

**INUIT TRADITIONAL ECOLOGICAL KNOWLEDGE
OF
KILLER WHALES:**

COMMUNITY RESPONSES AT A GLANCE



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INTRODUCTION:

This report summarizes information gathered on killer whales from semi-directed interviews with Inuit hunters and elders conducted in Nunavut between August 2007 and April 2009. The research was approved by the Hunters and Trappers Organization in each community and the Nunavut Research Institute. In total 89 people were interviewed with the assistance of an interpreter from each community.

NOTE: This document was prepared to give a quick overview. It is by no means a complete response to questions asked. For more detail please see community reports and individual community interviews.

PARTICIPATION BY COMMUNITY:

	COMMUNITY	NUMBER OF PARTICIPANTS
Hudson Bay / Foxe Basin	Repulse Bay	17
	Rankin Inlet	10
	Arviat	5
	Igloolik	16
	Hall Beach	7
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Hudson Strait	Kimmirut	5
	Iqaluit	7
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North Baffin	Pangnirtung	11
	Arctic Bay	11

PHOTOS AND VIDEOS OF KILLER WHALES IN THE AREA:

Repulse Bay: photos and video

Igloolik/Hall Beach: none

Rankin Inlet: One participant had photos of killer whales that were taken in the last few years in the Rankin Inlet area.

Arviat: No photos of killer whales are known to exist in the community; however, video footage and sound recordings do exist.

Pangnirtung: photos

Kimmirut: none

Iqaluit: none

Arctic Bay: pictures and video

KILLER WHALE PRESENCE IN THE AREA:

Repulse Bay: Most participants said that killer whales have been in the Arctic, and in the Repulse Bay region, for a long time. It was stated by some participants that the whales, big ones and small ones, have been returning to this area every summer, although they are hard to spot because they do not stay for long. Some participants thought that although killer whales have always been around they have only been observed in this area every summer in the more recent past (last 10 years).

Igloolik/Hall Beach: Many Igloolik interviewees felt that killer whales are present in the area every summer. Several stated that this was a recent thing, possibly since the mid-1980s. Killer whales may not present every year, depending on ice conditions. Killer whales are seen during the summertime, usually in August and September, although sometimes they arrive earlier and stay later. Most people felt that killer whales return to the same areas every year (Tern Island, Richards Bay) and noted that killer whales are rarely seen in shallow waters, including the east side of Foxe Basin.

Rankin Inlet: Participants from Rankin Inlet felt that killer whales have been around for a long time. In the past, there were not many killer whales seen near Rankin Inlet. One participant said that killer whales were not seen often or talked about before the 1950's or 60's. About half the participants felt that sightings have increased in recent years and two participants specifically mentioned that killer whales have been sighted by people in the community every summer since 2000.

Arviat: Participants felt that killer whales have always been around. However, there are not many killer whales around the area but there are more sighting now than in the past.

Pangnirtung: Killer whales seen every year but they do not stay in the area for long.

Kimmirut: All participants agreed that killer whales are rare in this area. Three participants thought that killer whales migrate through this area. One participant thought that the killer whales will sometimes stick around for hunting but not for long. This participant thought that sightings of killer whales near Big Island (the outside of Big Island and out into Hudson Strait) were most common because beluga pass by the area on their migration route. This participant also said that killer whales come from the east, down the peninsula.

Iqaluit: Killer whales do not have a huge presence in the area.

Arctic Bay: Killer whales have been seen in the area for a long time but they do not stay in one area for any length of time.

NUMBERS OF KILLER WHALES IN THE AREA/INCREASING OR DECREASING?

Repulse Bay: There was no consensus on whether there have been any changes in the number of killer whales in the area. Responses varied from not knowing if there has been a change to thinking there has been an increase because there seems to be more killer whales around every year. One participant felt that the numbers of killer whales in the area is not increasing but that they suspected that the “population is growing but can’t say with certainty because they are not being hunted”.

Iglolik/Hall Beach: Almost all people agreed that killer whale numbers are increasing.

Rankin Inlet: One participant felt that there has not been a change in the numbers of killer whales in this area.

Arviat: There are more sightings now than in the past.

Pangnirtung: Almost all participants felt that there were more killer whales in the area in the past than there are today. One participant said that they don’t see killer whales now like they did in the 1960’s and 1970’s.

Kimmirut: No participants commented on this subject.

Iqaluit: same number

Arctic Bay: There are conflicting opinions as to whether or not the number of killer whales in the area is increasing or decreasing or staying the same.

NUMBER OF KILLER WHALES SEEN AT A TIME:

Repulse Bay: Participants had seen between 1 and 100 whales at one time.

Igloodik/Hall Beach: Most sightings involve a small number of killer whales. Many people noted that they are usually seen in small groups.

Rankin Inlet: Killer whales have been seen by participants in pods of 3 to 50 animals. One participant said that you usually see them in pods of 5 to 7 animals.

Arviat: Participants had seen between 1 and 100 whales at one time.

Pangnirtung: Participants have seen anywhere from one to less than twenty killer whales at a time. Some participants have seen killer whales travelling solo or in pairs and others have spotted them in pods of 3 to 4 or 5 to 6. Five participants said that they have seen killer whales in pods of 10 or more.

Kimmirut: Participants had seen between 1 and 20 whales at one time.

Iqaluit: Large pods are not seen. The range of killer whales seen is between 1 and 8.

Arctic Bay: They see a wide range in numbers of killer whales at a time but killer whales are hardly ever seen solo or in pairs.

NUMBER OF KILLER WHALES:

Repulse Bay: Most participants felt that it was difficult to estimate how many killer whales frequent the area as they are not usually seen in large groups. The range of total killer whales thought to frequent the area was anywhere from 12 to 500. The majority of the participants felt that there are fewer than 50 in total, although the number varies year to year.

Igloodik/Hall Beach: Most people felt that killer whales are not common.

Rankin Inlet: None of the participants had any idea how many killer whales are in the area.

Arviat: One participant thought that there were maybe 100 or less killer whales that pass by this area but that the numbers change each year depending on the food supply.

Pangnirtung: Many participants did not know how many killer whales come to the area. Of the participants that had an opinion, there was no consensus on the number of killer whales that frequent this area; however, three participants had similar estimates. One participant said that there are close to 40 that pass by and stick around during the summer season; another felt that there were less than 50; and a third thought that there were a bunch of pods of 10 to 15 that pass through. One participant thought that there are possibly 14 to 16 killer whales that pass through this area in the summer.

Kimmirut: not known

Iqaluit: unknown but not lots

Arctic Bay: Four participants felt that it was difficult to estimate the number of killer whales passing through the area. Estimates of killer whales ranged from around ten to more than fifteen or twenty to perhaps hundreds.

ARE THE SAME WHALES COMING BACK EVERY YEAR?

Repulse Bay: There was no consensus amongst the participants that commented on this topic. Some suspected that it was the same pod of killer whales returning each season and others were unsure.

Igloolik/Hall Beach: Many people thought that different groups of killer whales were present each year.

Rankin Inlet: It is not known whether it is the same whales coming back to this area.

Arviat: It is not known whether it is the same whales coming back to this area.

Pangnirtung: Six participants felt that the same killer whales return to this area seasonally. One participant said that the larger killer whales, the ones that eat whales, are the same ones that come every year. One participant thought that they are seeing different whales and another felt that it would be hard to say if it is the same killer whales coming around each year.

Kimmirut: different whales

Iqaluit: different whales

Arctic Bay: There was no consensus on this topic. One participant felt that it was the same whales coming back to the area each year and three others felt that they were seeing different ones each year and over the course of the summer.

MIGRATION AND TRAVEL ROUTES:

Repulse Bay: Killer whales migrate in and out of Hudson Strait using Frozen Strait to get to Repulse Bay in the summer. Participants who responded on this topic did not think that the killer whales migrated out through Roes Welcome Sound at the end of the summer. Travel routes of killer whales are uncertain but some participants thought that the stock that comes through Repulse may be the same that goes south past Arviat and up to Hall Beach. When killer whales are seen in Igloolik or Rankin Inlet, 5 days later they are seen in the Repulse area.

Igloolik/Hall Beach: Killer whales usually come into this region from the south when most of the sea ice has left. They travel through the centre of Foxe Basin, generally avoiding the coastline, and follow the same routes as their prey.

Rankin Inlet: Unknown

Arviat: Not know where they migrate to and from. One participant though they might migrate north from here and are using the same path when they travel north and south.

Pangnirtung: Most participants did not know where the killer whales were travelling to and from. One participant thought that the killer whales are coming from south of the Labrador Sea and that they do a cycle up north and then return south again.

Kimmirut: no information gathered on this topic

Iqaluit: unknown but thought to be following migration of sea mammals around Baffin

Arctic Bay: Four participants thought that killer whales come up from the south and migrate up the east side of Baffin Island. One of these participants said that killer whales travel away from land on their way north (not close to Clyde River or Pond Inlet). Two further participants said that they come and go from the area through Lancaster Sound.

FALL, WINTER, AND SPRING LOCATIONS:

Repulse Bay: Winter location is unknown but community members have seen killer whales at the floe edge in the spring.

Igloolik/Hall Beach: no information gathered on this topic

Rankin Inlet: No participant had heard of any spring sightings of killer whales. They are not seen until the ice is gone which is sometime in the first two weeks of July, according to one of the participants. One participant said they had never heard of sightings in October or November either. As soon as the ice begins to return the killer whales are not seen.

Arviat: Participants did not know where the whales spend the winter but one thought that maybe they winter between Greenland and Baffin Island. They do not stay in this area because of the ice. There have been no spring sightings that any of the participants were aware of.

Pangnirtung: Five participants said that killer whales go south in the winter where there is no ice. Killer whales are not known to be around when there is ice, however, three participants noted that a community member did see three killer whales near the floe edge in April last year.

Kimmirut: One participant said that killer whales will go south before freeze up. This participant felt that because their skin was thin (thinner than bowhead and beluga) and they have a dorsal fin, they would stay away from ice conditions.

Iqaluit: not seen when there is ice, not see in fall, winter, or spring at the floe edge

Arctic Bay: Not seen in winter or spring. Almost all participants mentioned ice as a factor for when killer whales come and go from the area. They are seen first in the Inlet once the ice has gone and leave before ice starts to form in the fall.

KILLER WHALE BEHAVIOR:

Repulse Bay: Fairly detailed information was given on the stalking behavior of killer whales by one participant. From stories he heard from his father he knows that killer whales are quite noisy when traveling but that it is traditional knowledge that killer whales will change their behavior when hunting. When stalking prey, killer whales will slow down, move very deliberately, and remain as quiet as possible in order to reduce the wake and sound produced by their dorsal fin moving through the water. When they are close to their prey they pick up speed. Another participant remarked that when the dorsal fin tilts down the killer whale will gain speed under water.

Killer whales are thought to hunt in pairs or more and are in a 'v' formation when they begin to attack. It was noted by two people that they can be dangerous to canoes due to their aggressive nature. This was noted by one to be especially true when they are in big groups as they follow their leader.

As a strategy for killing bowhead, one participant remarked that killer whales would block the bowheads blow hole or block its path to stop it from surfacing. One participant mentioned that they have found a carcass of a bowhead. Two killer or more killer whales were spotted this summer from shore going after a bowhead.

Igloodik/Hall Beach: Participants provided much information on killer whale hunting techniques. Killer whales will go on top of the bowhead to cover the blowhole and suffocate it, and they will often kill the bowhead by ramming it from below and tearing chunks out of the belly. Killer whales will also bite the bowhead's flippers.

Rankin Inlet: According to research participants killer whales have been known to follow boats. They are considered to be very smart and fast swimmers.

Arviat: Killer whales are very fast and smart according to study participants. Three types of behavior were mentioned by separate participants: swimming formation, hunting strategy, and kinship behavior.

Swimming: females are in front, the small ones are in the middle and the big ones in are at the back.

Hunting: participant heard from someone who observed a hunt in progress that when killer whales hunt in a pod they circle first then attack.

Kinship: if a killer whale is killed others will come back year after year to the same location looking for the one they lost. The pod will look after its members and seek revenge on someone who attacked one of its own.

Pangnirtung: Four participants said that killer whales will work in teams to hunt. The largest whale will lead the smaller whales in the hunt. One participant said he had seen a hunt in which the pack separated a bit and then spread out in all directions to catch the prey. Smaller whales and the larger whales are more often seen apart than together. Larger whales can be seen

travelling solo, according to one participant. Another participant said that when killer whales are in a group, two or three would be much larger than the rest. The smaller killer whales are not considered to be as dangerous as the larger ones.

Kimmirut: no information gathered on this topic

Iqaluit: Killer whales are not known to be afraid of humans but do not stick around in the area. Killer whales are known to come and go in the area over the course of the summer and simply pass by humans when they are not bothered. They are not known to stay in one spot for any length of time.

Arctic Bay: no information gathered on this topic

KILLER WHALES AND PREY:

Repulse Bay: Killer whales are carnivores and hunt mainly sea mammals: narwhal, beluga, bowhead whales and seals but will eat “what ever they can catch”. A few participants had seen evidence of killer whale teeth marks in walrus and narwhal as well as observing muktuk floating in the water. A few participants mentioned that killer whales did not appear to go after tusked narwhal. They knew this from observation of the narwhal that appeared to have been killed by killer whales.

Igloolik/Hall Beach: Nearly all people stated that bowhead whales were a primary prey item. Most also indicated that ringed seals, narwhal and beluga are important. Killer whales also eat bearded and harp seals, and are known as “wolves of the sea”. People were not sure if they ate fish.

Rankin Inlet: Killer whales eat beluga, narwhal, seals and perhaps other sea creatures such as shrimp and capelin according to the participants. Participants each mentioned more than one species preyed upon by killer whales.

Arviat: Killer whales are known to eat whales (including beluga and bowhead) and seals according to the participants of this study. All participants said that when the killer whales are near by the seals and beluga move into shallow water.

Pangnirtung: Killer whales are known to feed upon seals (especially harp seals in this area), beluga, narwhal (ones with tusks and without) and bowhead whales. One participant said that killer whales will go after almost any animal in the water, citing the animals listed above, and perhaps fish as well. A second participant agreed that killer whales will eat fish. One participant said that small killer whales feed on seals and the larger ones go after whales.

Kimmirut: Killer whales are known to eat sea mammals including seals, beluga whales, bowhead and walrus.

Iqaluit: According to participants, killer whales are known to eat seals (ring seals, harp seals), whales (beluga, narwhal, bowhead) and perhaps fish. It was noted by one participant however,

that there are lots of fish in the rivers and if killer whales were going after fish they would be near the rivers. One participant said that killer whales will eat just about any animal that comes into the area.

Arctic Bay: narwhal, seals, bowhead whales, unsure if they eat fish or shrimp as well. People have seen and heard of people seeing them hunt in the area.

KILLER WHALES AND WALRUS:

Repulse Bay: A few participants had seen evidence of killer whale teeth marks in walrus.

Igloodik/Hall Beach: All interviewees noted that killer whales fear walrus, because of their tusks.

Rankin Inlet: Three participants mentioned that killer whales are afraid of walrus.

Arviat: Participants said that killer whales are afraid of walrus.

Pangnirtung: Participants said that killer whales are afraid of walrus.

Kimmirut: Three of the participants mentioned that killer whales fear walrus. Two participants mentioned that when people spot killer whales when out on the water they will dip something white in the water, like a ceramic cup. It is thought that killer whales will think this is a walrus tusk and not approach. Another participant told a story they had heard of a walrus that had punctured a killer whale in the belly and got stuck. The incident was known because both animals died and were beached. The participant said that even though killer whales are afraid of walrus, they will still try to eat them.

Iqaluit: One participant said that they know, from traditional Inuit knowledge, that killer whales are afraid of walrus. This participant had heard a story of a walrus attacking a killer whale and becoming embedded in the side of the whale. The two animals washed up dead still attached. Walrus are common in this area.

Arctic Bay: One participant was told by an elder that killer whales are afraid of walrus. When people would spot killer whales out on the water when they were hunting they would drop a walrus tusk into the water to scare off the killer whales.

ATTITUDE TOWARDS KILLER WHALES:

Repulse Bay: Killer whales are considered the “wolves of the sea” according to two of the research participants. The general consensus is that they are very intelligent animals but that people are scared of them and usually keep their distance. Some people felt that the killer whales were competition for their food source and did not like them where as others felt that killer whales were their “helpers”, by pushing narwhal into shore making the hunting easier.

Igloodik/Hall Beach: They are respected and considered dangerous.

Rankin Inlet: Just under half of the participants mentioned that they were scared of killer whales in the past, perhaps from the stories they heard from their relatives about their aggressive nature. It was passed down through generations that it was best not to bother killer whales and that killer whales would avenge a death of their own. Participants said they are not scared of them anymore after seeing them up close and realizing that they can scare them off. It was also mentioned that killer whales scare the beluga in to shore which is good for hunting but three participants said that they are concerned about the killer whales taking the Inuit food. Their concerns were of the seal and beluga populations and that the increase in killer whales could disrupt the food chain.

Arviat: The general consensus was that people in the area are afraid of killer whales. However, one participant said they liked them because they brought seals close to shore and another said they felt indifferent towards killer whales, but that you have to watch out for them and keep a distance to avoid a possible attack.

Pangnirtung: The general feeling from participants was that people in the community of Pangnirtung are fearful of killer whales and don't like to be around them when they are boating. Not everyone is scared of killer whales however and people will still go boating when killer whales are in the area and some will even watch the smaller killer whales from their boats. Two participants said that they don't bother with killer whales but had conflicting views on whether or not the killer whales were helpful when they were hunting seals. One said they liked it when they were around because they drove the seals to shore and the other said that the killer whales bother him in that they drive the seals away.

Kimmirut: feared and respected

Iqaluit: People use to be afraid of killer whales; can be helpful to hunters by pushing the other sea mammals to shore.

Arctic Bay: Attitude towards killer whales in the community varies: some people afraid, some people wish that they would go away and or that people should hunt them, others like the presence of killer whales as they assist in hunting by scaring other marine mammals to shore.

INUIT HUNTING AND KILLER WHALES:

Repulse Bay: not hunted

Igloodik/Hall Beach: Inuit hardly ever hunt killer whales, although several hunting events were noted and discussed.

Rankin Inlet: Not hunted and thought to be of little use and not good for consumption.

Arviat: do not hunt killer whales and do not eat them

Pangnirtung: do not hunt killer whales and do not eat them

Kimmirut: not hunted

Iqaluit: not hunted and not considered food

Arctic Bay: not hunted

CONCLUSIONS:

Much is known about killer whales in the communities that participated in this research. A quick snap shot, such as this document, is useful for looking at the bigger picture in the region but does not tell the whole story. Understanding local knowledge is and will continue to help researchers learn more about killer whales in Nunavut.