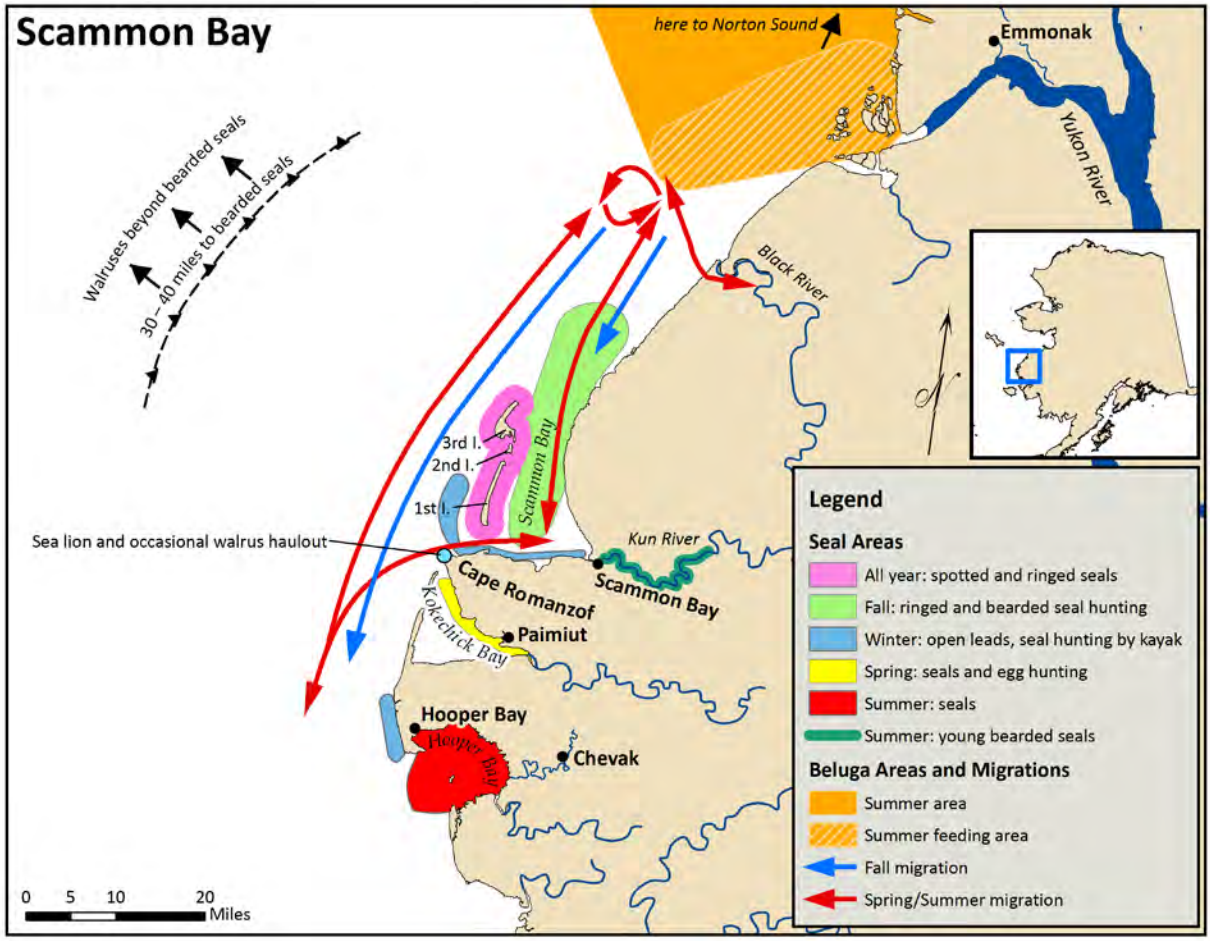
Traditional Knowledge Regarding Marine Mammals near Scammon Bay, Alaska



Traditional Knowledge Regarding Marine Mammals near Scammon Bay, Alaska

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Introduction

Seals, walrus, and beluga whales are important for subsistence harvests by Yup'ik hunters from Scammon Bay, Alaska. These animals are also iconic Arctic marine mammals at risk from climate change. Industrial activity in the Bering Sea, coastal development in the Norton Sound region, and shipping through Bering Strait are additional potential stressors to these marine mammals. The study of the distribution, behavior, and movements of marine mammals is an important contribution to monitoring the effects of a changing environment and the potential effects of industrial activity. Placing satellite transmitters on seals, walrus, beluga whales, and other species provides detailed information about the movements, habitat use, and behavior of some individual animals. Satellite telemetry studies, however are limited in the number of individuals per species that can be instrumented, therefore it is difficult to know how well tagged animal movements and behavior represent the population as a whole. Documenting traditional knowledge about timing of migration, behavior and the age classes of marine mammals at specific locations through interviews with residents of coastal communities, provides important context in which to interpret the satellite telemetry studies as well as providing contemporaneous and historical information about general patterns in marine mammal distribution, movement, and behavior that complement the science greatly. The integration of these two different but equally important types of information provides a broader more comprehensive overview of how Arctic marine mammals and hunters operate in their environment and how changes in the environment are influential.

This report summarizes information gathered from interviews held in Scammon Bay with hunters and other knowledgeable residents in January 2017. This traditional knowledge project used the same approach that the Native Village of Savoonga used when documenting traditional knowledge about bowhead whales on St. Lawrence Island (Noongwook et al. 2007).

Methods

We used the semi-directive interview method, in which the interviewers raise a number of topics with the person being interviewed, but do not rely solely on a formal list of questions (Huntington 1998). Instead, the interview is closer to a discussion or conversation, proceeding in directions determined by the person being interviewed, reflecting that person's knowledge, associations made between animals and the environment, and so on. The interviewers use a list of topics of interest to raise additional points for discussion, but do not curtail discussion of additional topics introduced by the person being interviewed.

In Scammon Bay, we interviewed five persons individually. The interviewees were Morgan Simon, Jim Kaganak, Wybon Rivers, John Bell, and one other who wished to remain anonymous. The interviews were conducted on January 10 and 11, 2017 in the homes of three interviewees, at the office of one, and in the school library.

The topics of interest identified by the research team in advance of the interviewers were:

Seasonal patterns of distribution of ice seals, walruses, and beluga whales
Haulouts on land
Use of rivers
Feeding patterns and prey
Impacts from climate change and hunter responses to those changes
Parts of marine mammals that people eat
Information about other marine mammals
Information about other aspects of the environment and people

Table 1. List of Yup'ik, English, and scientific names of marine mammals mentioned in this report.

	Yup'ik name	English name	Scientific name
	Maklak	bearded seal	*Erignathus barbatus*
	Maklagaq	young bearded seal	*Erignathus barbatus*
	Issuriq	spotted seal	*Phoca largha*
	Nayiq	ringed seal	*Phoca* or *Pusa hispida*
	Qaygulek	ribbon seal	*Histriophoca fasciata*
	Kaugpak	Pacific walrus	*Odobenus rosmarus*
	Uinaq	Steller sea lion	*Eumetopias jubatus*
	Cituaq	beluga whale	*Delphinapterus leucas*

The results are presented under different headings, reflecting the actual information collected and the fact that some of the subjects blend together, especially changes seen over time in regard to all of the topics. The interviewers were Henry Huntington and Mark Nelson. Lori Quakenbush is the project leader.

Ringed Seals

A few ringed seals can be found in the Scammon Bay area year-round, but most arrive back in November or so, around the time the sea ice returns, when they can haul out on shorefast ice or

on pack ice. They stay through the winter and spring, becoming more plentiful or at least more visible in March as the ice opens and hunters begin to go out by kayak. Some ringed seals stay in the area as late as May or so and don't leave until after the herring run. Ringed seals usually have small fish in their stomachs, and sometimes some shrimp.

Ringed seals used to be hunted mainly in spring, but now can be hunted in December through February, due to thinner sea ice and more open water. In spring, they are hunted mainly for the meat and oil. The oil is used to preserve dried fish and other things. Hunters avoid larger ringed seals in March and April, because they may be in rut and not suitable for eating. Ringed seal skins are used for hats, gloves, and boot uppers.

Two or so years ago, ringed seals with boils on their neck and bellies were seen, acting fearless unlike how seals usually behave. Some hunters went for spotted seals instead, as these appeared to be healthy. Another hunter reported ringed seals with red skin and open sores, on their backs. He said some spotted seals had similar sores. Seals with bald patches have been seen from time to time for as long as some hunters can remember (>30 years), but they are not common. Some seals in the past were skinny too, perhaps ill.

In 2011, after the Japanese earthquake and tsunami, some seals were seen behaving sluggishly, not fleeing when hunters approached. Hunters avoided those seals and went instead for the ones that were energetic as usual. This behavior lasted only a year or two.

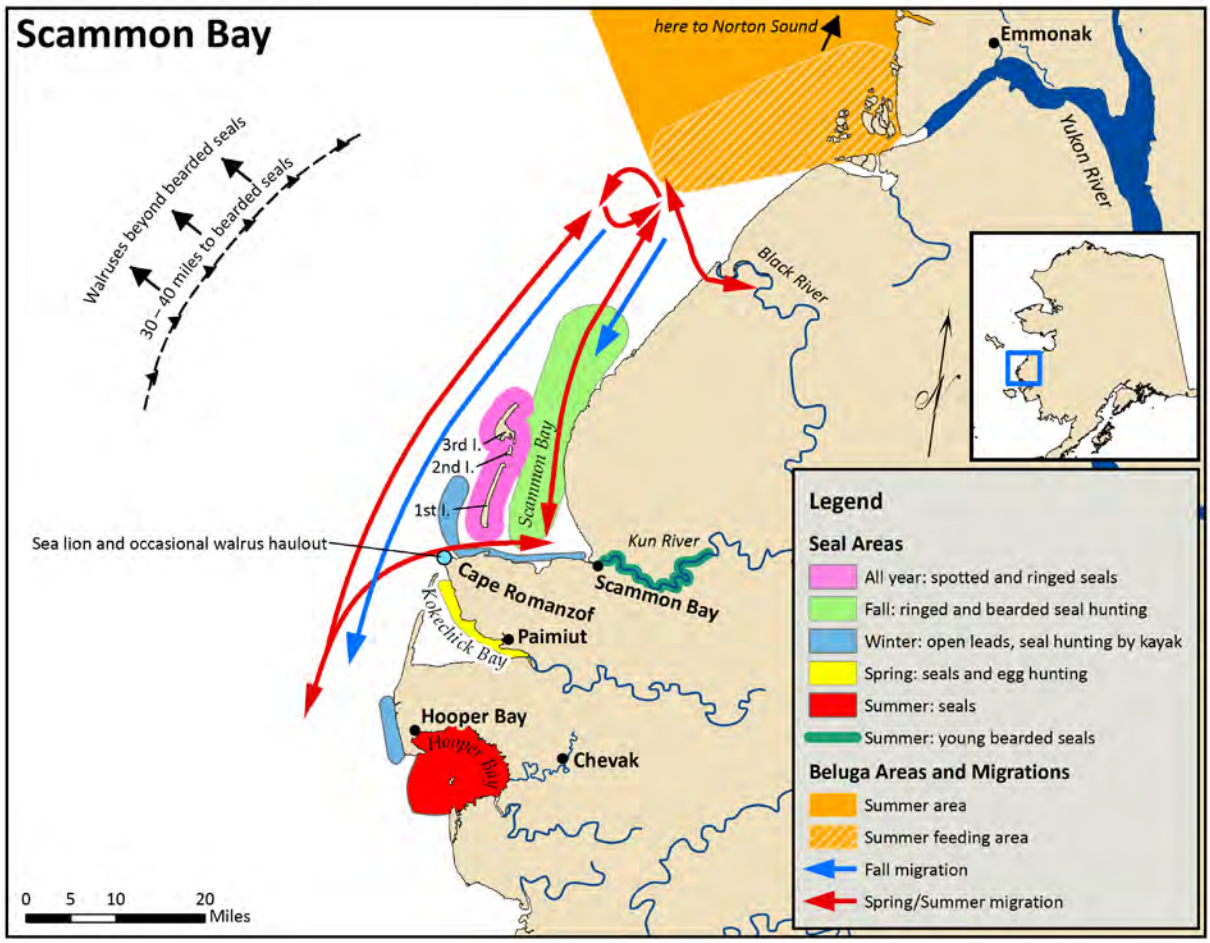

Figure 1. Movements and behavior of seals, walrus, and beluga whales as described during traditional knowledge interviews, January 2017.

Spotted Seals

Spotted seals are abundant. They are found in the area year-round. In spring, spotted seals become more common in April, after ringed and bearded seals start heading north. Hundreds of spotted seals can be seen in the weeks before break-up, sometimes in large gatherings. Spotted seals remain plentiful in May. In summer, 400–500 spotted seals haul out on the second and third islands off Scammon Bay (Figure 1), but not elsewhere in the area. Some ringed seals may haul out there, too, but after the herring run nearly all the seals in the area are spotted seals. Spotted seals are occasionally seen in the channel by the first island in summer. Spotted seals are hunted for their skin and oil.

This winter, spotted seals are more abundant than usual in the area, due to the open water and thin ice so close to shore. In late December, hunters saw mainly spotted seals and only a few ringed seals. In colder winters, ringed seals are more common than spotted seals and are the usual seal to see in January and February.

Spotted seals eat tomcod (i.e., saffron cod) when they are abundant in the area, and herring during the herring run. Some can be seen with herring eggs on their faces at that time of year. A

spotted seal taken in late December 2016 had tomcod and smelt in its stomach. Hunters can tell if seals are feeding based on where the seals are and when, and on indicators like herring eggs on their faces. The surfacing behavior does not seem to change very much.

Bearded Seals

Some bearded seals are present throughout the winter, but they are generally secretive and few are seen. Most bearded seals come in spring, when the ice opens up a bit and they have their young. They used to arrive in mid-March, but now some will come as early as February, showing up a few miles offshore. Most leave for the north in April or May, after the herring run, but some juveniles stay all summer, often going up rivers where they appear to be following tomcod and whitefish runs throughout the summer. At Black River, two or three bearded seals can be seen coming in with the fish on each tide (Figure 1). In fall, bearded seals return with the sea ice, but most of these are sub-adults.

Bearded seals are pregnant in spring. Mother bearded seals are very protective of their young; they can be approached easily as they will not flee and abandon their pups.

Bearded seals have many, often large, shrimp in their stomachs in spring and also sea cucumbers or spoon worms. In September and October, they will also have small, sardine-like fish.

Bearded seals are hunted in spring. The meat is often dried and can be frozen, too. The innards are used to make soup. Nearly all of the animal is used, with the exception of some parts such as the bile ducts near the liver. Bearded seal is used to make oil. Bearded seal skins are tough.

Bearded seal hunting in spring is getting harder, due to poor hunting conditions and fewer seals. Hunting in fall is also challenging due to fewer seals.

One hunter has found bearded seals with discolored livers on two occasions, including white patches on the liver. He discarded the livers but kept the rest of the seals. Another bearded seal had warts or a similar looking problem on the skin of its belly.

Walrus

Walrus migrate past Scammon Bay 15–20 miles offshore from Cape Romanzof in April and May (Figure 1), with the large ice floes, though the timing is shifting earlier in the spring so now a few are seen in March and even February. The walrus may come closer if the ice brings them in. Walrus are in the area for a few weeks, but by May when the bay ice breaks up, hunters cannot travel offshore so may not see walrus after that. Walrus are rarely seen in the fall in this area.

In the spring of 2016, the ice left early and some small groups of bull walrus were seen swimming north in the open water, about 20 miles offshore by people who were halibut fishing. The hunter who saw this is unsure where they rested without ice to haul out on. Without big, thick ice floes, it can be hard to find walrus and other marine mammals.

One or two walrus may be found hauled out at Cape Romanzof at any time during summer (Figure 1). Walrus eat clams, no other diet items were identified.

Beluga Whales

Belugas come from the south in May and June, following the herring and the salmon. Scammon Bay itself may still be frozen over, but the water is opening beyond the barrier islands. In summer, belugas stay near the mouths of the Black and Yukon rivers, going in and out with the tide as they feed on fish (Figure 1). They can also be seen along the coast between Scammon Bay and Black River. In fall, belugas head south around the time of freeze-up, though not as many are seen in fall as in spring. They may be following whitefish and tomcod in fall. The latest one hunter caught a beluga whale was late November. No belugas were seen in the fall of 2016. In other years, belugas have gotten tangled in fish nets in fall. Belugas are not seen in winter, but hunters are also rarely out on the ocean in winter. One hunter once caught a young beluga whale up a river, where he had gone to pick berries with his wife.

When killer whales are nearby, belugas will move to the nearshore shallows or into a river. Once belugas were seen by the hundreds in the river in front of the village.

Other Marine Mammal Species

Ribbon seals are seen in the area in fall when the sea ice returns and the seals can haul out. The farther offshore, the more ribbon seals can be seen.

Sea lions are seen in spring, when the herring run occurs. They stay as long as the fish are in the area, about six weeks or so, and then they leave. A few will haul out at a time high on the rocks at Cape Romanzof (Figure 1). Sea lions are occasionally seen in rivers, chasing salmon. People leave sea lions alone, though they were occasionally hunted several decades ago.

Killer whales are seen more frequently in the area over the past 10 years or so. Last summer, a killer whale carcass was found for the first time in the area, on a beach. Halibut fishermen see killer whales offshore and they are seen during salmon season, too. People tend to stay away from killer whales. Killer whales have been seen chasing beluga whales in spring. Killer whales are seen occasionally in fall.

Large whales are sometimes seen in the area in summer, by halibut fishermen. These were not seen 10 years or more ago.

Porpoises (i.e., harbor porpoises) are increasingly common now, seen every time fishermen go out. The porpoises are small and their Yupik name means animals that herd fish, which benefits killer whales.

Sea otters are seen once in a great while here. This is not a new phenomenon, and typically happens in spring when it happens.

Unknown animals are seen from time to time and are known from stories. One seal-like animal washed up on shore but no one knew what it was.

Other Information

Hunters need to be ready to take advantage of opportunities when they arise, especially in times of change as is the case at present. Waiting for the usual hunting times may not work well.

Instead, hunters have to be ready to go at times that are not customary, but when seals and other animals may nonetheless be available and accessible. In spring, the good hunting period used to last two to three weeks, when it was possible to go boating in the ice but the ice was still close to Scammon Bay. Now, the ice goes away quickly and hunters may have less than a week of good conditions before the ice is a long way out. Hunters have to be ready to go when the conditions are good, which tends to be earlier in spring than it used to be. Some hunters have begun avoiding spring hunting, being wary of dangerous conditions, seeking instead to get seals in fall. That strategy appears to be working so far for the hunters who are using it.

It is important to take what you can, when you can, so long as it is done respectfully and without waste. Sharing with elders and others who cannot hunt is important. In the old days, if Scammon Bay hunters had a successful season, they would load kayaks with meat and other foods and take them to Hooper Bay and other communities to share.

Chum and pink salmon runs have been strong in recent years. In 2016, fish of both species were large. The pink salmon that fall were as large as the chum salmon had been two years previously. King salmon returns are down and there are strict regulations restricting fishing. Fishermen have made chum salmon strips instead of king salmon strips. They are not as tasty, but they are still smoked salmon. Salmon can also be salted and frozen. People use the heads and fins, too.

Halibut fishing in July is a relatively new activity, and a good way of getting additional food. Halibut seem to be declining, though, while pollock and cod (Pacific cod) have been caught for the first time in recent years. One year, fishermen caught many skates. Salmon sharks are also seen while halibut fishing, which is a newly found species to the area.

Herring come in spring when the ice goes out from the bay. This used to happen in late May and early June, but recently has been happening in mid-May. The herring nonetheless arrive as the ice goes out.

Puffins, cormorants, and other birds nest at Cape Romanzof. Some new birds are being seen in the area, which hunters do not recognize. One looks like a small version of an arctic tern, with a wingspan of 6-8 inches. In one year, a storm blew little black birds into the village.

Sea ice has changed a lot. There is less shorefast ice and the ice is often thin, breaking easily and floating away. The ice is not strong, and breaks up and melts quickly in spring. There are few big icebergs any more. The ice does not extend as far out into Scammon Bay. There used to be thick ice all the way to Cape Romanzof, over which people would travel while gathering driftwood. This is no longer possible. Hunting is best in March and April. By late April, it is now too warm and the ice goes away.

Snow and ice melt earlier in the spring than they used to, which can make traveling harder over land and when trying to cross rivers during May when people hunt black brant. Some people now use boats to go brant hunting.

There has been little snow in recent winters, which is unusual. March is usually the snowy month, but has not seen much snowfall in recent years. The lack of snow also means fewer drifts on the ice that seals can use to make lairs for giving birth.

The weather has been more violent in recent years. Fall storms come early, even in summer, causing flooding and driving fish away until the waters settle again. Winds are stronger now and the weather is warmer. Flooding has been getting worse in the Scammon Bay area due to a lack of ice and strong winds during the winter.

Lack of snow in the Interior means less flooding on the Yukon River, so fewer trees are washed down the river and driftwood is scarce in the Scammon Bay area. This has been the case the past three years or so. People who gather driftwood have to go farther and have had to use cottonwood instead of the preferred spruce.

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References

Huntington, H.P. 1998. Observations on the utility of the semi-directive interview for documenting traditional ecological knowledge. Arctic 51(3):237–242.

Noongwook, G., the Native Village of Gambell, the Native Village of Savoonga, H.P. Huntington, and J.C. George. 2007. Traditional knowledge of the bowhead whale (*Balaena mysticetus*) around St. Lawrence Island, Alaska. Arctic 60(1):47–54.