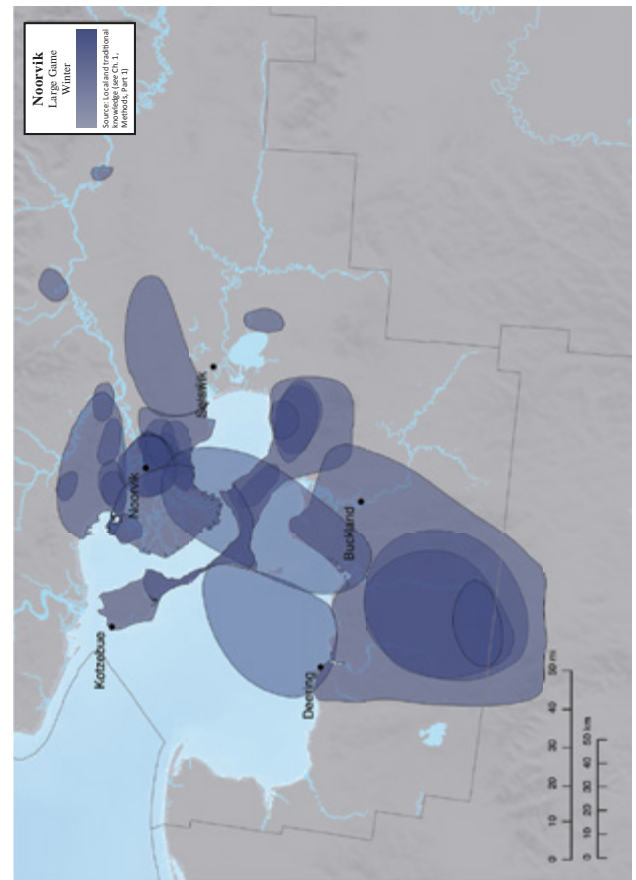


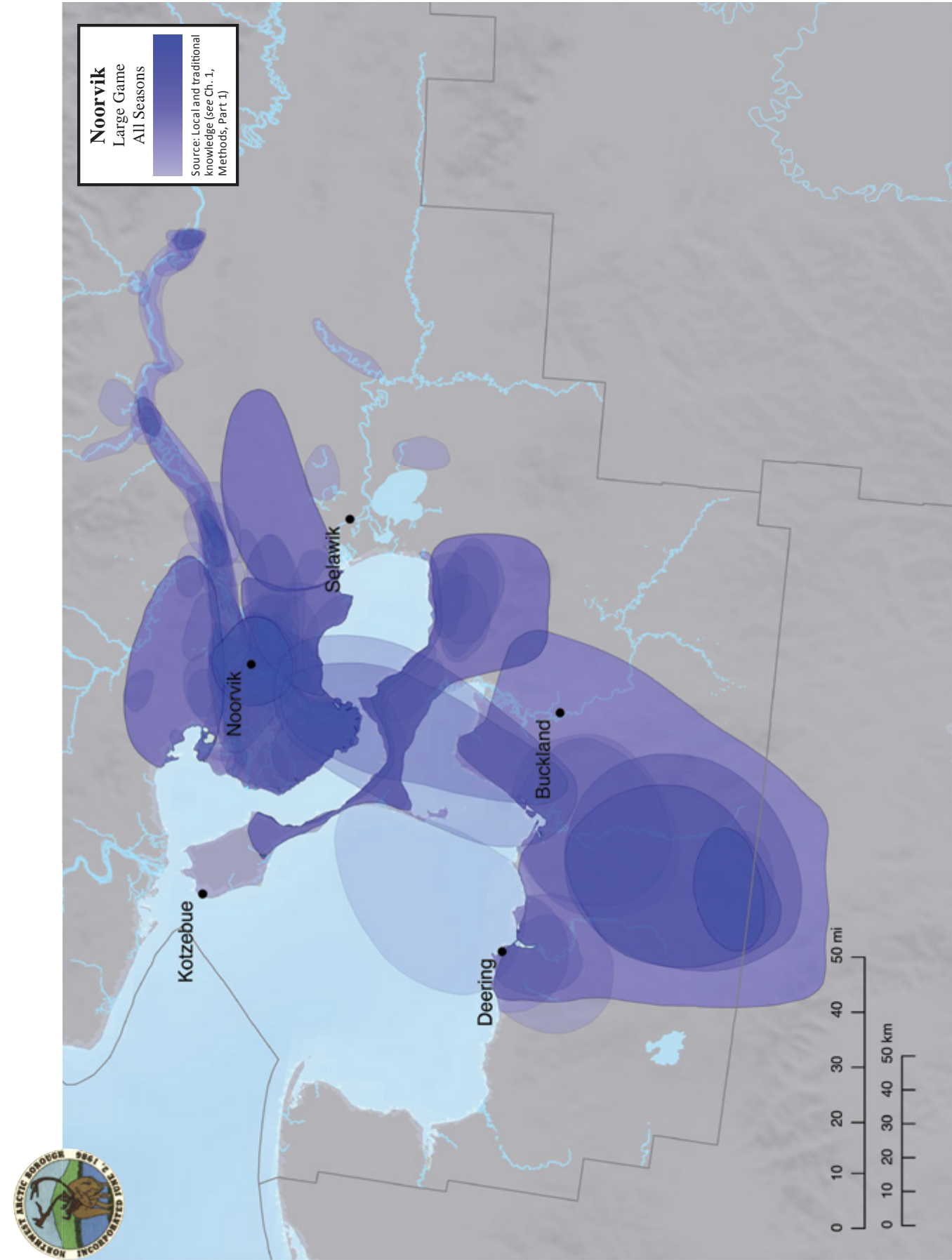


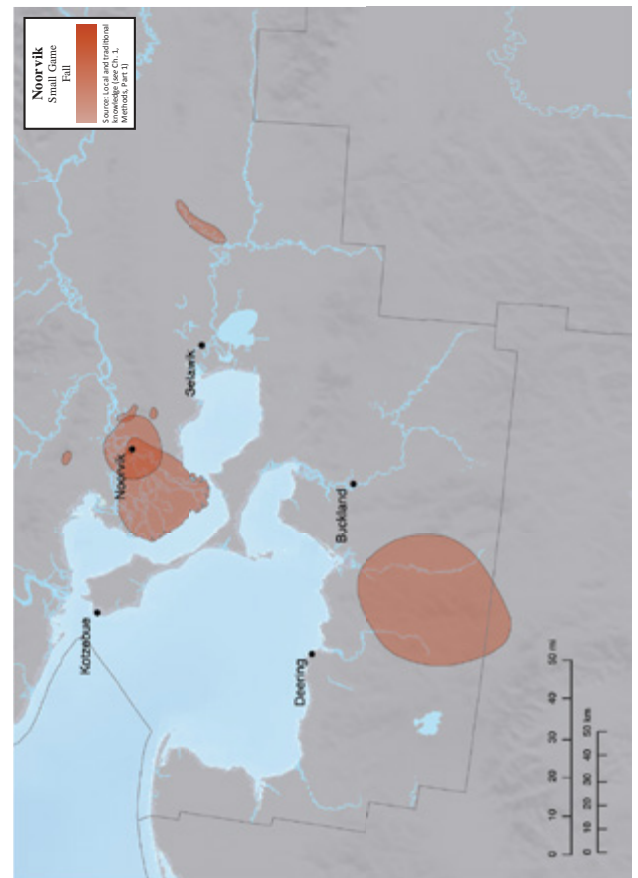
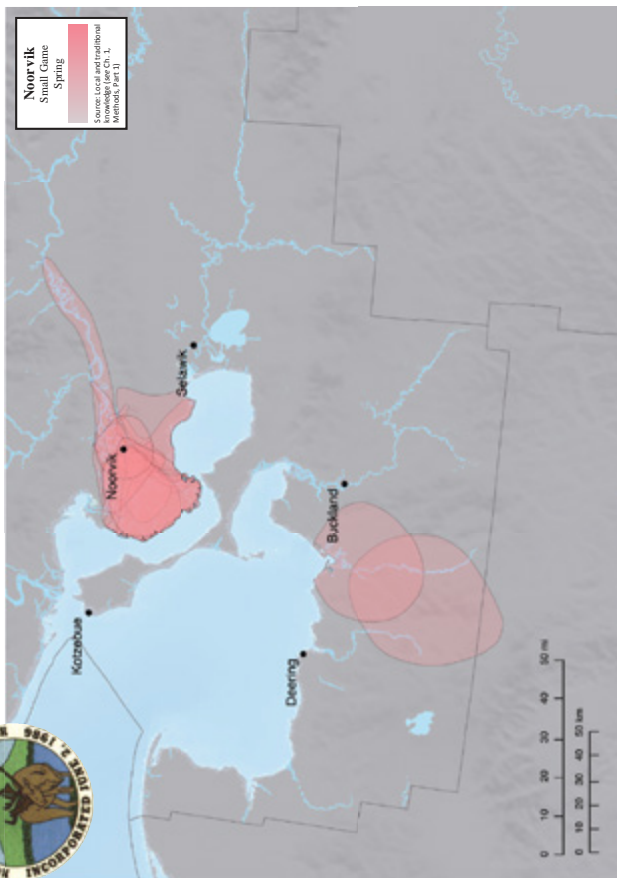
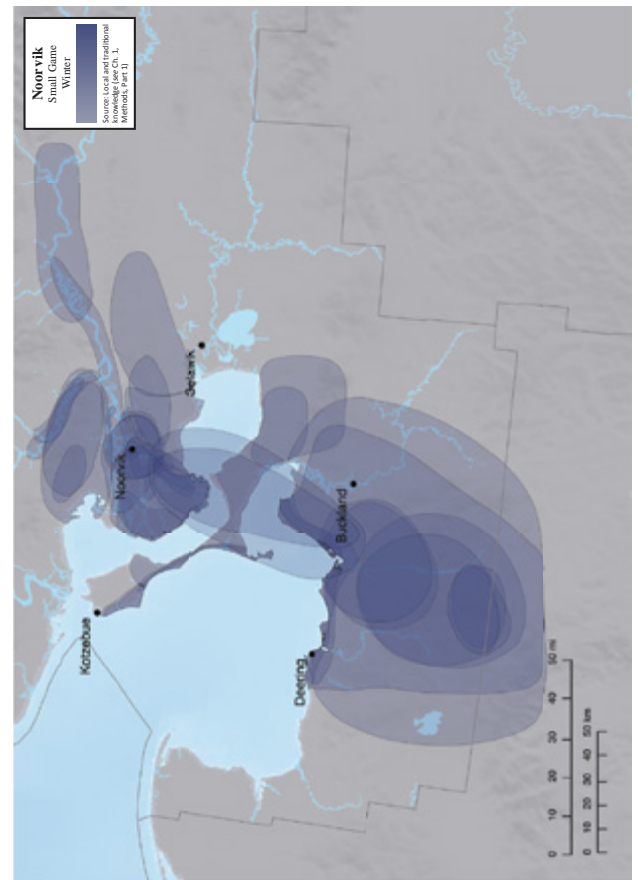
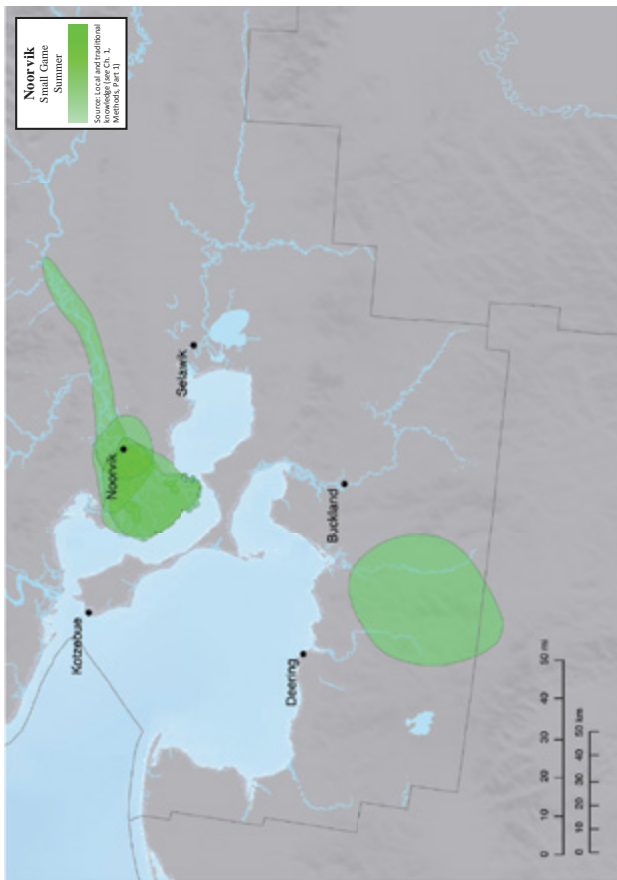


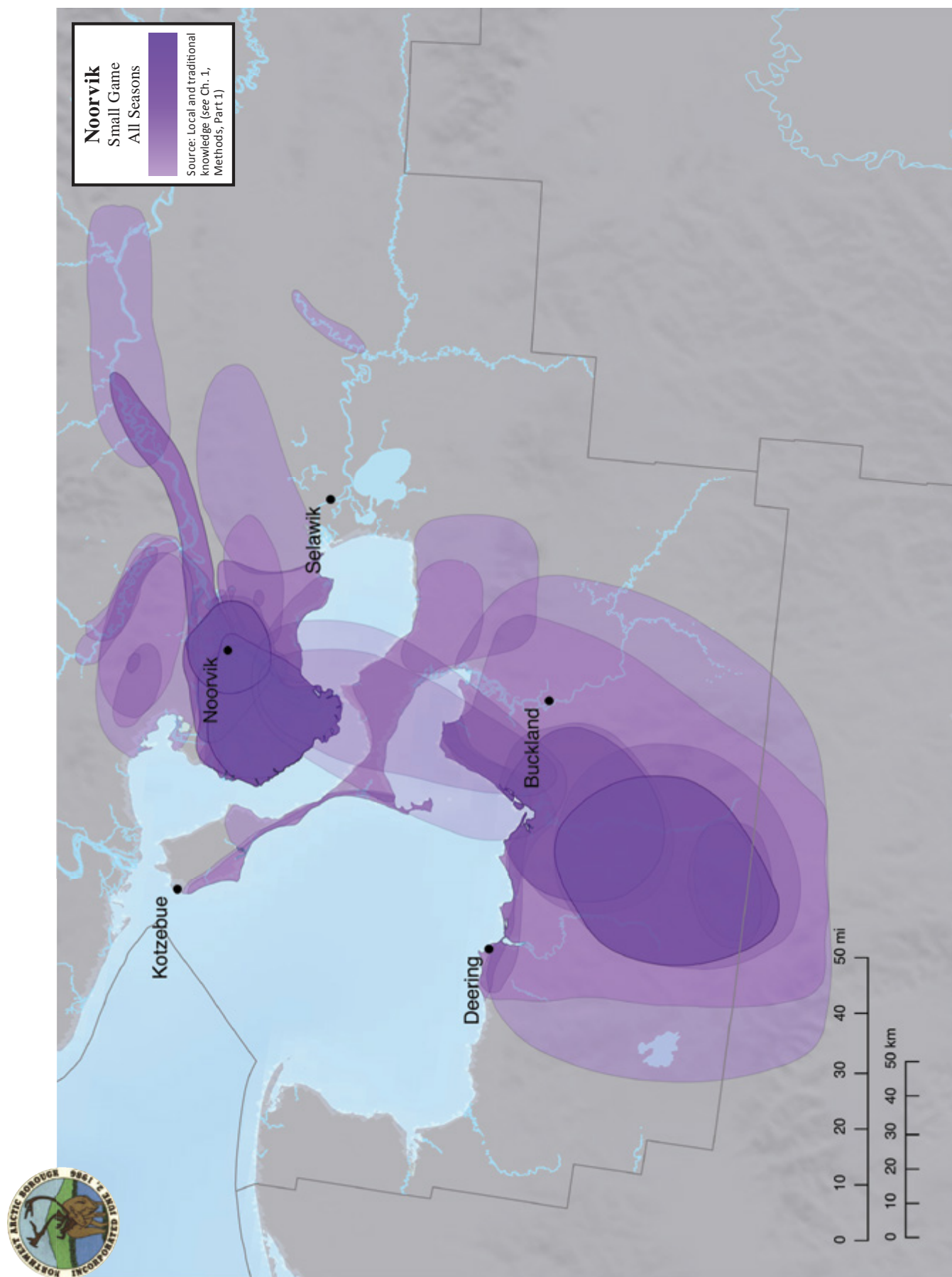


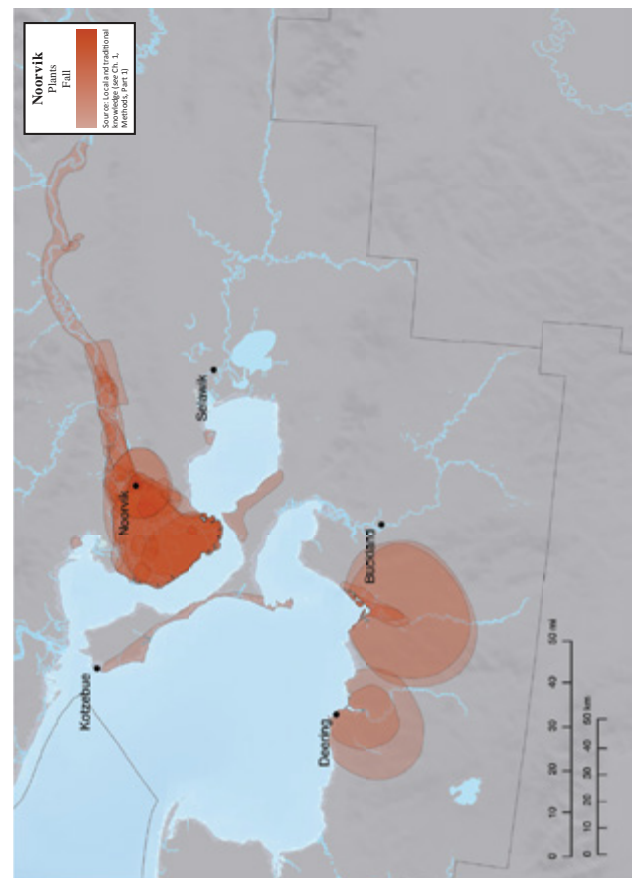
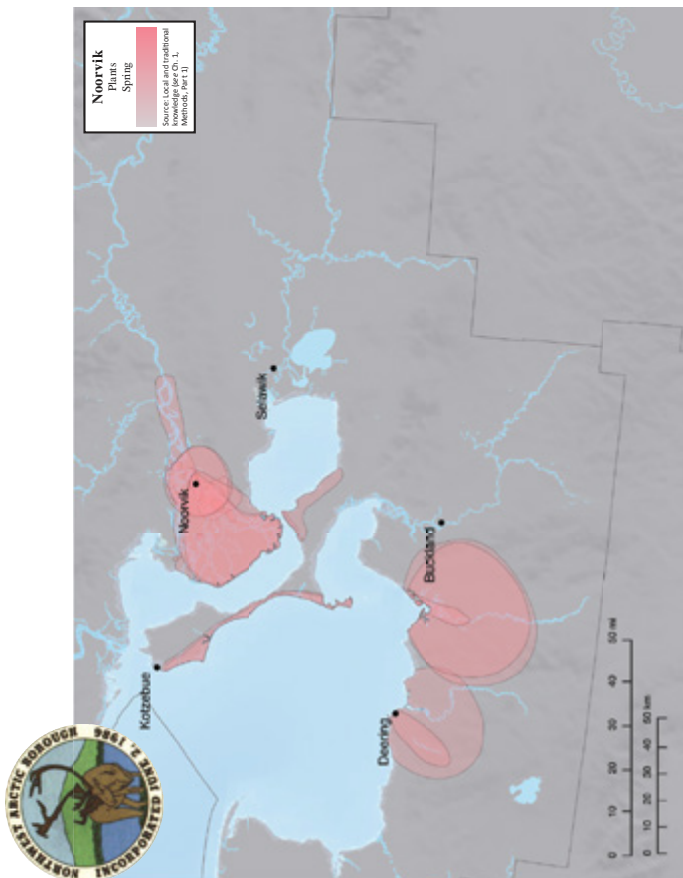
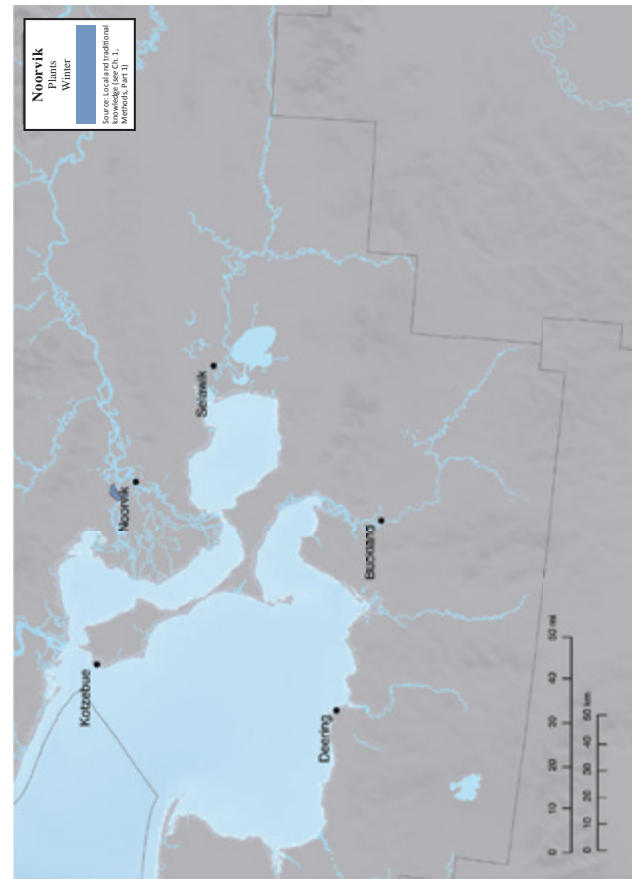
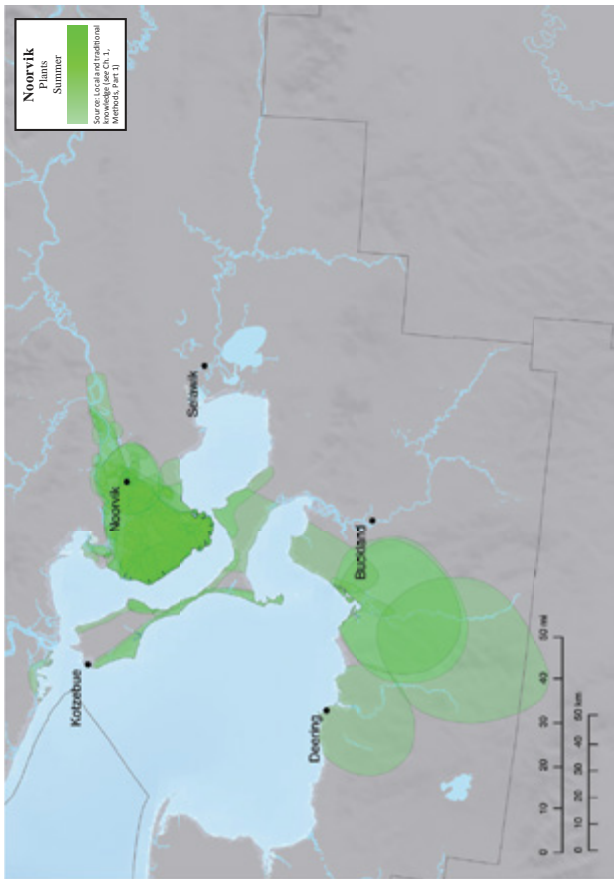


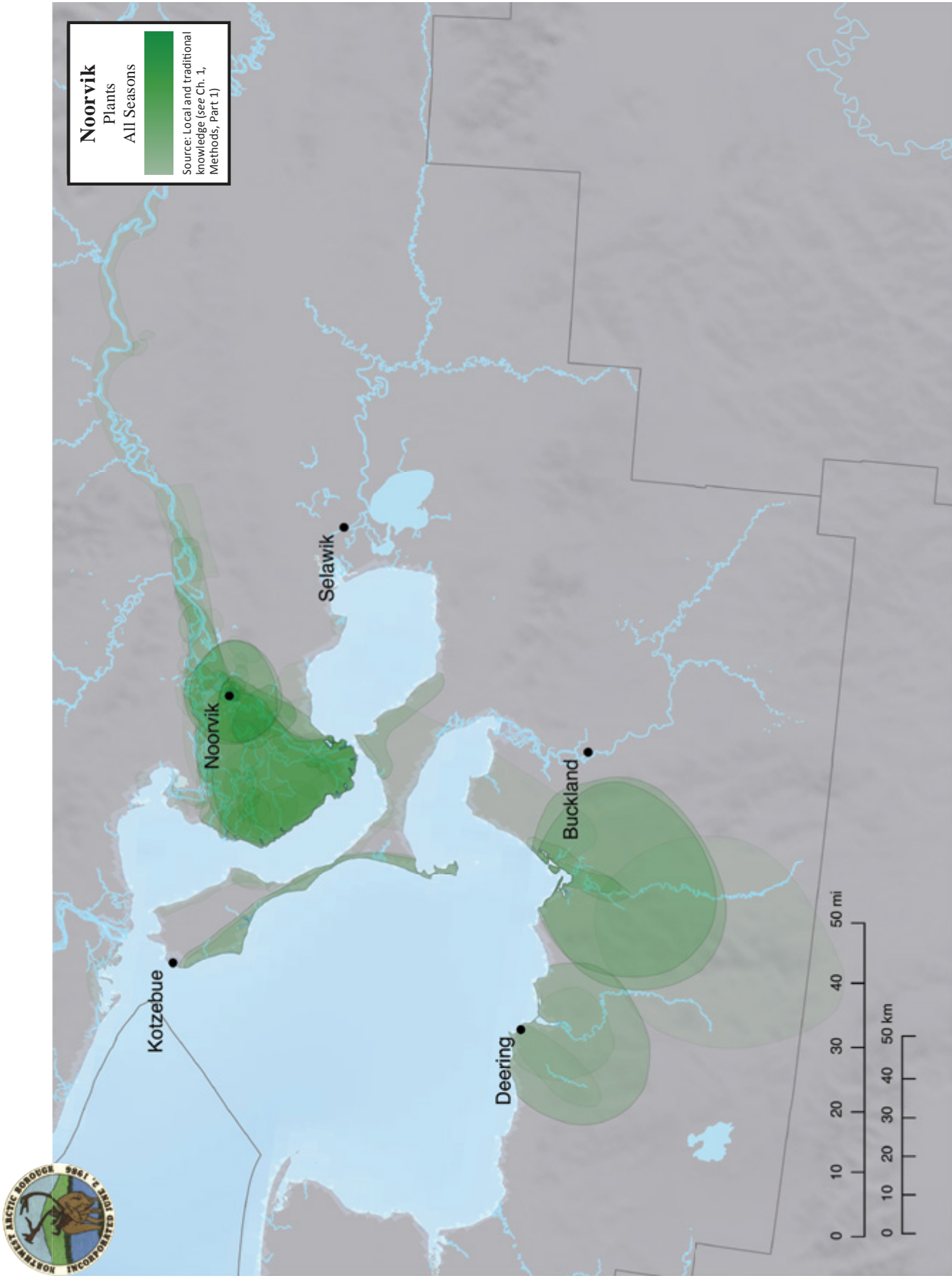


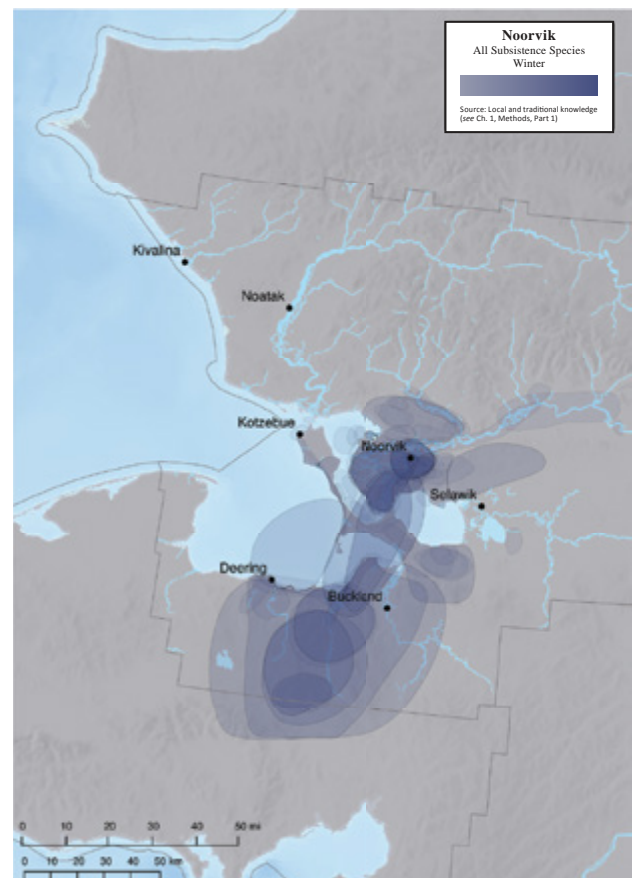
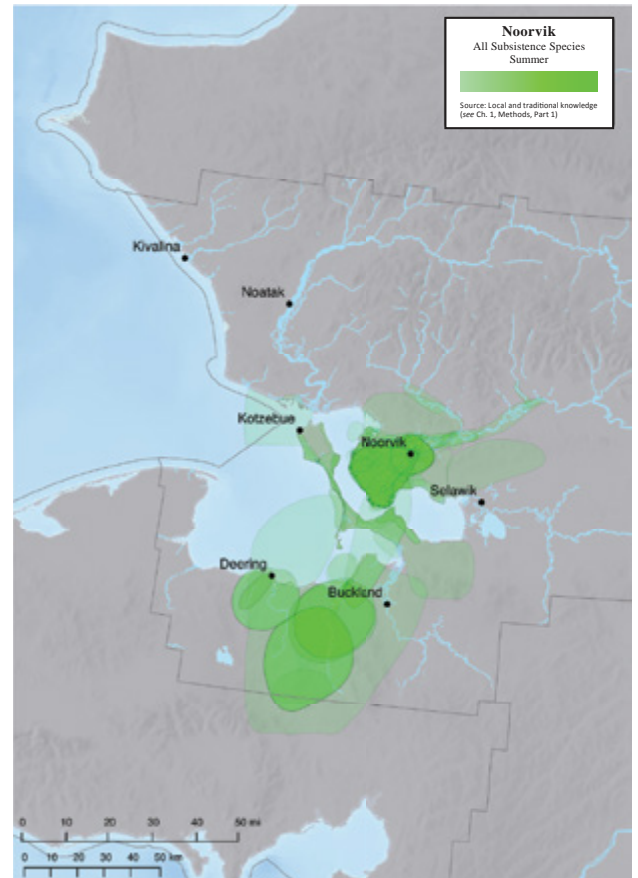














Kivalliñiq (Kivalina)



Photo credit: Department of Commerce, Community and Economic Development;
Division of Community and Regional Affairs' Community Photo Library.

Kivalliñiq (Kivalina)



The incoming tide rises over buildings in Kivalina in 2012. Photo credit: Department of Commerce, Community and Economic Development; Division of Community and Regional Affairs' Community Photo Library.

The People of the Uallik

Long before the first commercial whaling ship appeared on the horizon of the Chukchi Sea or anyone in the Arctic uttered the English words “global warming,” the people of the Uallik (Wulik) River hunted spring whales that migrated up the coast and seals that lay in the thick ice along the western edge of today’s Northwest Arctic Borough. Before outsiders, unaware of the beating it would take over the coming winter storms, built a drafty wood-plank school on an exposed barrier island and required Iñpi aq children to attend, the Kivalliñigmiut hunted not only seals, whales, and walruses, but a seasonal abundance of fish, caribou, marmot and other small land mammals, bear, ptarmigan, and roots, eggs, seeds, and berries near upriver wintering sites.¹ As Paul Ongtooguk writes, seasonal hunting and fishing activities were not randomly pursued, but “were planned based on the knowledge of where animals and fish had been found in the past and knowledge about weather conditions and the changing patterns of climate.”² The same remains true today.

Kivalina is located near the mouth of the Wulik River, about six and a half miles south of the Kivalina River. The village is bounded to the east by the 11-mile-long Kivalina Lagoon (Kivalliñagum Tasia), into which both the Wulik and the Kivalina rivers drain and mix with the Chukchi Sea. Traditionally, the Kivalliñigmiut hunted, fished, and gathered throughout the watersheds of these two important

rivers, traveling inland at least as far as the jagged De Long Mountains and the Kuukpak (Kukpak) River and along the coast from the Omikviorok River north to the rocky bluffs about halfway between Kivalina and Cape Thompson.³ Local and traditional knowledge suggests that indigenous people have occupied the coastal region “since long before the Roman era of Western Europe.”⁴ Using available genealogical data, social anthropologist Dr. Ernest S. “Tiger” Burch estimated the Kivalliñigmiut nation to have been founded no later than the mid-100s, probably earlier.⁵

As Paul Ongtooguk writes, seasonal hunting and fishing activities were not randomly pursued, but were planned based on the knowledge of where animals and fish had been found in the past and knowledge about weather conditions and the changing patterns of climate.”



Reindeer festival competition banners from early 1900s. Photo credit: Alaska State Historical Library, Daniel S. Neuman Collection. ASL-P307-1160, Alaska Digital Archives.

Before intrusion from the outside world, every spring the Kivalliniġmiut spread out among many camps strung out along the entire length of coastline within their territory. In April and May, they held a bowhead whale hunt near the northerly whaling camp of Nuvua. But the main spring hunting activities revolved around bearded seals. Spring was also the best time to hunt ducks, geese, and other birds.⁶

By early to mid July, the coastal sea ice had typically cleared, marking the time when the Kivalliniġmiut would gather near the mouth of the Kivalina River, where feasting, dancing, and other festivities took place. As Iūpi aq elders told Ernest Burch, the Kivalliniġmiut “celebrated the Fourth of July long before Whites came to northern Alaska.”⁷

After the festivities ended, some people traveled south to the Sisualik fair by boat, frequently accompanied by a party that had come down from Point Hope to trade, compete, and commune. Others would head upriver for the summer caribou hunt that provided meat for summer eating and skins for sewing.

In the fall months, all of the people who had been camped out by the sea traveled upstream to small settlements along the lengths of the two rivers, focusing first on seining for fish, and later, when the rivers began to freeze, on the fall caribou hunt. The fall hunt brought in fat caribou that provided meat to be preserved in underground freezers and eaten over the long winter. While the spring hunts were typically done in small parties, the fall hunts enlisted a more organized group effort that focused on coralling caribou into entrapments.⁸

Coralling could continue throughout the winter, but was typically most successful in the fall months. During the winter months, fish traps would be set in rivers wherever open water persisted, and jigging for char, grayling, and burbot through the ice was common practice after freeze-up.

The “Marrow Festival” marked the return of the light. All of the leg bones of caribou consumed over the winter were cracked open and the marrow removed and placed in a large pot and cooked in water. The fat was skimmed off the top and eaten or stored in caribou stomachs for consumption over the remainder of the year.⁹ After this festival, it was time to return to the coastal settlements to begin preparations for the next seal hunt.

In the mid-1880s, a major disruption of the local food gathering cycle and Iūpi aq way of life began when American ships that had been hunting whales in the Atlantic began to explore the continent’s western seas, eventually finding their way through the North Pacific to the Arctic. In 1848, the whaling vessel *Spe rior*, out of New York, passed through the Bering Strait and into the Chukchi, where the crew found bowhead whales to be plentiful. Word of their success traveled quickly through the industry, and the next year 154 ships entered the waters. The catch sold for \$3,419,622 (equivalent to about \$13.6 million today).¹⁰ Between 1848 and 1914, commercial whalers nearly hunted the bowhead to depletion, with most taken between 1848 and 188. ¹¹

Caribou populations crashed in the 1880s, leading to region-wide food shortages that hit the Kivalliniġmiut especially hard. It is thought that as many as half of the people around Kivalina starved or died of disease in the first winter.¹² In the following years, after returning children, women, and elders to the upriver winter houses, the more able-bodied hunters would go off on long excursions into the hills in search of caribou. Most of the few who survived left the area during this time, and the Kivalliniġmiut nation effectively ceased to exist as a cohesive social unit until around the turn of century, when people gradually began to return and regroup.¹³ They would soon face another threat to their continued existence, when the 1918 flu epidemic swept up the Alaska coast, claiming many lives. By 1920, Kivalina’s population had dropped to 87 from 350-400 in 1906.¹⁴

In the 1890s, workers (and their families) from the Seward Peninsula hired on to work with white whalers around Point Hope, and many, finding abandoned shelters, came to settle in the Kivalina area. In time, an estimated 10 Kivalliniġmiut families of the many who had fled over the previous decade now returned, though the caribou herd remained mostly absent from the region. This group of “original” Kivalliniġmiut continued their cycle of going inland in the winter, but the newcomers from the Seward Peninsula stayed on the coast year-round. In the early 1900s, tensions grew between the Kivalliniġmiut and the immigrants, until most of the newcomers moved away.¹⁵



Martha Swan of Kivalina, whose husband, Milton, became the first ordained Iñupiaq priest in the Episcopal Church. Photo credit: University of Alaska Fairbanks, Mary Cox photos. UAF-2001-129-188, Alaska Digital Archives.

The new century brought the first missionaries to the region. Concurrently, the long arm of the federal Bureau of Indian Affairs in Washington, D.C. finally reached the Kivallin̄gmiut. While many in Kivalina will recount benefits of the works of Christian evangelists over the past century, locals uniformly date the main challenge the village faces today—flooding—to the year 1905, when missionaries and the BIA insisted a school be constructed on the exposed barrier reef and Iñpī aq children be required to attend. As Reverend Joshua Griffin wrote in an Episcopal News Service article in 2012,

[w]ith the construction of the first school in 1905, the federal government forced an autonomous and semi-nomadic society, the Kivallin̄gmiut, to settle on what had been a summer hunting camp. Despite its role in the forced sedentarization and assimilation of Kivalina's people, U.S. government support remains unavailable for climate-induced relocation projects.¹⁶

Today, warming arctic temperatures are affecting where and when villagers in every community in the Northwest Arctic Borough go to harvest traditional food (*see, e.g.*, p. 103), but when it comes to the far-north effects of climate change, no village in the region faces greater challenges than Kivalina, the Borough's northernmost community. While village residents are still harvesting seals and the occasional bowhead, and they still have land under their homes, many

wonder how the community will be able to stay together after the ice moves farther off shore and the water comes in over the island.

As Paul Ongtooguk recounts in his article “Aspects of Traditional Iñpī at Education,”¹⁷ “when the missionaries arrived in Kivalina in the summer, they set the school building on a sand spit, not considering that their school would be held primarily in the winter and that the winter

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locations for the Alaska Native people in that region would have been by fresh water, in the tree line across the lagoon.” In an article in the December 1914 *Indian School Journal*, Emil Krulish, having just returned from a cruise to Barrow on the revenue cutter *Bear*, described three house types he saw in Kivalina: “sod igloos, frame houses, and tents.”¹⁸

The aerial view of Kivalina at the right, from September 1939, shows sod houses of the type constructed for winter shelter (and food storage) on higher ground across the lagoon and up the rivers in pre-contact times. The school and other wood-framed structures stand out from the sod houses and tents. As noted above, following the famine of the late 1800s, newcomers from the Seward Peninsula (Sakmaliagruitch) settled year-round for several years on the abandoned coast before finding life too harsh there (physically and socially) and returning south. The presence of sod houses near the coast may have led missionaries to mistake the coastal sites for permanent settlements of the Kivallinirmiut. Or the site may have been chosen for the school simply because it was easier for boats to land and offload building supplies there.¹⁹ Whatever their thinking, the BIA’s and early missionaries’ decision in 1905 set the stage for the difficult situation the villagers of Kivalina find themselves in today.

Eventually, the caribou returned, and the villagers reassumed their traditional pattern of spending much of the year upriver fishing and hunting caribou and other land mammals. As in most of the other communities in the region at that time, once the school was constructed, keeping children in it year-round proved impossible. One Kivalina teacher reported to superiors back east, “The irregularity of attendance is due to the fact that many of the children accompanied their parents up the rivers at various seasons for hunting and fishing, thus interfering greatly with their presence in school.”²⁰

In the decades following the completion of Kivalina’s first school, the community added more infrastructure. A population and nutritional recovery effort that was put in place by the U.S. government from 1896 to 1902 had brought reindeer to the Kivalina area and funded training for some residents to become reindeer herders. Almost two generations later, in 1940, the village got a U.S. Post Office.

Table 1. Sea Hunting Kill 1955-60.

	<u>Number seal killed</u>	<u>Number ugruk killed</u>
November	52	0
December	7	0
January	77	1
February	135	2
March	48	1
April	65	19
May	41	12
June	55	82

Project Chariot Phase III Progress Report.



In this 1939 photo, sod houses can be seen alongside newer wood structures. Photo credit: Records of the Bureau of Indian Affairs Juneau Area Office, Record Group 75, Box 8, National Archives, Pacific Alaska Region, Anchorage.

That same year, villagers became a federally recognized tribe under the Indian Reorganization Act (IRA).²¹

The importance of subsistence to Kivalina’s way of life was documented in the late 1950s when the U.S. Atomic Energy Commission made plans to detonate five nuclear devices to create a deepwater port 50 miles up the coast at Point Thompson.²² President Kennedy canceled the program, called “Project Chariot,” in 1962.²³ In a study prepared for the project in 1961, Doris Saario described life in Kivalina, including details of the subsistence harvests for 1959 and 1960. The author noted that over half of the village’s people at that time still lived in sod houses.²⁴

By 1900, Kivalina had grown to 188 people.²⁵ Over the next decade, new wood homes and other structures were built and the village got electrical power. A second school was also constructed on the island during that era. Today, another new Kivalina school is in the works, though the general consensus is it will have to be built at or near a new village site on the other side of the lagoon.

During its 2015 regular session, the Alaska Legislature budgeted over \$43 million for the new Kivalina school, as mandated by the 2012 settlement of the *Kasayulie* rural education lawsuit won by Alaska Native villagers over 15 years earlier, which required equal educational opportunities for Alaska’s rural students.²⁶ The school, the last that remained to be funded under the settlement agreement,²⁷ has been a long time coming—and a lot has happened while villagers have been waiting. It now must be built on higher

ground at or near a new village site. State Senator Donny Olson (D-Golovin) who represents the region, together with then Northwest Arctic Borough mayor Reggie Joule, made a strong pitch to include money for a road to access the new school,²⁸ but there was no road in the settlement, so Kivalina now has money for a new school that children have no way to get to.²⁹

While its shores continue to erode,³⁰ Kivalina's population continues to grow, with 37 residents counted in the 2010 census and 411 estimated in 2014. In spite of all of the challenges the community has passed through over the last years, Iñupiat traditions remain strong on the peninsula today. Kivalina is the only village in the Borough where people hunt the bowhead whale. In mid-April of 2015, Kivalina crews grew hopeful for a good whaling year after Point Hope whalers successfully brought in two bowheads.³¹

Successful harvesting of bowhead, caribou, and other subsistence resources sustains the island village where paid employment opportunities are few. At the time of the 2010 Census, 0% of Kivalina's residents over the age of 16 worked at seasonal jobs, while only 49% had paid employment year-round. Thirty-five percent of the people who have jobs of any kind earn less than \$5,000 a year.³²

Year-round employers today include the Northwest Arctic Borough School District, the City of Kivalina, Maniilaq Association, NANA Regional Corporation, tribal council,



Butchering reindeer at Kivalina. Photo credit: University of Alaska Anchorage, Glenn Bowersox photos, UAA-hmc-0731-18, Alaska Digital Archives.

airlines,³⁴ and the Native store (which burned to the ground in December of 2014).³⁵ Rotation employment is offered at the Red Dog Mine, which is closer to Kivalina than it is to most other villages.

Subsistence Whaling Provides More than Food



Whale bone arch at Kivalina.
Photo credit: Sarah Betcher.

The bones of the whale are useful. The [vertebrae are] divided among the crews, who usually eat the meat frozen during hunting trips. In the old days before the introduction of the ladder, they were used as steps to climb out of the subterranean entrance hallway. They can still be used as work tables for cutting, chopping and carving.

The ribs are used for fences and as posts for tying things on to, but their main use was for rafters of the traditional sod houses and for fences around the graveyard. They were also used for arrow points and spear points. They can still be used for fish net sinkers, handles of *ulut* (plural for *ulu*, woman's knife, woman's knives) and other knives and as back ends of seal spears. Along with the shoulder blades, they were also used to pack down the moss and mud of the sod houses.

In the semi-subterranean sod houses of the old days, the shoulder blade played an important part in the ventilation of the home. As a *piig i*, it was placed by the *pallitchat*, the outside entrance into the iglu, and deflected the wind into the house when the house was too warm or humid. It was placed on the other side of the *pallitchat* to prevent the draft from coming in. The position of the *piig i* depended on the wind direction. The shoulder blade can also be used as a door mat outside of a house.

From *Whaling: A Way of Life—Āḡvigich Iglauniḡat Niginmun* by Tupou L. (Qipuk) Pulu, Ruth (Tatqavin) Ramoth-Sampson, and Angie (Ipiilik) Newlin.³³

“

“Mypointwa,yu can't have a school unless you build a road to it, so what's the use of going and putting money aside if you're not going to put money [toward] a road or even the planning of a road?”

Sen. Donny Olson

The Arctic Sounder, April 2013

Some of the services available in the community include the PreK-12th school and a nonprofit clinic operated by Maniilaq Association, which employs three health aides and provides a Med-Evac service. The general store is owned by the Alaska Native Industries Cooperative Association (ANICA).³⁶

The most recent road construction project involved improvement of the road that runs along the Kivalina shoreline in 2009. The new road also functions to help mitigate erosion. The gravel roads are used in the summer by four-wheeler vehicles and by pedestrians. In the winter months many residents use snow machines for recreation and subsistence activities.

Air travel for passenger and cargo uses the state-owned gravel landing strip. Built in the 1960s north of the village and west of the cemetery, the runway, about a half-mile long and 60 feet wide, is extremely exposed to ocean storms, with little land now left on either side. Daily flights arrive

from Kotzebue and bi-weekly flights depart for Point Hope. Weather-related flight cancellations are common, especially during the winter, often affecting the availability of supplies.

Kivalina has barge service during the summer when the Chukchi Sea is ice-free. The barge can transport large bulk items such as vehicles, household goods, large grocery orders, and bulk fuel. Whether shipments come in through air or marine transport, shipping costs are high. General supplies cost around \$14,700 for a 20 sq. ft. shipping container, which can hold up to 27 tons of cargo shipped from Anchorage or Seattle.³⁷ Barging dry goods to Kivalina from Anchorage or Seattle costs between \$1,800 and \$2,500 for a metric ton.

High shipping costs are reflected in the price of goods and services purchased in the community. Electricity is available through diesel-generated power, run by the Alaska Village Electric Co-Op (AVEC). According to a 2013 census report, the residential rate for electricity was \$0.65 per kWh.

Individual households must haul their own sewage to the Class 3 landfill the tribe operates just out of town. A pipe in the Wulik River gathers water for the village at a point downstream from the Red Dog mine.

While beach erosion and severe winter storms may be the greatest concern of Kivalina's villagers today, fears related to contamination from the mine run a close second. Measured by national income standards, Kivalina is an impoverished community that needs good jobs. But, by traditional standards, since recovering from periods of disease and famine over the past 150 years, Kivalina has been rich in resources. People drank clean water from the Wulik River and enjoyed the pure meat of readily available game.

Several of the people in Kivalina we interviewed for this mapping project voiced concerns about pollution leaking from the mine's tailings facility into the river water they drink and fish from (*see, e.g.*, pp. 103 and 534), and some villagers have sued the mine over permit violations and



Photo credit: Sarah Betcher.



Red Dog Port. Photo credit: Sarah Betcher.

“

It was a sitting place for its sealing camp about fifteen miles southeast of the village. Its members lived in tents complete with floors, beds, stoves, stereo systems, and lots of tapes. A CB radio was used to maintain contact with the village, and also with hunters boat ing on the loose passes of sea ice. After a dinner of seal meat, rice, and seal oil, we listened to world news on the radio. The broadcast concluded with the stock market report, which stimulated among my Inupiat friends a discussion of the state of the world economy, particularly on the effect that lower oil prices might have on it. Then they went out and resumed seal hunting. But the place where their camp was located had become the port site for the Red Dog Mine.”

Ernest S. Burch, Jr., in
North Alaska Eskimos:
A Changing Way of Life³⁸

prevailed,³⁹ though Red Dog’s owners opted to pay an \$8 million fine⁴⁰ rather than remedy the discharge into Red Dog Creek, which flows into the Wulik River. Red Dog’s owners have been working to abate impacts from the 55-mile road that runs from the mine to the port, after studies by the National Park Service⁴¹ and the state found lead, zinc, and cadmium in the roadside fauna that caribou and other animals ingest.⁴² Many residents believe all of the industrial activity around the port has caused whales to move farther offshore, out of reach of hunters already forced to contend with ever-decreasing sea ice. Borough residents need the mine’s contribution to their cash economy. Traditional hunting, fishing, and gathering activities now often require money for fuel to run snow machines and four-wheelers, ammunition for rifles, and electrical power for food preservation, but the Kivallirmiut know their traditional way of life will be lost if the food they hunt and fish is not healthy—and if the beluga migrates too far offshore.

It is hard to find a village in the Borough that is more resilient or more threatened than Kivalina. In many ways, the people of the Uallik have transcended the difficulties of the past. At the same time, they have been left a legacy of serious problems still in need of resolution. Kivalina’s residents have always found a way to sustain themselves and their culture. “We’re not going to stop doing what we’re trying to do,” said tribal president Millie Hawley in 2015 after the legislature refused to put the road across the lagoon in the budget. “Our community is still here and we’ll continue to do our best to look out for our people.”⁴³

1. Burch, E., Jr. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press.
2. Ongtooguk, P. 2000 Aspects of Traditional Iñupiat Education. "The Inupiat also gathered resources, such as ivory, jade in some regions, copper in others, slate, driftwood, baleen, and bones. Sometimes the materials sought included grasses for insulation and baskets, or animals and birds for clothing and shelter." <http://ankn.uaf.edu/sop/SOPv5i4.pdf>. Accessed 3 May 2015.
3. Burch 1998.
4. Ongtooguk, p.1.
5. Burch 1998.
6. Ibid.
7. Ibid, p. 34.
8. Ibid.
9. Ibid.
10. <http://www.davemanuel.com/inflation-calculator.php>
11. Burch, E. *Social Life in Northwest Alaska*. 2006. Fairbanks: U of Alaska Press, p. 26.
12. Burch 1998.
13. Ibid.
14. NANA.com. 2015. Kivalina. <http://nana.com/regional/about-us/overview-of-region/kivalina/>. Accessed 4 April 2014.
15. Burch, E., Jr. 1998. pp. 23-57.
16. Griffin, J. 2012. Standing with Kivalina at the 77th General Convention. Episcopal News Service. <http://episcopaldigitalnetwork.com/ens/2012/06/29/standing-with-kivalina-at-the-77th-general-convention/>. Accessed 15 Apr 2015.
17. Burch 1998.
18. Krulish, Emil. 1919. Home Conditions among Natives of Alaska. The Indian School Journal. December, 1914. from records of the Bureau of Indians Affairs Juneau Area Office, Record Group 75, Box 8, National Archives--Pacific Alaska Region, Regional Archives, Anchorage, AK; Burch 2006.
19. See ANTHC 2011, p. 12.
20. School Report for Kivalina and Point Hope for the Fiscal Year ending June 30, 1910, dated July 1, 1910.
21. NANA.com. Kivalina incorporated as a second-class city in 1969 and, in 1972, like most of the villages in the Borough, merged its ANCSA village corporation with NANA (see Introduction to this chapter).
22. See Davis, Robert. 1973. *The Genocide Machine in Canada: the Pacification of the North*. Montreal: Black Rose Books, pp. 143-151; O'Neill, Dan. 1995. *The Firecracker Boys*. New York: St. Martin's Press; and Seife, Charles. 2008. *Sun in a Bottle: The Strange History of Fusion and the Science of Wishful Thinking*. New York: Viking.
23. Saario, D.J. 1962. Project Chariot Final Report: Human Ecological Investigations at Kivalina. University of Alaska. <http://www.osti.gov/scitech/servlets/purl/4603887/>. Accessed 6 May 2015.
24. Ibid., cited in ANTHC 2011. See also Burch 2006 at p. 14.
25. NANA.com.
26. *Kasayulie v. State*, 3AN-97-3782 CIV (Sept. 1, 1999).
27. Medred, C. 2011. State settles Kasayulie education suit for \$146 million. Anchorage Daily News, Oct. 11. <http://www.adn.com/article/state-settles-kasayulie-education-suit-146-million>. Accessed 4 Apr 2015.
28. Rogers, J. 2015a. Senate reinstates funds for Kivalina school. Arctic Sounder, April 17. <http://www.thearcticsounder.com/article/1516senate-reinstates-funds-for-kivalina-school>
29. As of this writing in May of 2015, the budget bill sits on Governor Walker's desk, pending the outcome of an ongoing special session of the legislature that has the budget on its call.
30. The City of Kivalina filed a lawsuit in federal district court in 2008 against ExxonMobil and other oil companies under federal nuisance and other statutes. (*Kivalina v. ExxonMobil Corp.*, No. 4:08-cv-1138 SBA (N.D. Cal.)). The District Court judge found against the City, ruling the claims were governmental and not judicial in nature. The 9th Circuit agreed and, several years later, the U.S. Supreme Court denied certiorari, ending the case.
31. Rogers, J. 2015b. Point Hope lands two bowheads in first weekend of spring whaling season. Alaska Dispatch News, April 18. <http://www.adn.com/article/20150418/point-hope-lands-two-bowheads-first-weekend-spring-whaling-season>. Accessed 7 May 2015.
32. <http://live.laborstats.alaska.gov/alari/details.cfm?yr=2013&dst=01&dst=03&dst=04&dst=06&dst=12&dst=09&dst=11&dst=07&r=4&b=19&p=160>. Accessed 1 Dec 2014.
33. *Whaling: A Way Of Life, Abvibich Iglaunifat Niginmun*. Tupou L. (Qipuk) Pulu, Ruth (Tatqavin) Ramoth-Sampson, and Angeline (Ipiixik) Newlin, from Information provided by David (Umigluk) Frankson and Dinah (Aviq) Frankson of Point Hope, AK (name spellings copied from original document). <http://www.alaskool.org/projects/traditionalife/whalingawol/WHALING-English.html>. Accessed 26 Apr 2015.
34. Northwest Arctic Borough. 2013. "Community Information: Kivalina." <http://www.nwabor.org/villages.html>. Accessed 1 Dec 2014.
35. Rogers, J. 2015c. Kivalina store partially back up and running a month after fire destroyed it. *The Arctic Sounder*. Reprinted in *Alaska Dispatch News*, January 17. Following the fire, Kivalina received food and other donated supplies from all over the country. After getting a temporary store set up, the City of Kivalina issued a statement thanking the hundreds of people who contributed, stating "Not only did the kindness put food on the tables of the people of Kivalina, it has also restored the spirit and hope of many who reside in Kivalina."
36. Maniilaq Association. <http://www.maniilaq.org/kivalina.html>. Accessed 2 Dec 2014.
37. NANA.com 2010.
38. http://wps.prenhall.com/wps/media/objects/12330/12626747/myanthropologylibrary/PDF/NDS_21_Burch_Jr_30.pdf.

39. Several villagers sued the mine for various violations of discharge permits and prevailed in 2006 in U.S. District Court, leading to a settlement under which, by its own admission, the mine has not yet ceased discharging toxic waste into the Wulik River. *See Adams et al. v. Teck Cominco*, 414 F.Supp.2d 925 (2006).
40. Caldwell, S. 2014. Despite fine, Red Dog Mine opts out of building wastewater pipeline. *Alaska Dispatch News*, June 6. Accessed 5 Apr 2015.
41. Twenty-four miles of the road traverse Park Service land.
42. Alaska Department of Environmental Conservation Contaminated Sites Program website at <http://dec.alaska.gov/spar/csp/sites/reddog.htm>; *see also* chapter 5, p. 534.
43. Rogers 2015a, p. 1.

Traditional foods important to the people of Kivalina today

KIVALINA TRADITIONAL FOODS BY EDIBLE MASS, UNIQUE AREAS AND PEOPLE

SPECIES	BY EDIBLE MASS (% OF TOTAL FOOD HARVESTED ⁴)	BY NUMBER OF UNIQUE AREAS (% OF 252 MAPPED POLYGONS)	BY PROPORTION OF PARTICIPANTS (% OF 15 KIVALINA RESIDENTS IN STUDY)
Ugruk Bearded Seal (<i>Erignathus barbatus</i>)	39.0	6.7	80.0
Qalukpik/Aqalukpik Trout/Dolly Varden (<i>Salvelinus malma</i>)	25.9	11.9	100.0
Tuttu Caribou (<i>Rangifer tarandus</i>)	13.9	19.4	86.7
Sisuaq Beluga whale (<i>Delphinapterus leucas</i>)	10.8	8.3	86.7
Aqpik Salmonberry (<i>Rubus chamaemorus</i>)	1.2	9.9	40.0
Amaḡuq Wolf (<i>Canis lupus</i>)	n/a ⁵	8.7	66.7
Niḡliq Geese (all species)	1.2	9.5	80.0

The variety of subsistence foods that make up the diets of today's Kivalina villagers mirrors that consumed by people from the area in the days of old.¹ According to subsistence harvest surveys conducted by the Alaska Department of Fish and Game (ADF&G),² *ugruk* (bearded seal) makes up the greatest portion of the total traditional food harvested around Kivalina (39% by edible mass; other seals contribute another 2.2%). Trout (*qal ukpik* or *aql ukpik*), mostly Dolly Varden,³ make up a little over a quarter of the food caught and eaten (25.9%) in the area, and *tuttu* (caribou) compose 13.9%. Today, *sisuaq*, or beluga whale, continues to contribute over one-tenth of the local traditional diet (10.8%). Numerous other plants, birds, and mammals are harvested in smaller amounts.⁴

The documented local and traditional knowledge gathered from Kivalina residents and reported on maps for this project provides a different way to look at traditional hunting, fishing, and gathering by local residents. We plotted a total of 252 polygons with overlapping subsistence search areas



Meat drying in Kivalina. Photo credit: Sarah Betcher.

on the Kivalina maps. In our interviews (*see* Chapter 1, Methods, Part 1), caribou hunting occurred in the greatest proportion of polygons. Local hunters reported searching for caribou inside 49 map polygons—in other words, across 19.4% of the total polygons mapped for all subsistence resources. (Note, polygons are of different sizes, so the number of polygons does not necessarily correlate to the size of a search area—though the polygons for caribou, seals, and belugas tended to be large.) Participants assigned trout fishing (mostly for Dolly Varden) to 30 map polygons (11.9% of polygons). *Aqpik* (salmonberries) are sought inside 25 different map polygons (9.9%). Though they are hunted for traditional uses other than eating, many people mentioned *amaġuq*⁵ (wolf) to us; hunters look for wolf inside 22 (or 8.7%) of the mapped polygons. Study participants documented 21 polygons for beluga search areas (8.3% of mapped polygons). The areas where Kivalina residents search for their central traditional food staple, *ugruk* (bearded seal), were marked on 17 map polygons (6.7% of polygons). Geese represent the bird group that Kivalina participants mentioned most often (“geese” are hunted inside 24 map polygons, or 9.5% of the total). *Nigliqnaq* (brant) was the specific goose searched for in the greatest number of polygons. (For more explanation of what “search area” does and does not mean in this study, *see* pp. 16–19 in chapter 1.)

Another dimension that the local and traditional knowledge documented in this study adds to the ADF&G data can be seen in the fact that, of the 15 people we interviewed in

Kivalina, all (100%) reported that they fish for “trout” or “Dolly Varden”; 13 people (86.7% of the 15 participants) hunt caribou; 13 (86.7%) hunt beluga, 12 (80%) hunt bearded seal, 12 (80%) hunt geese, with *kaġuq*, or snow geese, being the variety hunted most frequently.⁶ Ten out of the 15 interviewees (66.7%) hunt wolves.

As we can see from our Kivalina findings, the local and traditional knowledge documented in this study makes an important contribution to the information considered by future planners by adding to ADF&G’s harvest statistics data on what food and other subsistence resources local Iñupiat value. For example, while whales may not make up a great portion of the food presently consumed, they are still among the species most people (86.7%) spend time looking for. Also, subsistence pursuits that cut across age and gender lines, like fishing and berry picking, account for a big part of Kivalina’s subsistence activity. Caribou, as a central traditional resource, remains among the most sought-after food (highest by area and second highest by number of polygons and second highest by number of harvesters), even though ADF&G reports the still-cherished *tuttu* as presently making up only 13.9% of villagers’ traditional food diet.

1. *See* Burch, E. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press. 1998.
2. Unless otherwise indicated, subsistence harvest numbers in this chapter are from 2014 data generously provided to our researcher by ADF&G staff.
3. What locals refer to as “trout” most commonly refers to Dolly Varden (*Salvelinus malma*), but may occasionally refer to Lake Trout (*S. namaycush*) or Arctic Char (*S. alpinus*). In Iñupiaq, the terms *qalukpik* and *aqalukpik* are today used somewhat interchangeably for these species.
4. It should be noted that ADF&G’s numbers are based on a single year’s harvest. The department’s historical statistics support what we know from local and traditional knowledge—that availability of a species can fluctuate from year to year. *See* Community Subsistence Information System (CSIS) data at <http://www.adfg.alaska.gov/sb/CSIS/index.cfm?ADFG=harvInfo.harvestCommSelComm>. Accessed 5 May 2015.
5. Because wolves are not hunted for food, ADF&G does not include them in food harvest surveys.
6. Note, Kivalina participants attributed the most goose *search areas* to brant, while the variety hunted by *the greatest number of people* is the snow goose. (*See* chapter 1 for more discussion of the differences between these two findings.)

Lona Swan wearing a parka with a traditional wolverine ruff with claws. Photo credit: Sarah Betcher.



Kivalina Voices

It's October. By this time of year, an icy barrier should have formed along the island's western shore, but this year the waves continue to lap the breakwater. The caribou meat and skins hung up and swaying in the wind along the gravel streets of Kivalina leave no doubt it is peak hunting season.¹

Joe and Lona Swan's house sits on the lagoon side of the village. Lona is dressed in a colorful parka with a wolverine ruff—three layers of fur sewn around a hood. The house smells of the caribou intestines she's put up in a cool spot to cure. In the main room, meat strips dry above the wood stove. A bowl of seal meat soaks in oil on the kitchen counter. Several freezers line the wall behind the dining room table. Lona sits down by them. Born in 1936, she remembers when winter food supplies were stored in outdoor underground freezers. "They start using these kinds of freezers to store food away." She points to all of the deep freezers behind her. "I used to only have one. Now I got one, two, three, four. . . and five outside." She says they are always full. "Sometimes somebody will get walrus in the springtime. We always share with the village."

Lona is getting a little hard of hearing. She's most comfortable speaking Iñpi aq, so she has her young granddaughter sitting with her in case she needs help hearing or translating.

She has always lived in Kivalina, beginning in one of the old sod huts. The surrounding land was bigger then. Men and women traditionally have different responsibilities when it comes to subsistence, she explains. Her mother taught her

what she knows about processing seals and caribou. "Before my husband got weak, he used to hunt for us, until our three younger boys take over the hunting. All the boys hunt and all my eight daughters work the animals that they bring home. They go fishing up river and stay up there for about a week gathering fish, trout, graylings, whitefish . . . brants, white goose, and all kinds of birds."

Lona gathers plants that she uses as medicine. "Stinkweed. It always help[s]. I boil it. I always keep it in my *sigluaq* (cache in the ground), where I keep my oils and *paniq aq* (dried fish)." She also picks *masu*,² a root many locals like to gather and eat after soaking it in seal oil.

She walks over and opens all the freezers and shows off her many bagged foods, describing their contents: "Caribous, *ugruks*, fish and these are fats from caribous." She continues to shuffle around her frozen food items. "This is walrus and these are *paniq aq* (dried fish). These are whitefish worked by my daughters."

Lona's husband Joseph has spent all of his life in and around Kivalina, too. Like his wife's, his memories of the old village go way back. Joe's family lived semi-nomadically, moving around in search of caribou and other animals and fish. "Right now, fall time, we go seining upriver. We spend our time up there maybe two or three weeks and put them away by the thousands; maybe 30-40 sacks per family. The one who had a skin boat always took as many as they could. Fifteen—maybe one from each family." In addition to meat and fish, Joe gathers *masu* (an edible root) in the fall—

"Eskimo potatoes," he says. "We usually do it every year."

As now, when Joe was a boy, the seasons drove villagers' search patterns:

We hunt by the season. Springtime we hunted whales; belugas . . . summer time we usually got a lot of belugas . . . March, April we hunt *ugruk*, bearded seal, because they start to migrate in March through the ice. We dry up the bearded seal [meat]. We put away the blubber for seal oil in June. There is always enough seal. That is the most important meat that we have. That is the main thing we hunt throughout the year. They still hunt for stray whales. They go through here every year.

We use the seal blubber to keep the fire going, and it lasts a few hours. We don't have wood all the time [because we] depend on driftwood. Sometimes the whole beach will be wiped out. That is why we depend on blubber in wintertime.

The Swans eat caribou or seal pretty much every day. "Two groups of caribou migrate, one from the north and one from the south," says Joe. "I never buy store-bought meats—only once a month, maybe. We bought some canned salmon maybe 10 years ago. I never depend on the store for food. I depend on the hunt. We have ptarmigan all year round. We fish all year round. We hunt caribou all year round."

Traditional harvesting methods are regulated by Iñupiaq ethics, he says. "The rule is hunt what you can eat. If you can't eat it, you leave it alone. We are always trying to protect what we eat." He offers an example: "The rule is for us to make sure we let the first bunch of caribou pass by." The same thing goes for whales. "Don't block the migration of the mammal," he instructs in a serious voice.

Joe is acutely aware of the changes taking place in the arctic environment—not just the thinning ice, but things like

“

“I glanced around . . . and realized a very cool thing. There wasn't any white-man food on that table. Not even a Lipton's teabag.”

Seth Kantner, writing in the *Bristol Bay Times* about sitting down to dinner at Joe and Lona Swan's house.

melting permafrost changing where he and his family go to pick berries. He describes his family and other Kivalina residents as “adaptable,” but he worries the Red Dog mine infrastructure may be changing the migration habits of caribou and whales. His concerns are personal, as his family has always relied on these animals for their livelihood. He and Lona go up to the Kivalina River to get water because of contaminants they believe are in the public drinking water from the tailings pond that drains into Red Dog Creek, which runs directly into the Wulik, the City's drinking water source. They cannot afford to buy bottled water. Lona's food, fur and skin clothing, and home all reflect her lifelong reliance on the wealth of traditional resources in and around her village.

This time of year the drying racks fill up fast, and skins and meat can be seen hanging off of porch railings and other improvised structures up and down the village streets.



Caribou, seal, and salmon drying together in Kivalina. Photo credit: Sarah Betcher.

Just down the street from the Swans' House, Oran Knox Sr. is in his *qanitchaq* (Arctic entry). Around him lie many hunting tools and containers. His grandchildren come in to check out what's going on, then go back outside, as Oran takes off a large parka and sits down on the couch. "I just turned 74 this last month. I have a bit of experience with hunting in the Kivalina area. I always followed . . . older people's hunting." He speaks in a relaxed way. "Last spring there were lots of belugas a couple miles from here. We always start getting bearded seals in May/June."

"Right now, they're starting to hunt caribous. They are real fat right now. Thousands of them. The caribous come from up north and they'll go in the flats right there." Oran points off to the east.

He's seen a lot of changes to hunting methods over the years. "They start using jet boats to go hunt trout." Again, he points off to the east. "Arctic charrs they call them." He again points out across the lagoon. "The mouth of the river is right there. Some people try to get whitefish. We always wait till the water goes down in the river." Fish are easier to catch when the water's low, he explains. "Wintertime, we always ice hooking. Arctic charrs, trout. Ice fishing you got to hit the right day and they always bite in the fall."

Over his lifetime in the Arctic, Oran has come to know the subtler things. "All kind of animals are scared of the west wind," he says. "Every time we have west wind no animals move around."



Kivalina land mammal stew.

Photo credit: Sarah Betcher.

"When we want to eat fresh meat, we hunt; when we want fresh fish, we go fishing." This self-sufficiency "is what Eskimo life is all about." When asked how often he goes to the store for non-Native food, he wrinkles up his face up and answers slowly, "No . . . No . . . even my kids like Eskimo food. They eat it for breakfast!"



A truckload of Caribou meat. Photo credit: Sarah Betcher.

1. This section is based on interviews conducted by Sarah Betcher.
2. The edible root often known as *masru* is called *masu* in the coastal dialect.

Kivalina residents walk across the lagoon to meet arriving snow machines.

Photo credit: Damian Satterthwaite-Phillips.



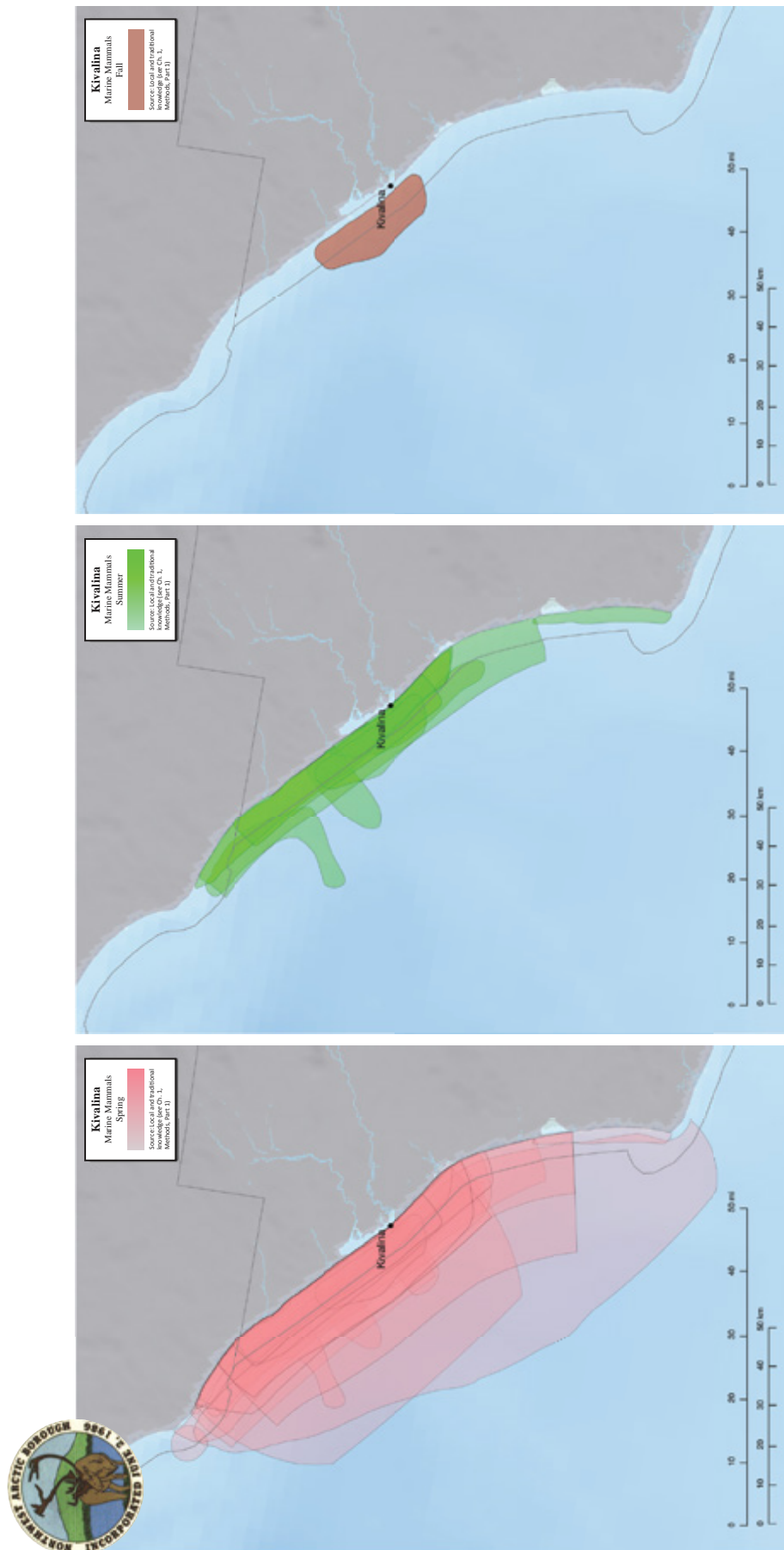
What the maps tell us...

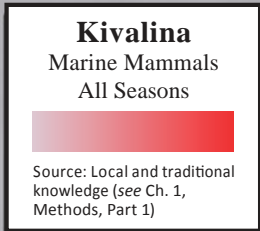
The combined area over which Kivalina residents search for their traditional foods today, as displayed on the map on the “All Subsistence” map on p. 122, for the most part mirrors the traditional territory of the Kivallīñġmiut delineated on Ernest Burch’s map on p. 6 in chapter 1. According to local and traditional knowledge documented in this and other studies, long before the oldest person in Kivalina today was born, the annual Kivallīñġmiut subsistence cycle consisted of upriver fishing and caribou hunting in the fall, and more limited ice fishing in the winter, followed by a move to the coast in the spring to prepare for the spring and summer seal and whale hunts, with another big caribou hunt taking place in the summer. With the exception of reduced whale hunting many believe to be caused by shrinking sea ice (*see, e.g.*, pp. 506-507) and activity associated with the Red Dog port (*see, e.g.*, p. 103), the traditional Kivallīñġmiut harvesting cycle, though interrupted at earlier times in modern history, appears to have been restored.

Interpreting the Color Scale on Maps in this Chapter

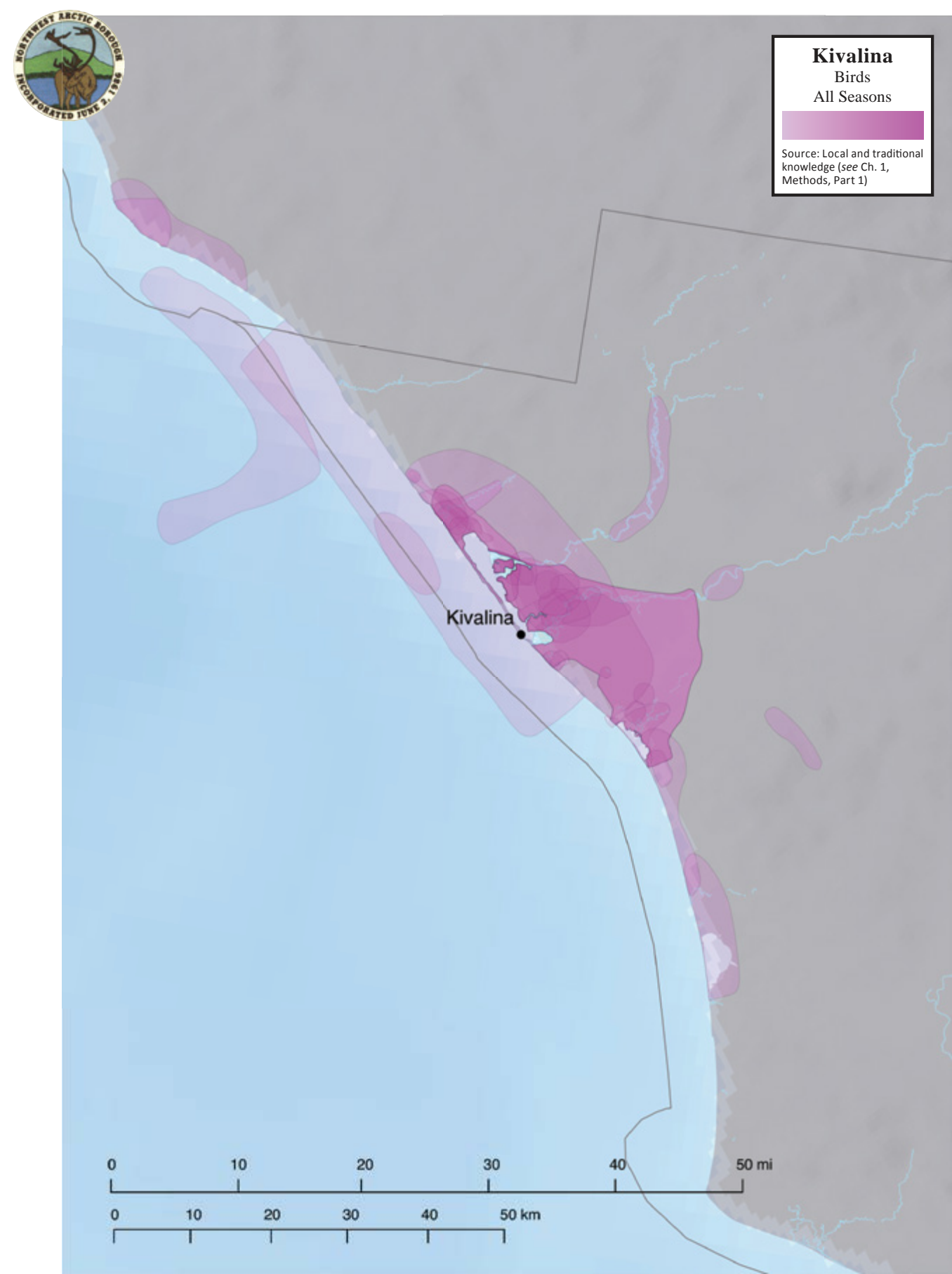
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.





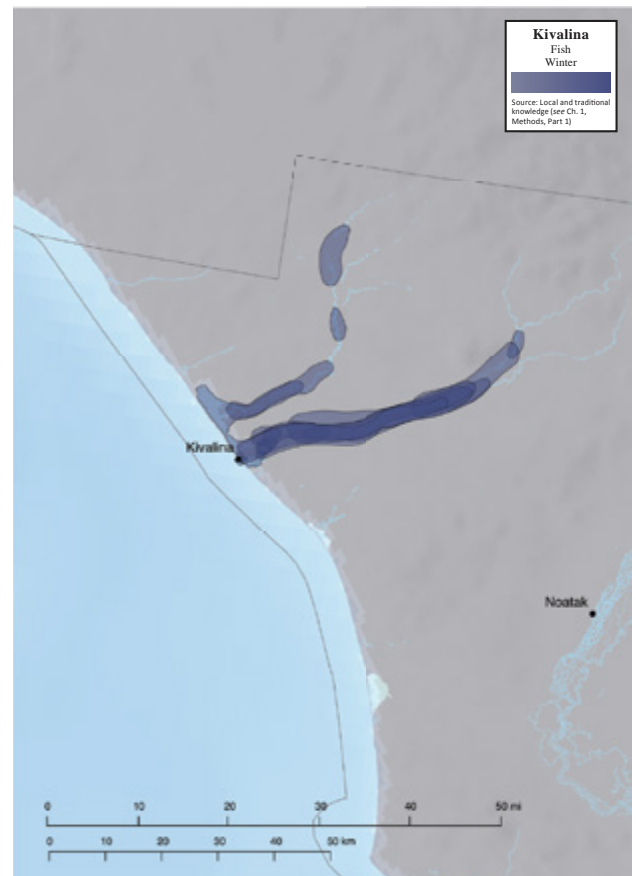
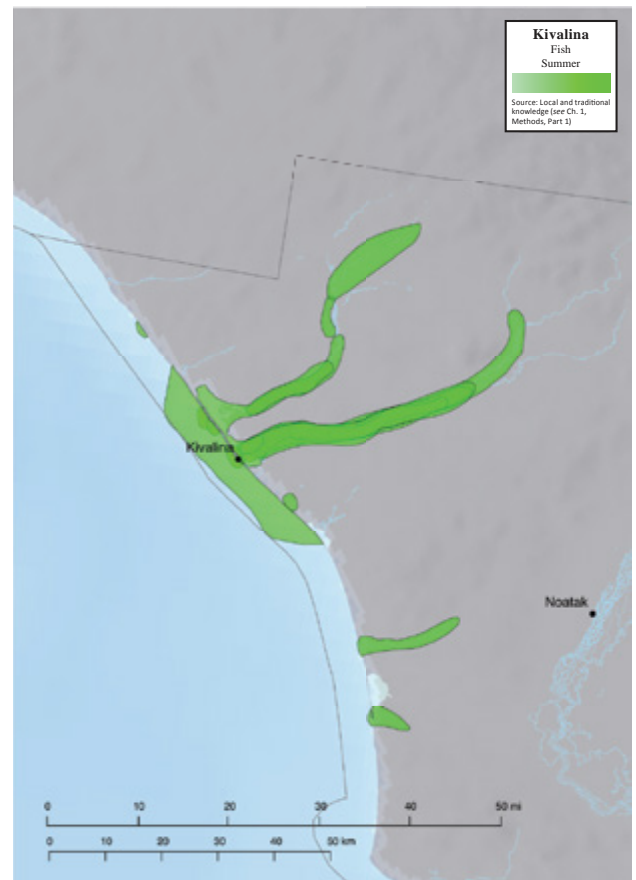




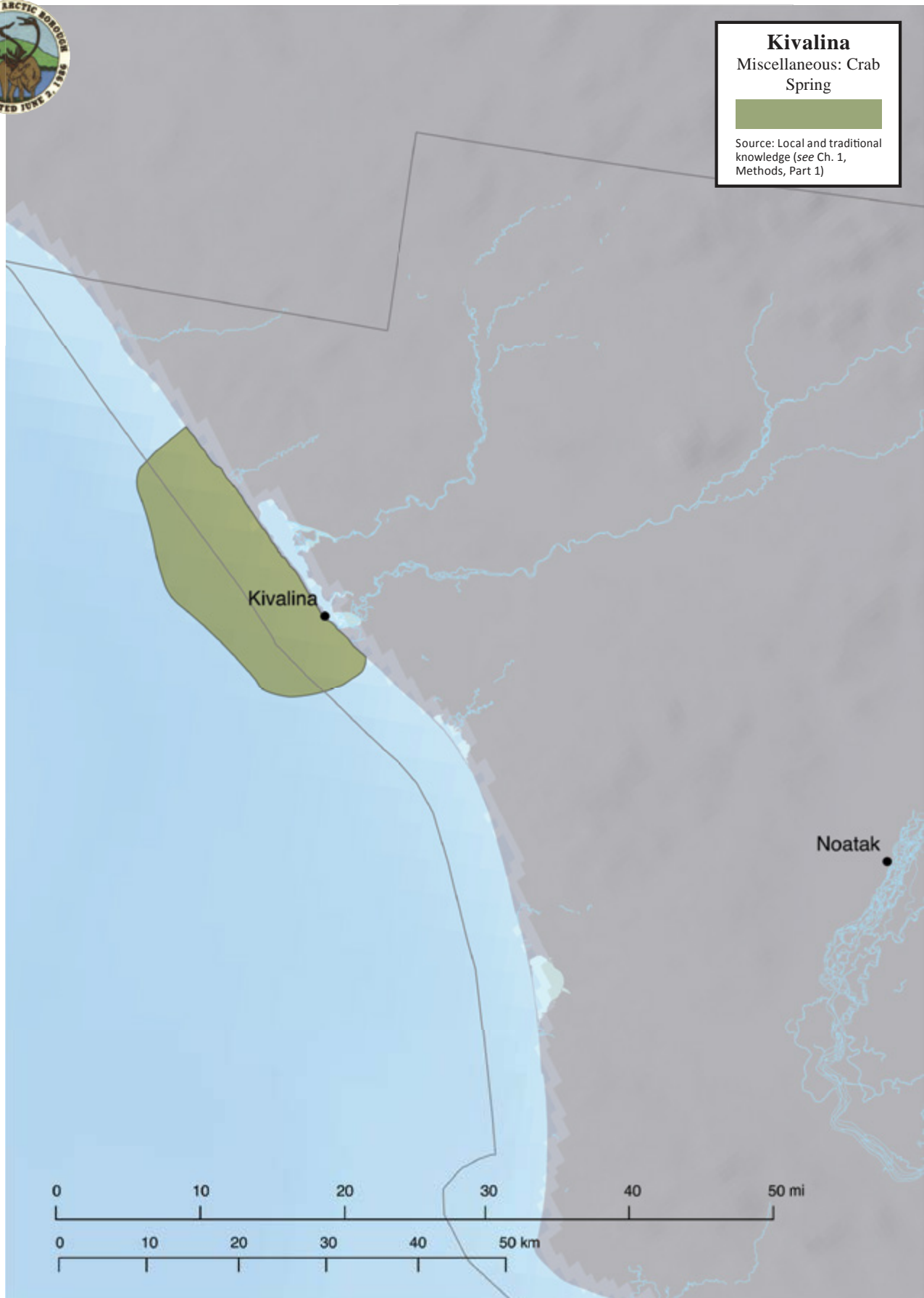


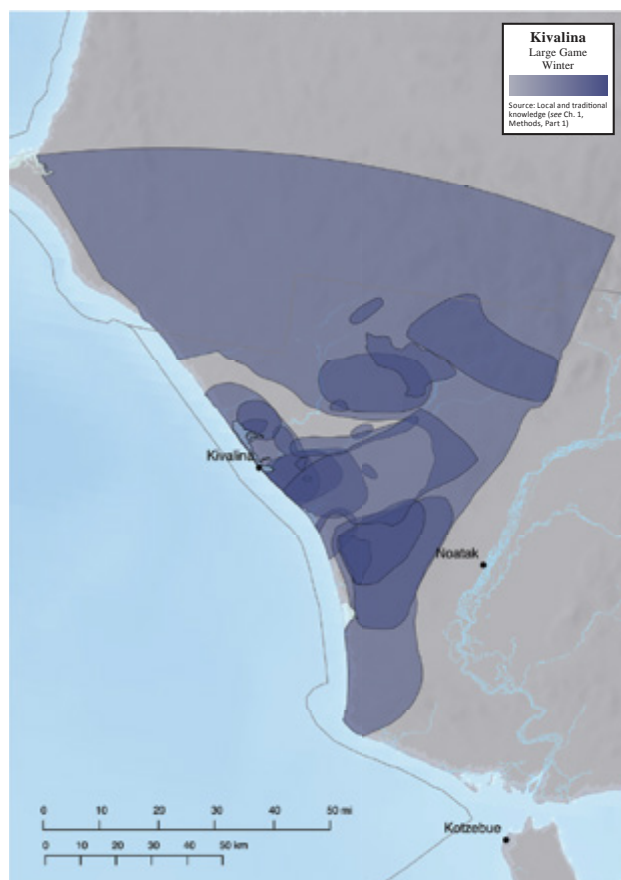


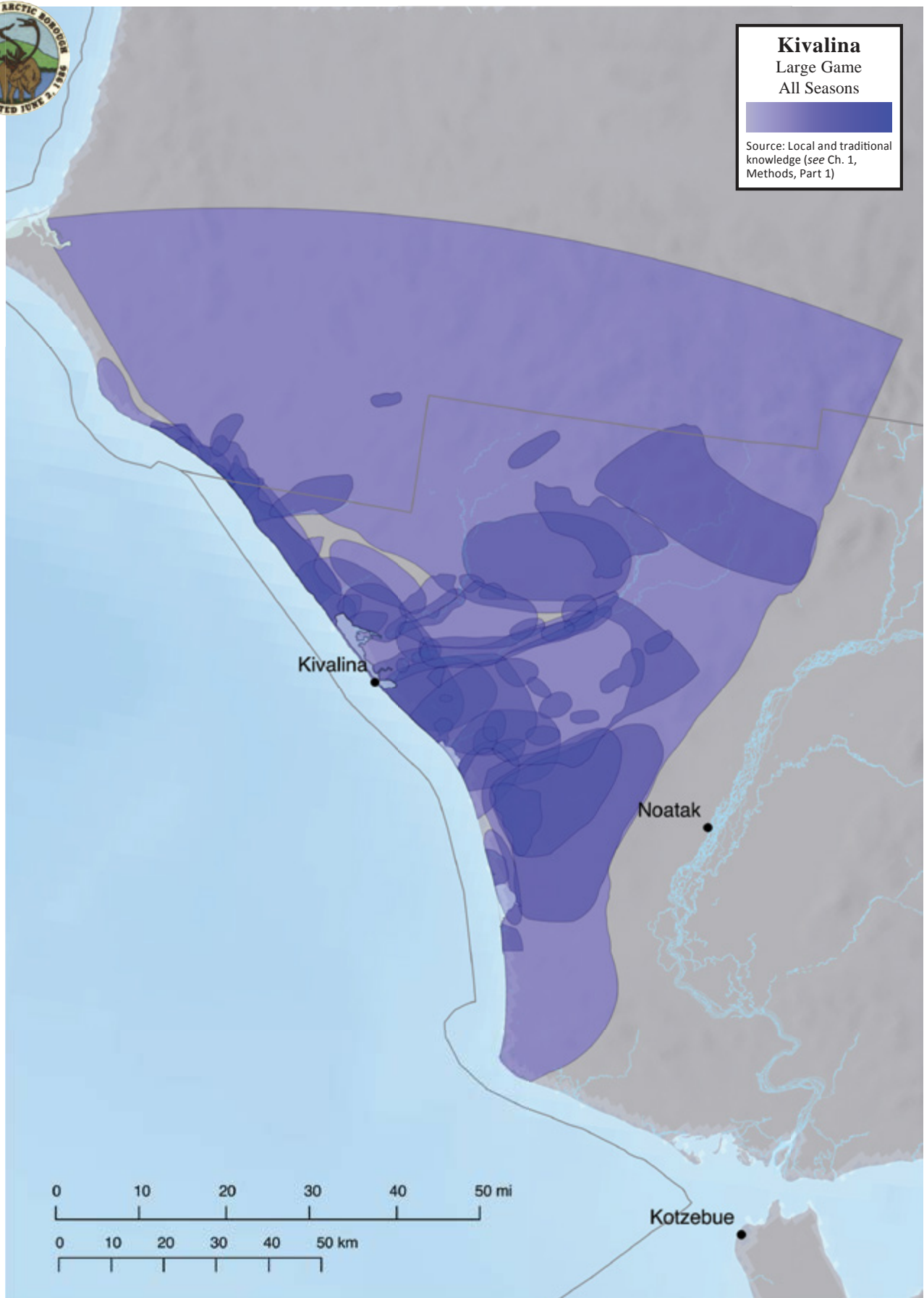


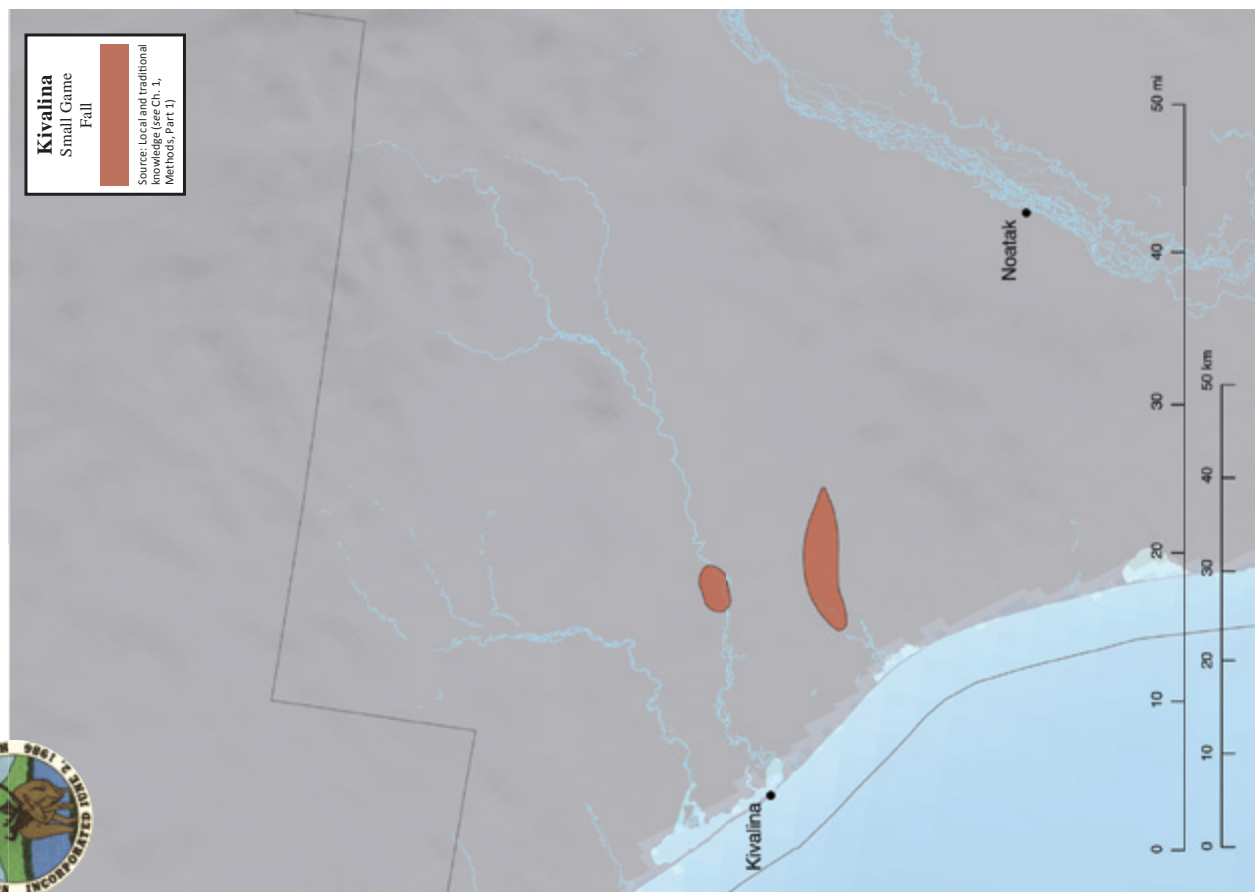
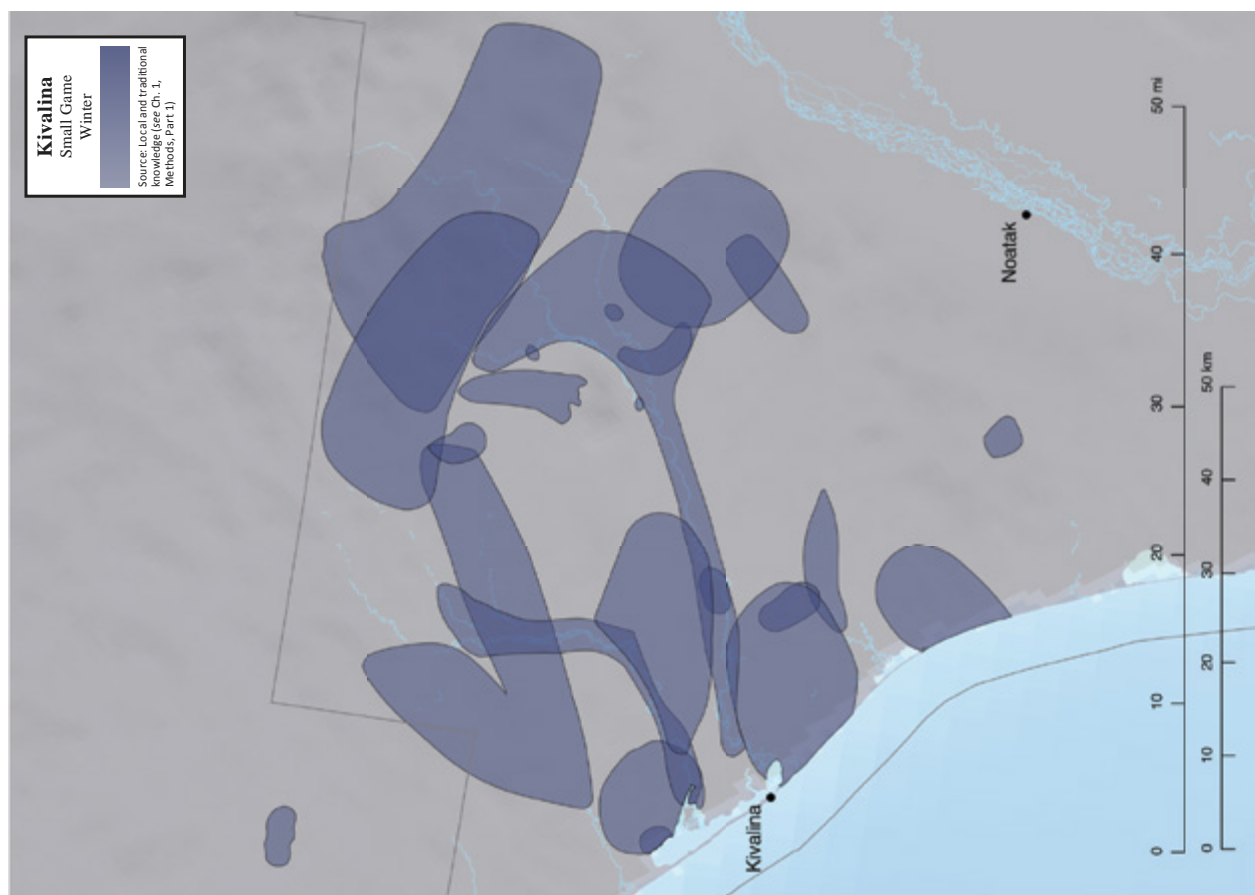


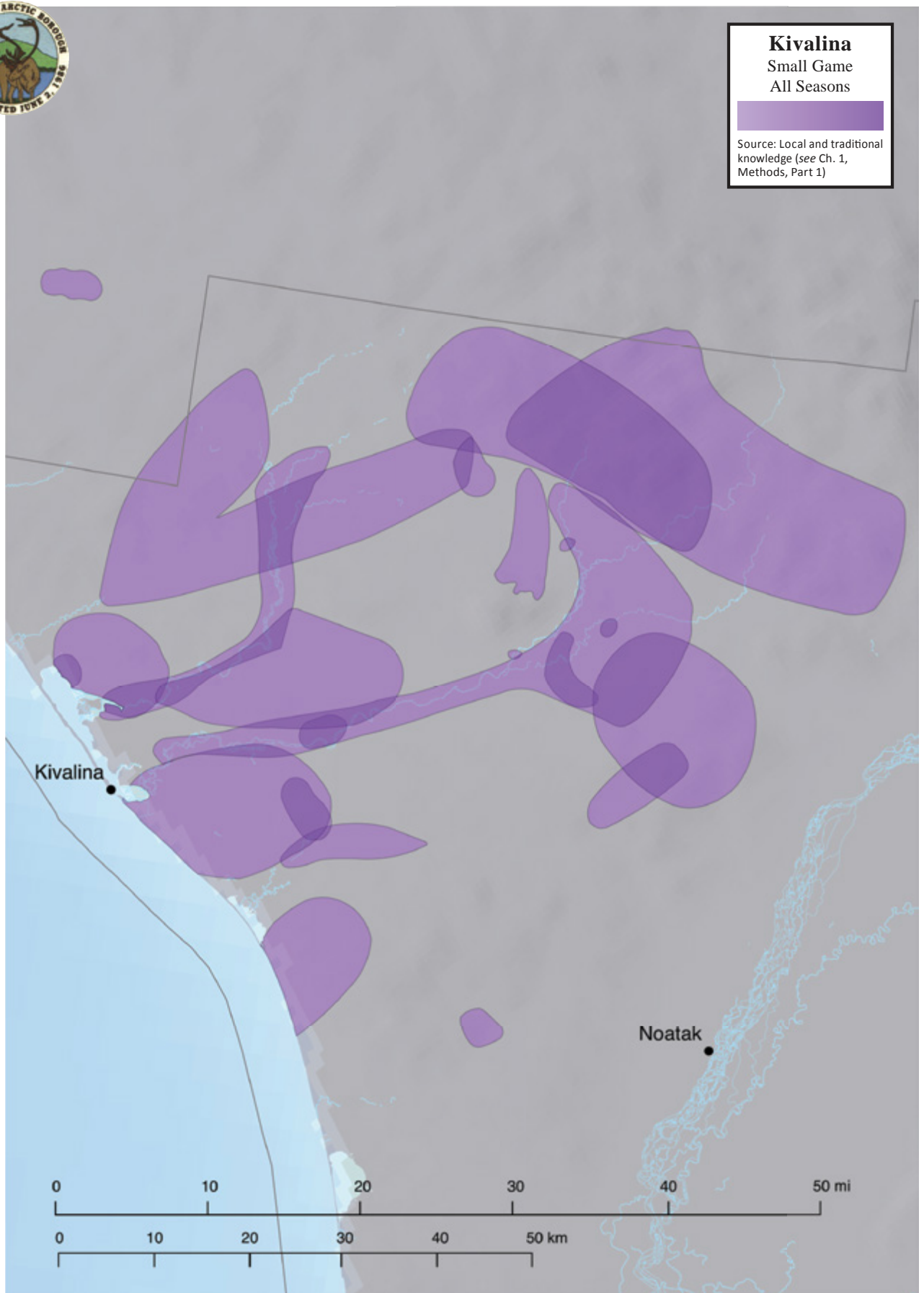


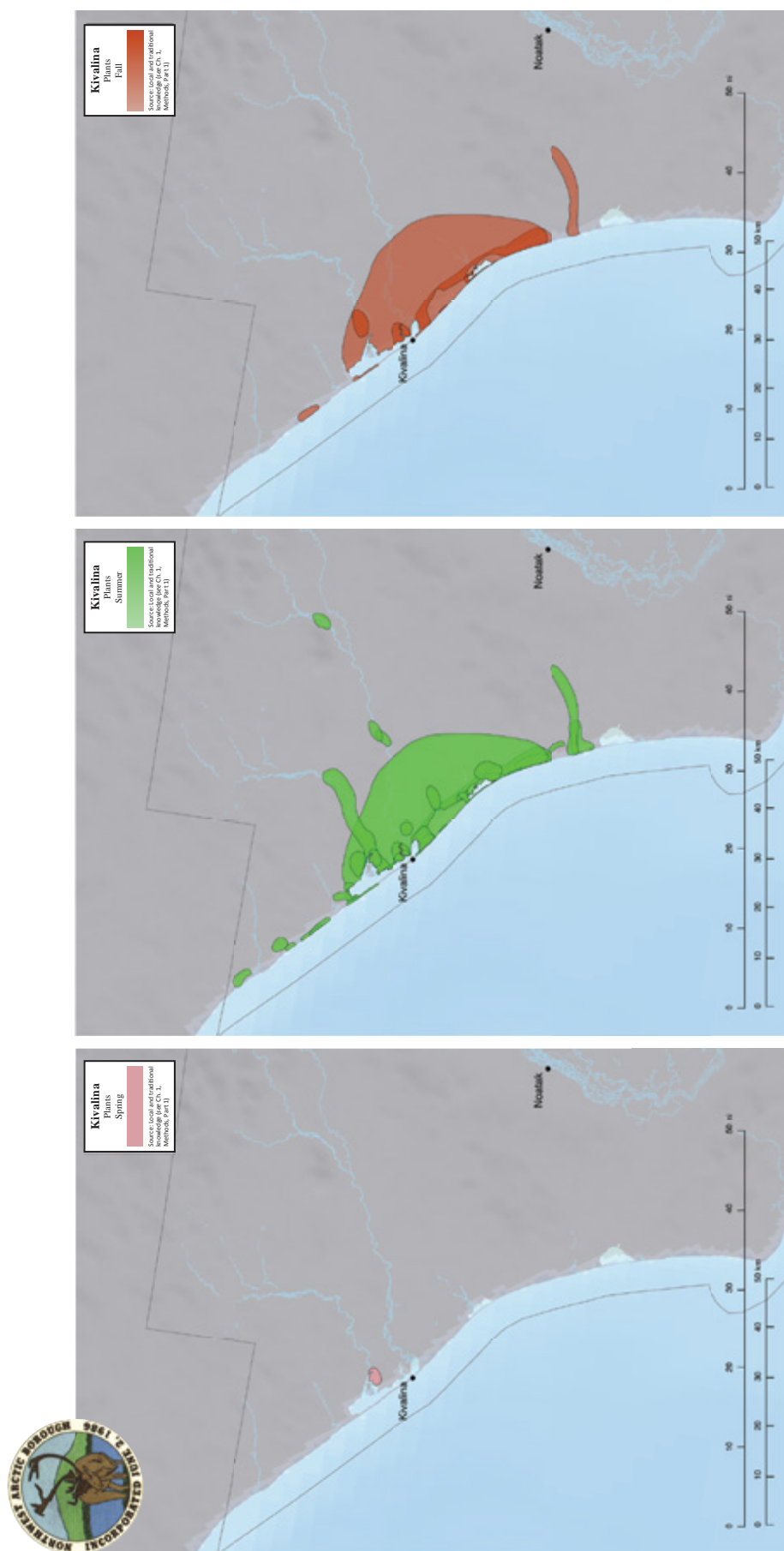


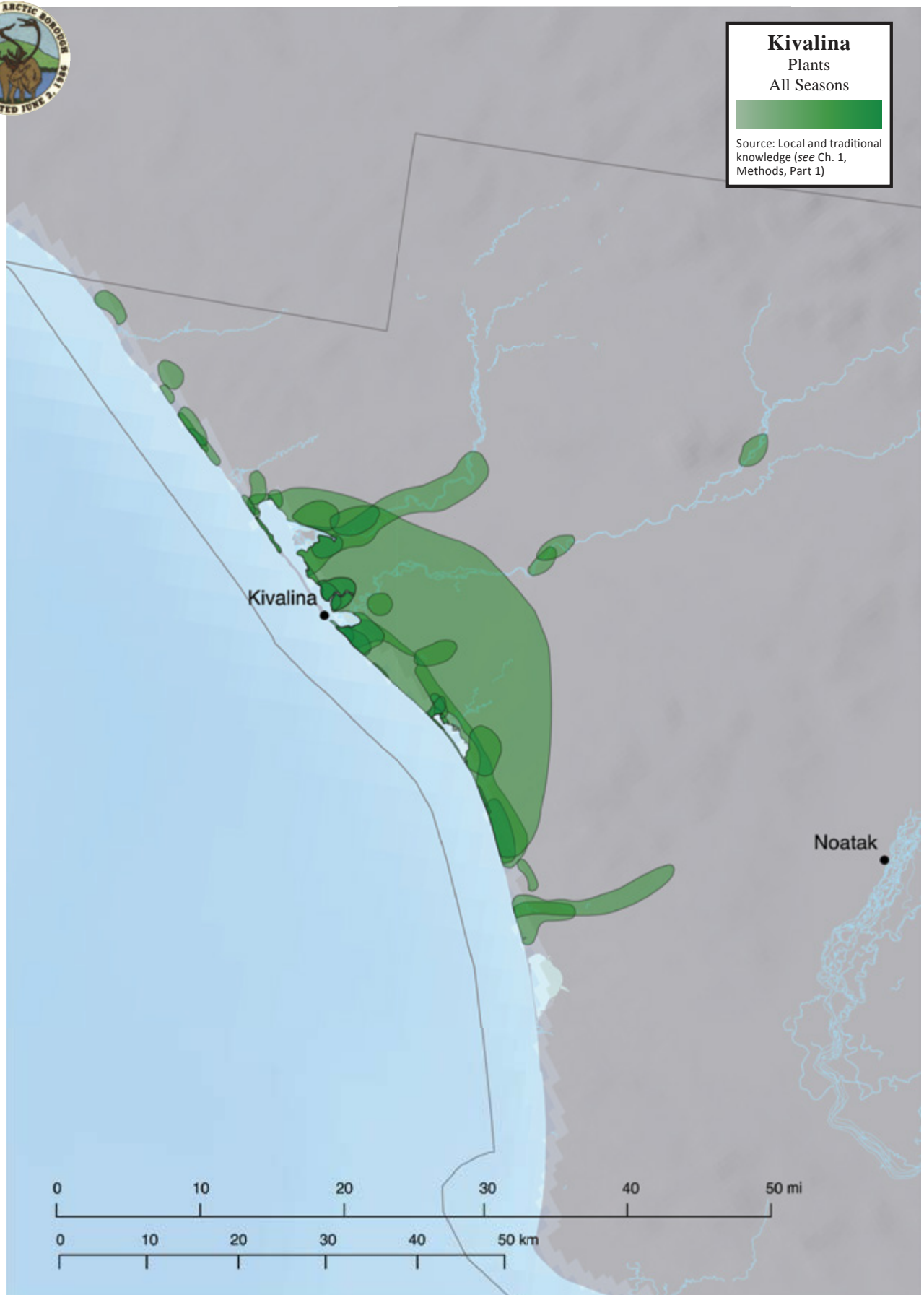


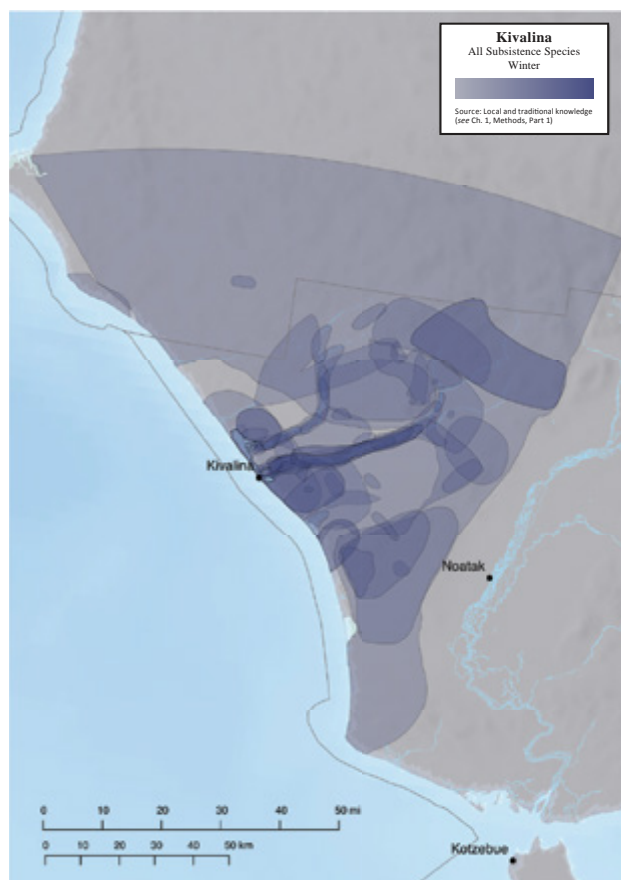
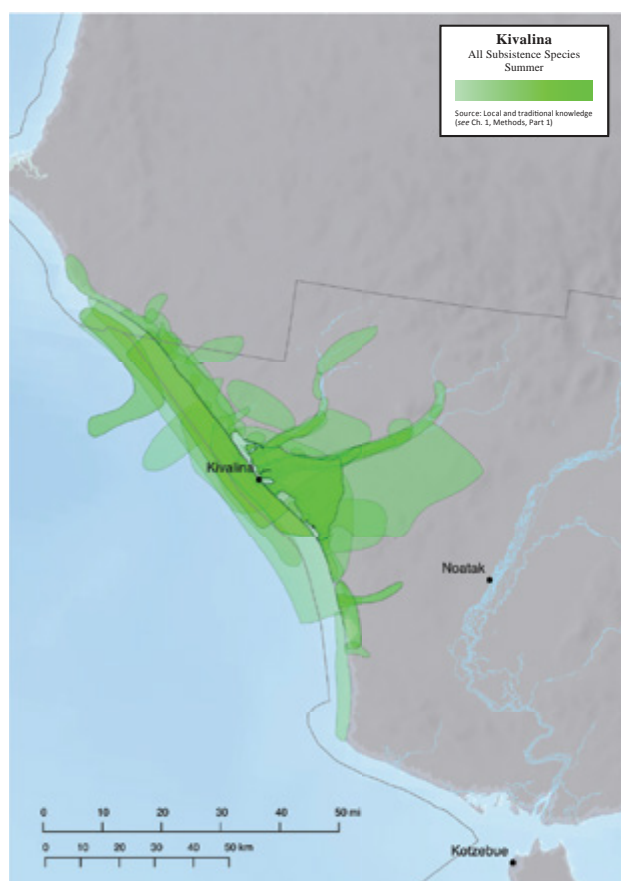


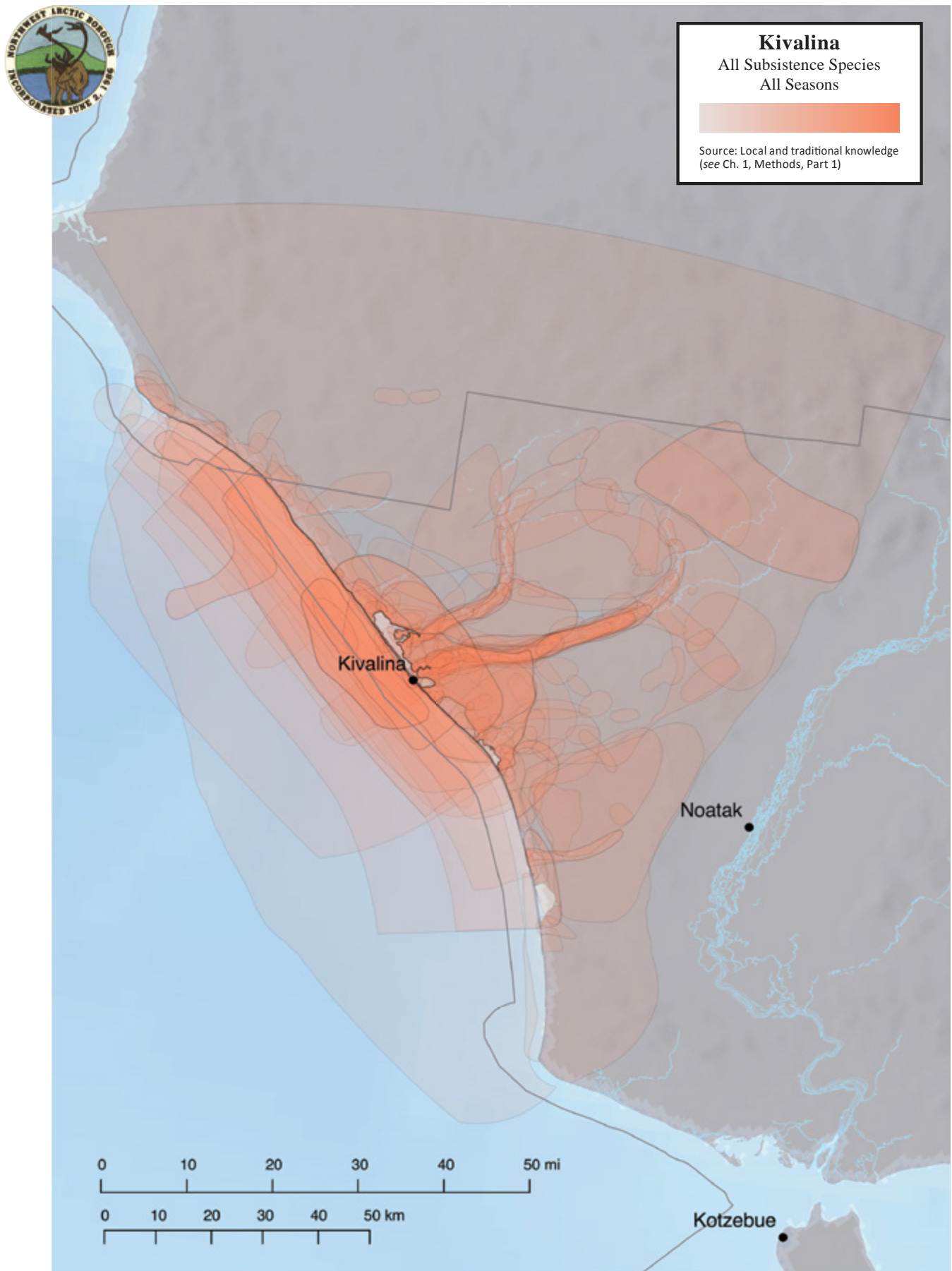












Siilvik (Selawik)



Photo credit: U.S. Fish and Wildlife Service.

Sii̱vik (Selawik)



Photo credit: Sarah Betcher.

The People of the Lower Sii̱viim Kuu̱a

Two Iñupiaq words are commonly associated with the village of Selawik and its surroundings. The first, “Akuli̱aq,” describes the place “where the river meets together.”¹ The second, “Sii̱vik,” means “sheefish place.” To this day, the place where the river meets together continues to create conditions for abundant subsistence fishing. The fertile Selawik drainage is believed to have been inhabited for at least 10,000 years, and probably much longer. Two distinct but closely allied Iñupiaq groups have historically lived on the Sii̱viim Kuu̱a (Selawik River): the Sii̱viim Ka̱jani̱miut, meaning “Selawik headwaters people,” and the Kiita̱miut, meaning “people down below.”²

Accessible and protected year round, today’s village site was once a winter camp that supplied local Iñupiat with freshwater fish across the seasons.³ In spring, just like they do today, people went out in small family groups to their camps. Before Selawik became a permanent community, many people also maintained winter camps away from the current village location. When the first outsiders arrived, around the middle of the 1800s, they had trouble getting a good count of how many people were residing in the lower drainage because everyone was so spread out—a testament to how many good fishing and trapping spots could be found on the lower Selawik. The 1880 census counted only 100 people,



Selawik residents, who traveled upriver on the ice to hunt small land mammals, float back home after break-up. 1920s. Photo credit: University of Alaska Fairbanks, Candace Waugaman Collection. UAF-2003-183-13, Alaska Digital Archives.

but Ernest Burch estimates 700 Kiitaaġmiut were living in the area at the time, making it the most populous region within the boundaries of today's Northwest Arctic Borough.⁴

Given early arctic peoples' complete reliance on an abundant year-round food supply, it is no wonder the Selawik drainage became a major Iñupiaq population center, and its appeal appears to be holding fast today. With 876 residents, Selawik is second in size only to Kotzebue among the Borough's communities.⁵ The Alaska Native Claims Settlement Act (ANCSA) regional corporation, NANA, projects Selawik's population will increase to about 1,170 by the year 2020.⁶

The area was first written about by non-Natives in 1840, when Lieutenant Lavrenty Alekseyevich Zagoskin of the Imperial Russian Navy⁷ ventured upriver. For several years after that, the lower Selawik's Iñupi at continued on relatively undisturbed. By all reports, the area during this time period remained rich in traditional resources, with reliable supplies of sheefish, whitefish, and *ugruk* (bearded seal).⁸

Also, through the middle of the 1800s, according to documented local and traditional knowledge, Kiitaaġmiut country lay at the southern boundary of both the Western Arctic caribou herd and "within at least the summer range of" the Nulato Hills caribou herd. As a result, the people had access to caribou meat all year round. Both herds apparently began declining in the 1800s. While the western arctic caribou would eventually rebound, the same was not true for the Nulato Hills herd, which is believed to have become extinct by 1890.⁹

In the face of fluctuations in the caribou populations, Kiitaaġmiut country remained "fish country."¹⁰ "In both the Selawik and Kotzebue districts," wrote Burch in *Sc i al Life in Northwest Alaska*, "whitefish move in to ponds and lakes during the spring flood. When the water level drops they are trapped making them easy prey"¹¹ . . . After a good summer and fall, the supplies owned at the end of October by the member of even a single household could weigh in the tons."¹² By applying early aquaculture techniques, the locals



Selawik residents, early 1900s, identified as: top row, L-R: Aniuvak, Robert Smith, Taluquraq Jones, Kitty Qitupan Gravey; bottom row, L-R: Charlie Jones, Sr., Ellen Makpiiq Jones, Mabel Jones Mitchell, and Bert Akumgan Jones. Photo credit: University of Alaska Fairbanks, UAF-1988-53-6, Alaska Digital Archives.

made even more of the fishery. As Burch explained, "[i]n the Selawik district, even in the early contact period, the Natives . . . sometimes dug trenches between landlocked lakes and nearby rivers. Water rushing out of the lakes enlarged the trenches into permanent channels linking the two bodies of water." In contrast to ground sloughing occurring today as a result of melting permafrost (*see* p. 126), which deposits sediments in streams, harming fish habitat, this type of work frequently had a positive effect on fish populations by opening up new spawning areas and fish migration routes.¹³

The 1880 census taker, Ivan Petrof,¹⁴ mistakenly assuming most of the region's population lived at the ocean's edge, wrote that, since Lieutenant Zagoskin, 40 years earlier, reached "merely the headwaters of the Selawik river, . . . the only reliable information concerning this route rests upon the statements of a few intelligent¹⁵ half-breed traders."¹⁶

In his summary of local population dynamics, Zagoskin went on to report that "[n]o trace or shadow of Christianity and its teaching has found its way to these desolate regions, the dark night of shamanism, or sorcery, still hanging over the human mind."¹⁷ Soon, however, after the Friends mission was established in Kotzebue, Iñupi at from the Kobuk, Noatak, and Selawik drainages who traveled downriver to coastal trade fairs would become acquainted with the region's first Christians.¹⁸ By the turn of the 20th century, Iñupi at converts had themselves begun to preach the Christian gospel. Among these, two names appear frequently in the written histories—Maniiłaq¹⁹ and a young man from Unalakleet named Uyaraq. When local Iñupi at encountered men among their

Given early arctic peoples' complete reliance on an abundant year-round food supply, it is no wonder the Selawik drainage became an important Iñupiaq population center, and its appeal appears to be holding fast today.

own people who could break the traditional taboos without consequence, the words of non-Native missionaries began to gain credence.²⁰ As mentioned in the Noorvik section of this chapter (*see* pp.64–65), the Quakers were building their missions on the coast at a time when people were facing both food shortages and dangerous illnesses for which the missionaries, not the shamans, had effective medicines. According to Quaker historian A.O. Roberts, Uyaraq was an especially effective voice for the new faith in the Selawik region, where locals constructed a schoolhouse in 1897^a and, later, a church.²¹ Writes Roberts,

by 1911 there were some 200 people living in Selawik. Almost all took part in the Friends church. Log houses were built in addition to sod igloos. Between 1910 and 1922, 140 names are listed in the birth records. During the same period fifty-seven persons died.²²

As recounted by local planners in the village history written for the 2007–2017 Selawik Comprehensive Development Plan, “[i]n 1909, the U.S. Republic School opened in Selawik and used English as the means of instruction while discouraging the use of Iñupiat—e.g. teachers only allowed children that spoke English to be invited and attend school parties.”²³ During this period, the Kiitaagmiut way of life incorporated new foods and new economic means, as locals learned how to plant vegetable gardens²⁴ and herd reindeer.²⁵ Walter C. Shields, the U.S. Department of Education’s Superintendent of Schools in the Northwestern District, offered his perspective on the situation in his 1912–13 report to Washington, D.C., superiors:

While most [Iñupiat] can secure a sufficient amount of the food of the country, yet in their advance in civilization they have begun to need the foods of civilization. Instead of bemoaning the fact that the Eskimo can not get along on the food of his ancestors we should recognize the fact that we wish to lift him to a higher plane of living. No doubt he was happy and well a century ago, but progress must come.²⁶

The superintendent’s words highlight the link between the local food harvesting cycle and the Iñupiat world view. Shifting the local diet to the “foods of civilization” is described as a key part of the government’s plan to “lift” the arctic people to a “higher plane of living.” These days, the “progress” the superintendent refers to may be measured in health problems and economic hardship by all reports unknown to the residents of the rich lower Siilviim Kuunga before outsiders arrived (*see, e.g.*, p. 125).

Today, the village is also feeling the effects of far away industry, as rising temperatures thaw the permafrost along the banks of the Selawik River. In 2006, a section of thawed ground caved in, dumping a large mass of earth into the river about five miles upstream from the village.²⁷ The ground on which much of Selawik’s infrastructure is built, including the supports for the big bridges, is slowly sinking.²⁸ No one disputes that the village is facing high costs for climate change effects in the coming years, just as no one knows how those costs will be paid.²⁹

Alaska Natives were granted citizenship in 1924 when Congress passed the Citizenship Act, and Selawik organized under the Alaska Native Town Site Act in 1926. The local Post Office opened in 1930. In 1940, the Iñupiat people



Selawik garden. Photo credit: Sarah Betcher.



City water pump. Photo credit: Sarah Betcher.

of Selawik voted unanimously to reorganize as the Native Village of Selawik under the Indian Reorganization Act.³⁰

In 192, following passage of the Alaska Native Claims Settlement Act (ANCSA), Selawik's village corporation merged with NANA Regional Corporation.³¹ In 197 Selawik incorporated as a second class city under state law. In the current Selawik Comprehensive Development Plan it is noted that "[p]rior to 1955 and the introduction of welfare in Selawik, all members of the family (youngest to oldest) had to work together in active subsistence lifestyles to survive."³² Still, through all of its government restructuring and other adaptations to non-Native cultural norms, Selawik remains an active hunting, trapping, fishing, and gathering community. In addition to small and large land mammals and many varieties of fish available to locals, the surrounding Selawik National Wildlife Refuge welcomes countless species of migrating birds every spring.³³

Measured by the standards of a pre-contact subsistence economy, the Kiitaagmiut were a very wealthy group, with all-season fish, seals, whales, and bears coming up the river, and caribou regularly passing through or staying in the area at different times of the year. While late spring ice could make transportation difficult, residents of the lower Selawik traveled regularly to the coast to barter with their excess fish, furs, and crafts.³⁴

In contrast, few economic opportunities arise in the village today. At the time of the 2010 census, of the residents over the age of 16 years, 62% were employed seasonally. Only 44% had work for all four quarters of the year. In line with the economic hardship found in most, if not all, of the Borough's communities in modern times, the income bracket with most Selawik residents in it (33%) earns less than \$5,000 a year.³⁵ Employment opportunities peak during the

ice-free summer months when barge services are operating. Some seasonal firefighting positions are available with the Bureau of Land Management, and a few residents work in commercial fishing.

Selawik's steady jobs are mostly found in the pre-K-12th grade Davis-Ramoth School, in city and tribal government offices, in grocery stores, with the regional nonprofit Maniilaq Association Community Health Clinic, and in the Selawik National Wildlife Refuge. Some residents gain income from making and selling handicrafts locally and in larger cities.³⁶

The community extends across three riverbanks, connected by two long bridges. Residents travel around the swampy flats on boardwalks big enough to handle four-wheeler and motorcycle traffic in the summer and snow machines in the winter. Facilities and services available in Selawik include the U.S. Post Office, a community library, a few churches, a volunteer fire department, and one Public Safety Officer (VPSO).³⁷

The extensive network of small river channels is used for travel by small boat in the ice-free summer months between roughly early June and the middle of October. During this timeframe, freight companies can use the ice-free water to access the established barge landing to bring in cargo, fuel, and other larger supplies. People and small freight come and go via airplane on the gravel, state-owned Roland Norton Memorial Airstrip.

The Native Village of Selawik owns the fuel operations. According to a 2014 report, heating fuel was at \$7.88 a gallon, and gasoline costs \$7.75 a gallon.³⁸ The Alaska Village Electric Cooperative (AVEC) operates diesel-generated power, supplemented by four wind turbines.



Selawik grocery store. Photo credit: Sarah Betcher.



Bridge to Selawik airstrip. Photo credit: Sarah Betcher.

Selawik Community Vision

Selawik works in unity to live sober and healthy lifestyles while sustaining our environment and Inupiaq values in changing times.

8 lawik Community Comprehensive Development Plan 0 0

Taking into account state power cost equalization (PCE) subsidies, electricity ranges anywhere from \$0.21 to \$0.60 per kilowatt-hour in Selawik and similar arctic villages (depending on level of use), compared with \$0.15 per kWh in Anchorage.³⁹

A city-operated pump system pulls water from the Selawik River, which is chlorinated and fluoridated before entering a heated storage tank. From there, several circulation lines reach roughly 95% of the occupied homes, which have indoor plumbing. The remaining 5% of households must gather their own river water, collect rainwater, or melt ice from the river in the winter. The city also oversees a Class 1 sewage stabilization pond and a Class 3 open-pit landfill.⁴⁰

Like other villages in the Northwest Arctic Borough today, two cycles continue to propel the local economy forward. The first is the modern-age cycle of seasonal wage-based employment opportunities. The second continues the ancient cycle of hunting, trapping, fishing, and gathering. Though food-gathering activities continue to rule the hearts and minds of the vast majority of borough residents, in many communities where the most beneficial employment opportunities arise at the same time of year as the most beneficial hunting, fishing, and gathering opportunities, food harvesting and preservation can end up taking a back seat to the paycheck. The growing village of Selawik continues to benefit from a year-round supply of fish and caribou, largely in thanks to the surrounding expanses of protected land. With so much at stake, today's Kiitaaḡmiut face the challenge of finding a path forward for Selawik that will ensure continuing access to the area's historic abundance of traditional resources while creating new opportunities for other sorts of economic growth—perhaps the best definition of progress in a modern Iñupiaq community.

1. NANA.com. Selawik. <http://nana.com/regional/about-us/overview-of-region/selawik/>.
2. Ibid.
3. Ibid. See also Northwest Arctic Borough. 2007. Selawik Community Comprehensive Development Plan ("Selawik CDP"), <http://www.nwabor.org/forms/selawikplan07.pdf>. Accessed 12 May 2015. pp. 17-18.
4. Burch, E. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press, p. 221.
5. Alaska Dept. of Labor. 2014 population projections. <http://laborstats.alaska.gov/pop/popest.htm>. Accessed 4 Apr 2015.
6. NANA.com.
7. Ibid.
8. Burch 1998, pp. 228-29.
9. Ibid.
10. Ibid, p. 228.
11. Burch, E. 2006. *Social Life in Northwest Alaska: The Structure of Iñupiaq Eskimo Nations*. Fairbanks: U of Alaska Press, p. 145 (citing Elwood Hunnicutt 1970).
12. Ibid, p. 147.
13. Ibid, p. 19.
14. Petrof was eventually discovered to have falsified at least some of his data.
15. Intelligence here likely measured by the person's fluency in English.
16. Burch 1998 p. 230.
17. U.S. Census 1880 Report, p. 9.
18. Burch, E. 1994. The Inupiat and the Christianization of Arctic Alaska. *Etudes/Inuit/Studies*, 1994, 18(1-2), pp. 81-108
19. Alaskool.org has a comprehensive bilingual collection of Maniilaq stories told by elders and assembled by Raymond Lee from Buckland, see pp. 191-193). http://www.alaskool.org/Language/Maniilaq/webhtm/Maniilaq_Intro.htm. Accessed 15 May 2015. See also Burch 1994.
20. Burch 1994.
21. Roberts, A.O. 1978. *Tomorrow is Growing Old*. Newberg, OR: The Barclay Press, pp. 248-49.
22. Ibid, p. 249.
23. Selawik CDP, p. 8.
24. Roberts 1978, p. 249.
25. Selawik CDP, p. 18. The CDP names five local men who herded reindeer at various times leading up to "until the reindeer mixed with caribou when their migration routes changed in the late 1940's to 1950's." p. 18.
26. Shields, W. 1914. U.S. Dept. of Education. Report on the Work of the Bureau of Education for the Natives of Alaska, 1912-13, pp. 29-30. <http://files.eric.ed.gov/fulltext/ED541684.pdf>. Accessed 1 April 2015.
27. Alaska Native Tribal Health Consortium. 2012. Climate Change in Selawik, Alaska: Strategies for Community Health. <http://www.anthc.org/chs/ces/climate/upload/Climate-Change-in-Selawik-Alaska-web.pdf>. Accessed 15 May 2015.
28. U.S. Fish and Wildlife Service, Fairbanks Office. 2013. Selawik Sheefish. http://www.fws.gov/uploadedFiles/Region_7/NWRS/Zone_2/Selawik/PDF/Selawik_Sheefish_2013.pdf. Accessed 25 Aug. 2015.
29. Ibid.
30. Selawik CDP, p. 18.
31. Alaska Dept. of Commerce. 2014. Alaska Dept. of Commerce. Community database, Selawik. <http://commerce.state.ak.us/cra/DCRAExternal/community/Details/c70ceaa1-b8dc-4f8b-8c49-1c38db04015d>. Accessed 10 May 2015.
32. Ibid.
33. U.S. Fish and Wildlife Service. 2013. Selawik National Wildlife Refuge. <http://www.fws.gov/refuges/profiles/index.cfm?id=75625>. Accessed 4 December 2014.
34. Burch 1998.
35. Alaska Dept. of Commerce 2014.
36. Ibid.
37. Northwest Arctic Borough. 2014. Selawik. <http://www.nwabor.org/villages.html>. Accessed 6 December 2014.
38. Ibid.
39. NANA.com. cf. Chugach Electric rates at <https://www.chugachelectric.com/rate-information>.
40. Ibid; NANA.com

Whitefish constitutes the greatest amount of traditional food consumed in Selawik today, making up 34.8% of the total edible mass harvested.¹ The next most abundant food source is *tuttu* (caribou), which makes up 23.1% of the local diet, followed by *sii* (sheefish) at 16.0%. At villagers' direction, we drew a total of 42 overlapping polygons of various sizes on the Selawik maps showing where people go to search for their traditional foods. Of the 42 polygons, the highest number (21.%) marked places people go to look for *sii* (sheefish), followed by berries (16.4%), especially *aggi k* (salmonberries; 9.8%). About the same number of places

(16.3% of total mapped polygons) are associated with *tuttu* (caribou) hunting. Finally, in terms of food resources the greatest numbers of study participants go out to search for, all 35 of the people in Selawik who contributed to this mapping project (100%) indicated they fish for *sii*. All but one (97%) hunt caribou, and the same is true for pike fishing. Thirty-two people (94.3%) identified places they go to pick berries, with everyone in this group looking for salmonberries and 31 of them looking for blueberries.

Iñuuniatigput Ililugu Nunannguanun: Documenting Our Way of Life through Maps 130



Selawik salmon drying. Photo credit: Sarah Betcher.

Selawik Voices

It's been an unusually cold and rainy summer,¹ and that can be bad for berries. Families hoping to pick and freeze several pounds to hold them over the long winter months are preparing to be disappointed. Among the 11 villages of the Northwest Arctic Borough, Selawik is known for its abundance of *api ks*.² The Borough's villagers sometimes travel around the region in small planes, and it's not unheard of for someone to fly into Selawik to spend time with friends and family picking berries. Flying low over the Selawik drainage on a clear summer morning offers intimate views of the vast marshland and many lakes that surround the village, as well as creeks and rivers flowing out of the mountains to the east.

Ellenore Sunii Jackson picks up a visitor at the state-owned Roland Norton Memorial Airstrip and heads home on her four-wheeler, crossing the bridge from the airport side over to a well-constructed boardwalk that leads to her house in the village. Everything in Selawik is built to stay above the water—not only the wood-plank thoroughfares but water and sewer pipes, too.

Sunii gets her company settled in. They have plans to go berry picking the next day.

Home to about 800 people, Selawik is a big village but small enough that people know their roles in the community and the roles of others. The most active hunters stand out in borough villages with a strong tradition of food sharing. No one has to go without the foods that have made up the diet of

people living in this drainage for centuries. If you are unable to go out and hunt, someone will share with you.

In recent years, the government has coined a word for people who provide a lot of traditional food to others in their villages: “super-harvesters” (*see pp. 399-400*). Ralph Ramoth, Sr., now one of the oldest men in Selawik at over 70 years, no doubt has met the state's definition all his life. But he's only been doing what he was raised to do. Inside his house, he relaxes in a comfortable chair next to an array of sewing tools and pelts. His grandchildren can be heard playing outside. “I start to hunt . . . ever since I'm a little boy. I do a lot of trapping and do a lot of hunting and do a lot of fishing.”

“My mom raised me. She showed me how to hang the nets. We spent summers in camp fishing.” His family has the same fish camp they've used for generations. Ralph's father died when Ralph was just a boy. He learned the *Iūpi aq* traditions “by following people around, like the older people, who went out hunting, or fishing, or trapping,” and how to care for his family—“what we gotta do for the home . . . like cutting wood for winter.”

From the age of 18 until he retired, Ralph worked for the U.S. Fish and Wildlife Service. The role of the USFWS, as he sees it, is to “protect the land, to protect the wildlife. But, mostly, . . . the land. So there will be no development in the Refuge.” The land has to be protected, he explains, “because of the fish around the Refuge.” While he worked a regular job, Ralph continued his traditional harvesting and sharing routines.



Cutting dry meat and *maktak*. Photo credit: Sarah Betcher.

“We got pike all year round. You could fish any time. Even now [July], you could set a little net for whitefish [though] when the water gets warm, people don’t really fish that much. We got a lot of whitefish, more than we can use. And we got a lot of sheefish, cisco. We don’t have salmon.” An extensive trading network remains active among the villages. What one village doesn’t have can be traded for with another village. Selawik villagers commonly trade excess *sii* (sheefish), pike, and whitefish. “People trade down the coast for seal skins or seal oil or whatever they got to trade with.”

In addition to fishing, Ralph has been hunting all his life. “Caribou in the wintertime. During the migration time, they go through the village. We got moose, depending on the moose season . . . a lot of rabbits and muskrats, birds in springtime and all through summer. And ptarmigan in winter.

“In the fall time, they start preparing for trapping. They go trapping all winter long,” he says. “Late spring, they prepare for the spring season like muskrat hunting. Summer, they prepare for summer gathering—anything that grows around the land. A lot of people dry a lot of fish for winter use.”

Now that he’s older, Ralph has begun to depend on others. “They have a program down in Kotzebue through Maniilaq to supply some of the hunters with gas and ammunition to hunt for the elders,” he explains. “Once you become an elder, they hunt for you.” Friends and family routinely share with elders, but support from the Maniilaq Association helps with the effort.

Ralph wouldn’t think of living anywhere else. “When you become an elder, it’s more comfortable to stay home in the

village.” In Selawik, he can appreciate “frozen fish and frozen caribou meat and moose. If we had to move to the city, I wouldn’t be going out. I would just be a sitting duck doing nothing.”

Henry and Sunii Jackson keep their motorboat anchored up on the side of the river next to their house. They pull the anchor and motor over to a boat launch near a friend’s home. After loading up six passengers, they head out to where the



Selawik in the 1980s. Photo credit: Department of Commerce, Community and Economic Development, Division of Community and Regional Affairs’ Community Photo Library.



Selawik fish eggs and heads.
Photo credit: Sarah Betcher.

group has had success finding the prized *aqpiks*. They follow the drainage's narrow waterways, meandering through a treeless landscape covered with grass and willows. The group makes several stops, getting out to pick in different places. As they had feared might be the case, the wet summer is making it hard to fill their buckets.

Everyone's brought some food to share. They stop for lunch, spreading out a meal in the middle of the boat—fish heads, boiled salmon eggs, and *maktak* (whale blubber) share the board with non-native food staples like crackers, Spam, and granola bars. After a filling meal on the boat, the group heads back to Selawik with a couple of cups of berries for each person. With the price of boat gas at over \$7 a gallon, the gathering of this small amount of the traditional delicacy has been expensive.

Sunii has lived in Selawik since birth. Like Ralph, she lost a parent early in life. She was only one year old when her mother passed away, so she was raised by her grandparents who, from the beginning, instilled in her “knowledge of the land . . . a subsistence way.”

“We were at camp during the summer and we would come here during the winter. In springtime, before break-up, my *aana*³ would take Diane⁴ and I, and we would walk to our spring camp.

“After break-up, we would stay there all summer, gathering berries, greens, checking net, fishing, getting small game—muskrat, beavers. Ducks. We would walk and gather everything and put away and store food.”

Sunii notices that young people are not nearly as involved with subsistence activities as they used to be. She teaches in local summer youth programs “berry picking and picking greens, setting net, where to set net.

“We have to teach our young generation to maintain this subsistence way of life. To help lessen their food cost, hunting caribou and storing that caribou. Gathering fish, storing it away, drying it for the winter, gathering greens.” She teaches young people “when things are ripe and when it's the time to gather sourdock, rhubarb, wild celery, onions. And to preserve it.” She teaches them about the best places to go to get salmonberries and blackberries. “There are certain places in our region where we can gather blackberries,” she says. “They aren't everywhere.”

Sunii grew up living in a sod house, speaking only Iñupiaq with her grandparents, living mostly on traditional foods and getting around on sleds pulled by dog teams. She is thankful for some Western influences. She feels “fortunate to have technology to teach my Iñupiaq culture.” Having computers, GPS, VHF radios, and cell phones has helped make subsistence information more accessible, safe, and efficient. “If we need to get ahold of people, if we forget to carry supplies to our camp, we use our VHF. We use our cell phones.”

Lately, certain smaller animals and birds are becoming harder to find. “We have abundance of beaver. My brother



Aqpiq (also called “cloudberry” and “salmonberry”). Photo credit: Sarah Betcher.



Photo credit: Department of Commerce, Community and Economic Development, Division of Community and Regional Affairs' Community Photo Library.

is an avid muskrat hunter. He would sell the fur for income. Now, it's very hard to find a muskrat—muskrats that we rely on for our winter food supply. We use the skins for our parkas and our mittens.”

“We have to go to the hills to hunt ptarmigans now,” she says. She connects this development to changes in the local vegetation brought on by warmer temperatures.

Sunii has watched villagers' way of life change in many ways over the years. “When we were growing up, we'd go to our backyard to get dinner, setting snares. There's no more willows to set snares anymore. My grandpa would go get fresh meat from the backyard. Now we can't.” People still eat all of the traditional foods, but the process of getting them has changed.

“We've started seeing muskox coming into our area. The bears that live in the mountains, they are now coming closer. We think they are looking for food in the valleys that they

can't find in the mountains. The migration of the caribou changes really fast.” She believes these changes in the large animals' patterns are due to changes in the food chain.

Full racks of fish stand drying along the river. The long days allow everyone to spend more time fishing and picking berries. One group after another can be seen going out on foot or in boats to search for berries. Even in sparse years like 2014 everyone will get a little *aqpik* to put away. Whether by offering a boat ride, loaning out traps and other equipment, or just sharing what they bring in, the people of Selawik find ways to make sure everyone partakes of the wide variety of traditional foods that the rich lower Selawik drainage continues to provide.

1. This piece compiles interviews conducted by Sarah Betcher in July 2014.
2. Locally, *aqpik* (*Rubus chamaemorus*) is used interchangeably with “salmonberry,” though many plant books list the common name as “cloudberry.” In other parts of the country “salmonberry” refers to *R. spectabilis*.
3. Grandmother.
4. The speaker's sister.



Selawik post office. Photo credit: Sarah Betcher.

What the maps tell us...

A brief look at the Selawik maps on the following pages document that nearly all of the surrounding area is used with relatively high frequency, though the areas along the Selawik River and the marshy area between Selawik Lake and Inland Lake are especially productive.

Fish are available year-round in the river as well as the lakes, with whitefish found in nearly every little slough and channel in the region, and sheefish throughout Selawik Lake, especially in the shallows near the banks. The eastern region of Selawik Lake is a particularly popular spot for ice fishing among Selawik's residents. Pike are also abundant in this region, and there is a well-known hot spot at the northern tip of Inland Lake where it is met by a drainage from the river.

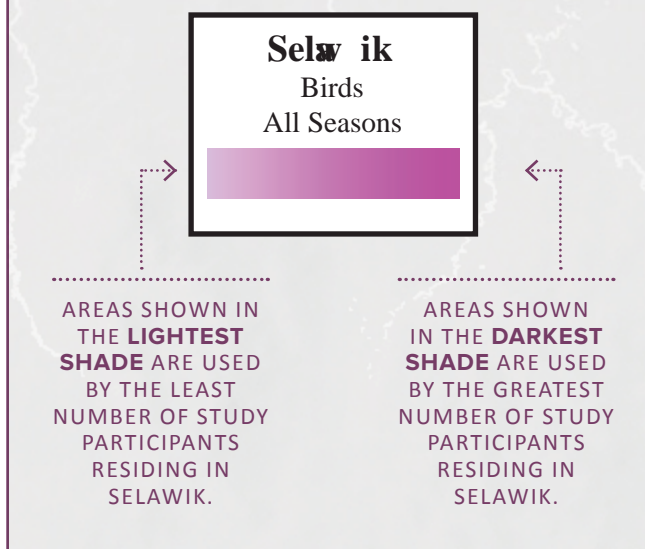
The marshy flatlands between and around the lakes provide excellent wetland habitat for a variety of waterfowl, which can readily be found throughout the region in spring and fall. Eggs are harvested in the spring, with the region between the two lakes, as well as the region where the Selawik River drains into Selawik Lake, being especially popular.

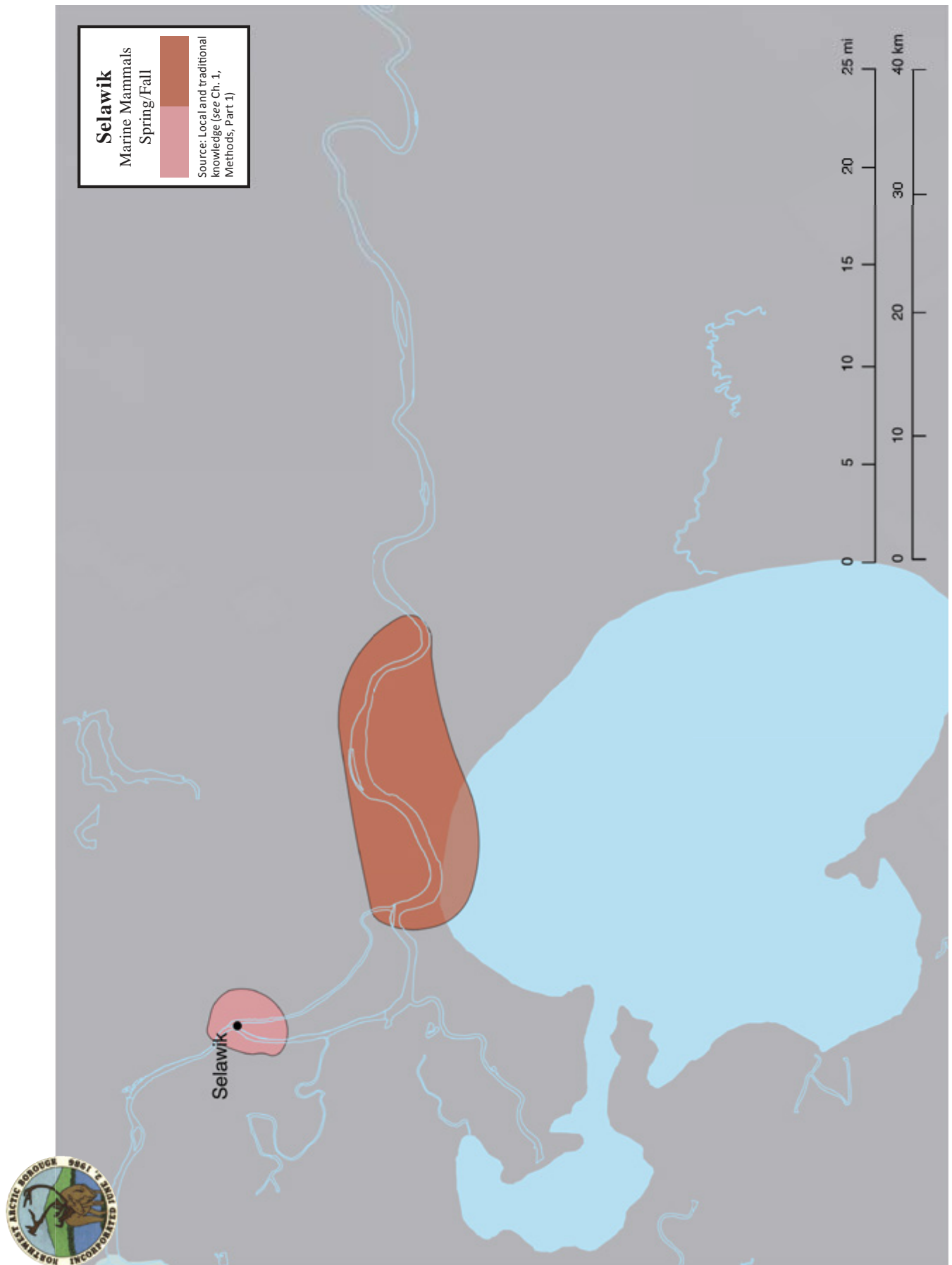
During the migration, caribou can often be found near town, and will frequently migrate right across the frozen Selawik Lake. Some years, residents may travel farther south, around the base of the Selawik hills to the south of the lakes, or sometimes as far as the hills beyond Buckland. Moose are also fairly common in this region, especially along the river in the fall. Many residents who simply like to get out on the water will frequently travel a long way upriver in search of moose, and are always promised an abundance of fish even when failing to find a moose.

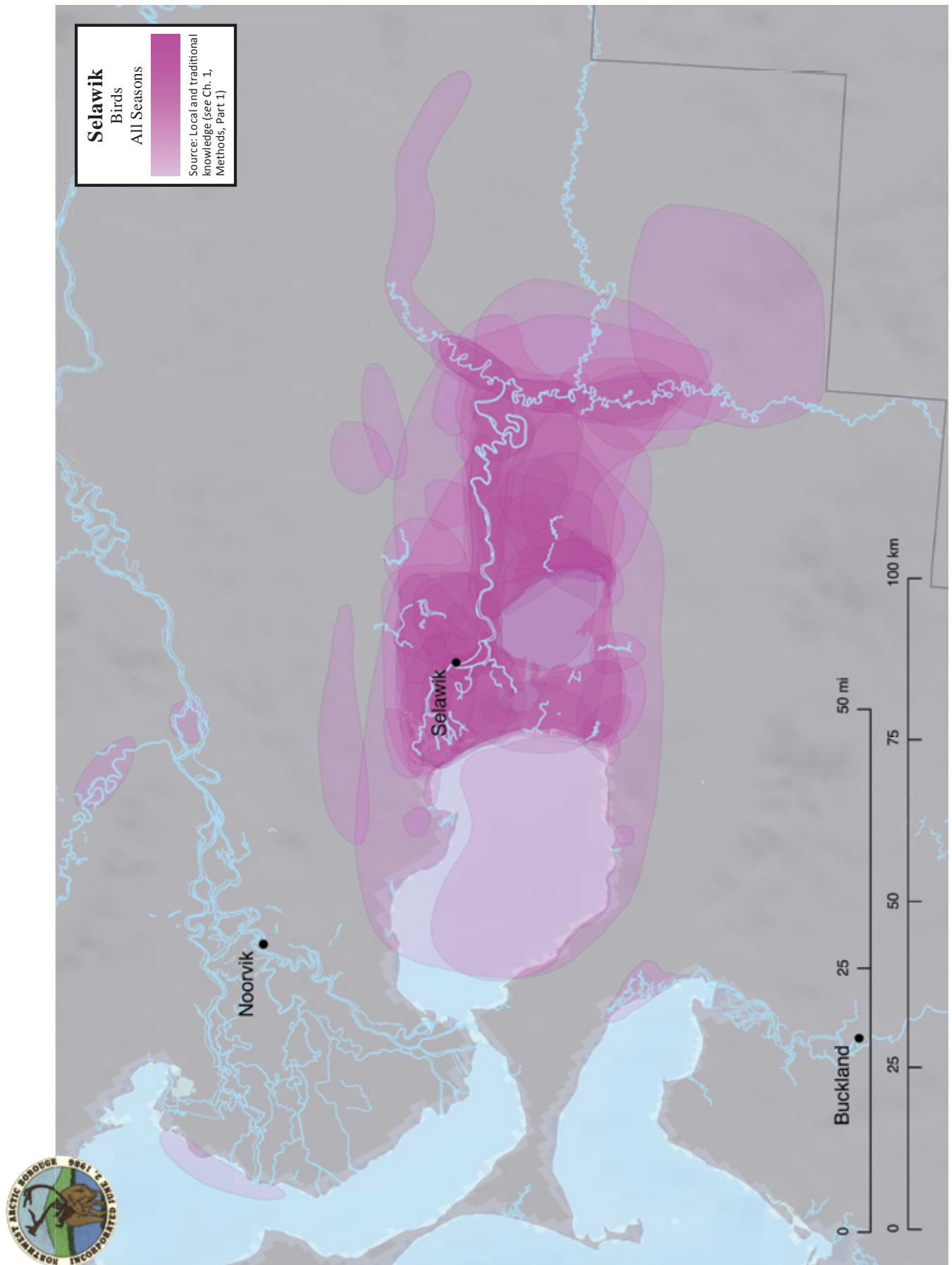
Marine mammals are rarely found this far inland, but once in a great while a lone seal or beluga whale will be spotted near town. Because these sightings are so rare, though, they are typically known and remembered by nearly all of the people.

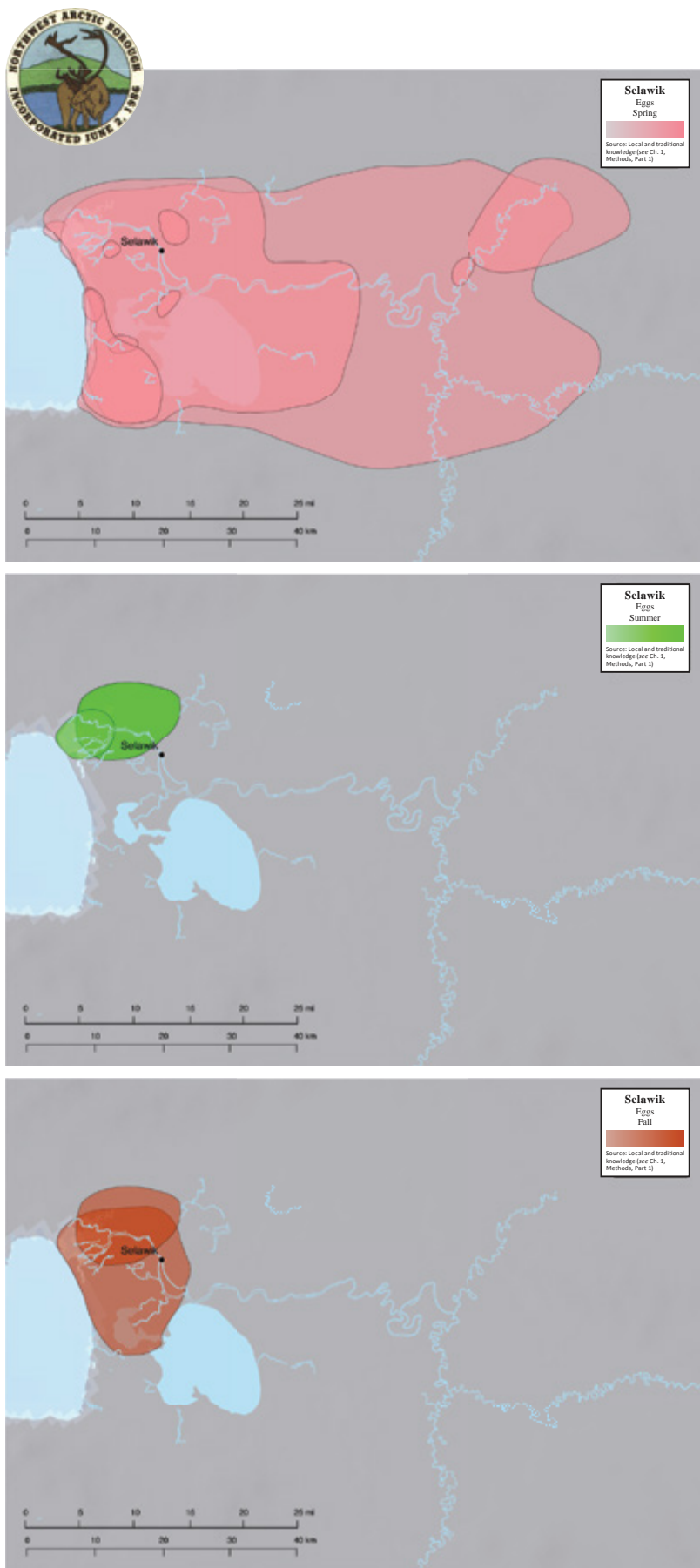
Interpreting the Color Scale on Maps in this Chapter

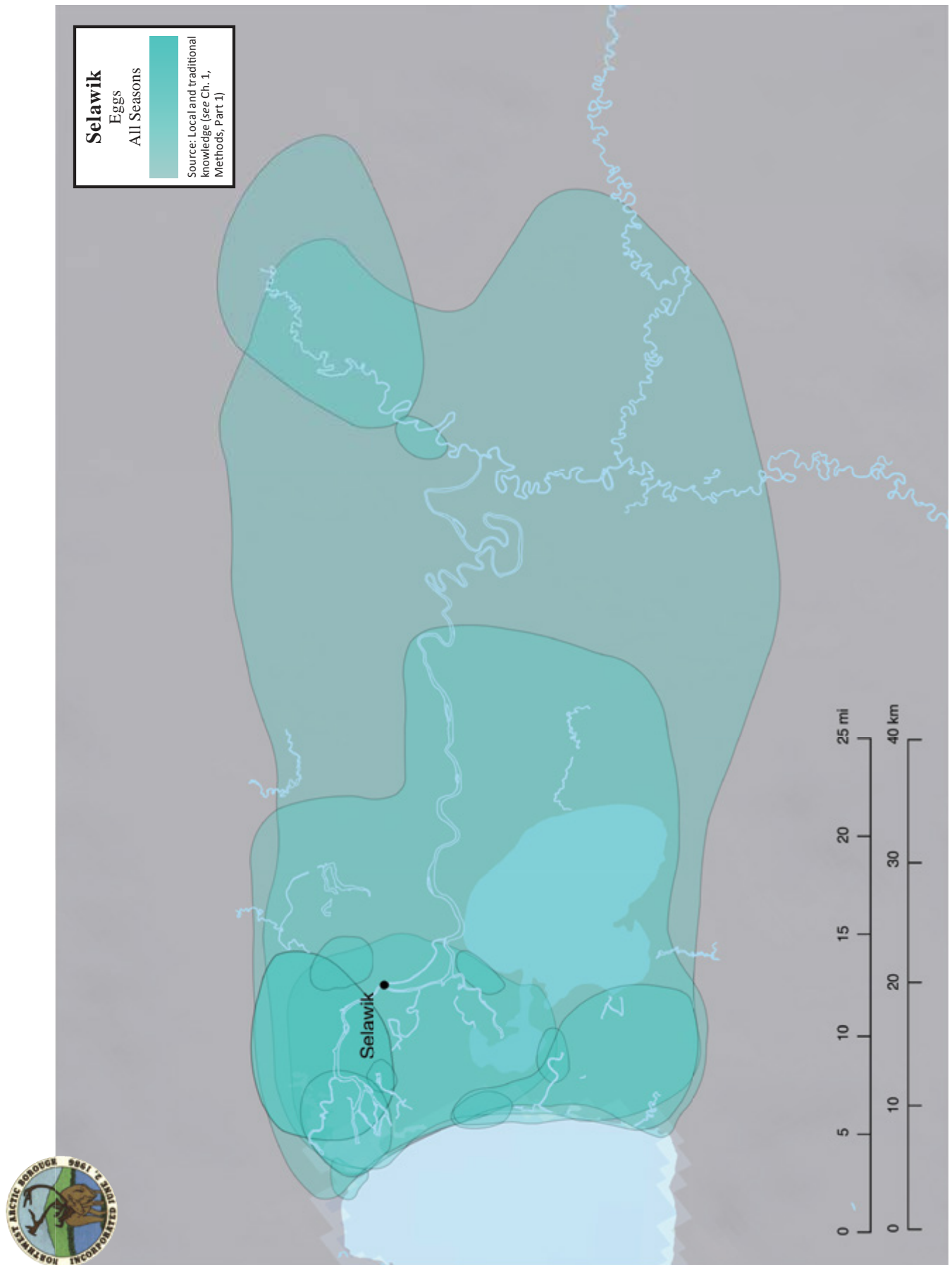
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.

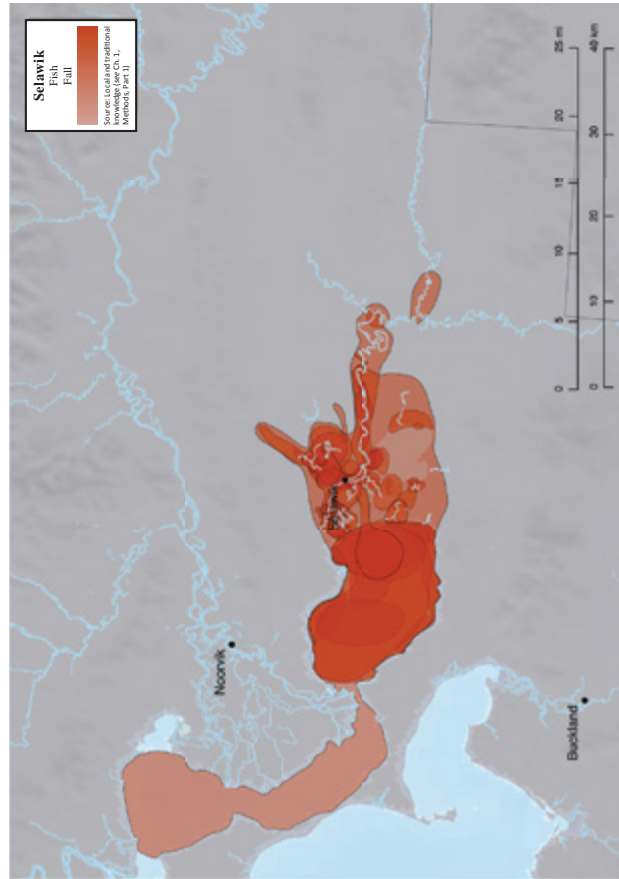
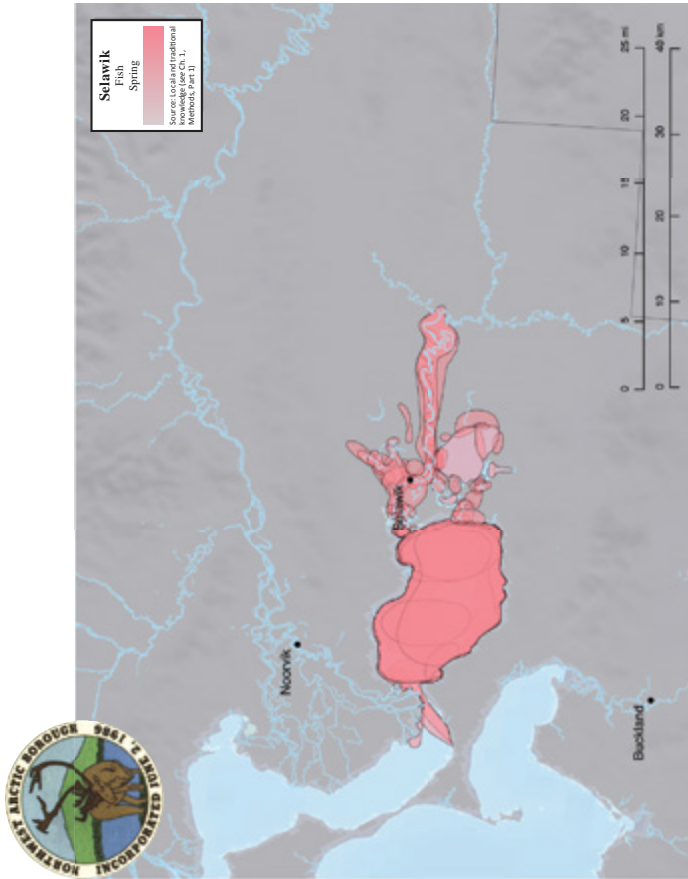


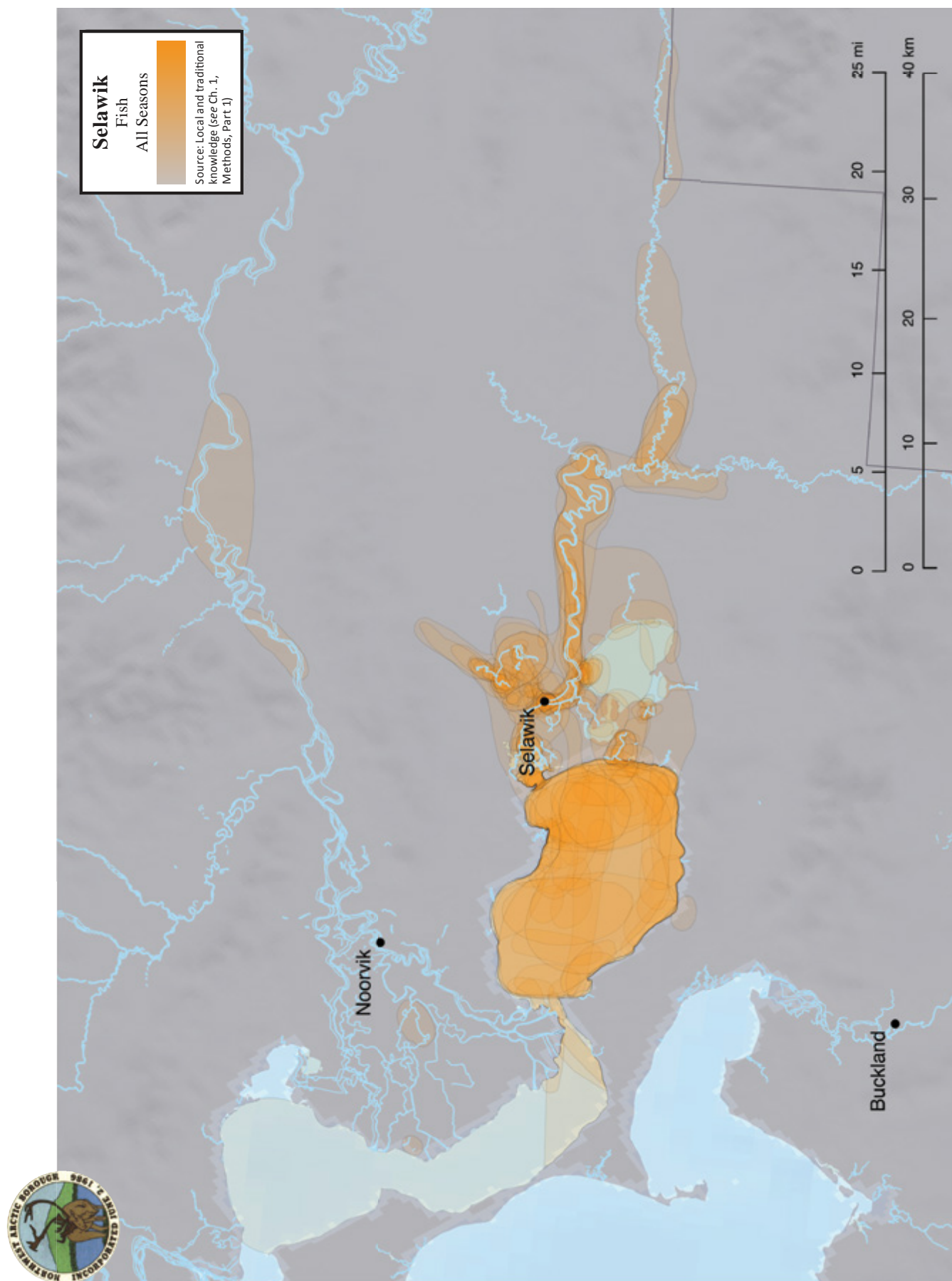


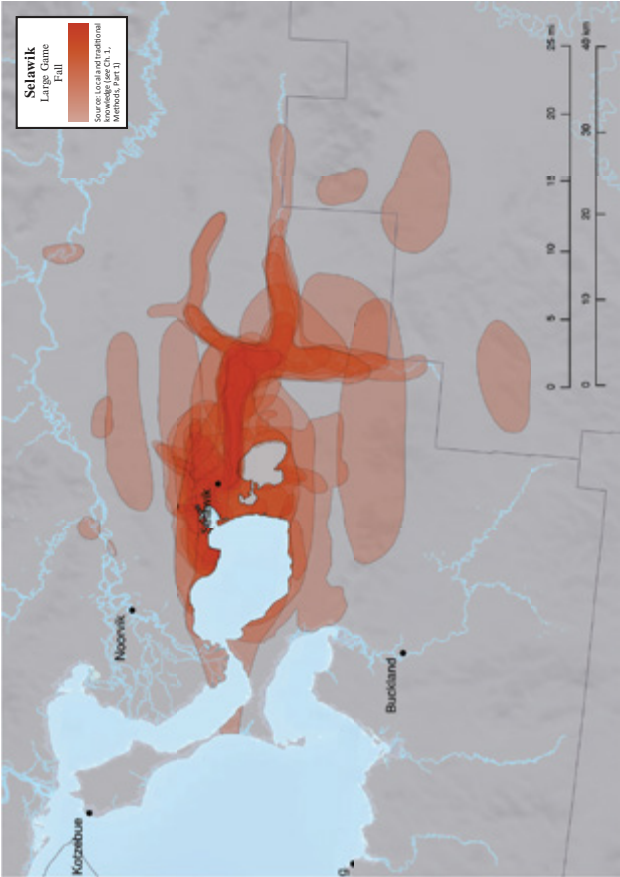
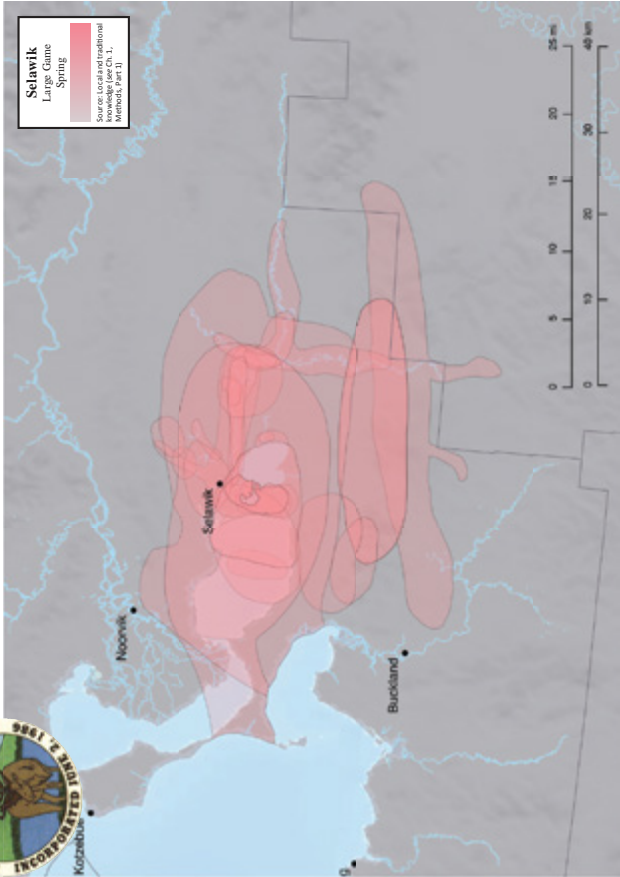
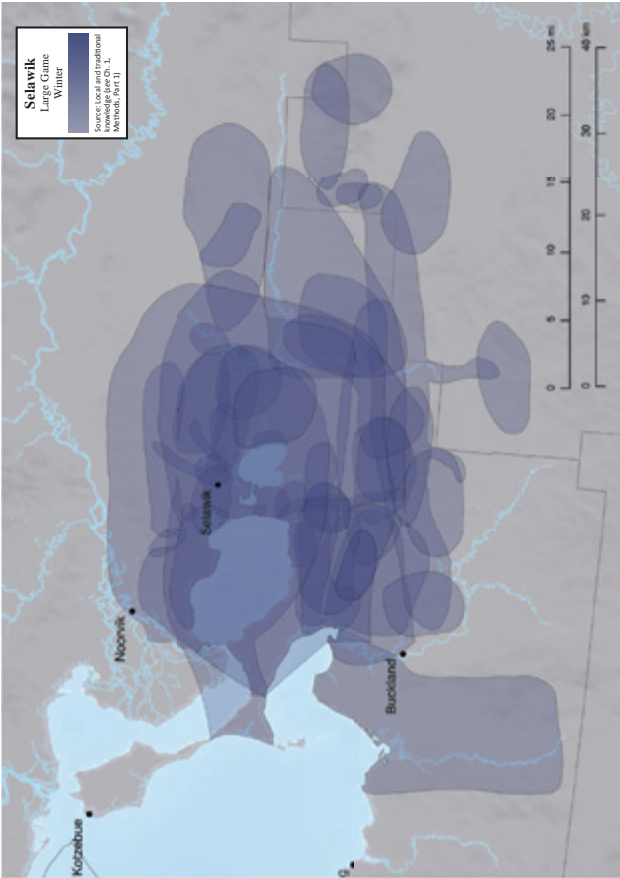
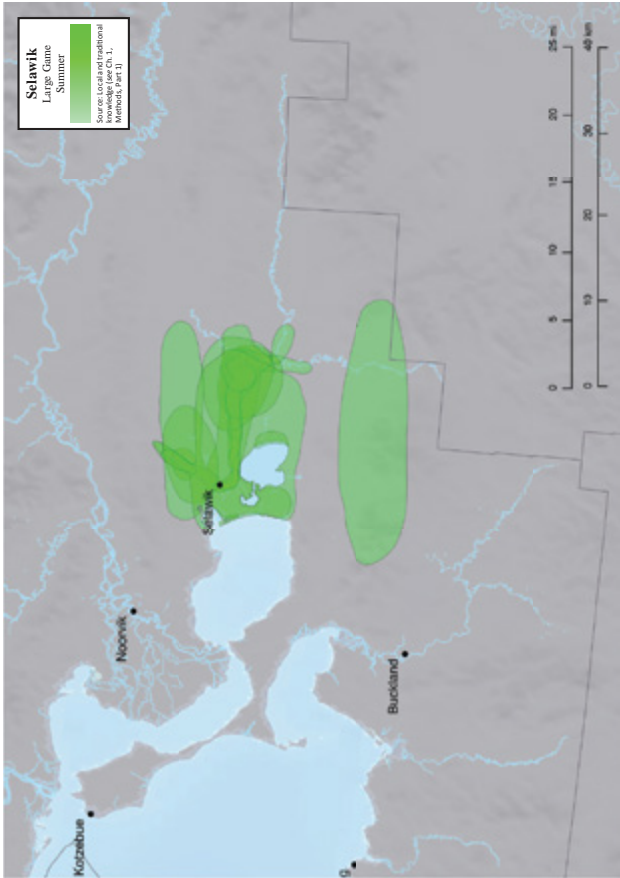


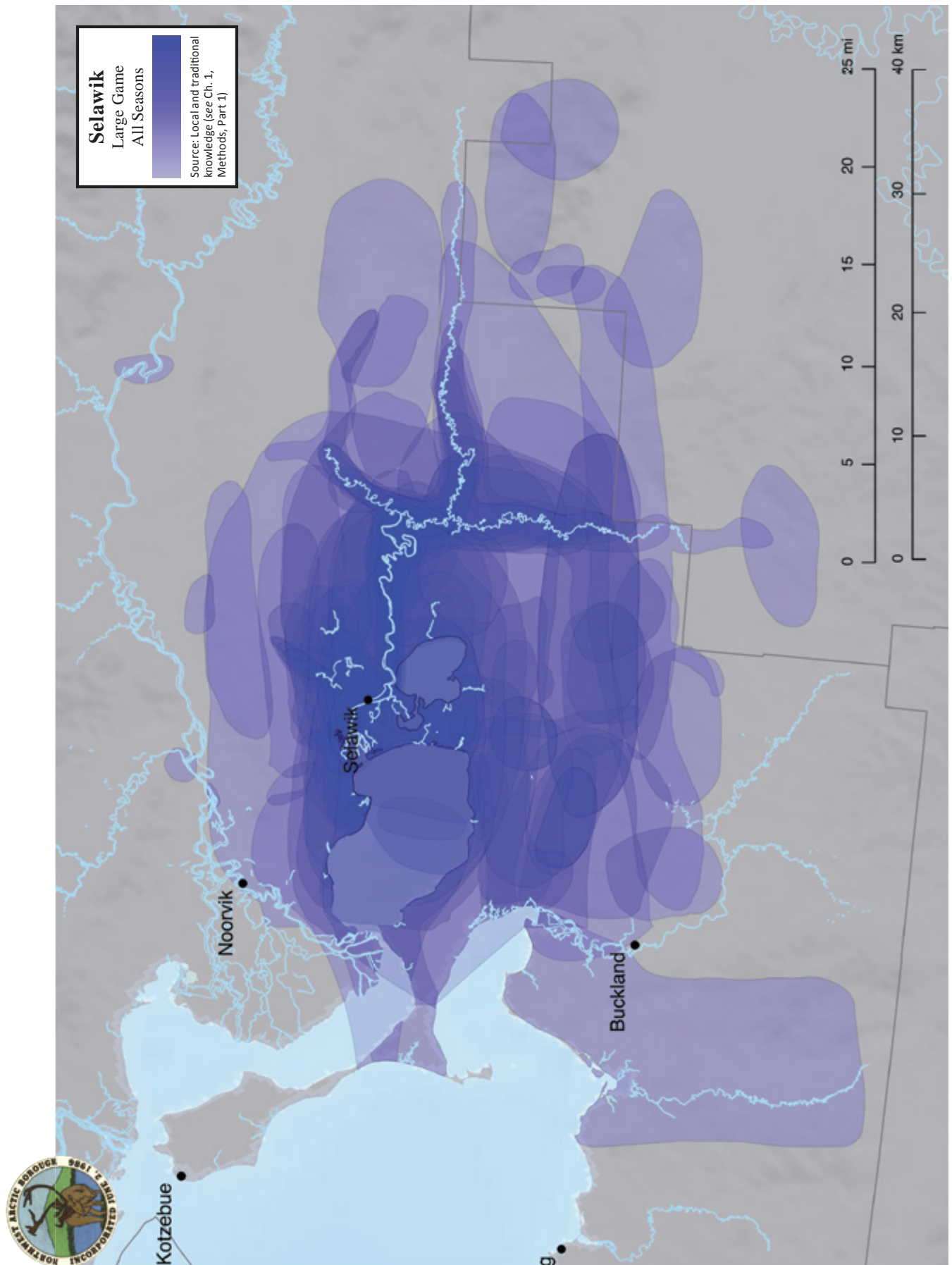




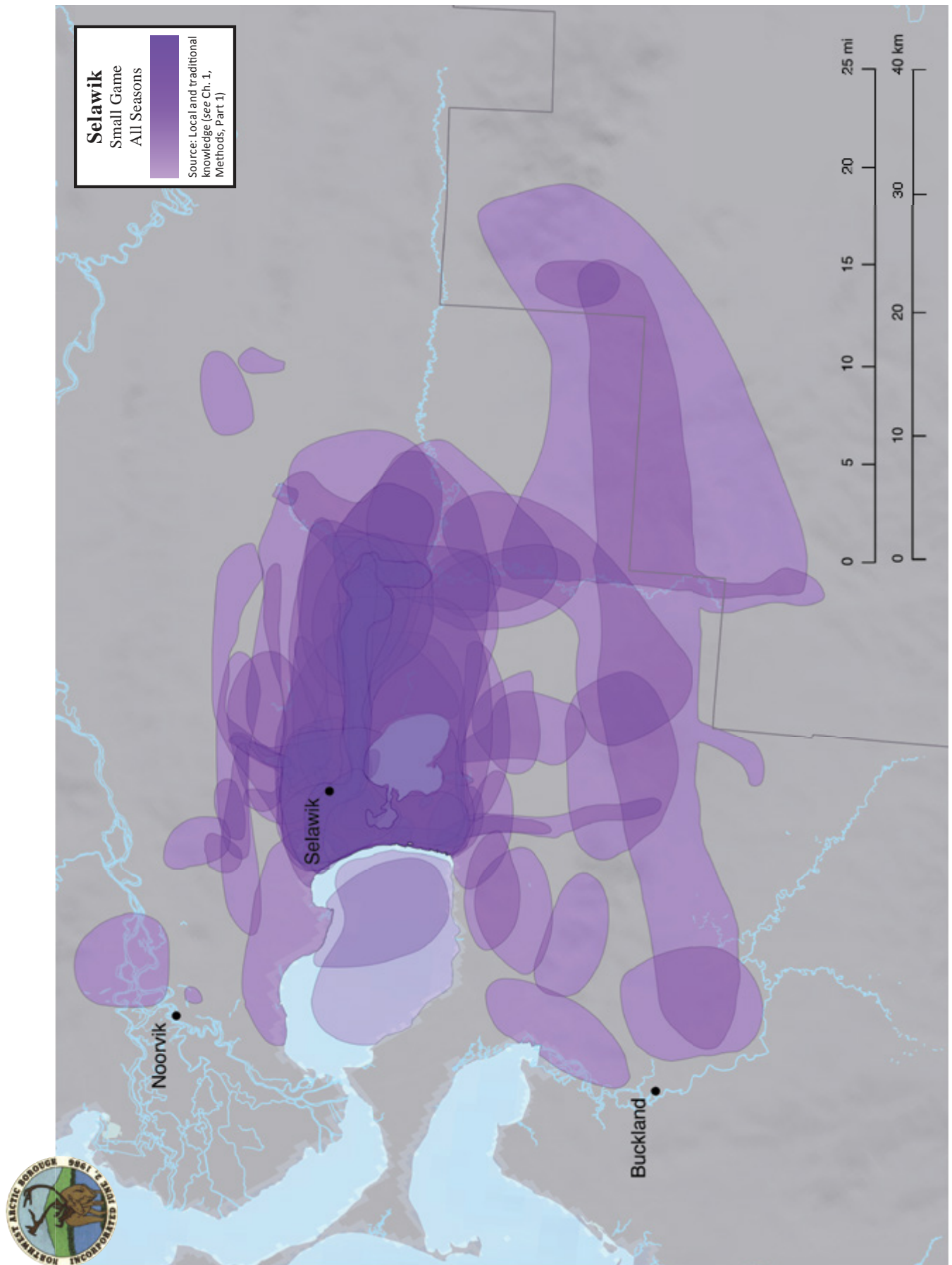




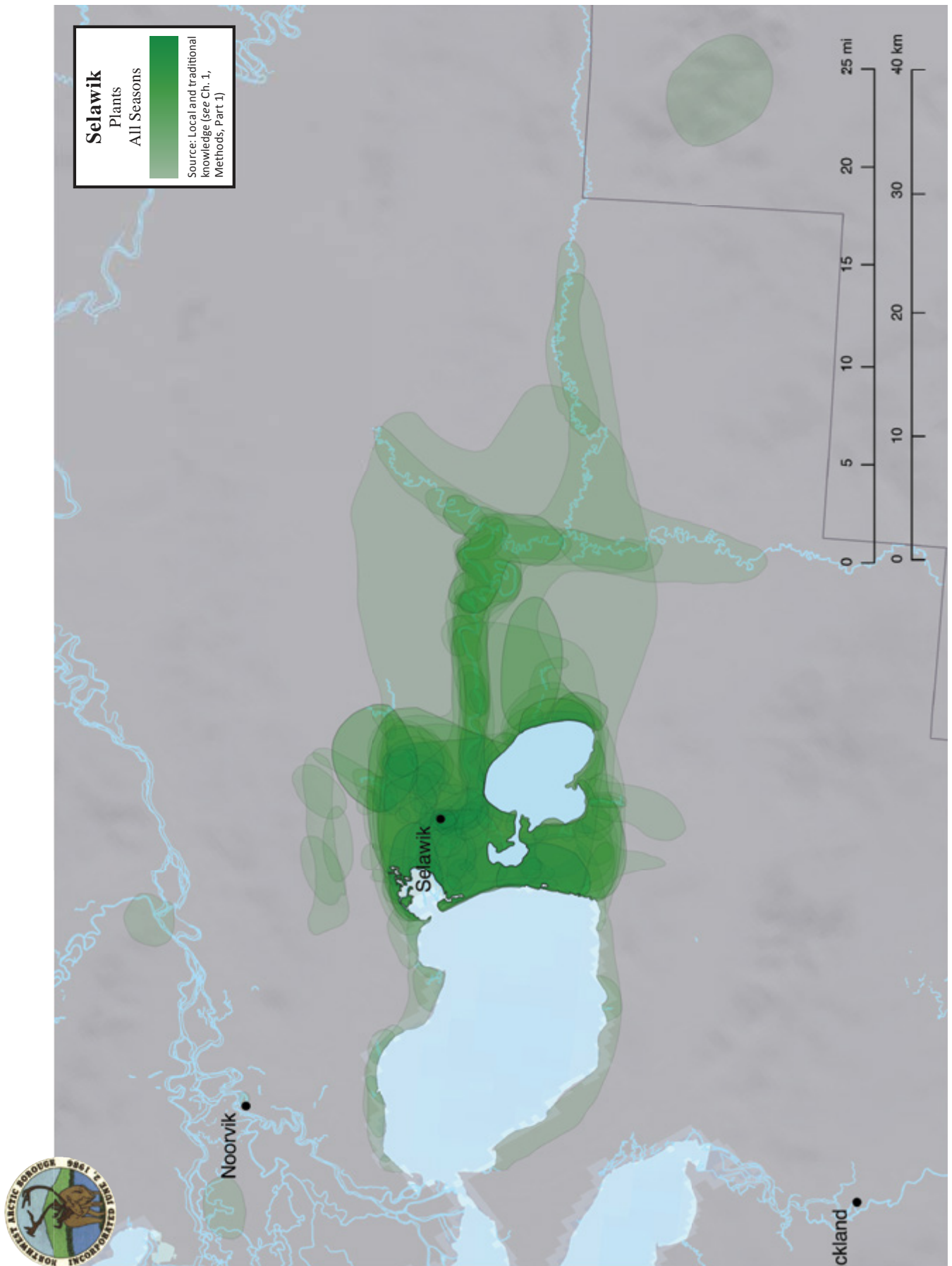


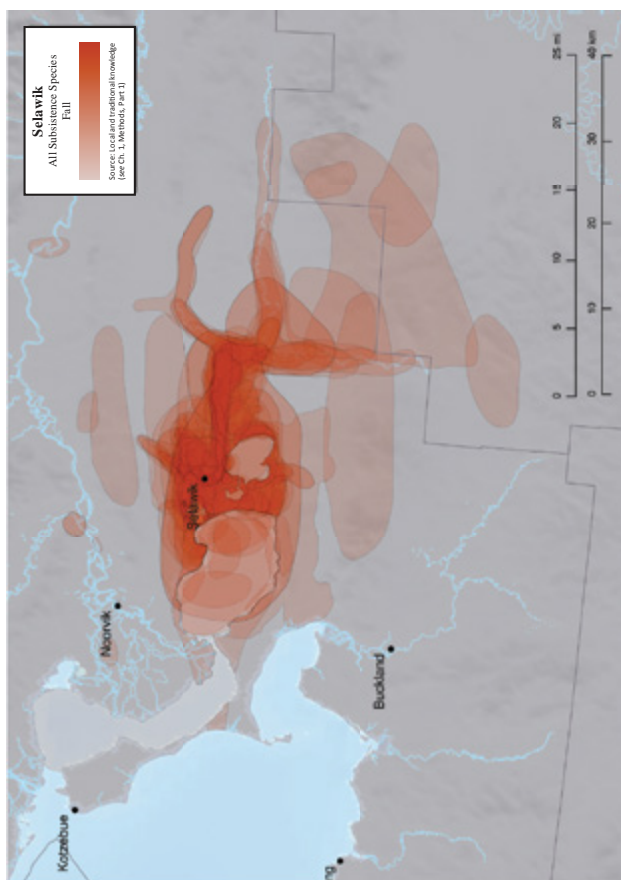
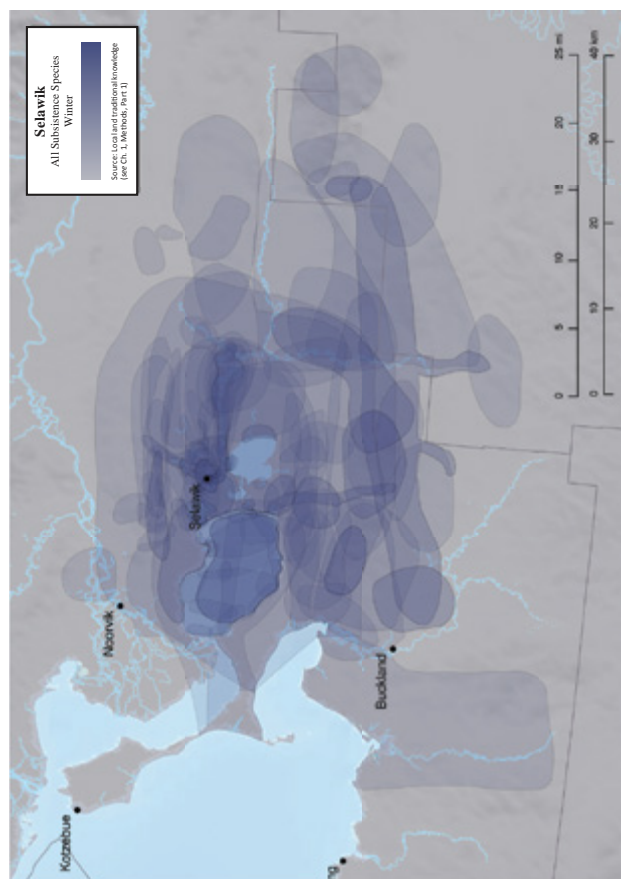


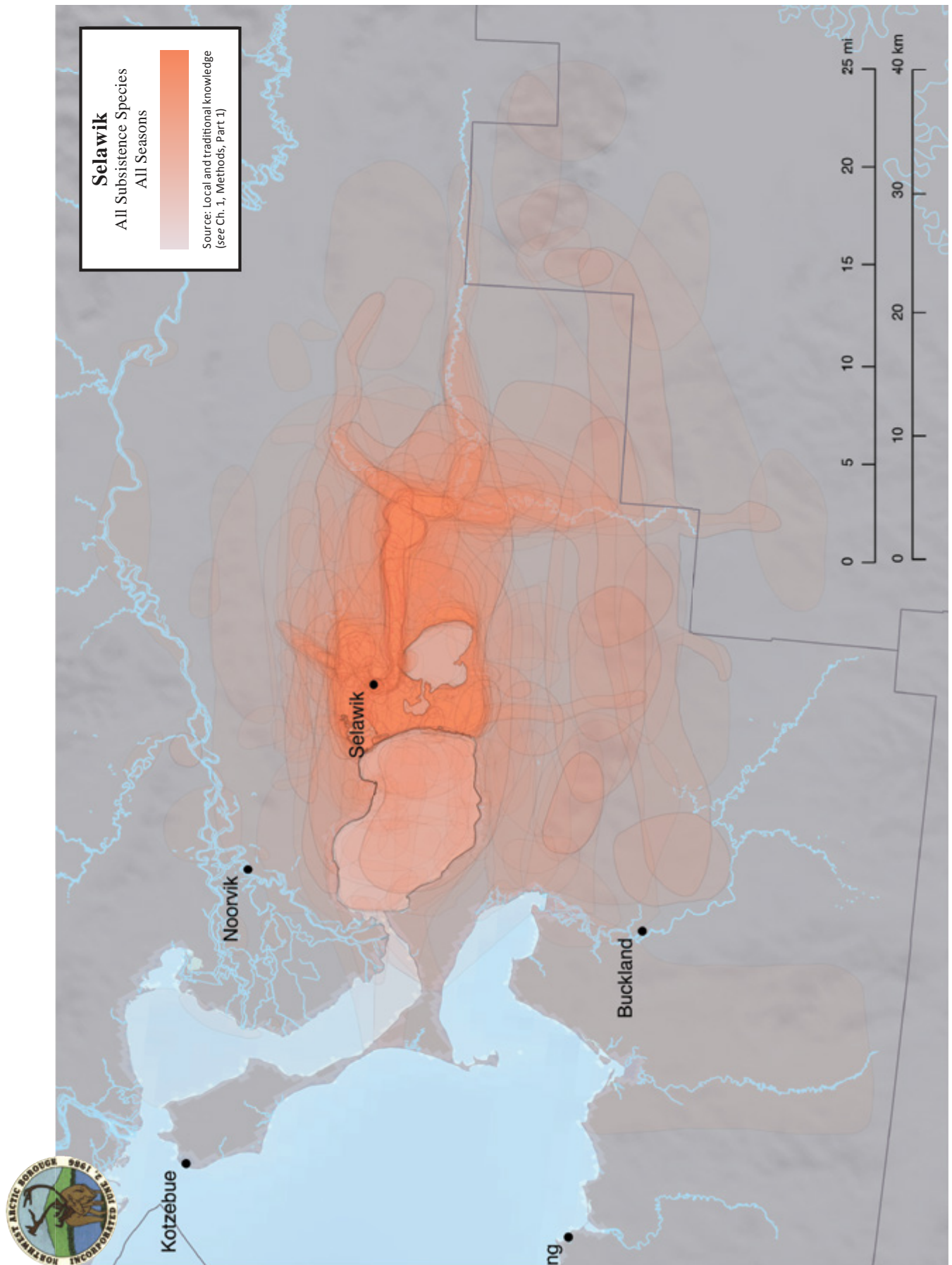












Nuataaq (Noatak)



Noatak erosion mitigation. Photo credit: Sarah Betcher.

The People of the Nuataam Kuuṇa

From its origin at the 8,200-foot-high Mt. Igikpak in the Shwatska Mountains of the Brooks Range, the Nuataam Kuuṇa (Noatak River) flows over 300 miles west, with the DeLong Mountains rising to its north and the Baird Mountains to its south, before turning south and meandering another 95 miles to Kotzebue Sound, where it enters the sea near the mouth of Hotham Inlet. Well-defined at its source, in its southernmost 5 miles the river spreads out across the Noatak basin in a wide system of braided, shallow channels. Archaeologists believe humans have inhabited the Noatak region for over 11,000 years.¹ At one time, the area's original people occupied at least 32 settlements along the upper and lower regions of the river.² Today, approximately 556 people,³ mostly descendants of the area's original inhabitants, live in one community—the village of Nuataaq (Noatak)—located on the river's west bank, just outside the federal Noatak National Preserve, 8 miles above the Arctic Circle and about 55 miles north of Kotzebue.⁴

Historically, two separate nations lived along the Noatak River. The Nuataagmiut occupied the headwater regions from Itivlik, or Howard Pass, to the upriver portion of the Noatak Canyon. The Naapaqtugmiut occupied the region from the downriver portion of the Noatak Canyon to just below where the Uallim Kuuṇa—the Eli River—joins the Noatak.⁵ The two main groups diverged for much of the year,

some heading upriver, with the caribou, and others staying in the forest. All gathered on the coast in spring to hunt seals and beluga.⁶ The territory of the Naapaqtugmiut also included the Kuugruuraq (Kelly) and Kuugruaq (Kugruruk)



Della Keats and Jenny Mitchell preparing fish at Sisualik Noatak camp, 1952. Photo credit: University of Alaska Fairbanks, Charles V. Lucier Collection, UAF-1966-80-33. Alaska Digital Archives.

river drainages, and areas extending along the southern Chukchi coastline 10 to 15 miles from Rabbit Creek in both directions. Present-day Noatak lies near the center of the old Naapaqtuġmiut region, where residents continue to hunt, fish, trap, and gather throughout the traditional Nuataaġmiut and Naapaqtuġmiut grounds.⁷ Since the permanent village was established in 1908,⁸ locals have harvested most of their food from the lower river drainage and coastal regions, but, increasingly, caribou and moose hunters travel farther inland to search for meat for their and their neighbors' winter supplies.⁹

The annual food-gathering cycle of the earliest people inhabiting the Noatak region began in the spring, with the move to the coast. Some families set up camp out on the ice; some stayed on the shore.¹⁰ *Ugruk* (bearded seal) hunting would get underway in late June. As described by social anthropologist Dr. Ernest S. (“Tiger”) Burch, “[t]hroughout the spring and summer the Napaaktuḡmiut lived in a type of dome-shaped house [consisting of] a frame of willow poles that were placed in the ground in a circle, bent over, and tied together at the top. A caribou skin was placed over the frame.”¹¹

The historical record shows spring trips to the coast continued uninterrupted after the arrival of outsiders.¹² Though the dwellings at the summer camps have changed shape over the years, the spring migration of Noatak residents to their historical sites at places like Sisualik (Sheshalik) and Nuvgurok continues to this day. As planners noted in the 2009 Red Dog Mine Supplemental Environmental Impact Statement (RDSEIS),

the duration of residents' trips to Sheshalik varies. Those individuals with employment or other responsibilities in Noatak or elsewhere reported taking multiple trips of shorter duration, while others travel to Sheshalik in May or June and stay there until the end of the summer, traveling back to Noatak in time for the fall caribou hunting season.¹³



Grace Bailey at Sisualik repairing a whitefish net, with granddaughter nearby, 1952. Photo Credit: University of Alaska Fairbanks, Charles V. Lucier collection, UAF-1966-80-27. Alaska Digital Archives.



Men and dogs starting up the Noatak River, early 1900s. Photo credit: Alaska Digital Archives, ASI-P949-03.

The coastal camps provide ready access for fishing, sealing, whaling, and bird hunting.¹⁴ Most of the beluga hunting at Sisualik occurs in June and July.¹⁵ A recent Alaska Native Tribal Health Consortium report provides a glimpse of Iñupiaq summer life at the coast:

Today, during the sealing and fishing seasons, Sisualik is still like a small village, with family owned camps stretching for miles along the coast of Kotzebue Sound. There are no local services in Sisualik, nor is there much in the way of infrastructure. Electricity is provided by small diesel generators or solar panels. Water is hauled from Kotzebue, Noatak, or collected from tundra streams in the vicinity.¹⁶

In early times, the people from the Noatak River drainage would leave the coast in August to return to their scattered settlements in time for the spawning run of chum salmon. Most located their winter huts near productive salmon streams. After storing the food brought back from the coast, the men would travel upriver in search of caribou while the women fished, usually with sealskin or willow seines.¹⁷ A rainy summer could cause the river to run fast, making seining difficult. As Burch writes, back then, a good year was a dry year.¹⁸ After freeze-up, ice fishing added to winter food supplies. In years of winter shortages, hunters would return to the coast to harvest more *ugruk* (bearded seal) from the nearshore ice.¹⁹

According to Burch, the same food shortage that led to famine in the early 1880s in the Selawik drainage (*see* p. 216) struck people living along the Noatak River, with equally awful effects.²⁰ The historical record suggests that, by the time missionaries established the first school in Noatak in 1908, food resources had rebounded—though people had apparently not forgotten the bad years. In his



Noatak Friends Church and Native Store. Photo credit: Sarah Betcher.

“Annual Report of the United States Public School at Noatak, in Arctic Alaska (1912-13),” teacher Frank Snowden wrote:

The natives were very successful in fishing during the summer, and they also swelled their caches to overflowing during the late-fall. As winter drew nearer, game seemed to multiply, and at no times during the whole winter were there any signs of a dearth of food. This has certainly been one of the most prosperous years the natives have ever enjoyed; they caught red and white fox, wolverine, and caribou in abundance. And, as fur has increased in value, they look forward to having more money this summer than they have had for several years. That the natives are waking up to their situation is manifested in the orders they sent to the States this spring for supplies. They are storing these in the event that next winter does not bring the success this one did.²¹

The early 20th century population of Noatak was also helped by a several-month-long quarantine in 1918 that, according to Quaker historian A.O. Roberts,²² spared residents from the influenza epidemic that took so many Iñupiat lives in villages farther to the south. The 1910 U.S. Census reported 121 people living in Noatak; by 1930, that number had nearly doubled to 212.²³

According to the Noatak history reported on the NANA website, the village was founded when

Friends Church missionaries asked families living in sod houses in various settlements along the Noatak River to establish a permanent community where the Friends Church would build a school and place of worship. Elders selected the current site of Noatak, which at the time was a seasonal hunting and fishing campsite, because of its strategic location for access to various camp sites, its ready supply of wood for heating, its

fishing productivity and its year-round hunting and trapping.²⁴

The first airplane to land in Noatak arrived in the 1920s. Eventually, the state built a 3,992-foot landing strip. In 1939, the Native Village of Noatak was established as a recognized Indian tribe under the Indian Reorganization Act, which became law that year, and the Post Office was built a year later. Unlike other villages in the Northwest Arctic Borough, Noatak has not incorporated as a municipality. The tribe governs the village and provides basic services. The ANCSA village corporation merged with NANA along with the Borough’s other villages in the 1970s.²⁵

Noatak’s 550+ residents, 95% of whom are Iñupiat, today live and work in old and new sections of the village. Modern housing, mostly constructed by the Northwest Iñupiat Housing Authority, has been built farther inland in the general area of the Maniilaq clinic and the school. The old village lies closer to the river.²⁶

People heat their homes with oil and wood. Heating oil and gasoline can be purchased and pumped at the Native store. With freight barges unable to make it up the shallow river to the village since the early 1990s, fuel prices in Noatak are among the highest in the region. According to the 2011 Alaska Native Tribal Health Consortium (ANTHC) climate change report for Noatak, in 2010, the per-gallon price for fuel oil was as high as \$10.99 and \$11.99 for gasoline. In times of fuel shortage the prices can be as high as \$15.00 per gallon.²⁷ Some supplies still come in on shallow draft boats that navigate the river’s channels during the ice-free months, typically late May through early October.²⁸

Some year-round employment opportunities can be found in Noatak—with the tribe, school district, Maniilaq Association, or at a few retail operations. Residents also work at the Red Dog Mine or hire on with the seasonal commercial fishing industry out of Kotzebue. According to

**INCREASE IN VISITORS TO
NOATAK NATIONAL PRESERVE BETWEEN
1983 AND 2013**

	RECREATION VISITORS	NON- RECREATION VISITORS
1983		
January	85	100
February	50	200
March	100	460
April	175	300
May	100	25
June	400	140
July	1,000	250
August	1,500	600
September	900	250
October	200	0
November	75	75
December	20	100
1983 Totals	4,605	2,500
2013		
January	2,200	800
February	1,100	350
March	1,000	300
April	600	300
May	600	432
June	700	456
July	1,357	500
August	1,050	325
September	1,000	450
October	900	400
November	4,500	1,500
December	1,900	350
2013 Totals	16,907	6,163

SOURCE: NATIONAL PARK SERVICE



Napaaqtuġmiut School, completed in 2009, houses elementary, middle, and secondary students.

Photo credit: Sarah Betcher.

the State of Alaska's community statistics, among Noatak villagers who work, 31% earn less than \$5,000 a year.²⁹ With dependence on subsistence rising with every wage dollar not paid, local people continue to rely on local wild resources to put food on the table.

As in all of the Northwest Arctic Borough villages participating in this study, traditional hunting, fishing, trapping, and gathering are braided through modern Iñupiaq life in Noatak in much the same way the river braids itself through the sandy delta. But, just as those formerly navigable river channels are losing depth to rising arctic temperatures,³⁰ so are local subsistence harvesters losing once-secure subsistence food resources under pressures from outside—most notably, upriver big game trophy hunting.³¹

With vast areas of federal preserves in Noatak's immediate vicinity (the Noatak River runs through both the 10,265 square mile Noatak National Preserve and the 13,238 square mile Gates of the Arctic National Park and Preserve), it would be easy to assume the village's hunters enjoy ready access to their traditional large mammal food sources. The Alaska National Interest Lands Conservation Act,³² which established the reserves, allows subsistence hunting on them, but it also provides nonresident trophy hunters access to the same big game resources that local Iñupiaq villagers depend on to survive. As of July, 2014, eight trophy hunting transport companies held permits to operate in the Preserve.³³

At its peak in 2003, the Western Arctic Caribou Herd numbered 490,000 animals. The last caribou census, conducted by ADF&G in 2013, counted fewer than half that many—about 235,000.³⁴ The situation, in the words of one ADF&G writer, is “a crisis in the making.”³⁵

While ADF&G's game managers attribute the decline of the herd to a variety of causes—from increased predation by wolves and bears to changes in caribou grazing resources as a result of warming arctic temperatures³⁶—many local residents point to the influx of sport hunters over the past few decades. It is not just the number of caribou the outsiders hunt, say villagers, but where they go to hunt. In a

recent *Alaska Dispatch News* article, Enoch Mitchell from Noatak pointed to an incident where commercial guides had set up camp on the caribou migration route. “[The caribou] couldn’t pass because there were hunters on the other side of the river,” he said. “It’s affecting the village quite a bit. They could hunt above where we hunt and then the caribou would pass by us, too.”³⁷

Under Title 8 of ANILCA, the State of Alaska has authority to manage fish and game on federal land reserves under certain conditions, one of which is that subsistence be given priority over “other purposes.”³⁸ The law put in place local and regional advisory groups to prepare proposals for the state Board of Game. Whenever the Board refuses or modifies a recommendation, it is required by law to state clearly the factual basis for its decision.³⁹ Sometimes, ADF&G also establishes working groups to bring user groups together to try to resolve management disputes.

Nowhere in Alaska is the conflict between subsistence and trophy hunting more severe than in Game Management Unit 23 (GMU 23) along the Noatak River.⁴⁰ In a 2006 article in *Alaska Fish and Wildlife News*, Nome ADF&G educator Sue Steinacher wrote about the conflict building between subsistence and trophy hunters in GMU 23:

[Iñpi at] are meat hunters, generally leaving behind the racks—large or small—in the field with the gut pile. Each fall they watch in disbelief as pallet after pallet of antlers—and very little meat—disappear into the bellies of Alaska Airlines jets. “I see these guys on a daily basis. ‘Okay, where’s your meat,’ I ask them? No meat. Just antlers,” complains an Alaska Airlines cargo agent.⁴¹

In 2008, the department organized the Unit 23 Working Group to bring stakeholders together to try to find cooperative game management solutions (*see* box on next page). A broader working group, the Western Arctic Caribou Herd Working Group, has been set up to try to resolve user conflicts across the herd’s territory. Its stated mission is

[t]o work together to ensure the long term conservation of the Western Arctic Caribou Herd and the ecosystem on which it depends, and to maintain traditional and other uses for the benefit of all people now and in the future.⁴²

In cooperation with the working groups, over the past few years state game managers have taken some steps to address the problems commercial operations are creating for local villagers, including imposing flight restrictions in the Noatak Controlled Use Area, which extends five miles on either side of the river from the sea up to the mouth of Sapun Creek (*see* p. 157 for much of the fall).

In early 2015, the Noatak and Kivalina Advisory Committee submitted an agenda change request (ACR 3) for the Board of Game’s 2016 meeting, requesting the Noatak Controlled

Where Outside hunters set up

Hunter conflict between residents and nonresidents is highest in Unit 23 — an area in the Northwest Arctic — where most of the caribou are taken.

Near Noatak, hunters from Outside are flown in and set up camp on the Noatak River in spots that divert the herd away from town and away from local subsistence users, said Noatak’s Enoch Mitchell.

“They couldn’t pass because there were hunters on the other side of the river,” Mitchell said. “It’s affecting the village quite a bit. They could hunt above where we hunt and then the caribou would pass by us, too.”

He added that the herd is coming later each year and crossing farther north, forcing local hunters to travel longer distances.

“We have to do something now before they get depleted,” Mitchell said.

SOURCE: ALASKA DISPATCH NEWS,
DECEMBER 28, 2014⁴⁴

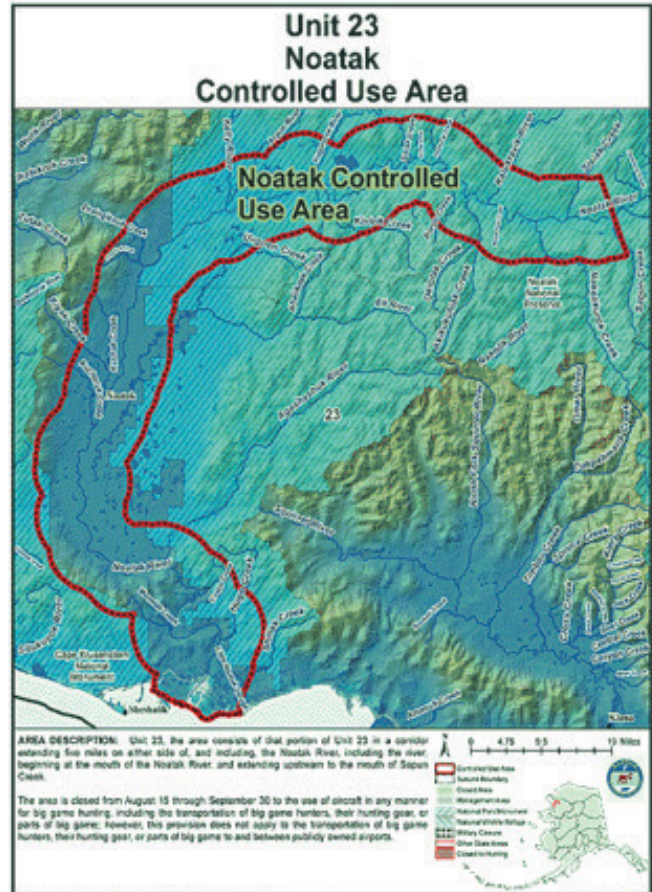
Use Area be enlarged to 20 miles on either side of the river, informing the Board that

- subsistence needs for caribou of the villages of Noatak and Kivalina are not being met;
- caribou migrations are being diverted away from the villages of Noatak and Kivalina and have been for three years by hunters who are too densely populated along the river causing the caribou to move further out of their normal migration that would normally go through the current Controlled Use Area which was established to protect traditional hunting areas by people in Noatak and Kivalina;
- young people are losing valuable information and time with elders who are passing on such as caribou hide preparation, sewing and hunting skills;
- we are losing our identity with the caribou. People are spending substantial amounts of money (\$1000-1500) to try to get caribou and are unsuccessful.⁴³

In 1987 Heather Noble wrote in a *Duke Law Review* article that, for Iñupiaq villagers at that time, it was “more efficient to use earned money to purchase equipment for hunting and fishing than to buy food.”⁴⁵ In 2015, with locals spending \$1,500 on unsuccessful caribou hunting trips, Noatak’s people are becoming increasingly concerned that this may no longer be the case.

Unit 23 Working Group

“The Unit 23 Working Group formed in early 2008 to discuss issues related to fall hunting and to work toward developing solutions that all can support. The 20-member group includes representatives of regional and tribal governments and organizations, land and wildlife management agencies, the Big Game Commercial Services Board, the Alaska Professional Hunters Association (which include representatives from the hunting guide and transport industries), Fish and Game Advisory Committees, the Northwest Arctic Regional Advisory Council, and the Board of Game and Federal Subsistence Board.”



THE SEVEN VILLAGES IN THIS STUDY RESIDE IN GAME MANAGEMENT UNIT (GMU) 23, OUTLINED IN RED ON THE MAP ON THE LEFT. THE ALASKA DEPARTMENT OF FISH AND GAME ESTABLISHED THE NOATAK CONTROLLED USE AREA WITHIN GMU 23 (SHOWN ON THE RIGHT) AS PART OF THE STATE'S EFFORT TO ENSURE ADEQUATE LARGE GAME SUBSISTENCE RESOURCES REMAINED AVAILABLE TO LOCAL VILLAGERS.

Unit 23 Working Group Purpose

“The purpose of the group is to find solutions to hunting conflicts that will preserve the Inupiaq values of the region, including opportunities for local hunters to take caribou as needed, while also providing reasonable opportunities for non-local hunters to hunt caribou in the unit. The group makes *advisory* recommendations to the regulatory agencies and boards that manage hunting, land use and wildlife in Unit 23. The group works cooperatively to reach consensus decisions on what to recommend.” (Emphasis in original.)

SOURCE: ALASKA DEPT. OF FISH AND GAME. 2015. GMU 23 WORKING GROUP: ADDRESSING FALL HUNTING CONFLICTS. [HTTP://WWW.ADFG.ALASKA.GOV/INDEX.CFM?ADFG=PLANS.UNIT23](http://WWW.ADFG.ALASKA.GOV/INDEX.CFM?ADFG=PLANS.UNIT23).

“Whether you choose an outfitted hunt, the peace of mind of a guided hunt or a drop hunt, our base camps are all ideally located adjacent to major travel routes for caribou as they migrate into the Kotzebue Sound area for winter.”

From a Noatak area big game trophy guide advertisement.



“

This year, there were a lot of reports
hunter can purchase—very common. Since this
increased, our caribou are not crossing like
they used to.”

Eileen S. Foster, Noatak, 2014

DECREASE IN CARIBOU HARVESTING IN NOATAK BETWEEN 1999 AND 2010

	1999	2010
Households “using” caribou	96%	55%
% of hunters searching for caribou	74%	20%
% of hunters successful	72%	20%
Individual caribou harvested	683	66
Pounds of caribou meat harvested	92,902	8,937

SOURCE: [HTTP://WWW.ADFG.ALASKA.GOV/SB/CSIS/INDEX.CFM?ADFG=HARVINFO.HARVEST](http://www.adfg.alaska.gov/sb/csis/index.cfm?adfg=harvinfo.harvest)

Name	Inupiat	Traditional Season	2010–2011 Season	Comments
Bearded Seal	Ugruk	June	Sea ice conditions are changing	Greater dependence on seal because of high cost of living.
Beluga Whale	Sisuak	April	Same	We wait til word from the coast, Kivalina and surrounding, then head out from Noatak.
Blueberries	Asiavik	End of July	Same	It was a good berry season.
Caribou	Tuttu	August–Winter	No Caribou season (missing)	Frustration—there was potential for boating all the way into October but no Caribou.
Chum Salmon	Qalugraug	July–Sept	Same	Drying salmon has been difficult. Temperature is often too warm.
Dolly Varden Trout	Aqalukpiq	Year Round	Same	People did not catch many trout this year.
Moose	Tiniikaq	September–October	Same	Harvested as you come upon them, not necessarily heavily sought after, 3 moose were harvested by community members this year.
Salmonberry	Aqpik	End of July–August	Same	
Whitefish	Sii, Qaaligig	September–October, May–June	No change	Some big whitefish caught recently by some proud community harvesters.

AN ALASKA NATIVE TRIBAL HEALTH CONSORTIUM SUBSISTENCE HARVESTING SURVEY REPORTED “FRUSTRATION” OVER LACK OF CARIBOU IN 2010.



“The taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes.”

16 U.S.C. § 3114 (1982), (ANILCA § 8)

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Traditional foods important to the people of Noatak today

NOATAK TRADITIONAL FOODS BY EDIBLE MASS, UNIQUE AREAS AND PEOPLE			
SPECIES	BY EDIBLE MASS (% OF TOTAL FOOD HARVESTED ¹)	BY NUMBER OF UNIQUE AREAS (% OF 386 MAPPED POLYGONS)	BY PROPORTION OF PARTICIPANTS (% OF 35 NOATAK RESIDENTS IN STUDY)
<i>Tuttu</i> Caribou (<i>Rangifer tarandus</i>)	31.4	18.1	94.4
<i>Qalukpik/Aqalukpik</i> Trout/Dolly Varden (<i>Salvelinus malma</i>)	16.8	11.1	100.0
<i>Ugruk</i> Bearded Seal (<i>Erignathus barbatus</i>)	13.0	6.0	88.9
<i>Qalagruaq</i> Chum Salmon (<i>Oncorhynchus keta</i>)	12.9	2.1	33.3 ⁵
Berries (blueberry, cranberry, salmonberry, ⁶ blackberry combined)	4.5	10.9	66.7
<i>Ivugasrugruk</i> Mallard (<i>Anas platyrhynchos</i>)	0.1	8.8	72.2
<i>Sisuaq</i> Beluga whale (<i>Delphinapterus leucas</i>)	4.0	6.0	88.9
Whitefish (excluding sheefish; see n. 4)	7.4	7.3	88.9

According to ADF&G's subsistence harvest data,¹ caribou provide the most edible mass of traditional food (31.4% of total harvest) in Noatak, followed by "trout" (16.8%), bearded seal (13.0%), and *ql agruaq* or chum salmon (12.9%).

Referring to villagers' reports of how many places they go to search for subsistence foods (% of mapped polygons, as shown in the second column of the table), caribou were again at the top of the list² at 7 polygons (18.1%), followed

by trout at 43 polygons (11.1%), *ivugasrugruk*, or mallard, at 34 (8.8%), and different combinations of berries—most commonly salmonberry, *asraivik* or blueberry, *paungaq*, or “blackberry,” or “crowberry” and cranberry³ designated in 42 (10.9%).

Finally, in terms of the number of individuals surveyed who mentioned each species, trout was at the top of the list (100% of individuals), followed by caribou (94.4%), and beluga, bearded seal, and “whitefish” (each at 88.9%).

1. The numbers in the first column reflect Alaska Dept. of Fish and Game data. Community Subsistence Information System. <http://www.adfg.alaska.gov/sb/CSIS/>. Compared to the 2010 figure in the table on p. 159 (20%), this shows a slight improvement in hunter success.
2. The number of polygons indicates the number of areas hunters searched for caribou; a hunter may have many search areas, but still bring home little meat. See explanation in ch. 1, pp. 16-17.
3. Cranberries are known by several different names in Iñupiaq; see Appendix J.
4. “Whitefish” is another commonly used term that includes several different related species of salmonids, including most commonly, *qausriluk* or *siyyuilaq* the broad whitefish (*Coregonus nasus*); *qaalgig* or *ikkuiyiq*, humpback whitefish (*C. pidschian*); *quptik*, round whitefish (*Prosopium cylindraceum*); and may also include *tipuk*, Bering cisco (*C. laurettae*) and *qalusraaq*, *ajuutituuq*, or *qalutchiaq*, or least cisco (*C. sardinella*).
5. Many respondents simply identified “salmon” without further identifying species. “Salmon” was identified by 72.2% of respondents.
6. *Akpiq*

Robert Kirk's house in Noatak. Photo credit: Sarah Betcher.



Noatak Voices

It's late September¹ and all of the passengers on the incoming flight strain to spot caribou on the ground below. Some are coming home. Others chose this time of year to visit friends and relatives in Noatak, hoping to be there when the caribou come through. Once on the ground, all are greeted by villagers who have come to load their gear onto ATVs and offer a lift the short distance to scattering of houses nearby.

Robert Kirk, a well-known local food harvester lives in one of the larger houses. With building materials being so expensive to get into the village, most homes, even the newer ones, tend to be small. Robert explains that, with a job at the Red Dog Mine that ran most of the year, he managed to afford a good-sized home. He worked that job 16 years and left the mine in 2002.

"This time of year it's primarily caribou," he says. "Moose, if we happen to come across one. But it's primarily caribou. One moose and at least four caribou and that will get us through until we can hunt with snow machines." He lists off the family members and friends he shares meat with. All have limited access to traditional foods for one reason or another—a widow, a family who lives in a larger community with limited access to subsistence hunting.

"After freeze up, then we'll start fishing for trout," he explains. "If we don't get much trout by seining before freeze up, we'll be ice fishing pretty hard throughout October, November, and December. Then, when it gets back



Caribou meat drying on a Noatak porch.
Photo credit: Sarah Betcher.

into January/February, we'll go back to hunting caribou, and that will get us through until spring."

Once the meat is in, Robert usually returns to Noatak to fish. "We will be ice fishing for trout as they leave the creeks. They'll be heading out to sea, so we'll be trying to get the big trout that are leaving," he explains. "In the spring we'll work our way down to Sisualik, where it's time to hunt *ugruk*. And, if there's beluga around, we will get beluga." He also collects beach greens² from the Sisualik tidelands. The summer "is primarily gathering berries—salmonberries, blueberries, blackberries, cranberries, any roots we can find. Like *masru*.³ A few greens that we find on the beaches at Sisualik."

Robert has two camps—one upriver and one on the coast. He heats his house in Noatak with heating oil, but burns wood at his upriver camp. "That's our primary source of heat right now." He brings water up to the camp in pails. "At Sisualik, we have to bring out water, or collect rainwater off the roof."

After leaving the Red Dog, he took a full-time job at Maniilaq Association. These days, he has to plan ahead if he's going to go out hunting and gathering. He not only takes about three weeks off work each year to hunt but "there is always evenings after work that we would go out and seine for fish. So, like for instance, this week, so long as the river is flowing, we'll go out after work and go seine for trout until it gets dark," he says.

"When we are seining for trout and whitefish, we'll put them in burlap sacks and leave them on the beach in an attempt to age the fish without spoiling them. We will put a bed of willow down, to allow air to circulate underneath, and we'll put a layer of sacked fish, and then well put another layer of



Cutting and wrapping moose meat.

Photo credit: Sarah Betcher.

willow, and then another layer of sacked fish and cover it as densely as we can with willows on top to let air in but try to not let sun hit the sacks themselves. This part of the year, we start hanging fish with the eggs in the fish.

Working on harvesting and preserving food all year is something Robert's always done. "It's in my blood," he says. "My son, he enjoys doing it when he is home, too. It's food that I enjoy eating. On top of that, I know where it's coming from and what's in it. I could say that with 100% certainty. I could drop the Western food so easily," he adds. "But I choose not to."

Up the street, a group of relatives and friends are busy cutting up a moose they got upriver. Outside of a few of the nearby houses, people have hung up caribou meat to dry on various kinds of racks. Along the river, stands a full rack of



Fish drying on bank of the Noatak River. Photo credit: Sarah Betcher.



Photo credit: Sarah Betcher.

fish. Dead spawners litter the river bank, while a few can still be seen splashing their way up river.

Evelyn Shy stirs a pot of caribou soup on the stove. Three generations occupy the couch in her living room. Evelyn, a highly respected elder who in her younger years spent much of her time harvesting subsistence foods, stopped going to camp when her husband died in 1987. Before that, they would go to Sisualik every spring. While the men hunted *ugruk* “and whatever they could catch on the ice,” the women caught and dried fish. “We put nets out and catch lots of whitefish and hang them. Cut them up and hang them.” Evelyn’s dining room is full of family photos of her fishing and gathering days.

No longer on the front lines of fishing and gathering, like many elders, Evelyn takes time to share with others the skills her mother once shared with her. “When I was growing up, our mother used to let us work the fish she’d catch. We would scale the whitefish and get some water for her and then rinse the fish and she’d let us hang them. And she’d show us how to cut them.” *Those whitefish or trout fish, try not to tear the skin or they won’t be good to hang*, her mother would tell her. Evelyn likes to eat both trout and whitefish. “And those whitefish eggs . . . were good. Trout we put them away for our *quaq*.⁴ Or, if they were big, we would filet it and put it away for the winter—put it in the food saver or Ziploc.”

September is the best time to dry fish—when there is sunshine and not too many flies around to lay eggs on the fish. In the hotter months, she’s had to work hard to keep the larvae-laying flies off the fish. “We create smoke to try to keep the flies away from them.” With today’s warmer conditions, villagers keep fires going most of the time to keep the flies off. The time of freeze up has become hard to predict, but the river is usually frozen by October. “In the winter, we go ice fishing as soon as the river freezes up. We just put those fish away. Later in winter, we are still ice fishing. And hunting for caribou whatever they could in tundra; the hills. They go hunting. When the trapping season opens, they go trapping—November 15.”

Ice fishing continues on into the spring. “It’s a lot of fun to go ice fishing springtime when it gets warm,” she says. “Some people go hunt caribou or go ptarmigan hunting.”

Evelyn thinks traditional hunting, fishing, and gathering is changing because of changes in the weather. People have to be more careful because the ice could be too thin. It rains when it used to be snowing and the permafrost has been melting along the river.

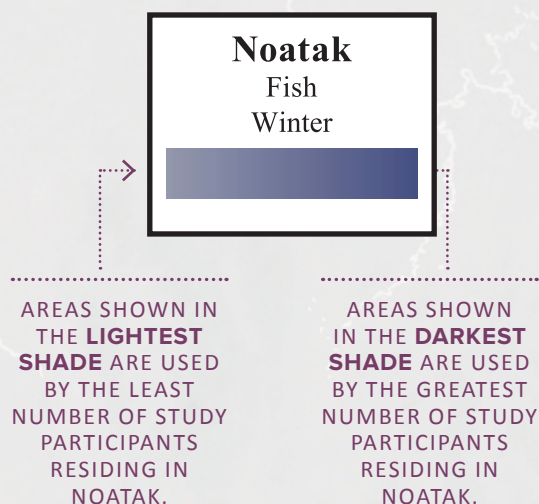
She walks to the freezer and shows what she’s managed to put up, making particular mention of her favorite foods. She holds out the container she obviously treasures most—a large jar of dried seal meat packed in seal oil that she always keeps at the ready.

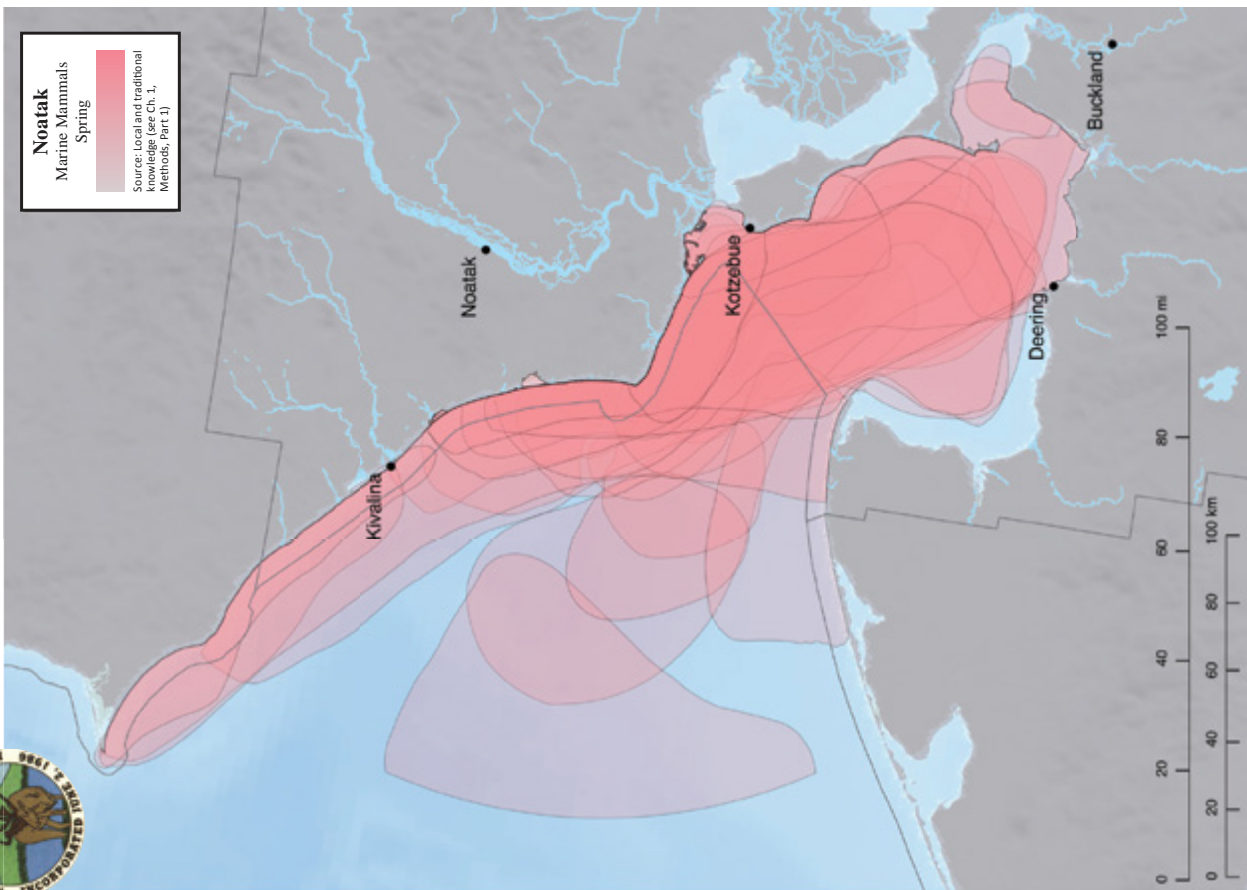
1. This section compiles interviews conducted by Sarah Betcher in Noatak in 2013.
2. Sea lovenge (*Hedysarum apinum*).
3. Edible taproot (*Hedysarum alpinum*) from the Alpine sweetvetch plant.
4. “Frozen meat.” Note, *quaq* refers not only to meat that is frozen to store but also to meat that is eaten frozen.

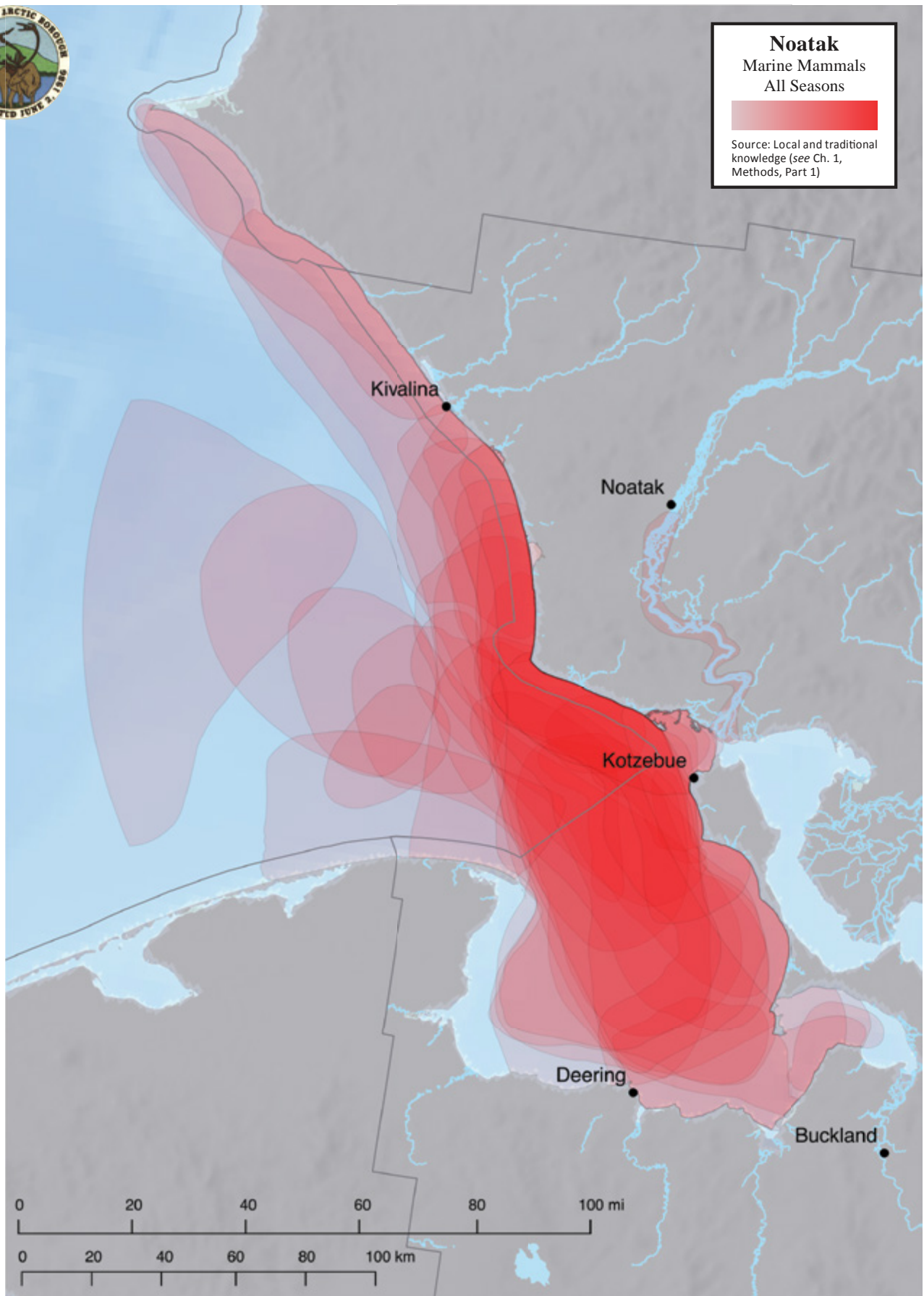
There can be little doubt that the Noatak River is *the* main transportation route for subsistence activity for the Noatak residents. A variety of fish can be found in the river throughout the year. In the fall, hunters will travel great distances by boat in search of caribou crossing the river, and moose are frequently found near the riverbanks as well. In the springtime, waterfowl are abundant, and nests full of eggs can be found along the riverbanks and countless creeks and sloughs that drain into the river.

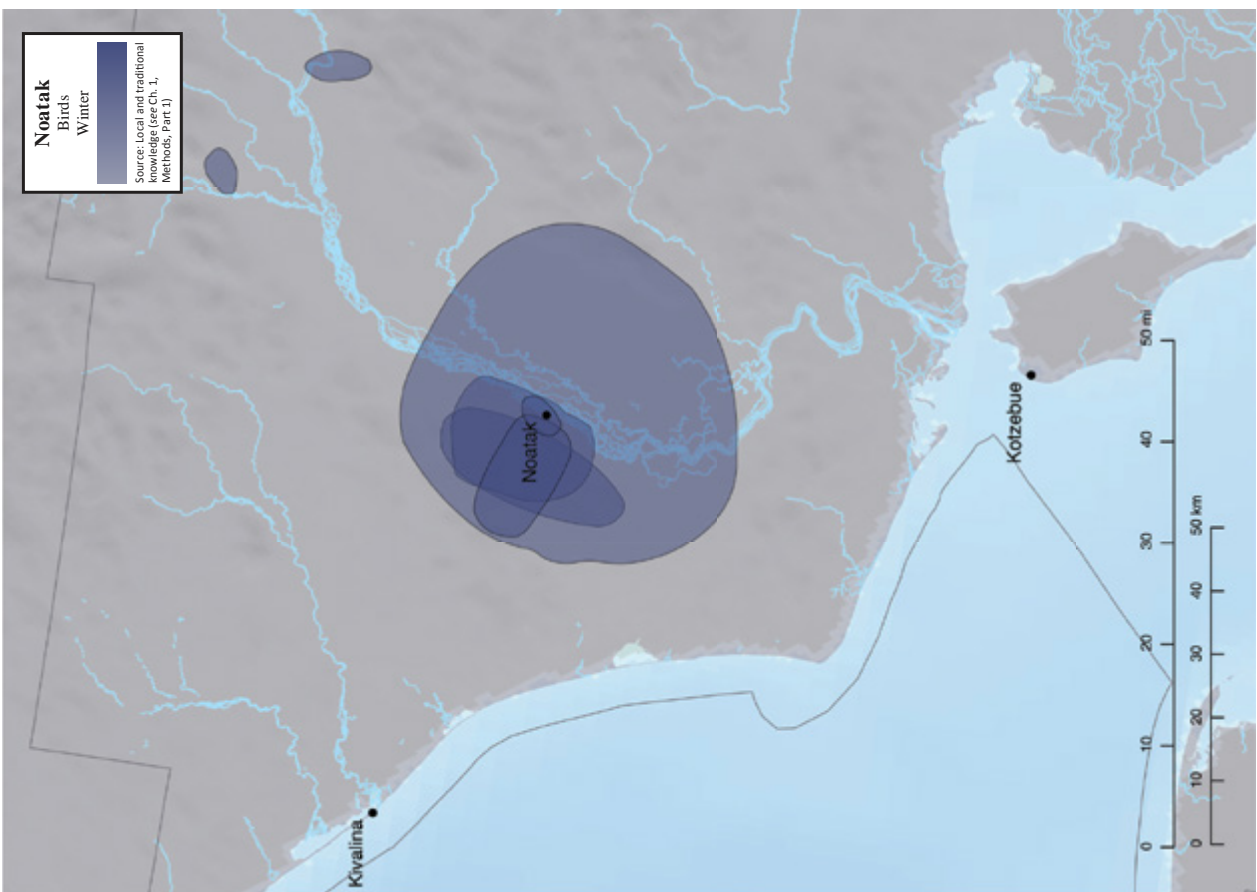
For those unable to get far from home, even the flats surrounding the village offer a wide variety of game, including many migratory bird species, and ptarmigan year-round, as well as hares, foxes, and other small game.

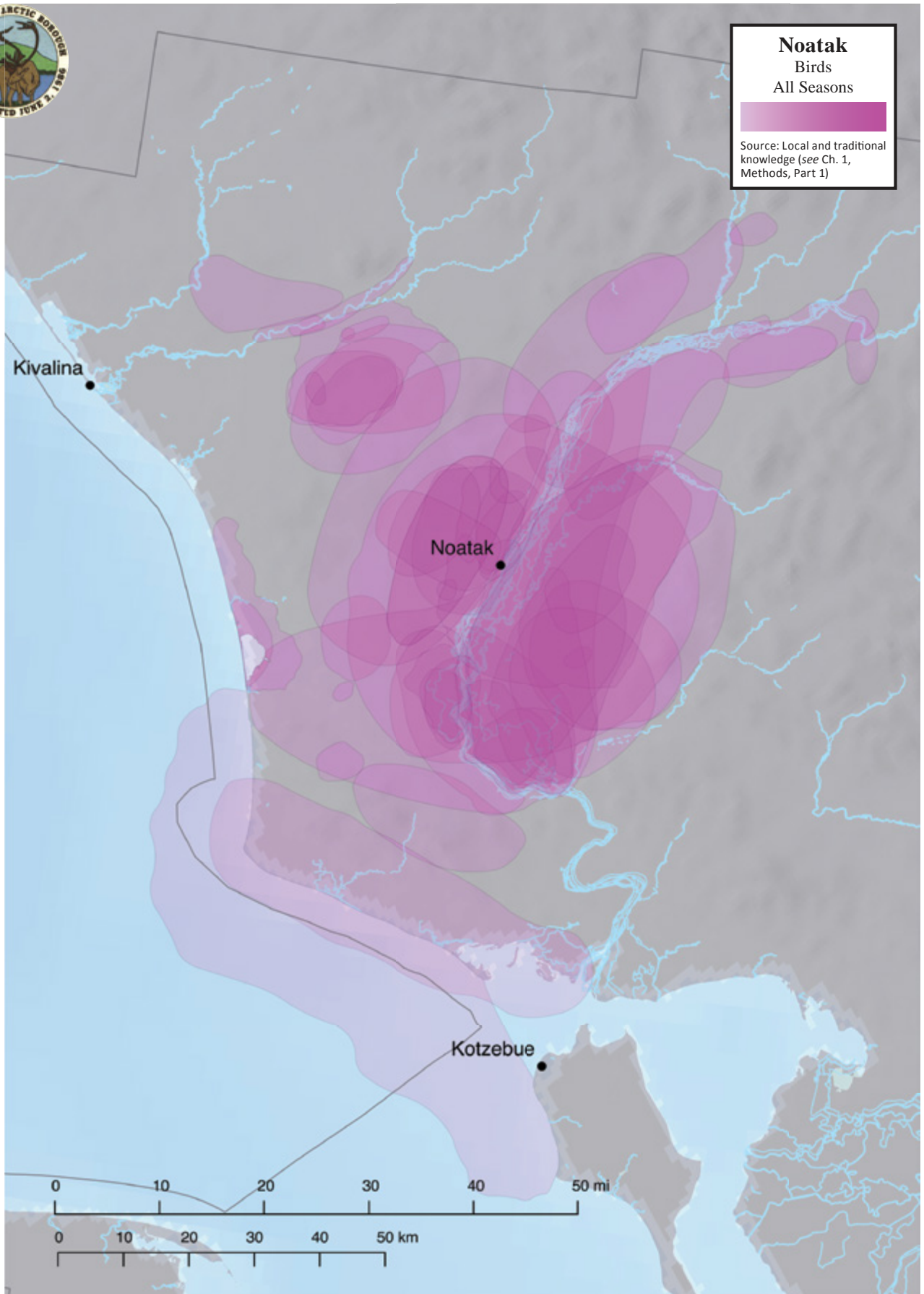
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.

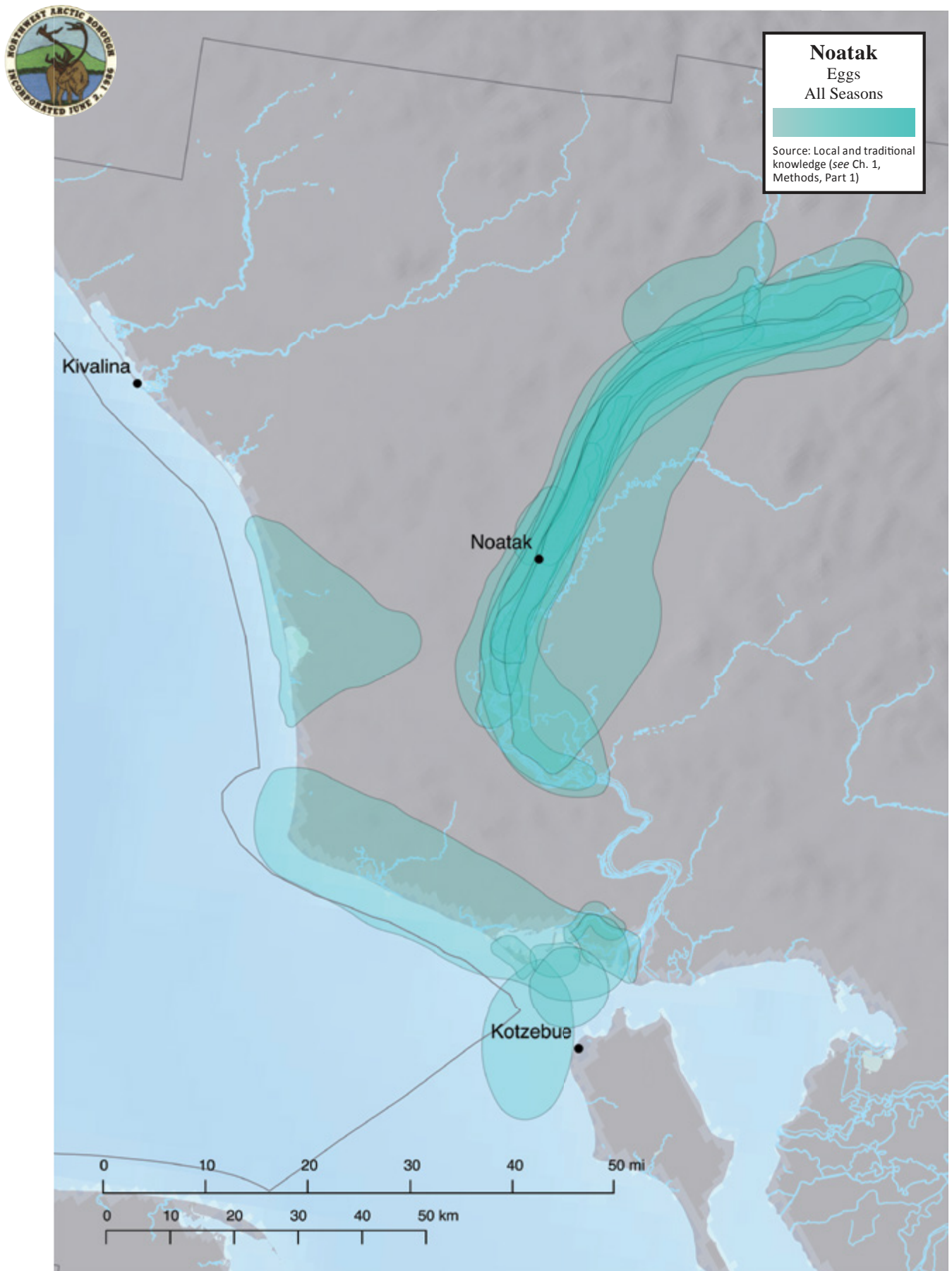




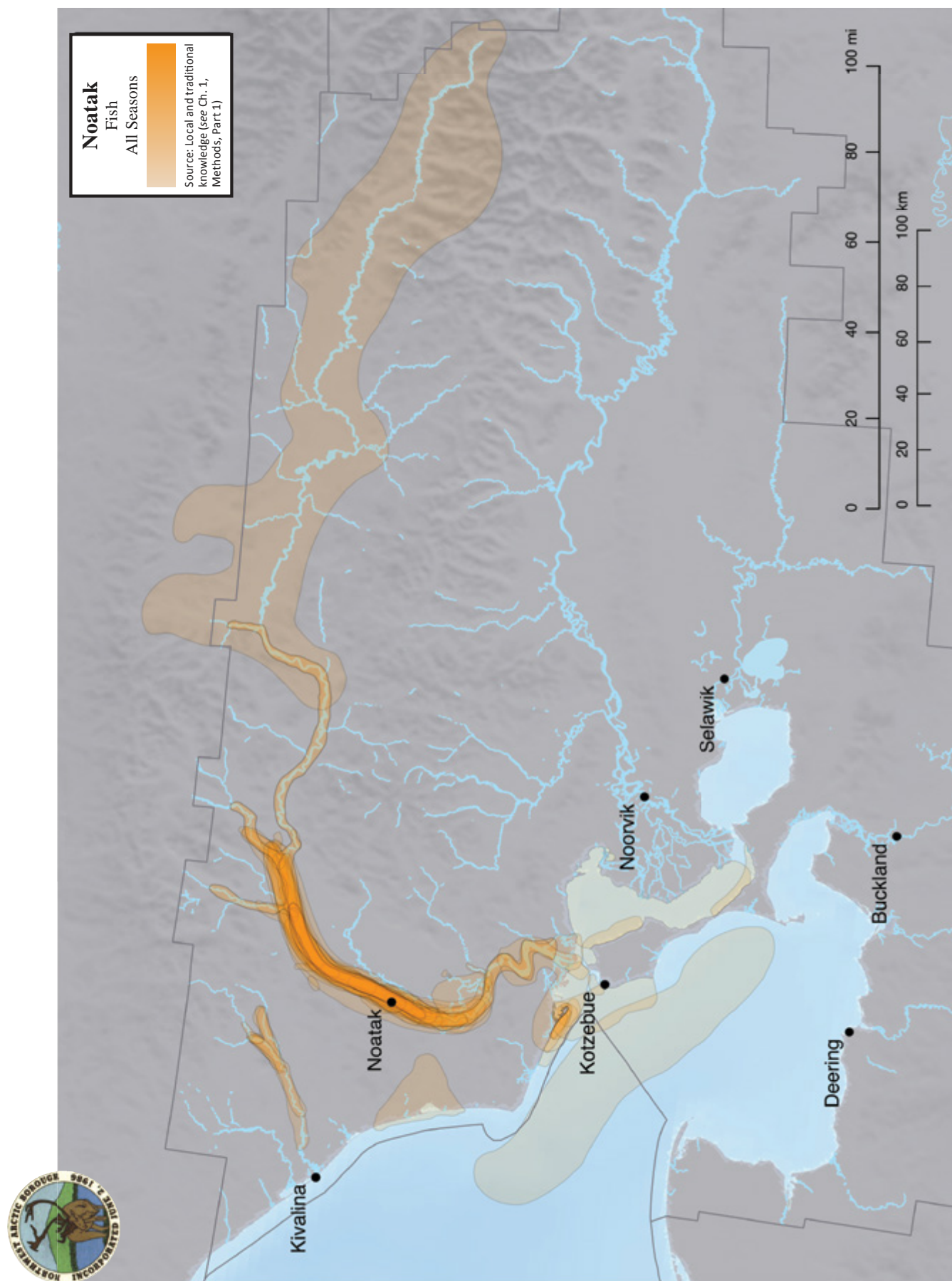


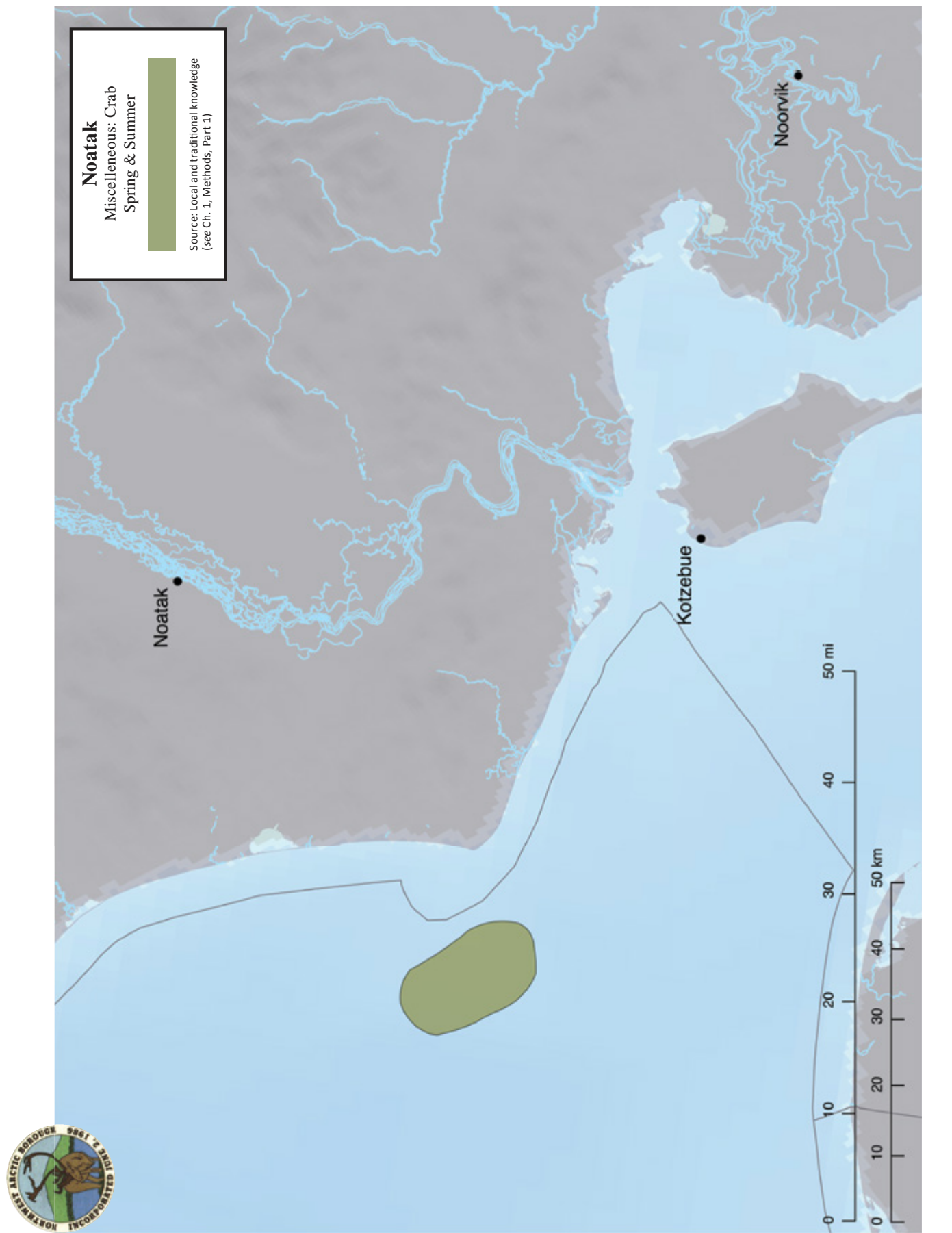


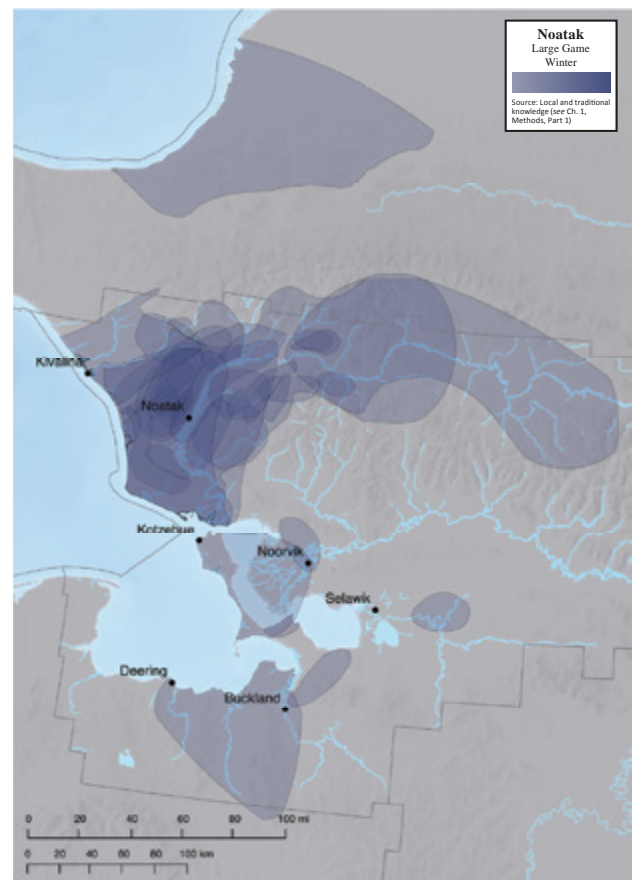


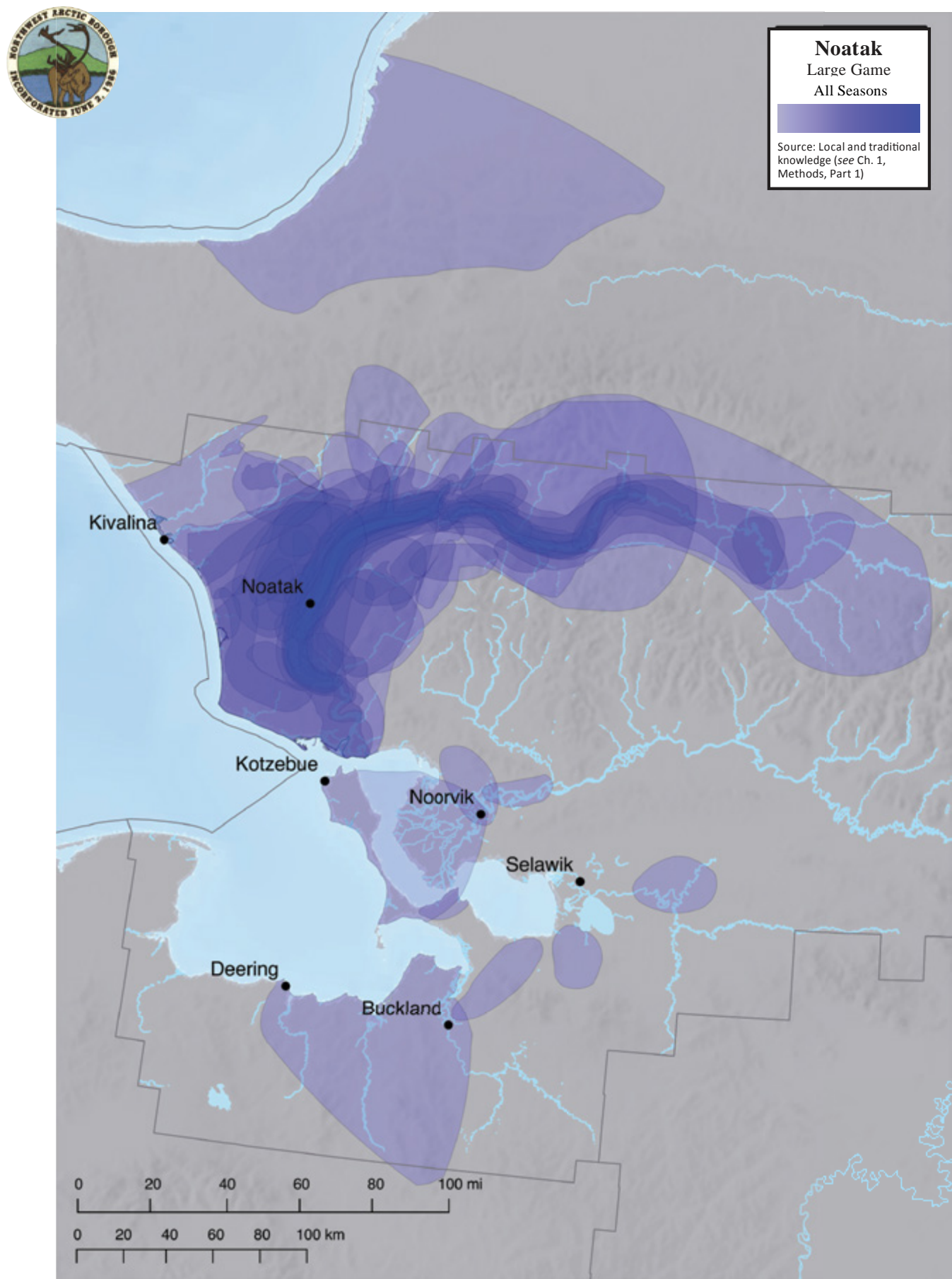


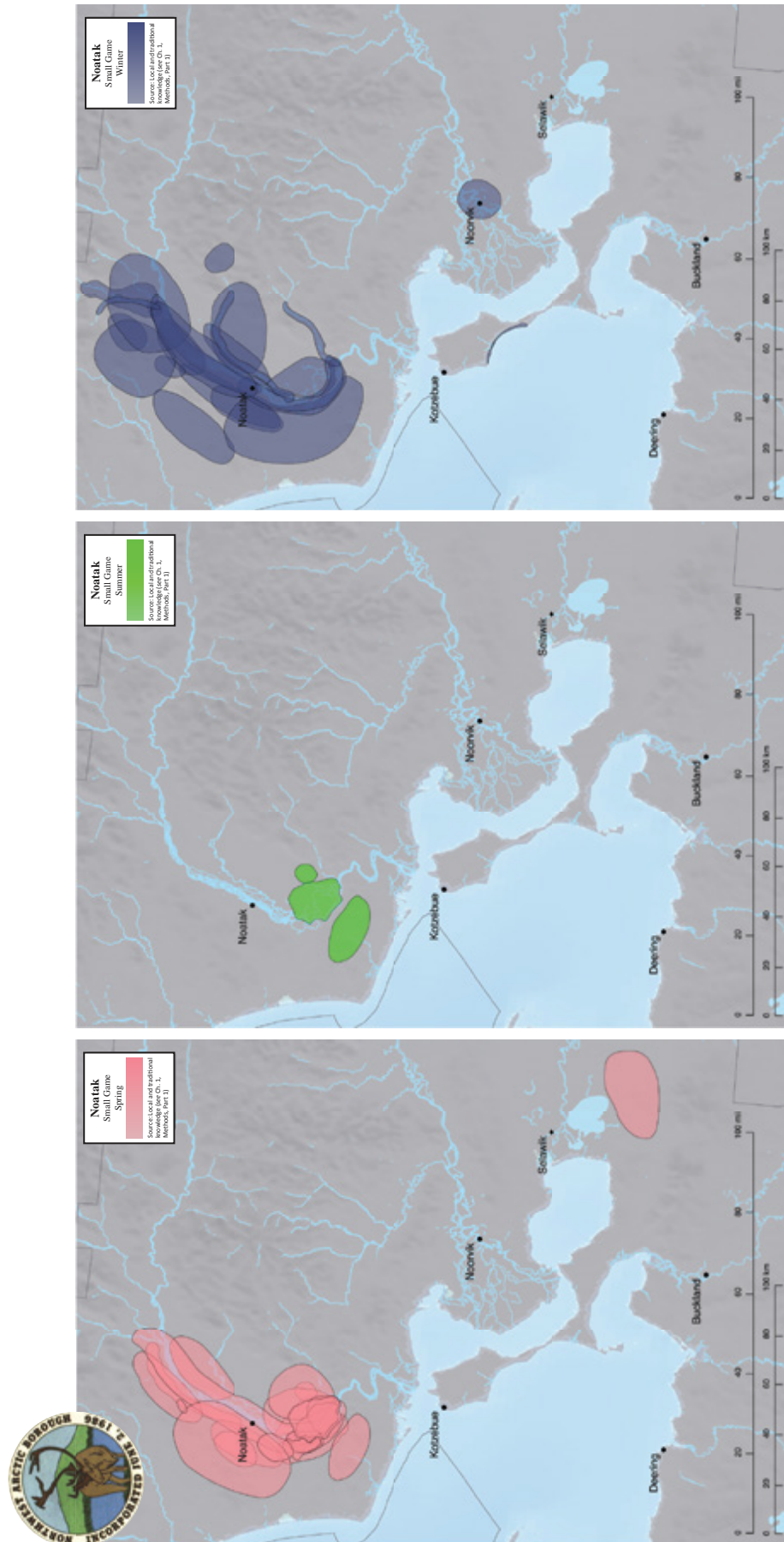


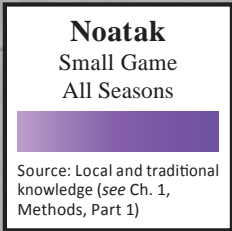


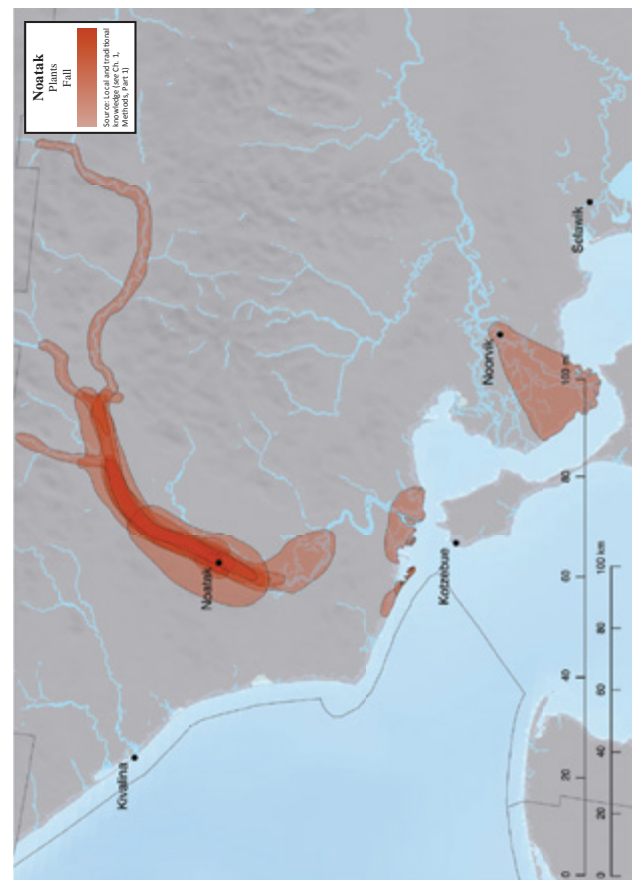
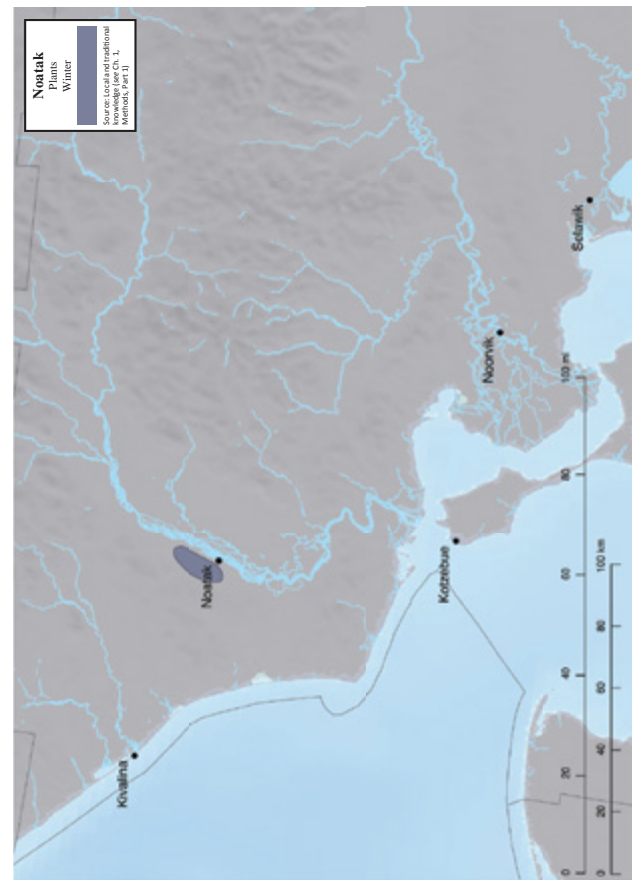


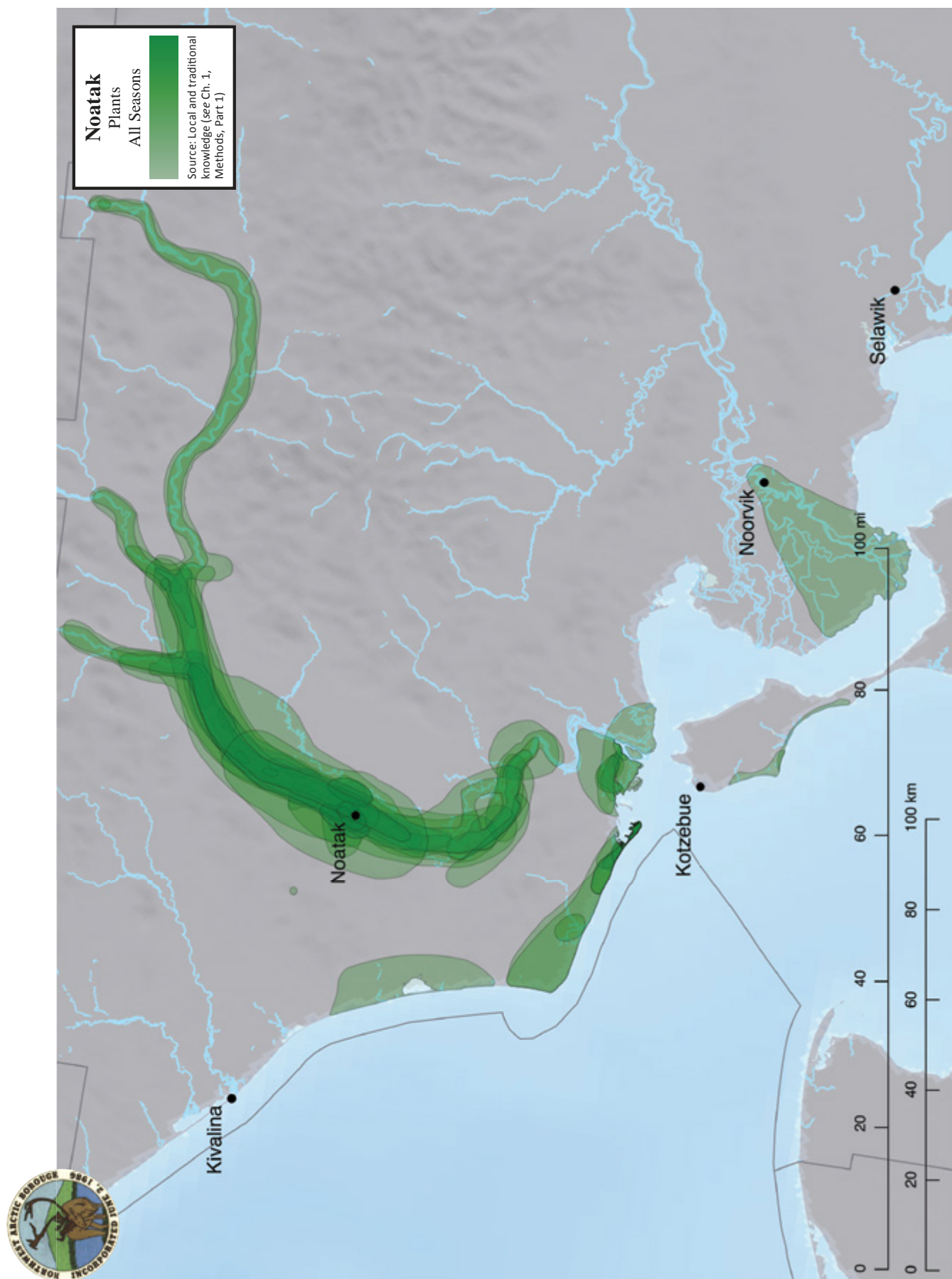


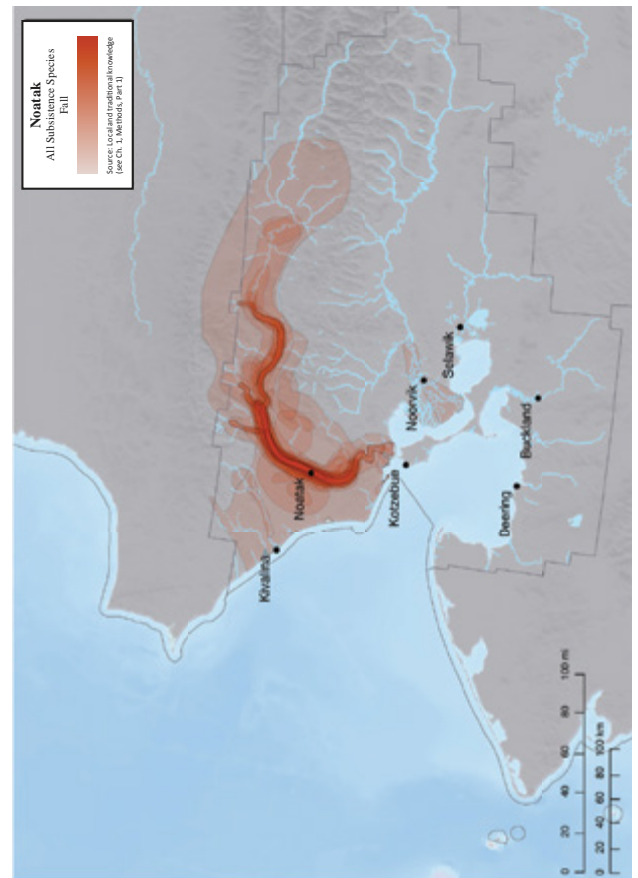
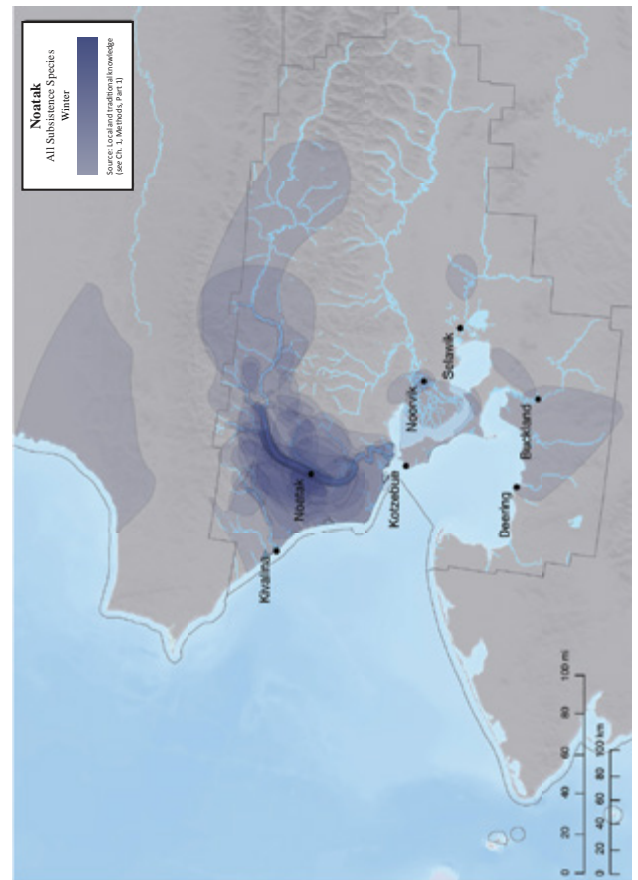












Nunatchiaq (Buckland)



Photo credit: U.S. Army Corp of Engineers.

Nunatchiaq (Buckland)



Beluga hunting. 1940. Photo credit: Alaska State Library Historical Collections, Doyle C. Tripp Photo Collection. ASL-P454-065. Alaska Digital Archives.

The Kanigmiut Herders

Long before Sheldon Jackson imported reindeer to Northwest Alaska, the Kanigmiut people of the Buckland River drainage were already good herders. Every year at breakup, after fishing abundant smelt from the river with dip nets, drying them at camps up and down the river, and storing them for later eating, the local people headed downriver. After stopping on the lower river flats to gather seagull and duck eggs, once in Eschscholtz Bay, most of the boats would turn south and beach at the big summer camp at Elephant Point. A few would cross the bay to Sisiivik. Once settled in, the Kanigmiut passed the time fishing for herring and whitefish along the shore while they waited. Not until the sea ice cleared from Kotzebue Sound would it be time to paddle up bay to just south of Nuvuat (Igloo Point), get the children and dogs quieted down, and climb the bluffs to watch for the annual arrival of the beluga.¹

Elders, recounting their memories in the mid-1900s, spoke of hundreds of beluga coming into the inner bay at high tide, where, in an effort to avoid a shoal named Kasigiaq,² the whales would swim near enough to the shore to be corralled by nets stretched between hunters' umiaqs on the outgoing tide. In those early times, before large international trading vessels and whale boats began to set anchor regularly in the 20-foot-deep waters of the protected bay, Iñpi aq hunters were readily able to secure enough whale meat for the long winter. Because they couldn't fit more than a few spear floats in their small boats, only so many whales could be brought back at one time. The only other enforcer of a bag limit was the wind, since the local herding method required calm

water. Now, years go by when not a single beluga whale is harvested by Buckland's hunters. Much has occurred at Elephant Point since those times in the elders' memories, but it remains a place that embodies much of Buckland's history.

Elephant Point received its name from Capt. Beechey of the British Royal Navy in 1826, who wrote in his journal, "I bestowed the name Elephant Point upon the point, to mark its vicinity to the place where [mammoth] fossils were found."³ Recent archaeological evidence dates human occupation of the Kotzebue Sound area to 11,000 years.⁶ A 2010 study dated ceramic artifacts found at Elephant Point to 500 years ago and found evidence of the intergroup

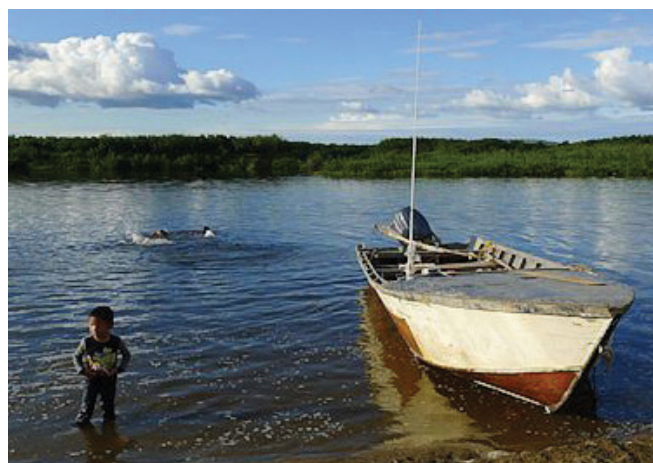


Photo credit: Native Village of Buckland.

exchanges that the oral record has long associated with coastal trade fairs.⁷

According to the NANA website, “Buckland residents and their close ancestors have established villages at different points along the Buckland River at least five times in recent memory . . . [including] Elephant Point, New Site and Old Buckland. Pasturing or harvesting the village’s reindeer herd led to relocations to New Site and Old Buckland in the 1920s.”⁸

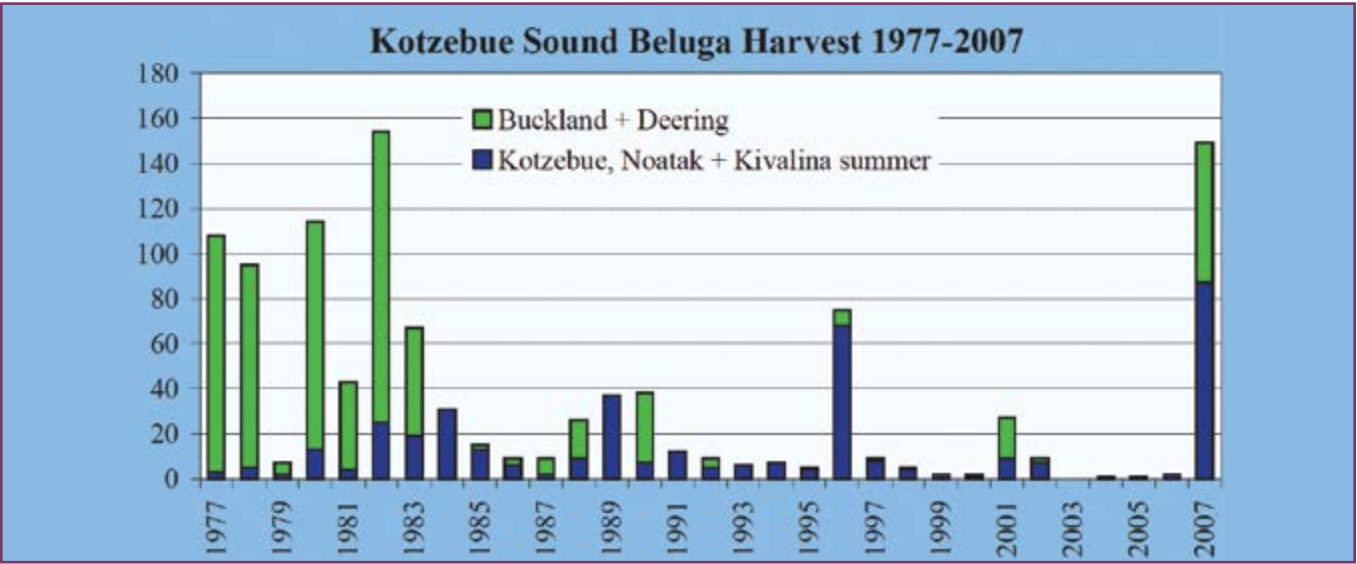
As can be heard in Bucklanders’ accounts of their beluga harvests, before the arrival of the first outsiders in the late-1700s, they “had a history of seasonal geographic mobility for hunting, trading, and feasting, and occasional relocation to a new territory to better exploit resources.”⁹ The village histories in this chapter include many examples of the ways Iñupiat adapted to the new circumstances they found themselves in during the early post-contact period. In Buckland, many would take advantage of opportunities

to manage reindeer herds—and to work as laborers in a reindeer processing plant built and operated by non-Native industrialists at their traditional subsistence site, Elephant Point.

In 1885, Sheldon Jackson, a Presbyterian minister who had already operated several missions in the Lower 48, came to Southeast Alaska to spread the Christian gospel. Soon, the federal government appointed him General Agent of Education for the entire state. By the time Jackson arrived in the Northwest Arctic, years of international whaling, fur trading, and overhunting were making it difficult for Iñupiaq families to sustain themselves on their local traditional food resources.

Jackson had proven to be a skilled fundraiser over his years of missionary work among both white and Native American followers in the western continental United States. When it came to getting private philanthropists and the U.S. government to finance his missions, he had long since

BUCKLAND BELUGA HARVEST ⁴				
Year	1990	1995	2000	2005
Harvest	31	1	1	0



Beluga harvests in Kotzebue Sound 1977-2007. While beluga populations remain somewhat steady, over the past few years, Buckland residents report seeing few in Eschscholtz Bay, near Elephant Point. The summer of 2007 was unusual. Airplane pilots reported killer whales in the area, which, many believe, kept the belugas close to shore, leading to a good harvest. Source: *Kotzebue Marine Mammal News* Vol. 1, No. 2. Alaska Beluga Whale Commission, September 2008, p. 2.

discovered the gold buried in the hearts of well-meaning American citizens who, as he wrote, aspired like he to bring Alaska Natives “out of barbarism into civilization.”¹⁰ On a visit to the Northwest Arctic in the late 1800s, Jackson, declaring a protein crisis among Natives, launched a plan to introduce reindeer to the region. Roxanne Willis, in her 2006 article “A New Game in the North: Alaska Native Reindeer Herding, 1890–1940,” describes what he had in mind:

[R]eindeer herding . . . started in the early 1890s as a modest plan to import small herds of reindeer from Siberia to feed the Eskimos of western Alaska, whom Jackson mistakenly believed were facing starvation. The idea soon grew far beyond its original scale, however, as Jackson and his sympathizers began imagining a vast reindeer industry in which whites and Eskimos would work together to make Alaska's northern land profitable. In addition, Jackson believed that the herding program would gently, but thoroughly, "civilize" the Natives, changing hunters into capitalist entrepreneurs.¹¹

Over the next 60 years, the number of reindeer in the Northwest Arctic would grow to over 60,000, while local Natives would gain and lose and regain control of the industry. By far, the greatest profits on reindeer were made by the Lomen Bros., a white-owned enterprise out of Nome that bought up many of the reindeer in the early 1900s and built industrial plants in the region, including one at Elephant Point, where villagers worked as processors.



Aerial view of Lomen Bros. reindeer processing operations at Elephant Point, 1930s. Photo credit: Anchorage Museum, Ickes Collection, AMRC-b75-175-11, Alaska Digital Archives.



Lomen Bros. store and living quarters at Elephant Point. 1938. Photo credit: Anchorage Museum, Ickes Collection, AMRC-b75-175-13, Alaska Digital Archives.

After the Great Depression all but destroyed the Lower 48 market for reindeer meat and hides, the government bought out Lomen and redistributed the company's herds to the locals to use for subsistence and cash income. Among those enfranchised through the program was Paul Hadley of Buckland. During the robust reindeer years, few predicted the return of the Western Arctic Caribou Herd in the 1930s or that the herd would reach over 250,000 in western Alaska by the 1970s. By 1950, most of the Alaska reindeer herding operations had folded, as domesticated reindeer joined the growing caribou herds, but herding on the Seward Peninsula enjoyed relative success until about the 1980s,¹² with the use of snow machines in round-ups allowing herders to live closer to their home villages.¹³ In the late-1980s, helicopters would sometimes be used to round up the reindeer, while the herders hid under canvas awaiting their arrival.¹⁴ But, over the next 20 years, the reindeer on the peninsula would follow the pattern of other reindeer across the Arctic and slowly merge with the large migrating caribou herds. As recently as 2000, state game managers were still pointing to predation and tundra overgrazing as the most likely cause of



The BLM counted 19,500 caribou in the Buckland Valley in 1981.

Source: Adams, L. and Connery, B.

“

“When I was 14 years old—in 1954—me and my friend Jimmy Gregg went rounding up with my father, Paul Hadley, and Marvin Thomas. Marvin and my dad were with the main herd, and Jimmy and I went to go pick up that one little bunch and there was this one big bull... We tell my father there’s the biggest reindeer we ever saw in our lives. Marvin and my dad hurry up and dress up, go up there and butcher that caribou. That’s when they [the caribou] first come in—in 1954... Anyway, they used to be here long time ago.”

Reindeer herder Nathan Hadley from Buckland, quoted in *Alaska Fish & Wildlife News*, June 2003.

the reduction in reindeer numbers, while locals repeatedly reported having seen their animals joining migrating caribou.¹⁵

To the dismay of a federal government that had sent a great deal of money north to try to build a Native-controlled reindeer industry in Alaska, most local herders did little to interfere with reindeer that abandoned the herd. With the



Photo credit: Sarah Betcher.



Grace Lee and her cousin David Lee dry smelt on the shores of the Buckland River in Northwest Alaska in 1998. Photo credit: Ethel Weber.

return of the caribou, tuttu once again became the central staple in the Iñupiaq diet. Until recently, the Hadleys in Buckland and a few other Iñupiat in Western Alaska still kept reindeer, but commercial herding has now all but disappeared. As Florence Nolton, daughter of Nathan Hadley, explains it, “they’re all off somewhere.”¹⁶

Today, most people with steady jobs in Buckland work for the city, the NWAB School District’s Buckland School, the tribe, the Maniilaq Association health clinic, or at the village store. Some residents take part in rotation employment in mining, especially at Red Dog Mine, or seasonal commercial fishing out of Kotzebue.

Like the Borough’s other villages, Buckland too faces challenges from the effects of climate change. In the spring, ice jams have been causing flooding.¹⁷ Once summer gets going, the Buckland River now runs at levels too low for barge traffic.¹⁸ In the winter, supplies often become depleted and travel is impeded because of frequent strong crosswinds at the local airstrip.¹⁹ Buckland has been incorporated as a second-class city since 1966. One of the 11 villages that make up the Northwest Arctic Borough (NWAB), the community is governed by the Borough assembly and has a village mayor. The village of Buckland is also a federally recognized tribe under the Indian Reorganization Act (IRA), which runs under a Tribal council and has a Tribal president. Two seats on the NANA board are filled by Buckland residents.



Photo credit: The Washington Post.

According to the 2010 Census report, 70% of Bucklanders over the age of 16 were employed during part of the year, while only 54% had employment during all four quarters.²⁰ Seasonal work contributes to the reason why 28% of annual earnings (for those employed) earned below \$5,000. These

“

“Like many Bucklanders, my family awaits the *aqpik* (salmonberries) at Flats during the spring in order to gather the first batch, and to gather as many as we can. Picking *aqpiks* means being outdoors—overlooking the vast tundra, breathing a much fresher tundra air, waving at the still and blooming hills, looking up at the clouds where the birds dance and sing, as if it is all mine. Once you learn to love the outdoors and pick *aqpiks* at the same time, you will always find your *aimmaq* (berry container) full.”

Florence Nolton, Buckland

statistics represent close to average numbers for the past five years. Buckland residents supplement the need for purchased food items with subsistence foods, especially proteins.

There are no roads connecting Buckland to other communities. Residents make use of four-wheelers and small boats in the summer and snowmobiles in the winter to hunt and gather and for recreation and travel. The state operates Buckland’s airstrip, located at about a mile southwest of the village, at about 25 feet above sea level.²¹

In 2013, the city-run diesel-generated power company sold electricity at \$0.47 per kWh, which included the use of two wind turbines with a capacity of 200 kWh. The wind turbines help decrease the community’s reliance on diesel.

The public water supply in Buckland is pumped 300 feet from the Buckland River through an insulated pipe to the washeteria, where it is treated and stored in a 100,000-gallon tank. Honey buckets were recently replaced with indoor plumbing. The City also runs a class 3 landfill, located west of the community along a gravel road.

There is a U.S. Post Office, and the Borough school district administers the preK-12 school.

As in other villages in the Borough, Buckland’s modern Iñupiaq families compensate for the high local cost of living and shortage of year-round, well-compensated jobs by carrying on their subsistence routines. With no beluga having come in for several years, memories of the times not so long ago when people of all ages would go together to Elephant Point for the annual hunt live on, alongside continuing hope that the whales will soon return. In the meantime, families continue to go downriver to the flats, where berries, roots, birds, and eggs remain plentiful. If it’s a nice day, they might continue on down to picnic on the always familiar beach at Elephant Point.²²

1. Burch, E. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press, p. 272.
2. *Qasiġiaq* is the Iñupiaq word for spotted seal (see Burch 1998, p. 273). It could be that the shoal is a particularly good location for hunting them, or perhaps the shoal's contours resembled those of the animal.
3. Ibid., p. 273.
4. Frost, K. and Suydam, R. 2010. Subsistence harvest of beluga or white whales (*Delphinapterus leucas*) in northern and western Alaska, 1987-2006. *Journal of Cetacean Resource Management* 11(3): 295.
5. Orth, D. 1967. *Dictionary of Alaska Place Names*. U.S. Government Printing Office, p. 309.
6. National Park Service. 2009. Noatak National Preserve Long-Range Interpretive Plan, p. 20. http://www.nps.gov/noat/learn/management/upload/WEARFINAL_LRIP.pdf. Accessed 18 June 2015.
7. Anderson, S., Boulanger, M., and Glascock, M. 2010. A New Perspective on Late Holocene Social Interaction in Northwest Alaska: Results of a Preliminary Ceramic Sourcing Study. Anthropology Faculty Publications and Presentations, Portland State University. Paper 31. http://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1031&context=anth_fac. Accessed 18 June 2015. For more information on coastal trade fairs, see Kotzebue history, pp. 213-216. According to Lucier and Stone (1992), Arctic indigenous pottery production ceased post-contact, after which metal pots came into use. Charles V. Lucier and James W. VanStone, *Historic Pottery of the Kotzebue Sound Iñupiat*, Fieldiana: Anthropology, New Series, No.18 (Chicago, IL: Field Museum of Natural History, 1992), 4, cited in Sullivan, P. http://www.tealsullivan.com/ceramics/arcticpottery/#_ftn10. Accessed 18 June 2015.
8. NANA.com. Buckland's Iñupiaq name, Nunatchiaq, translates to "new land" or "new site" ("nuna" meaning "land" and "chiaq" meaning "new").
9. Ducker, J. Out of Harm's Way: Relocating Northwest. *American Indian Culture and Research Journal*, 20 (1), pp. 43-71.
10. Burch, E. 1994. The Iñupiat and the Christianization of Arctic Alaska (quoting Jackson, 1893). http://www.alaskool.org/native_ed/researc_reports/christianization/burch.htm. Accessed 15 Apr 2015.
11. Willis, R. 2006. A New Game in the North: Alaska Native Reindeer Herding, 1890–1940. *Western Historical Quarterly* 37, p. 301.
12. Dau, J. 2000. Managing reindeer and wildlife on Alaska's Seward Peninsula. *Polar Research* 19(1), 57-62.
13. Finstad, G., Bader, H. & Prichard, A. 2002. Conflicts between reindeer herding and an expanding caribou herd in Alaska. University of Alaska. CAES Workshop: "Reindeer 2000," Tromsø, August 1999.
14. According to the childhood memories of Florence Nolton. Personal communication with Liz Dodd, August 2015.
15. Ibid. This has changed in recent years, as state officials have come to appreciate the value of Iñupiaq local and traditional knowledge on this and other issues. See, e.g., Steinacher, S. 2003. Reindeer herders' memories of caribou. Alaska Fish & Game News. October. http://www.adfg.alaska.gov/index.cfm?adfg=wildlifeneews.view_article&articles_id=48. Accessed 26 Aug. 2015.
16. Personal correspondence with Liz Dodd, August 2015.
17. NANA.com.
18. Ibid.
19. Alaska Dept. of Commerce, Community, and Economic Development. 2014. Division of Community and Regional Affairs. <http://commerce.state.ak.us/cra/DCRAExternal/community/Details/525f1c5e-cc76-415c-9b62-38721d36914b>. Accessed 1 December 2014.
20. Alaska Department of Labor and Workforce Development. 2015. www.laborstats.alaska.gov.
21. NANA 2010.
22. Florence Nolton personal correspondence with Liz Dodd, August 2015

Traditional foods important to the people of Buckland today

BUCKLAND TRADITIONAL FOODS BY EDIBLE MASS, UNIQUE AREAS AND PEOPLE

SPECIES	BY EDIBLE MASS (% OF TOTAL FOOD HARVESTED ¹)	BY NUMBER OF UNIQUE AREAS (% OF 457 MAPPED POLYGONS)	BY PROPORTION OF PARTICIPANTS (% OF 20 BUCKLAND RESIDENTS IN STUDY)
Tuttu Caribou (<i>Rangifer tarandus</i>)	38	16.6	100
Ugruk Bearded Seal (<i>Erignathus barbatus</i>)	14	5.3	85
Ithuaǵniq Smelt (<i>Hypomesus olidus</i> , <i>Osmerus mordax</i>)	9	4.2	75
Berries: (blueberry, cranberry, salmonberry, blackberry combined)	2.9	12.4	90
Niǵliq Geese	1.0	9.8	85
Sisuaq Beluga whale (<i>Delphinapterus leucas</i>)	0.0 ²	4.2	85
Seagull Eggs	<0.1	7.7	85

In Buckland, caribou contributed the largest mass of edible food, making up 38% of the edible mass of the total harvest. The next most abundant species were *ugruk* (bearded seal) at 14%, and smelt at 9%. Of the 457 search polygons we drew on maps, caribou again accounted for most (16.6% of all polygons), followed by berries at 12.4% (the most frequent of which was blackberries, occurring in 8.3% of all polygons). Goose search areas accounted for 9.8% of polygons, with Canada geese being the most frequently named species (6.1% of all polygons). All the 20 study participants who contributed data in Buckland, reported harvesting caribou (100%). Next most frequently pursued were berries, which 90% of Buckland participants routinely go out to find (most often salmonberries, included by all interviewees mentioning berries, or 90% of all interviewees). Beluga whales, bearded seal, sea gull eggs, and geese were all mentioned by 85% of the interviewees. Among geese, Canada geese were the most frequently that were explicitly mentioned, occurring in 55% of the interviews.

“Now that I am older I realize that my parents weren't showing us how to live off the tundra for fun. They taught us how because we needed to know how to survive.”

Denise Haldley, Buckland

1. The numbers in the first column reflect Alaska Dept. of Fish and Game data. Community Subsistence Information System. <http://www.adfg.alaska.gov/sb/CSIS/>.
2. Note that the data provided from this survey were specific to the year in which they were conducted. Beluga harvest, in particular, may vary considerably depending on the timing and precise route of their migrations. See graph on p. 185.



Buckland Voices

It is the middle of October and freeze up is late.¹ If you fly east from Kotzebue across the Sound, make a sharp turn south, following the Baldwin Peninsula, cross Eschscholtz Bay, and turn up the river, you will soon arrive at the Iñupiat village of Buckland. Once on the ground, you're likely to encounter [former] Mayor Tim Gavin, Jr., driving the local road in his small truck.

Down along the river, the mayor assesses the erosion situation. The river's edge is now within feet of the newly remodeled school and many homes. Rapid erosion, and the flooding it causes, worry Gavin and other Buckland residents. Flooding has been a recurring problem for as long as people can remember, but, with the local weather warming up, more land is giving way.

The residential streets are muddy, pocked with deep, splash-spraying puddles. Some streets are blocked off for the sewer system construction project that has gotten underway. The road through town eventually leads up a hill, from which the whole surrounding area can be viewed. Mayor Gavin points out the many places locals like to go to hunt caribou, moose, wolverines, muskox, and bears. Down in the village, Raymond Lee is getting ready to go out on one of those trips.

A lifetime Buckland resident, Lee is the mapping project's village coordinator for both Buckland and Deering.

Raymond started getting his hunting supplies ready the day before; now he just needs to take his ATV to the pump at the local store to get fuel for the boat trip. Hunting is expensive these days. A boat trip down the river and back can easily cost over \$100.



Raymond Lee with mallard.
Photo credit: Sarah Betcher.

Raymond's boat is anchored with several others alongside the river. Carrying the fuel jugs to the boat Raymond remarks, "As of today, October 16, this river should be frozen and we should be tomcod fishing."

The next morning, Raymond heads north toward the mouth of the river through a flat treeless landscape covered with high shrubs. He's brought extra ammunition for his rifle and containers to hold any food he finds. On the way, he passes several camps belonging to his family and friends. Some of the structures are heated by wood; others by oil. Raymond points out places he's had successful hunts and other areas that are especially good for gathering eggs and picking berries.

After running a few miles down the Buckland River, Raymond spots a group of birds and shoots two. He motors to the side of the river and gets out to look for them in the tall grass. "Mallards," he smiles. "Good eating ducks." He examines the birds' wing colors before bringing them back to the boat. He'll prepare them later at home.

Continuing down the river, Raymond surveys the surrounding water. "If we see a seal, I will shoot it." Like many of his neighbors, Raymond tries to consume seal oil daily. A little farther downriver, he points to the shore. "This is pretty much where the caribou cross—7 ½ miles from Buckland!"

It's sunset by the time the mouth of the river comes into view. A herd of muskox—over 20 of them—grazes on nearby uplands. Raymond is surprised they don't run off when he brings the boat closer. He expected them to scatter, he says, because "people harvest them." The following morning, Raymond and another local hunter, Amil Carter, Sr., head back out on the river, after loading guns, extra ammunition, and some empty containers. They've got a 12-pack of soda, a box of crackers, and some canned tuna from the store to snack on. The bill totaled almost \$50.

After the boat is loaded with all needed supplies and warm clothes, they motor down the river with eyes scanning the landscape for moving objects. Raymond stops the boat to load his gun. Amil remarks, "Buckland is a good place to be, especially when you are a man that likes to hunt. Because there is a little bit of everything—from the land, from the sea, and from the air—that passes through here seasonally."

Being in wild unpredictable country, he and Raymond will not necessarily find the meat they're looking for. Amil makes note of the fact that October's not the easiest time of year to come across a caribou herd:

Buckland is right in the middle of the winter migration trail for the caribou. "November, December, January, February, March, we should have an abundance of caribou throughout our hills. And our caribou stay in that area for months just eating. That is why this is a good place to be as a Native person. Where food is abundant year round.



Amil Carter, Sr. Photo credit: Sarah Betcher.

Amil appreciates the diversity of traditional foods that can be found around the village. He points out an area along the side of the river where his family has gathered *masru*² for generations. Raymond drives the boat over to a tall bank on the western shore. The erosion requires them to step carefully on the loose soil held by exposed shrub roots. Amil pulls a digging tool out of his pack, and they walk over to some tall grass. "*Masru* is abundant in these flats. We gather in early spring and in fall time. You get it any other time and they are kinda firm. This time of the year to me is better, so it's good to get whatever you need."

The two men use their hands to dig out the narrow roots. With a wide smile, Amil says, "Just like our eggs from the island, we preserve them in seal oil and they stay good for years and get better with age." When they have gathered a few roots, he instructs, "when you are done, we just cover the ground like this so they can grow again." Amil and Raymond diligently cover the holes with grass. "That's all about *masruing*."

Back in the boat on the river, it isn't long before they spot a dark mass near the bank. Raymond slows the boat to a stop. Amil takes out his rifle. With a steady aim off the bow of the small boat, Amil shoots at a seal. He hits his target on the first shot, but fires two more to make sure.

Raymond motors quickly to where they saw the seal fall in the water. They have to move fast. This time of year, seals will sink due to the decrease in blubber during the warmer months. As they approach, they can see that the seal is just below the surface of the water. They grab it with their hands and together pull it up on the riverbank. Standing over it, Amil remarks, "this is a small one but it's a bearded seal. If we continue to ride around today, we will see more seals out here. If we want, right now, we could cut the stomach open and get the intestines and peel the outer layer of fat off and

chop it up. It's called *qaunnaq*. It's a good tasting fat. It's rich and it keeps you warm." His eyes light up as he looks forward to eating this most cherished food.

Processing seal takes several days. Many families utilize the meat and the skin. Some of the organs are consumed and the blubber is made into oil. Amil talks about his family's way of processing and preserving the seal oil. "They put it in the house at a temperature where it's not too hot or cold and stir it daily. Within four or five days it will render and turn to oil."

Raymond goes to get a black garbage bag ready to haul the animal away. As they're wrapping it up, Amil says, "if you go to my house, you will see three freezers full of jars with *masru*, blueberries, *aqpik* (salmonberries/cloudberries), cranberries, blackberries, and seal." The men explain how this catch will be shared in the community. "That seal will probably make 10 gallons," says Raymond. "Lots of people will be having some of this."

After they load the seal on the boat for processing back in the village, they wait for a while for whatever comes by next. They see a few seals stealthily swimming in the distance. “This is how we hunt them,” Amil explains. “We go out and hope that we see some, and I’m glad we did.” He looks out toward the mouth of the river. “As the tide goes out, they hang out by the mouth. When the tide goes up, we see them all the way into Buckland and above.”

The sun is still up but the air is cool, as Raymond turns the boat for home. Back in town, they brew up a pot of hot coffee and drink it with powdered creamer. “You have to go out in the ocean in spring time,” offers Amil. “That’s the most important seal hunting time.”

He likes to fish in the early fall. This time of year it's usually the right temperature to ferment the fish before they are put away in the freezer. "We hunt seasonal," says Amil. "After the seals, the ducks start coming. Then they have their eggs and we look for their eggs." He stops to think before continuing. "When all that is done, pretty soon our berries begin to get ripe—salmonberries, blackberries, blueberries.



Ugruk hunting on the Buckland River.

Photo credit: Sarah Betcher.

Even our moose is seasonal. There is a time that they are prime. Like our caribou—when they are the fattest. If you get them too early, then the skin is too thin. In the fall time, just about everything is in their prime.” Amil describes the many uses of animal fur, mostly for gloves, hats and boots. Pelts are not necessarily used by a hunter but are given to someone who knows how to sew with animal skin.

“This is what we rely on. Most of our food is natural—what we get out of the country.” Buckland’s elders all have a strong preference for the traditional food. Amil says they like the way it makes them feel. “It will keep you warm,” he emphasizes. “Just like this bear fat we have,” he jokes. “Much warmer than Spam.”

1. This piece compiles interviews conducted by Sarah Betcher in October 2013.
2. Edible taproot of Alpine Sweetvetch (*Hedysarum alpinum*), in some parts of the Borough called *masu*.



Photo credit: Sarah Betcher.

What the maps tell us ...

Like the Noatak and Kobuk rivers, the Buckland River provides an abundance of food to those who inhabit its banks. When the smelt migrate up the river, nearly all of the Buckland residents come out to help with the seining, right alongside the village. Smelt are caught in such abundance—hundreds in each net—that the residents struggle to find sufficient flat areas to dry them on. In addition to the smelt, a number of other fish species can be found throughout the year—trout are commonly caught in spring and early summer, salmon migrate throughout the summer, pike can be found at a variety of summer hotspots, and burbot, or “mudshark,” are a fall favorite. During the winter, many Buckland residents will travel north to the southern coastlines of Selawik and Kobuk lakes to fish for the sheefish that are commonly found in the shallows there.

The estuary where the Buckland River flows into Eschscholtz Bay is a very productive region, providing good feeding grounds for seals, among which *ugrukchiaq*, or young bearded seals, are especially frequent visitors. The flats in and around the estuary are also a favorite nesting ground for a number of waterfowl species, which provide the locals with both fowl and fresh eggs in the spring. At the point where Eschscholtz Bay joins Kotzebue Sound lies Chamisso Island, another popular area for egg gathering. Frequented by Buckland and Deering residents alike, the island, with its high rocky walls, is a favorite nesting round for murre, puffin, and seagulls.

In addition to the young bearded seals, the bay is frequented by adults, as well as other seal species, during their migration, and these can be found in much of the spring and summer. Although beluga have become less predictable visitors to Kotzebue Sound in recent years, when they do migrate through, they, too, can be found in the bay and at the river’s mouth.

The land around Buckland also provides rich hunting grounds. Caribou frequently migrate near the village and can often be found in the hills to the west of the village and around the base of the Selawik hills, which lie to the east. Raymond Lee, and many young Bucklanders who have

Interpreting the Color Scale on Maps in this Chapter

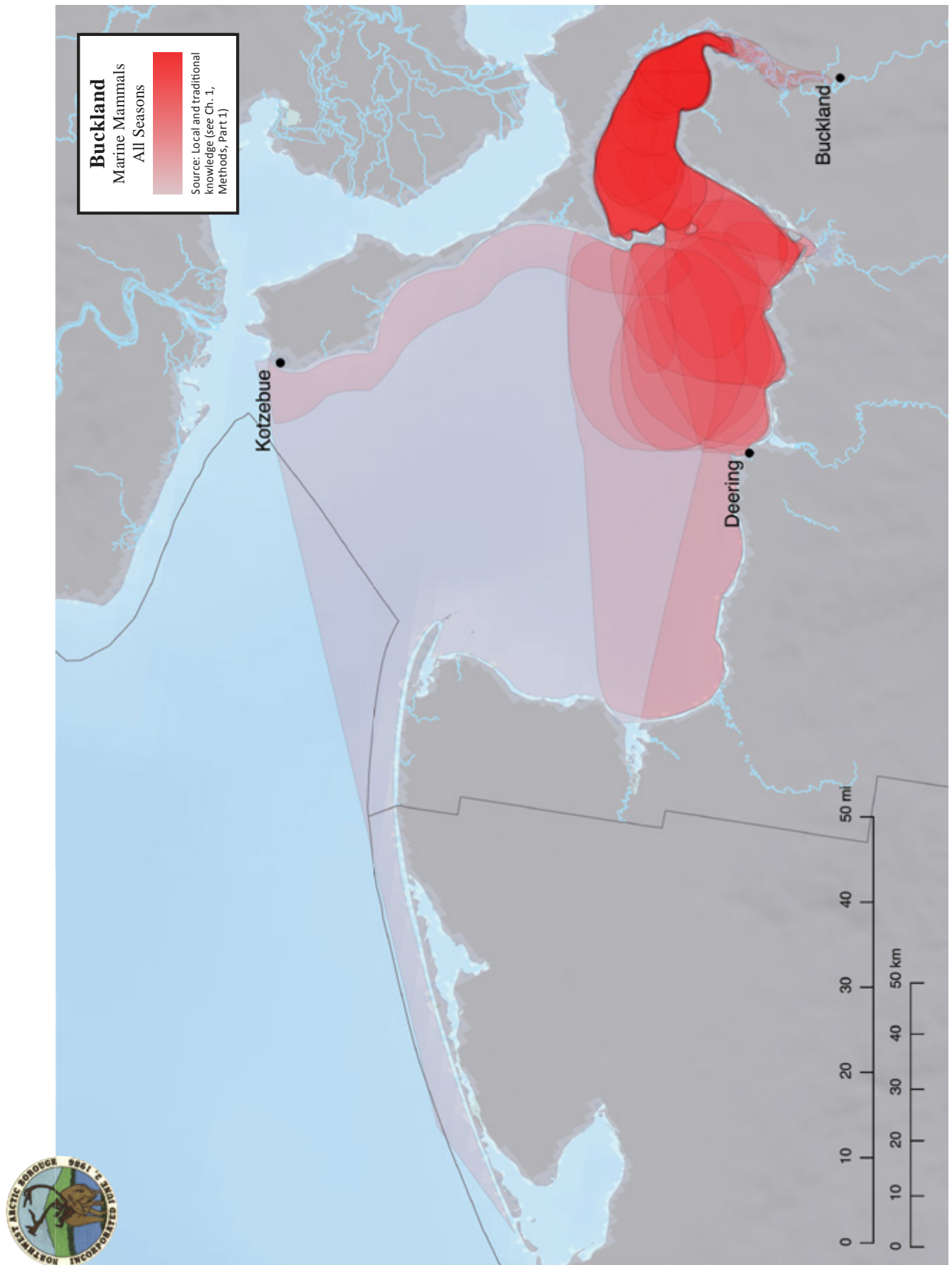
In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.



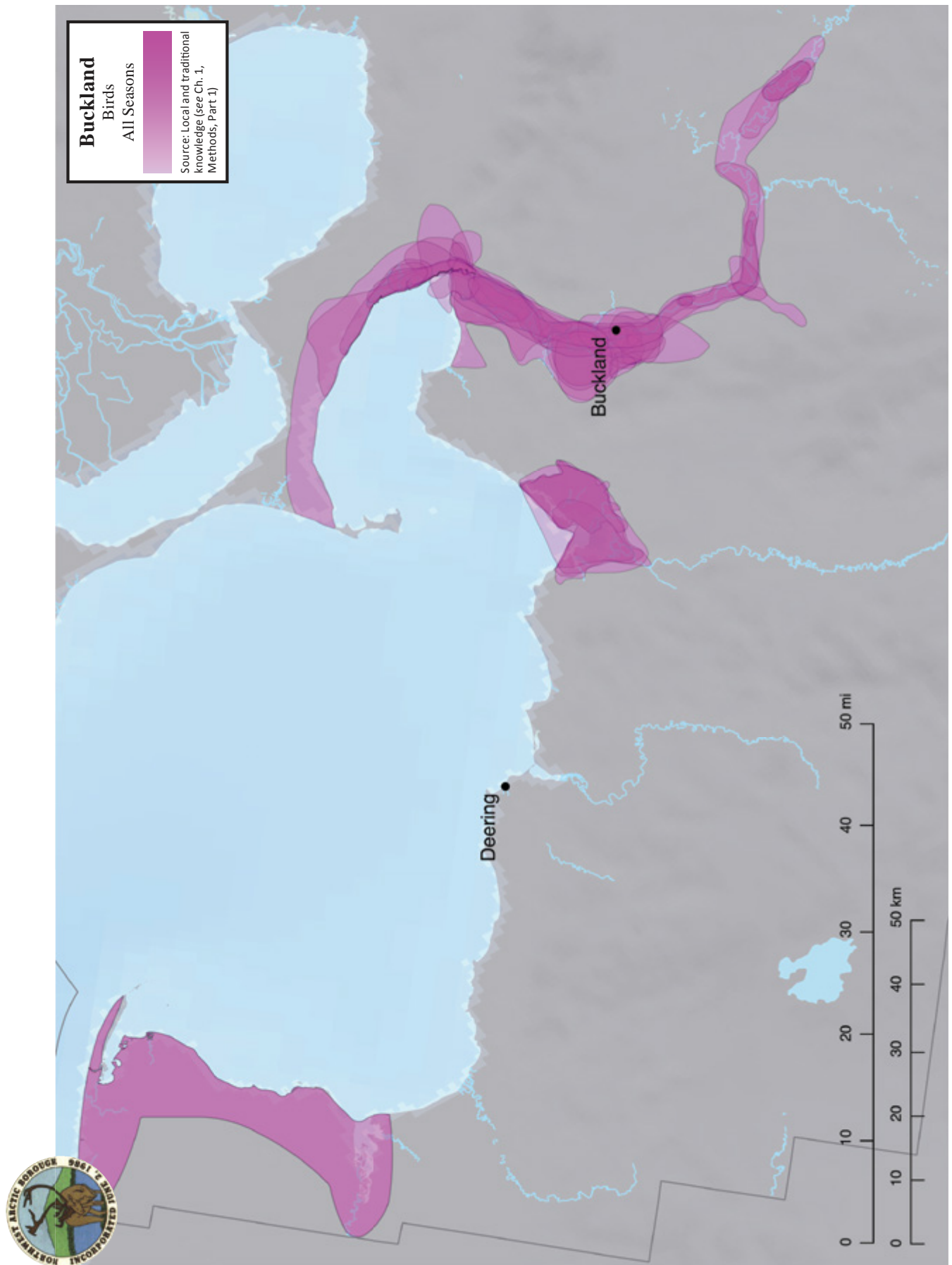
learned from him, hunt wolves, making use of the furs while perhaps relieving the caribou a little from the predator. Moose can occasionally be found along the river, typically upstream from the village. In recent years, villagers hunt musk ox in numbers limited by state harvest restrictions.

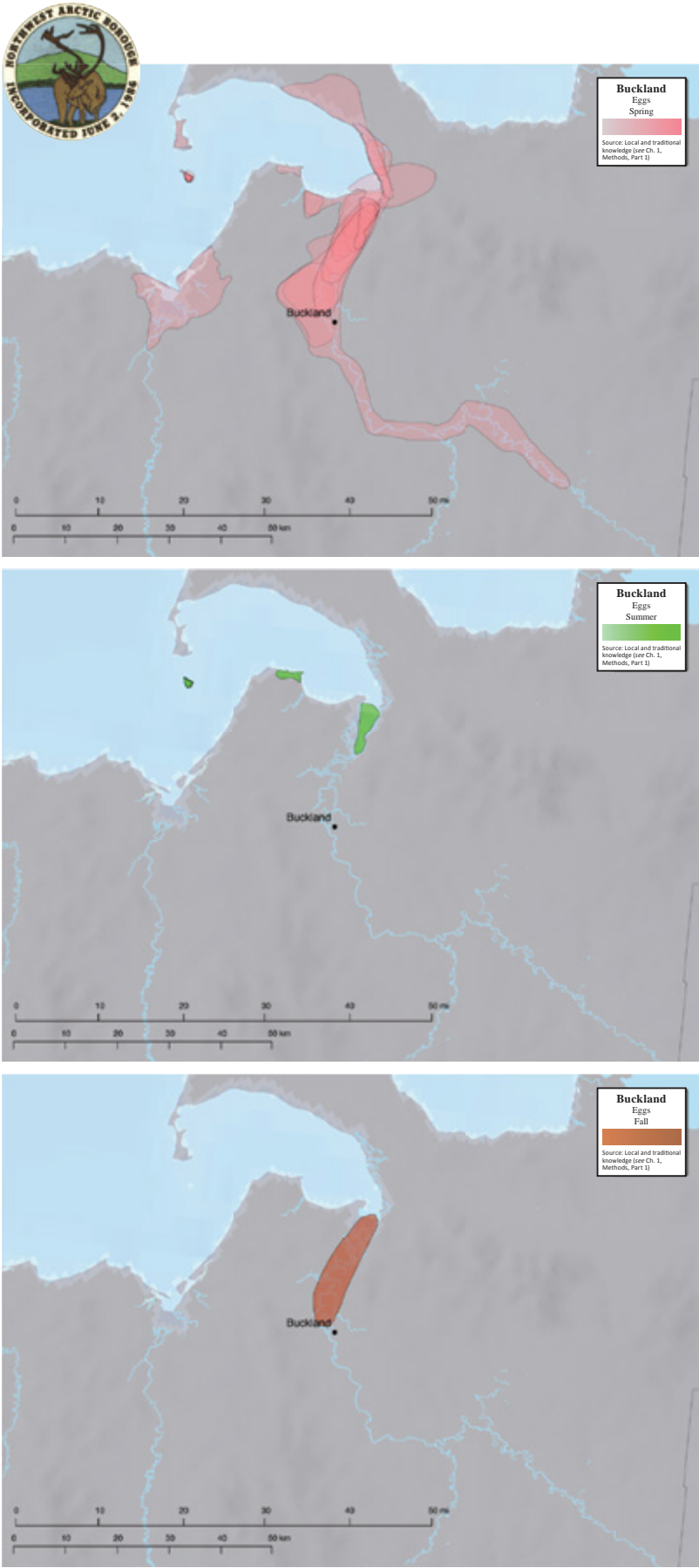
A wide variety of berries, roots, and other greens can be found all along the river and the coastline surrounding the bay.

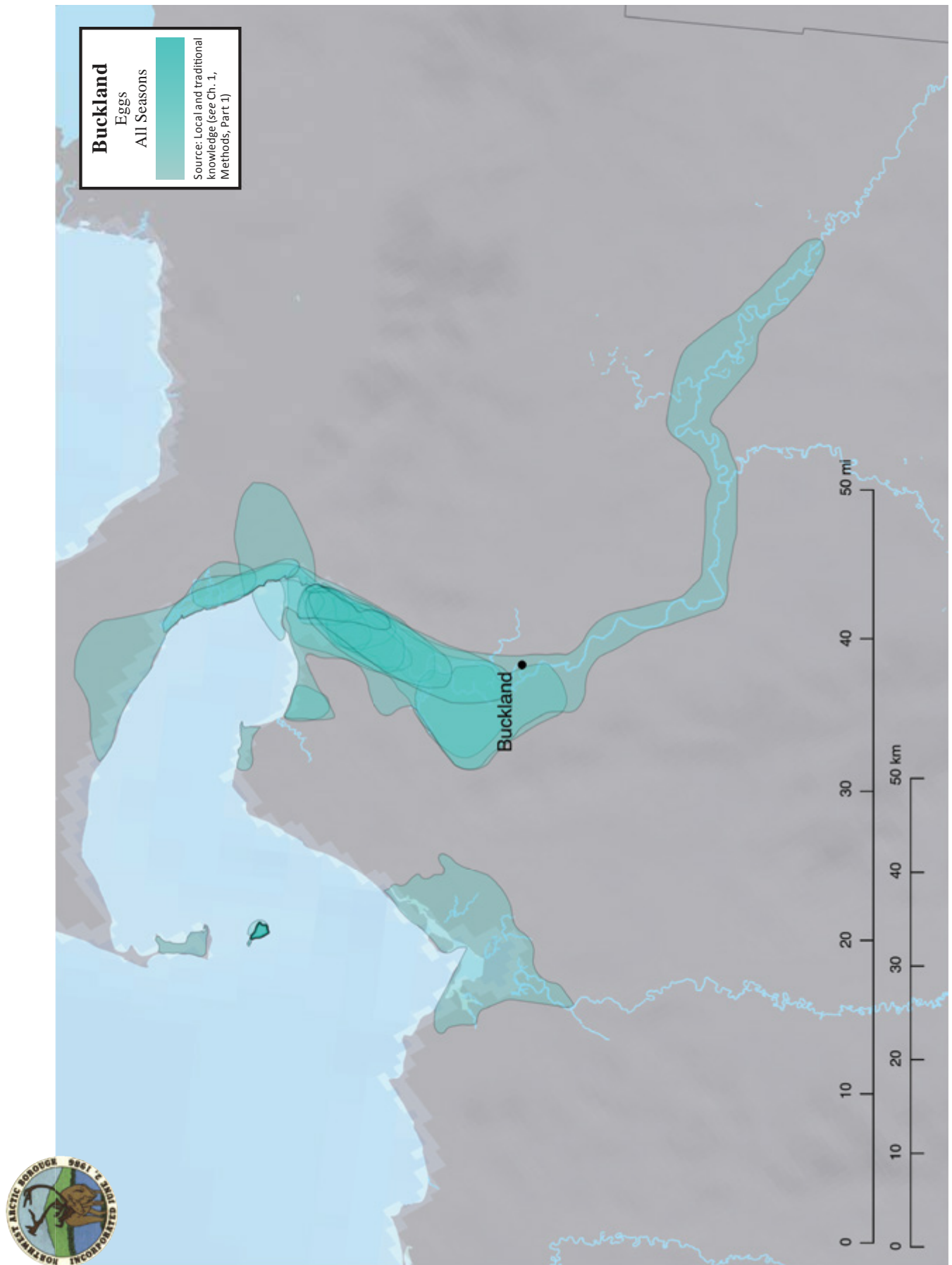


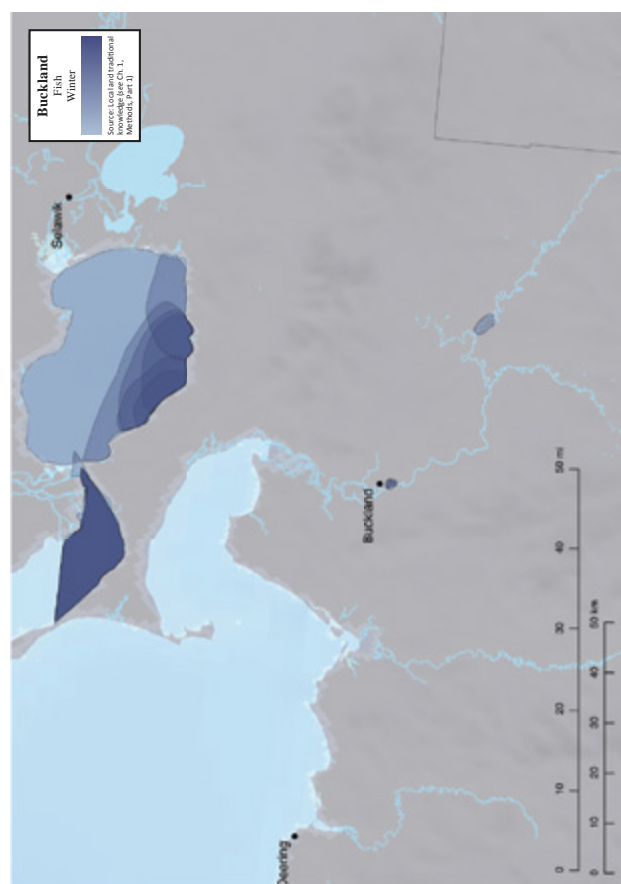


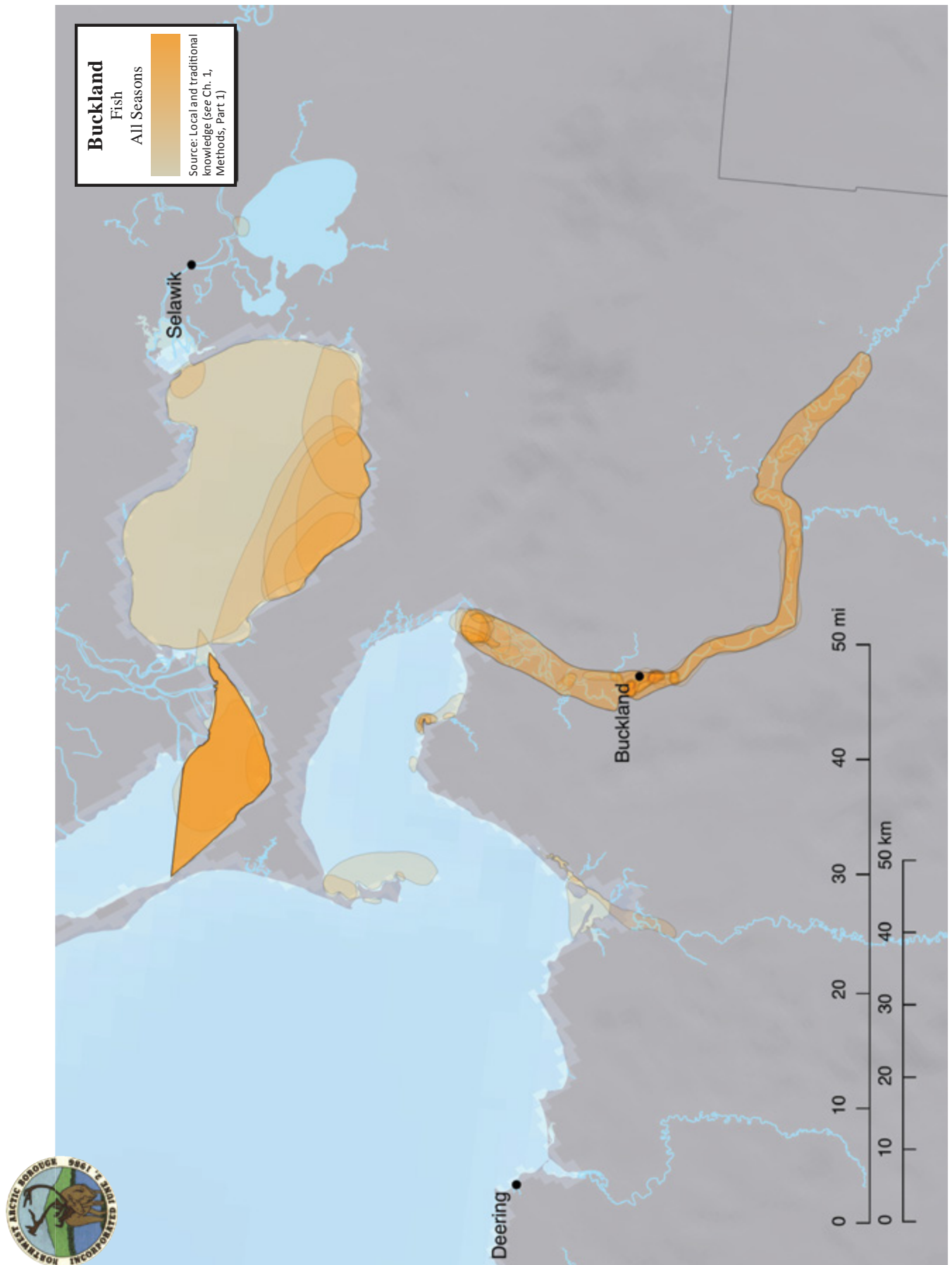


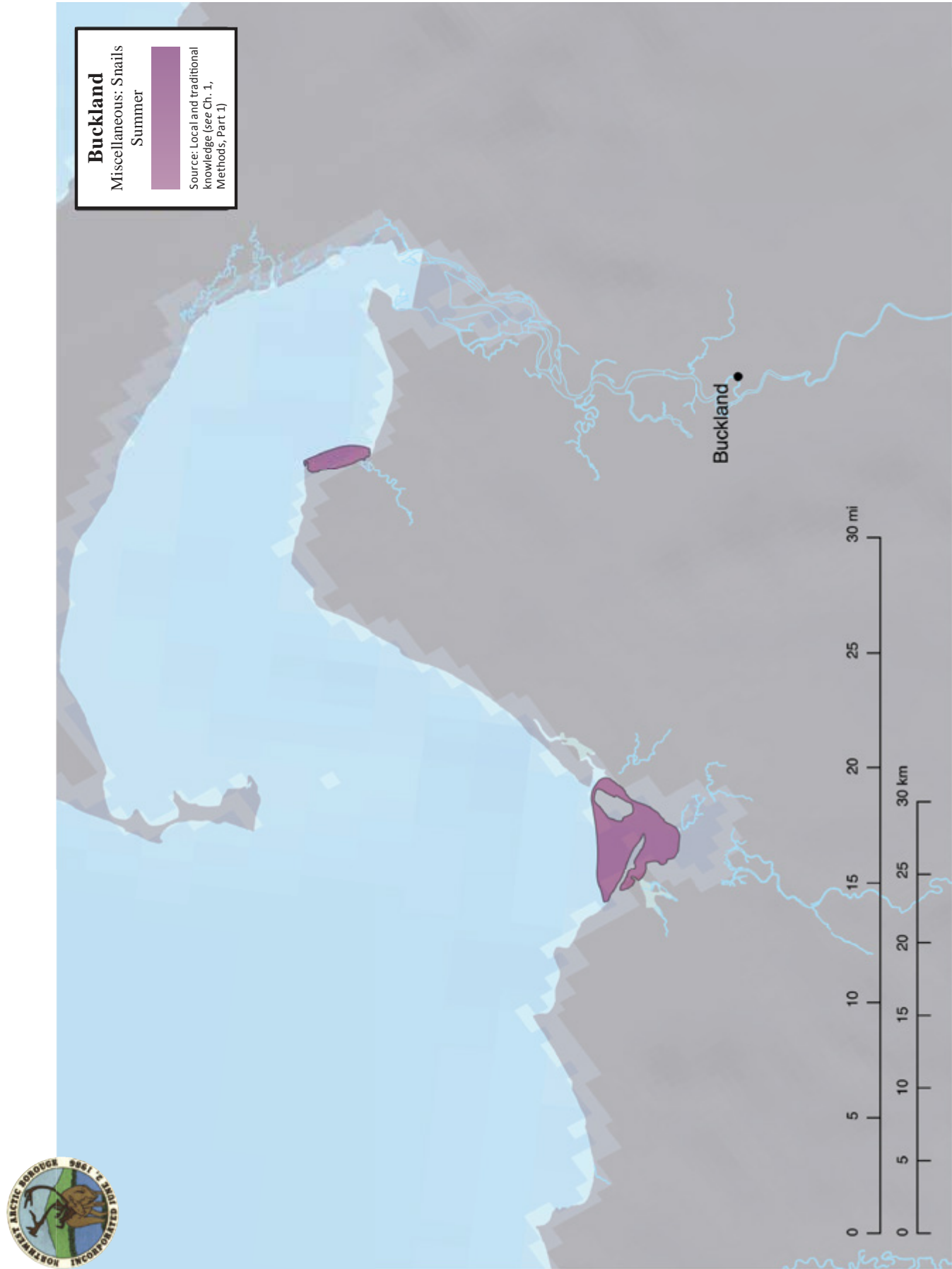


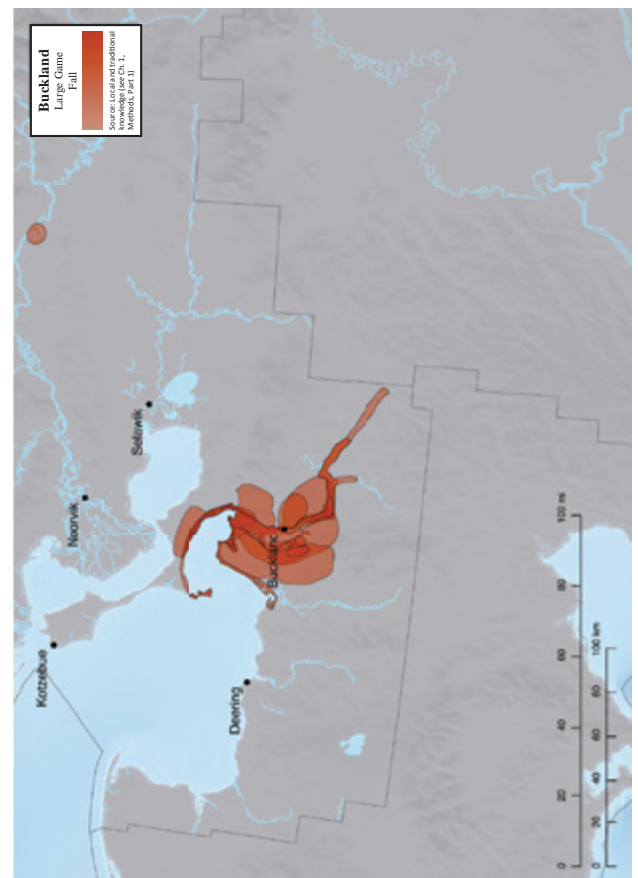
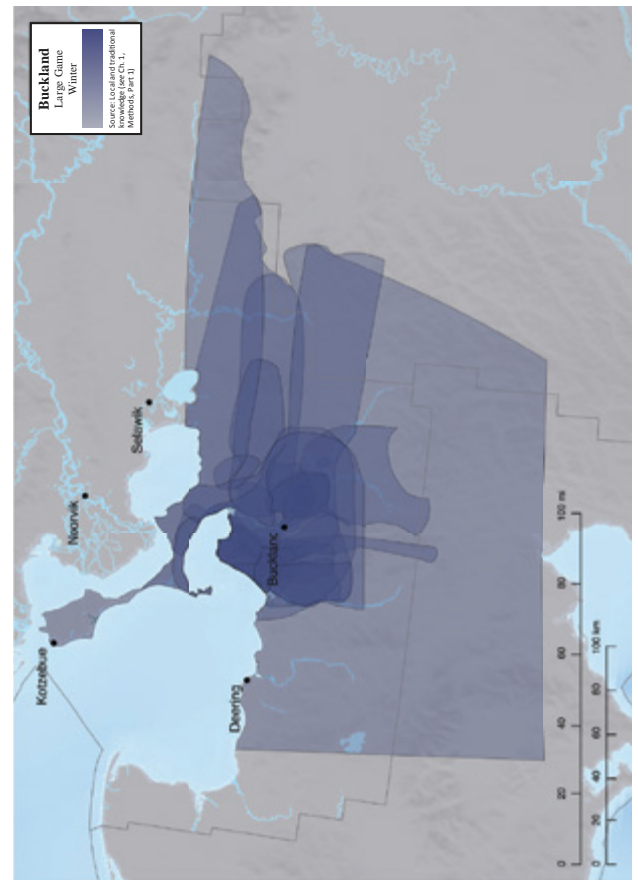


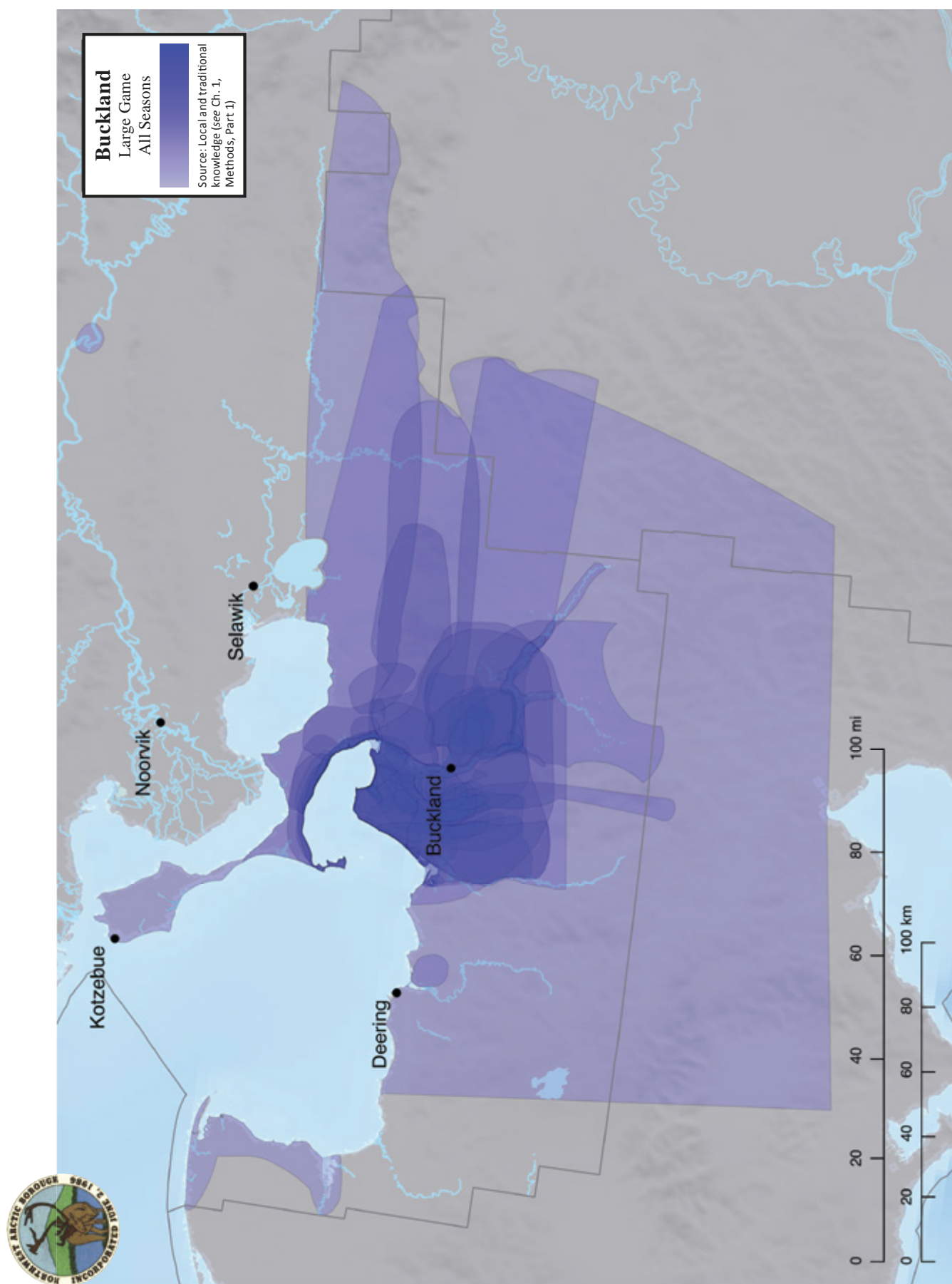


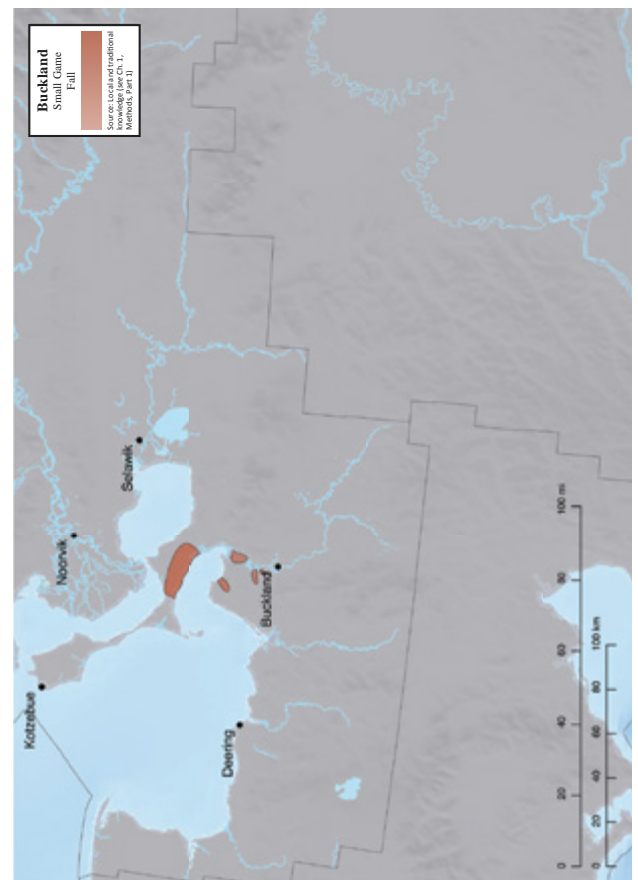
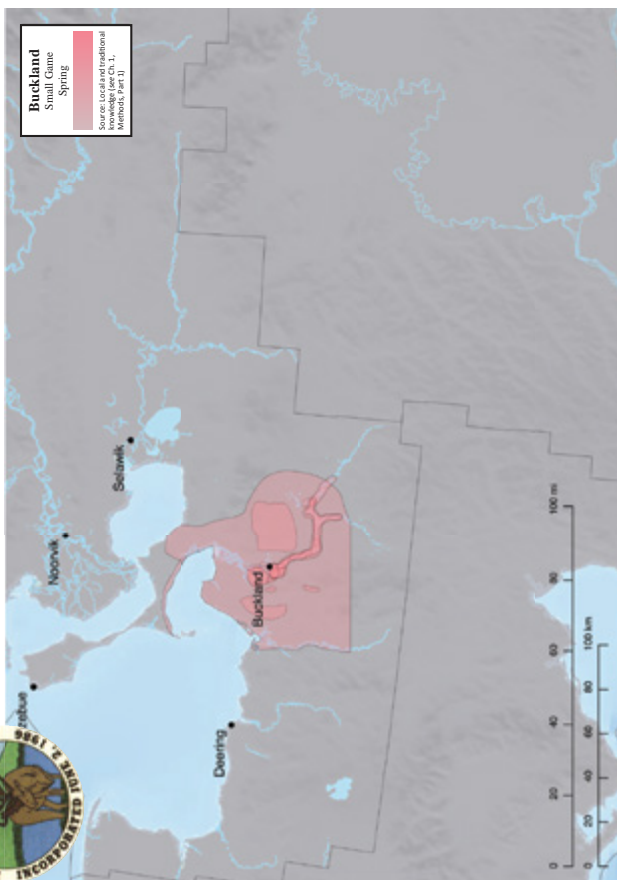
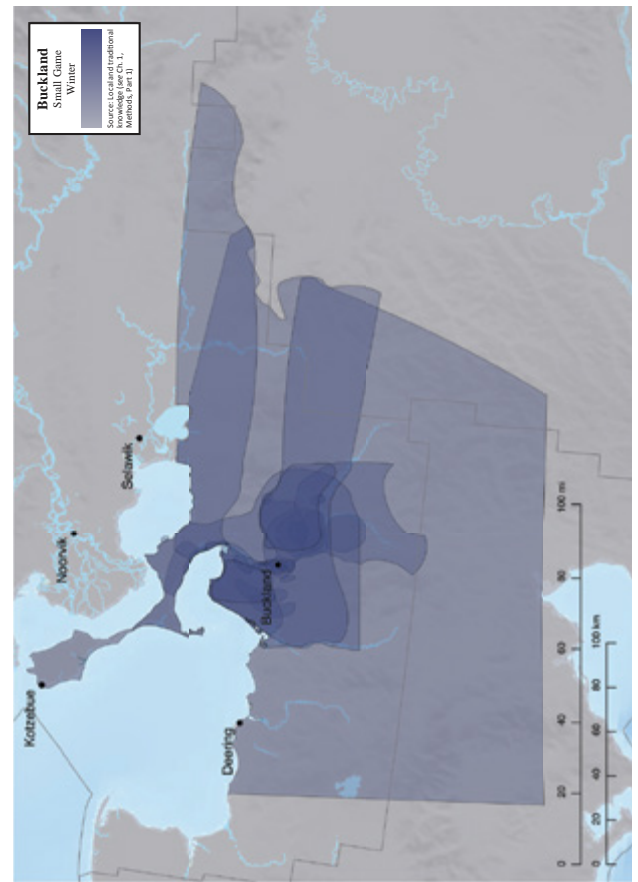
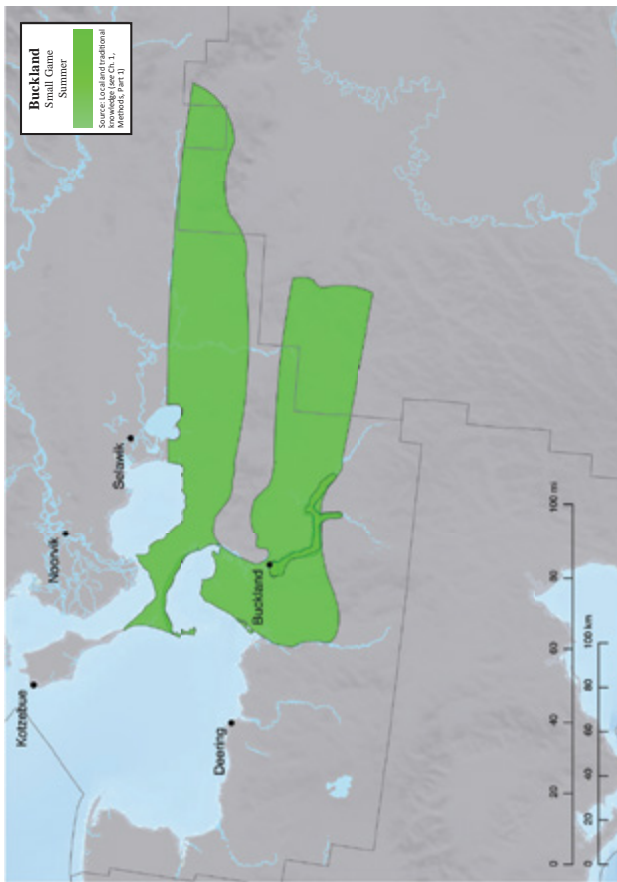


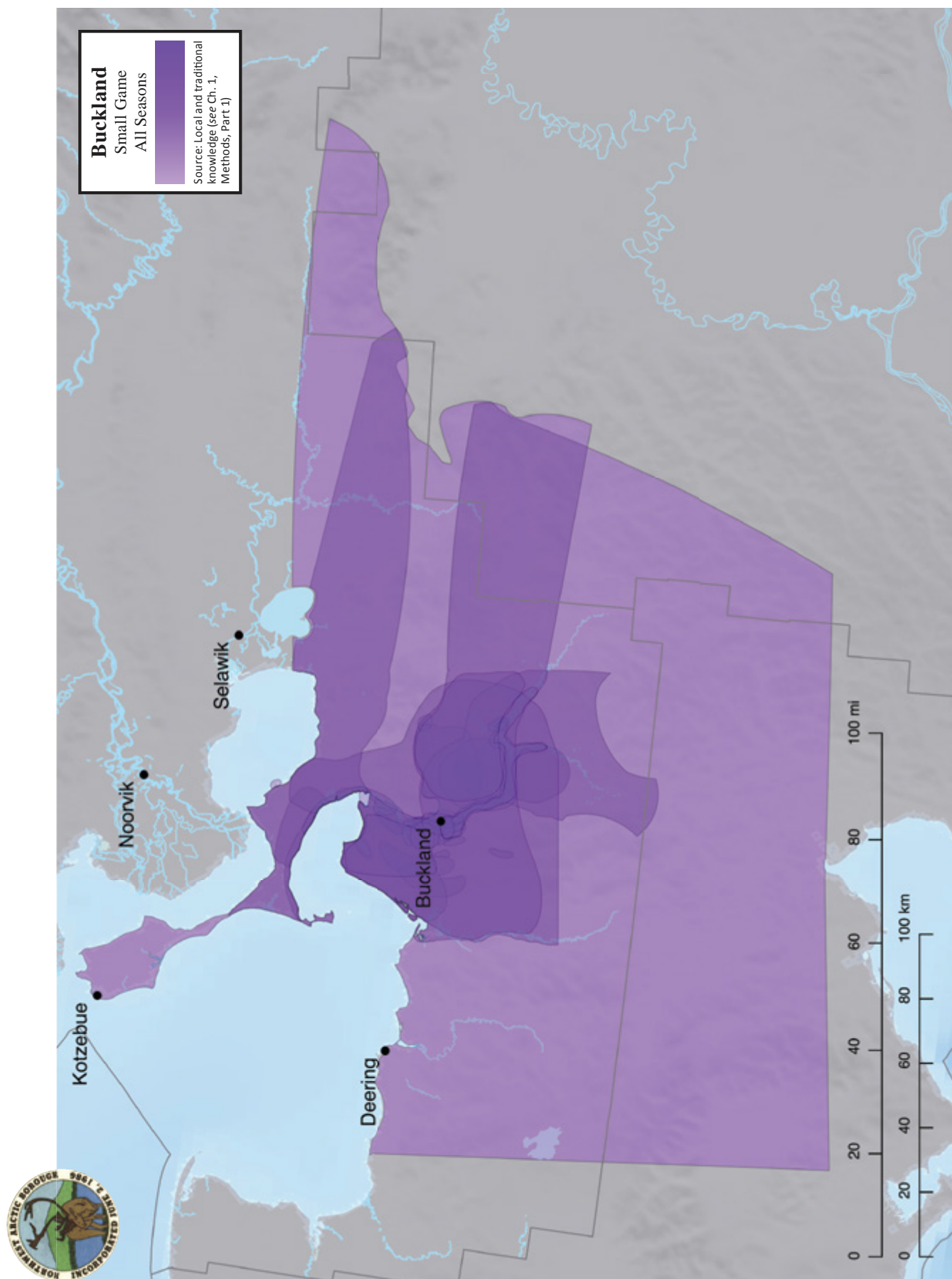




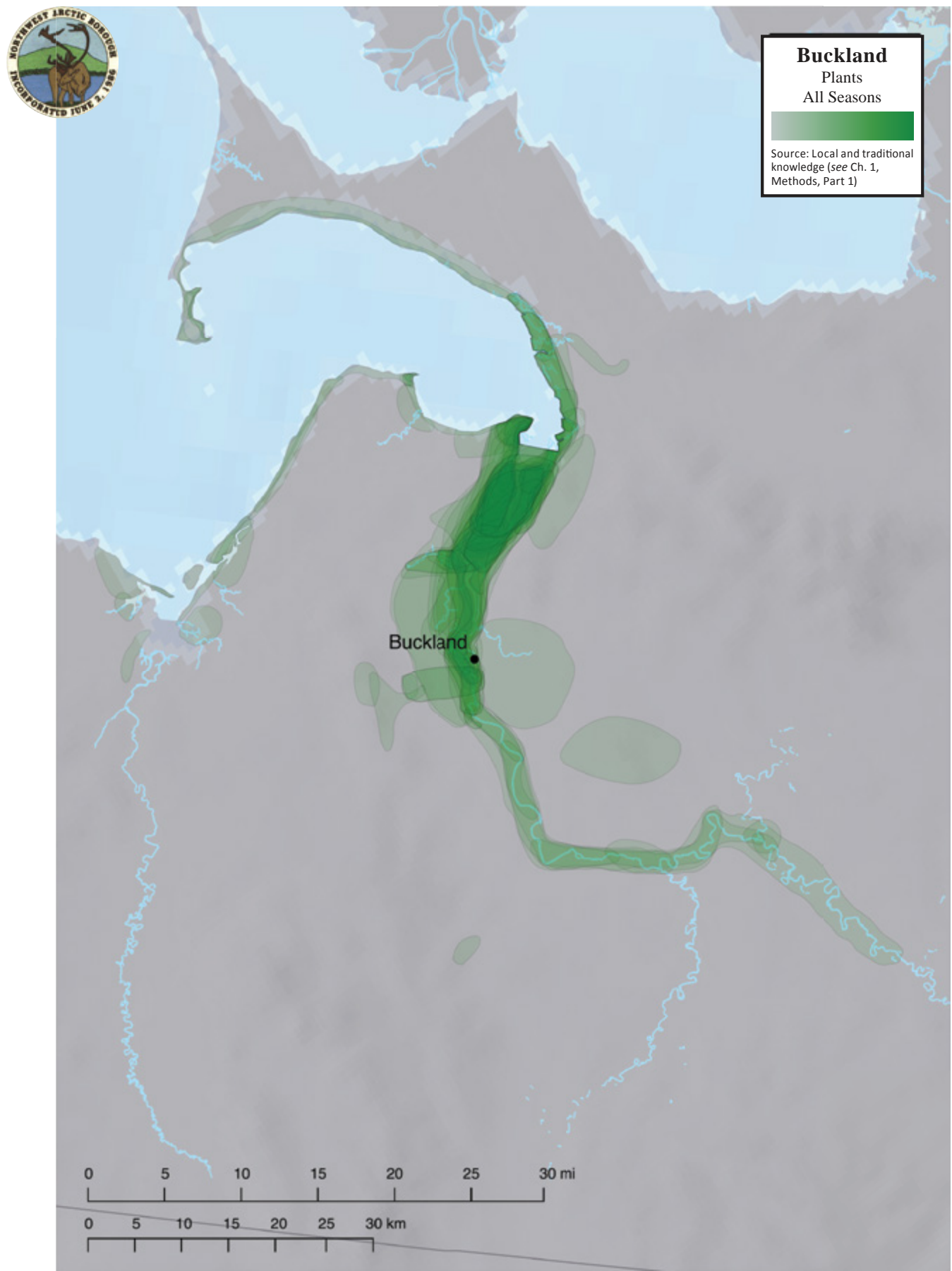


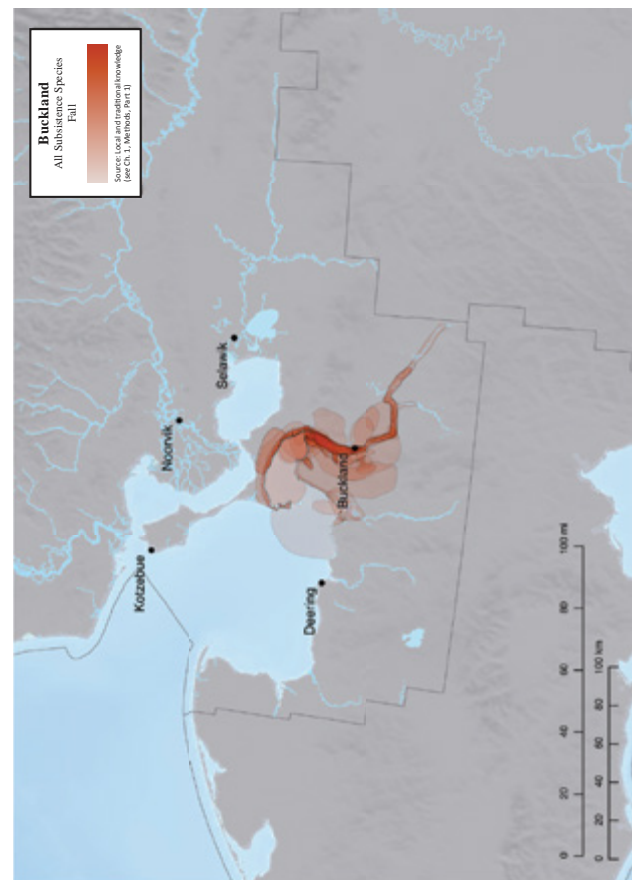
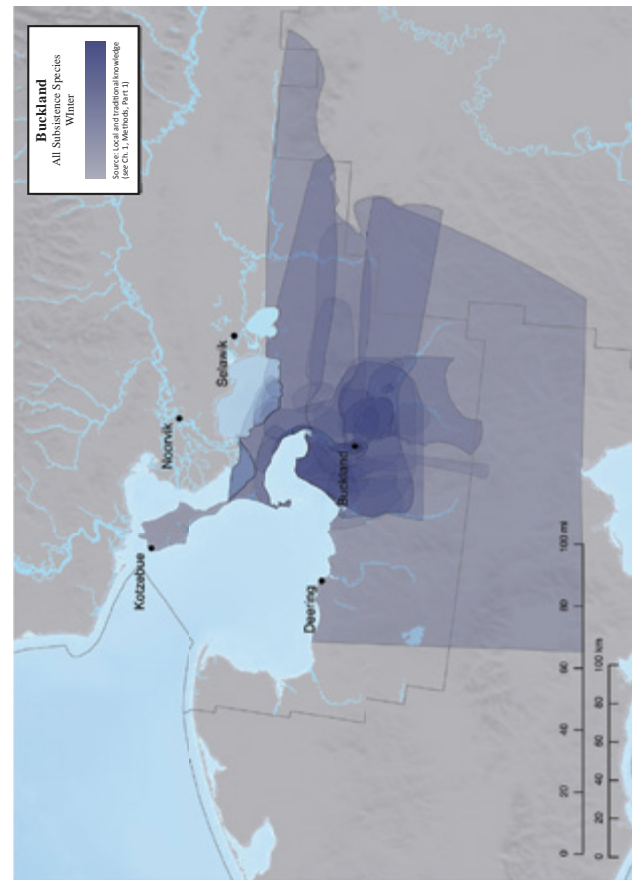














Qikiqtaġruq (Kotzebue)



Photo credit: U.S. Army Corps of Engineers.

Qikiqtaġruq (Kotzebue)



Modern day Sisualik. Photo credit: Peter Metcalfe.

The People of the Qikiqtaġruq Region

The modern port city of Kotzebue sits at the end of a three-mile-long spit on the Baldwin Peninsula, 26 miles north of the Arctic Circle in Northwest Alaska. The area surrounding today's town site was traditionally inhabited by the Qikiqtaġruṃmiut or the "People of the Peninsula," with *qikiq* meaning "island"¹ and *qikiqtaġruq* (sometimes written "Kikiktagruk") "almost an island." Beyond what its Iñupiaq name suggests, the Qikiqtaġruṃmiut nation occupied not only the peninsula but the lands immediately north of Kotzebue Sound, including present day Cape Krusenstern, Sisualik (Sheshalik Spit), and the mouth of the Noatak River extending up through the lower Noatak Flats to slightly upriver from where the Agashashok ("Aggie") River (Igġiitch isuum kuṇja) comes into the Noatak.

Well before the arrival of the explorer who gave his name to Kotzebue Sound,² the Qikiqtaġruṃmiut hunted *ugruk* (bearded seals) on the ice, beluga from open channels in the ice, and caribou from the coastal uplands. Located near the mouths of several spawning streams and rivers, the area extending up the coast from the spit also welcomed annual returns of a variety of fish and birds. In addition to



Sod house with bones. Kotzebue, mid-20th century. Photo credit: Steve McCutcheon, McCutcheon Collection; Anchorage Museum, B1990.014.5.AKNative.35.28.4. Alaska Digital Archives.

having access to a broad spectrum of food resources, the Qikiqtagruṃmiut benefitted from an asset still central to the community's success to this day: "location, location, location." Strategically situated on the edge of the Chukchi Sea near the outlets of three major river systems, Qikiqtagruṃmiut territory historically served as a central trading zone.³ As the commercial and governmental center of the Northwest Arctic Borough today, Kotzebue carries forward its longstanding role as a regional economic enterprise zone. The Northwest Arctic Borough's website lists just some of the ways the city continues to benefit from its location:

Kotzebue is the transfer point between ocean and inland shipping. It is also the air transport center for the region. Activities related to oil and minerals exploration and development have contributed to the economy.⁴

Recent archaeological work done by the National Park Service suggests people have inhabited the region around Kotzebue for over 11,000 years.⁵ In earliest recorded history, and continuing to this day, Qikiqtagruṃmiut food harvesting, preserving, and storing routines follow an annual cycle. Traditionally, during the early stages of breakup, the focus was primarily on bearded seals, and the occasional ringed seal, from qayaq or umiaq, as openings in the ice allowed. As the spring progressed, waterfowl and eggs would be added to the diet.

After the ice went out, the people from various settlements converged at Sisualik (Sheshalik), hunting beluga and waterfowl and catching salmon or whitefish. This too remains true today at many cabins and camps around Sisualik, the mouth of the Noatak, and the southern region of Krusenstern—as well as at the tent cities near Kotzebue, where large numbers of semi-permanent camps support communal summer subsistence activities.

In an annual ritual that anthropologists and local custodians of oral history date back centuries, in late July and early August, Arctic peoples from far and wide gathered at Sisualik for the annual trade fair. According to the U.S. Park Service, Siberian (mostly Chukchi) visitors came to trade jade, reindeer skins, pottery and beads for local goods that were scarce near their home in what is now modern-day Chukotka, Russia.⁶ Competitions, many involving skills related to food harvesting activities, featured selected representatives from different areas vying for top honors in archery and spearing, as well as other feats of agility and strength.⁷ As anthropologist T. Max Friesen writes, at the Russia fair, "[v]irtually anything could be traded, ranging from . . . labrets, beads, metal, and special skins, to 'bulk goods' such as dried meat or fish, whale oil, seal oil, and caribou skins."⁸ In *Alliance and Conflict: the World System of the Iñupiat Eskimos*, Ernest Burch discusses extensively the social significance of the trade fair.⁹ Long after the arrival of outsiders and the establishment of permanent villages and schools, the annual gatherings on the coast continued. With

dancing and other Iñupiaq traditions banned in many of the new villages, the fairs served to unite a diversity of arctic nations around deep cultural values held in common and helped to carry those values forward into modern times. As described in an *Arctic Sounder* article, some of today's elders remain

emotionally affected by the missionaries who prohibited Eskimo songs and dances. Back then, the missionaries were confused when other villages gathered for trade fairs and had big dance celebrations. They didn't understand the Eskimo dances or the language and believed it wasn't good for the community.¹⁰

The fair now takes the form of the biennial Qatḡut. The National Park Service website reports that, for the first time since the beginning of the Cold War, Siberians traveled to Kotzebue in 2013 to join North American Iñupiat at Qatḡut.¹¹ Another important part of the 2013 Qatḡut reported in the *Sounder* was the arrival of young dance groups from several of the villages in the Northwest Arctic Borough. According to the Park Service article, "[w]hen the Noatak dancers took the stage it was announced that the group had only been recently formed, and that all the dancers were young people who had taken it upon themselves to resurrect the



Archers competing at Sisualik, early 1900s.

Photo credit: Alaska Digital Archives, UAA-hmc-0401-album1-1-21b



A young modern-day trader at the 2013 Qatjut in Kotzebue. Photo credit: Northwest Arctic Borough.

native dance group in their community.”¹² Denali Whiting, who grew up between Kotzebue and the camps at Sisualik, described the significance of her fellow youth bringing dancing to the fair. “We have the freedom ... the right ... to teach our traditional ways,” she said. “We are now free to dance with pride.”¹³

In late summer, after the fair, people turned their attention to catching and drying salmon, along with picking berries and gathering greens and masu.¹⁴ Before the arrival of outsiders and the relocations that followed, major camps lined the northern shore of the sound and the western coast of the Baldwin Peninsula. While women dried fish and stored plants for winter, many of the men traveled by boat into the Baird Mountains and Igichuk Hills to look for caribou (and grizzly bears when opportunities arose), returning by the end of September.¹⁵

In the fall, caribou often migrated along the coastal region and, after freeze-up, would frequently cross Kotzebue Sound ice from the mouth of the Noatak drainage to the peninsula. If the ice wouldn’t hold them, they would go around Kobuk Lake (Hotham Inlet). Ptarmigan could be snared year-round. Sheefish and whitefish lingered in the many lakes and lagoons, and spotted seals and young bearded seals stayed around for much of the year. Once the winter food supply had been secured in sod-covered deep freezes, it was time to sew, create protective face masks, and socialize. In November, winter festivals got underway in the Krusenstern area and continued through January. As remains true today, ice fishing for sheefish, tomcod, and smelt, using both nets and lines, occupied the winter months and provided fresh food.¹⁶

Based on the number of reported settlements and oral accounts of average household sizes, Ernest Burch estimated that the Qikiqtagruṃmiut nation was made up of close to 400

people at the beginning of the 1800s.¹⁷ The new century then brought a series of catastrophes that significantly reduced that number.

Recorded oral accounts from the Kotzebue region mention an event believed to have occurred sometime between 1815 and 1820 on Taksruq saaja, a lagoon near modern-day Kotzebue. While playing a ball game on the ice, nearly all of the members of what is spoken of as the largest Qikiqtagruṃmiut settlement at the time fell through and either drowned or died later of hypothermia, leaving behind mostly elders and young children. As many as 110 people are thought to have perished in the incident.¹⁸

The years between 1850 and 1900 delivered several blows to the Iñupiaq subsistence cycle.¹⁹ To feed robust markets in a faraway industrialized world, whalers from the East Coast of North America all but depleted the bowhead whale populations for baleen and the walrus populations for their tusks. Fur-bearing animals of many kinds were threatened with extinction by the international fur trade.

In 1860, the whalers brought *qaviqsirut* or *qaviqsinaq* (“red sickness”), which claimed the lives of many Qikiqtagruṃmiut.²⁰ Not even a generation had passed before the region was struck with famine, threatening those who had survived the epidemic.

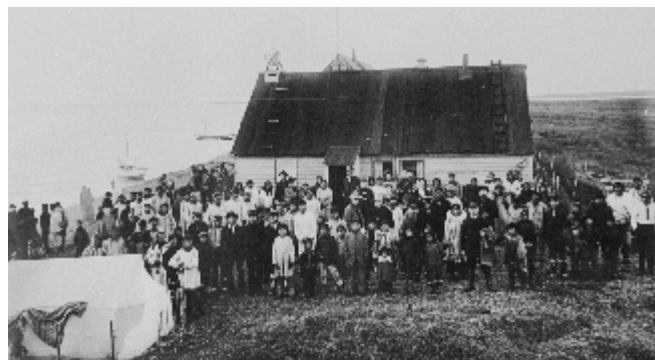
By mid-century, firearms were making Native caribou hunting more efficient. During the same period, miners and other outsiders were getting their meat from the arctic herds. By the 1870s, the Seward Peninsula and Nulato herds had both entered sharp declines.²¹ Then, a series of severe winters struck. As Caleb Pungowiyi wrote, during the time of the Great Famine in western Alaska, there were very cold winters for a long period. The main factor in the famine was the decimation of walrus and whale populations due to the

In 1880s, during the time of the Great Famine in western Alaska, there were very cold winters for a long period. The main factor in the famine was the decimation of walrus and whale populations due to the commercial harvest by Yankee whalers, but lots of ice and the long, cold winters did not make things easier.

Caleb Pungowiyi



Photo credit: Peter Metcalfe.



Friends Mission at Pt. Blossom, Kotzebue Sound. Early 1900s. Photo credit: University of Alaska Fairbanks, Cordelia L. M. Noble Collection. UAF-1973-203-4. Alaska Digital Archives.

commercial harvest by Yankee whalers, but lots of ice and the long, cold winters did not make things easier.²²

Between the years 1881 and 1883, few Iñupiat in the region of today's Northwest Arctic Borough could find enough of the food sources they had depended on for centuries to feed their families. An estimated two-thirds of the Qikiqtagruṃmiut starved to death or died from causes related to starvation over the course of these hard years. The 1890s were also lean, with fewer deaths but considerable emigration to neighboring nations. Concurrently, some people from the inland region who had been hit hard by the famine came to live at the coast in hopes of subsisting on marine mammals.²³

Against a backdrop of over 15 years of food shortages, disease, and dislocation, in July of 1897, Quaker missionaries Robert and Carrie Samms came ashore at Cape

Blossom, where they were greeted by itinerant Iñupiaq evangelist Uyagak (*see* Selawik history at pp. 125-126).²⁴ That same year, the first school was built,²⁵ and two years later, the village received a U.S. Post Office and the name we call it by today.

For the reasons discussed earlier in other village histories in this chapter, following the construction of mission infrastructure at the center of an area that had once been home to scattered subsistence camps, local people would start to live near the new buildings at times of year when they weren't hunting, fishing, trapping, or gathering. Frustrated teachers who desired to stick to what was for them a normal schedule had to learn to take in stride the absence of students who were expected to be out harvesting food



Kotzebue Dancers, mid-20th century. Hannah Jensen, Chester Sedik, Maine Garock; Leroy Lexford; Ken Worthy; Charles Jensen; Blanche Cinceh; York Wilson; Levi Rexford; Chester Sevek; Charlie Jensen; Blanche Lincoln; and others. Identifications by George Taylor and Jimmie Evak (some spellings uncertain) Photo credit: Alaska Digital Archives, UAF-2001-129-181.

with their families for much of the year.²⁶ Adding to their frustration was the fact that conversation in the camps was always in Iñupiaq. As Ernest Burch writes in his book *Social Life in Northwest Alaska*:

Camp life was extremely important to the preservation and communication of traditional knowledge during the early 20th century because it kept people out on the land where their ancestors had lived, and thus in touch with the old place-names and the stories associated with them . . . [E]lders were often brought out from the mission-school villages to provide entertainment in the form of storytelling sessions during the long nights.²⁷

As Burch implies, only through the persistence of elders who continued to tell stories and transmit oral history after the arrival of the missionaries was so much of the oral record, dating back thousands of years, brought forward into the present day.²⁸

Now the most populous community in the Northwest Arctic Borough, Kotzebue was for a long time among the smaller of the villages in the region. The U.S. census counted 200 people living in Kotzebue in 1900. Though it is more racially and culturally diverse than the surrounding villages, Kotzebue is still 73.6% Alaska Native, mostly Iñupiaq.²⁹ The Native Village of Kotzebue, the federally recognized tribal government, represents Kotzebue's Natives. A sovereign entity, the tribe, organized under the 1934 Indian Reorganization Act, as amended for Alaska in



Kotzebue Air Force Station in the 1960s.
Photo credit: Wikipedia.

1936, is commonly called the “Kotzebue IRA.” Although part of NANA Regional Corporation under the Alaska Native Claims Settlement Act (ANCSA), when the other village corporations located in the Northwest Arctic Borough merged with NANA in 1976, Kotzebue retained its separate

Nappairuq – “to build”

Founded in 1973 as an Alaskan Native Corporation (ANC), Kikiktagruk Inupiat Corporation (KIC) operates a diverse portfolio of companies across North America, offering quality services and products to clients in both the public and private sectors. Located in Kotzebue, Alaska, KIC proudly serves a shareholder base of Inupiat natives.

KIC Website

Kikiktagruk Iñupiat Corporation

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2010 port work. Photo credit: Peter Metcalfe.

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By 1950, Kotzebue's population had grown to 623.³¹ The community incorporated as a second class municipality under state law in 1958. It was only a matter of time before Kotzebue's strategic location would bring about a growth spurt, and that time came during the Cold War when the Air Force built a missile intercept station at Kotzebue, beginning in 1957. The work, mostly done by the Army Transportation Corps, was completed in April 1958. Tours of duty at the station were limited to one year because of "psychological strain and physical hardships."³² No longer needed after U.S.-Russia tensions eased, the squadron was deactivated in November of 1983 and the station turned into a Long-Range Radar (LRR) site. In 1998, the site was remediated in "Operation Clean Sweep," a military site cleanup program for abandoned Alaska bases. The work, performed by a civil engineering squadron out of Elmendorf Air Force Base, was completed in 2005.³³

Subsequent economic developments would contribute to the city's rapid growth. In 1970, as recounted on the NANA Development Corporation website, "Kotzebue bush pilot Bob Baker noticed rust in a creek. He named the creek after his red dog." Ten years later, in 1980, NANA made an ANCSA selection of a 120-square-mile block of land underlying the Red Dog Mine area, and, in 1982, signed an operating agreement with Canadian mining company Cominco to develop and operate the mine.³⁴ In 1995, the regional nonprofit Maniilaq Association completed a \$42 million health care facility, which acts as the primary health care center for the Borough.³⁵



Spring break-up. Photo credit: Damian Satterthwaite-Phillips.



Kotzebue freshwater pump station.
Photo credit: Sarah Betcher.

By 2000, Kotzebue's population had reached 3,082. Today, many people work at white-collar jobs in health care, education, and, most notably, government. The employment picture is generally rosier here than in the smaller villages, with jobs available in air and marine freight transport and seasonal work available in construction and fishing. In 2010, 18% of those who had employment earned less than \$5,000 annually, with 291 workers collecting unemployment at some point during the year. Locals hold 112 commercial fishing permits.³⁶ Support services for exploratory oil drilling on federal offshore leases in the Chukchi, which commenced during the summer of 2015, will likely keep many local workers employed.

Educational institutions in Kotzebue include the June Nelson Elementary School and the Kotzebue Middle/High School, both in the Northwest Arctic Borough school district. Across the street from these schools sits the University of Alaska Fairbanks' Chukchi campus, which offers college level courses and houses the Chukchi Consortium library.³⁷ The tribe runs an Iñupiaq language immersion school, Nikaitchuat Iḷisaḡviat, for children ages 3-7.

The City of Kotzebue operates a harbor and marina, volunteer fire department, police department, recreation center, landfill, and water utility. Transportation infrastructure is more developed in Kotzebue than in the rest of the Borough, including several paved roads leading out to the summer camps, the landfill, and the reservoir. Unlike the other villages, where the vehicles most commonly encountered on the roads during the summer months are ATVs, several Kotzebue residents drive cars and trucks, and locals and visitors keep a couple of cab companies in business. In the winter, it is not uncommon to encounter snow machines on plowed roads in addition to on the frozen tundra, rivers, lagoons, and ocean.

The state-owned Ralph Wien Memorial Airport accommodates daily jet service to and from Anchorage, which connects with several air taxis that serve the region's villages. Most goods and services come into villages via air transport these days.

Goods, services and construction aggregates arrive in the sound on barges and container ships during the ice-free months. Sediments washed down by the rivers, especially the nearby Noatak, make for a shallow harbor, so deep-draft vessels anchor out and transfer cargo to shore on smaller ships.³⁸ Kotzebue competed to become a new Arctic deepwater port, but came in behind Nome and Port Clarence as preferred sites.³⁹ Nevertheless, the city aspires to develop a deepwater port at Cape Blossom to better accommodate local shipping.

Even though Kotzebue is a place of modern amenities and good paychecks for many people, the community's residents remain engaged in the annual local cycle of fishing, gathering, and seal, whale, and caribou hunting. The shared fish camps found on the beaches north and south of town testify to a strong communal longing to savor salmon, *ugruk*, and berries—and the age-old experience of working together to harvest them.



Kotzebue pizza delivery. Photo credit: Peter Metcalfe.

1. Burch, E. 1998. *The Iñupiaq Eskimo Nations of Northwest Alaska*. Fairbanks: U of Alaska Press, pp. 189-218.
2. Ibid. The name of the village comes from Otto von Kotzebue, a Baltic German, who was a citizen of, and explorer for, the Russian Empire. In 1816, Kotzebue was the first known European to make contact with the Qikiqtagruṃmiut, though, according to Burch, “he never entered the northeastern portion of the sound that now bears his name.” p. 380, n. 822. The village of Kotzebue was named for Kotzebue Sound when the Post Office was established in 1897.
3. Ibid, pp. 206-209; see also Northwest Arctic Borough. 2015. Community Information. <http://www.nwabor.org/villages.html>. Accessed 12 June 2015.
4. Northwest Arctic Borough. 2015.
5. National Park Service. 2015. Cultural Resource Program. <http://www.nps.gov/noat/learn/historyculture/program.htm>. Accessed 4 May 2015.
6. National Park Service. 2015. Resurrecting Ancient Connections through Dance. April 14. http://www.nps.gov/akso/beringia/about/spotlight/Qatnut_article.cfm. Accessed 30 Aug. 2015.
7. Burch, E. 2005. *Alliance and Conflict: The World System of the Iñupiaq Eskimos*. Lincoln and London: U of Nebraska Press, pp.180-191.
8. Friesen, T.M. 2009. Alaskan Analogues and Eastern Uncertainties: Reconstructing Thule Inuit Interaction Networks in the Eastern North American Arctic (citing Burch 2005). Networks, Interaction and Emerging Identities in Fennoscandia and Beyond: Papers from the conference held in Tromsø, Norway, October 13–16. http://www.sgr.fi/sust/sust265/sust265_friesen.pdf. Accessed 12 June 2015.
9. Burch 2005, pp. 180-212.
10. *The Arctic Sounder*. 2013. Kotzebue celebrates Qatjut, togetherness. July 6. (No author; quoting Denali Whiting of Kotzebue). http://www.thearcticsounder.com/article/1327kotzebue_celebrates_qatnut_togetherness. Accessed 11 June 2015.
11. National Park Service 2015.
12. Ibid.
13. The Arctic Sounder. 2013.
14. A kind of taproot, termed masru in upriver areas.
15. Burch 1998, pp. 205-208.
16. Ibid.
17. Burch 1998, p. 203.
18. Ibid., pp. 203-204, 375-380.
19. Burch, E. 2006. *Social Life in Northwest Alaska: The Structure of Iñupiaq Eskimo Nations*. Fairbanks: U of Alaska Press, pp. 386-387.
20. Historians often refer to the outbreak as “measles,” but qaviqsirut or qaviqsinaq may have, in this case, referred to scarlet fever.
21. Burch 2006, p. 386.
22. Pungowiyi, C. Native observations of change in the marine environment of the Bering Strait region. National Oceanographic and Atmospheric Administration (NOAA). n.d. http://www.arctic.noaa.gov/essay_pungowiyi.html. Accessed 13 June 2015.
23. See map at Burch 1998, p. 217.
24. Roberts, A.O. 1978. *Tomorrow is Growing Old*. Newberg, OR: The Barclay Press, p. 170.
25. Alaska Native timeline (originally posted on www.nativefederation.org). http://www.questconnect.org/ak_native_timeline.htm. Accessed 6 June 2015.
26. Burch 2006, p. 389.
27. Ibid., p. 390.
28. Ibid.
29. Alaska Dept. of Commerce, Community and Economic Development (DCCED). 2014. Community and Regional Affairs. <https://www.commerce.alaska.gov/dcra/DCRAExternal/community/Details/8aa56b8f-c01a-44a4-8f66-cbac5c6f2f4e>. Accessed 22 Aug. 2015.
30. The Arctic Sounder. 2014. In Brief. February 7. http://www.thearcticsounder.com/article/1406in_brief. Accessed 16 June 2015.
31. NANA.com.
32. Wikipedia. Kotzebue Air Force Station.
33. Ibid.
34. NANA Development Corporation. 2015. Timeline. http://nana-dev.com/about/our_history/timeline/. Accessed 16 June 2015. Ongoing economic benefits and environmental challenges from the mine are discussed in more detail in chapter 5.
35. Maniilaq Association. Health Center. 2003. <http://www.maniilaq.org/healthCenter.html>. Accessed 13 December 2014.
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39. Joling, D. 2015. Alaska deepwater port proposed for vessels in Arctic waters. *Alaska Dispatch News*, Feb. 19. <http://www.adn.com/article/20150219/alaska-deepwater-port-proposed-vessels-arctic-waters>. Accessed 6 June 2015.

Traditional foods important to the people of Kotzebue today

KOTZEBUE TRADITIONAL FOODS BY EDIBLE MASS, UNIQUE AREAS AND PEOPLE			
SPECIES	BY EDIBLE MASS (% OF TOTAL FOOD HARVESTED ¹)	BY NUMBER OF UNIQUE AREAS (% OF 2,058 MAPPED POLYGONS)	BY PROPORTION OF PARTICIPANTS (% OF 38 KOTZEBUE RESIDENTS IN STUDY)
Tuttu Caribou (<i>Rangifer tarandus</i>)	27.0	15.3	97.4
Sii Sheefish (<i>Stenodus leucichthys</i>)	22.4	10.3	97.4
Ugruk Bearded Seal (<i>Erignathus barbatus</i>)	21.3	4.9	76.3
Qalagruaq Chum Salmon (<i>Oncorhynchus keta</i>)	14.0	2.7	≤86.8 ¹
Nigliq Geese	0.1	10.2	84.2 ¹
Berries: (blueberry, cranberry, salmonberry, blackberry combined)	2.6	9.8	100.0

In Kotzebue, caribou provided the largest mass of edible traditional food¹, making up 27.0% of the edible mass of the total harvest (ADF&G 2014). The next most abundant species were sheefish at 22.4%, bearded seal at 21.3%, and chum salmon at 14.0%. Of the 2,058 map polygons we drew in this study, caribou and sheefish were again at the top of the list, occurring in 15.3% and 10.3% of all search area polygons respectively. Geese were the next most common, occurring in 10.2%. For geese, villagers mentioned brant most often by name (3.1% of all polygons). Berries (9.8%), was the next most common food item,

with the top among them being blueberries (4.9%) and salmonberries (4.9%). Berries were the food sought by the greatest number of people in our study. All of the 38 study participants in Kotzebue said they search for berries, again with salmonberries and blueberries being the most frequent, named in 89.5% and 86.8%² of the interviews respectively. After berries, the next most frequently mentioned items were again caribou and sheefish (both 97.4%), followed by salmon (86.8%),² with chum being the most frequently named (explicitly named in 52.6% of the interviews).

1. The numbers in the first column reflect Alaska Dept. of Fish and Game data. Community Subsistence Information System. <http://www.adfg.alaska.gov/sb/CSIS/>.
2. The figure 86.8% represents the percentage of interviewees who caught “salmon” of any kind. In the area around Kotzebue, chum is by far the most prevalent species of salmon, so, for many people, “salmon” means “chum salmon” by default. Of all study participants, only 52.6% explicitly stated that they caught “chum salmon.” The next most commonly mentioned species, “pink” and “silver” salmon, were each explicitly mentioned by only 29%. Of the 33 respondents who caught salmon of any kind, only three explicitly named a species other than chum without explicitly naming chum (one named king salmon and the other two named pink salmon).



Women cut up fish at Kotzebue fish camp. Photo credit: Sarah Betcher.

Kotzebue Voices

Lifelong Kotzebue residents John Gallahorn and Alice Henry spend most of the year at their remote camp northeast of the Northwest Arctic Borough's busy hub. Their cabin, built with the help of family and friends many years ago, is situated above the beach, near a meadow of tall grass, among a few deciduous trees. Inside, Alice stirs caribou soup on the woodstove. Seated by the stove, John openly shares the details of the couple's way of life.¹

"We live off the land . . . all year long. We put our nets out for all kinds of fish all summer and all spring. In the fall time, when it freezes up, we put our nets under the ice for fish. And, when the caribou come, we do a lot of caribou hunting. Sometimes moose hunting. Then we do hunting for geese, ducks, and whatever birds we can get for the winter."

John and Alice don't often get the opportunity to travel the 25 miles back to town to get food. "Mostly we live here all year," says John. "Sometimes, about three or four days a month, we stay in town. During the spring and fall we have to get supplies." Between April and October, he often looks for periods of seasonal work. "Fuel and everything else is so expensive, you've got to have a job to pay for some of the stuff that you need." Although he and Alice still keep a dog team, these days they use dogsleds less and less for everyday needs. "I have two snow machines here that I use to haul firewood for heating the house and for cooking dog food. I still use the dogs for checking our nets and hauling

the fish back home on the sled, though—it makes it a lot quicker and easier.”

Several paths have been worn into the land around the cabin, leading to food caches, drying racks, and the kennel. John stands by a small smokehouse built partially underground. “We use this for smoking salmon strips and drying fish.”

It's not far to the beach, where a drying rack can be seen standing, a net draped over it. "Keeps out the ravens and other birds," says John. They use the rack for salmon, mostly. The most prominent structure on the property is another drying rack—this one tall and loaded. "That's our cache," says



Caribou meat. Photo credit: Sarah Betcher

John. “We got salmon for dog food and for our eating. There are salmon eggs hanging on the net.” Alice walks over to the drying eggs and pulls off a few to taste. The eggs are dried to preserve them, she explains. Caribou ribs have been set out to dry on the other side of the rack.

Alice and John stroll down to the water’s edge. He recounts how their family has been hunting birds here for as long as anyone can remember. “Ducks and geese? Sometimes we get about 30 or 40 and it lasts us the year. We get wigeons, pintails and Canadian geese during the fall,” says John, looking out across the distance.

They walk up a hill a short distance away, Alice picking blueberries from bushes already turning a fall red along the way. “This is where she picks berries when it’s dry out,” John says. Alice seems happy to let John do the talking. At the top of the rise, he points out a nearby caribou migration corridor. “This is where we wait. I take binoculars. I see a bunch of herds some times.” He’s hunted as many as 20, he says, to distribute among family and elders. “We share with other people.” He turns to a nearby pond. “I also go shee fishing down there on the ice all winter. Up here we have blueberries, blackberries, cranberries; fifteen twenty gallons each and that lasts us all winter.” Alice does most of the picking in August and September. “But I try to help out before the berries get too soft to pick,” says John.

From the hill, John is also able to point out nearby areas where he gathers firewood and traps beaver. “First time I did it I got 16 beaver,” he says, then admits it’s usually more like four or five. “It’s good meat.”

They walk back down to the water’s edge, where John and Alice have two single-engine boats. John explains that he uses them for different purposes depending on what he is out to catch and also depending on the weather. Two buckets of fish rest in the shallow mud next to one of the boats. “We have salmon and some little sheefish for the dogs. We get (the fish) out here in front. And we got some seals over here.” John points down the beach to the east. Alice leads the way to two large buckets next to two seals. “We got some blubber right here for seal oil,” says John. Alice tilts the opening of the bucket, revealing several pieces of blubber they’ve prepped for rendering into seal oil—an Iñupiaq staple. “The other day I got three spotted seals,” says John. Before they leave, John places a board back on top of the seals, saying he wants to try to keep them fresh.

A seal skin has been stretched over another drying rack. “We’re getting this ready for a friend of ours,” says John, pointing at the spotted, short-haired pelt. “And this one over here is a caribou skin.” He touches a longer-haired brown and white pelt. “We will use that for mukluks.” A tarp has been draped over part of the rack. They lift it and survey rows of fish blowing in the wind. “She’s got little whitefish and salmon. On this side, we got big whitefish with eggs in

it that we eat during the winter.” They walk out from under the tarp to a stick that holds drying meat. “The belly part of the caribou,” says John. He waves his hand over all of the caribou meat. “Everything that is here we call *paniqtaq*.”

John talks about the ways they trade for other traditional foods. “Sometimes I send them some sheefish and they send us walrus and fermented meat with the skin around it. It’s real good,” he says, adding “it’s nice to eat something different sometimes.”

As they walk back to the house, Alice says to look out for rabbit tracks along the side. John hunts rabbits with snares. He usually sets three or four traps. “Mostly I trap beaver, lynx or martins.” On the other side of the house a small pen comes into view. “That’s a chicken coup. She keeps them there when it’s warm. I’ll show you where she keeps them for the winter.” They walk past a tree with several snares hanging from it toward an insulated, partially underground, chicken coup.

They head back inside the house. “How much of the year do we do subsistence?” John asks. “We work at it all year long.” He smiles. “Around here, you got nothing else.”

1. This section is based on an interview conducted by Sarah Betcher in September of 2013.

What the maps tell us . . .

Sisualik also supplies locals with great expanses of berries and various other greens. The peninsula, too, has many good berry patches, and tundra tea and various medicinal herbs are also gathered.

Interpreting the Color Scale on Maps in this Chapter

In the maps in this chapter, the darker the color on the map, the more people from the village go to that area to search for the resource. The areas with the lightest color are generally used by only one of the study participants in the village. Please note, sometimes areas may look slightly darker because they lie over land, which is tinted gray on the base maps. Water appears in light blue on the maps, which slightly lightens up the search area overlay. All maps reflect information gathered from participating villagers in Part 1 of this study.



