Aarluk News

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In recent years northerners have seen killer whales more often and farther into the Canadian Arctic. To determine more about what is causing this increase and to find out more about killer whales we started collecting information in 2005. This information was a combination of sighting reports, photographs, and Inuit Traditional Ecological Knowledge or Inuit Qaujimajatuqangit. Our first aim is to find out basic things like the number of killer whales in the Arctic, where they are traveling and what they are hunting. This information will help determine the impact of increased killer whale numbers on animals like narwhal, beluga, and bowhead whales. The goal of this newsletter is to foster relations between researchers and northern communities by improving communication. Articles will include results of our research as well as provide opportunities for northerners to help with ongoing projects and to suggest areas needing investigation.

Please contact us if you have any comments or questions.

What to do if you see a killer whale

If you see killer whales or have seen killer whales then we need your assistance. Since 2007, people from northern communities have been sending Killer Whale Sighting Forms and photos of killer whale sightings to us. Partnerships in this sighting network have included northern residents, scientists, graduate students, ecotourists, Hunters and Trappers Organizations (HTO/HTA), Conservation Officers, Nunavut Tunngavik Incorporated, hunters, people on ice breakers, industry workers, consulting companies, and community elders. The database currently contains over 500 sighting records, ranging from the early 1800s to the present (2008). To date we have photographs from Baffin Bay (2004), Eclipse Sound (2004, 2008), Admiralty Inlet (2005), Repulse Bay (2005), Navy Board Inlet (2005), Rankin Inlet (2006, 2008), Churchill (2007), southwest Hudson Bay (2007), Pangnirtung (2008), Arctic Bay (2008), and others. This database allows us to determine movements, numbers, and activity of killer whales in Arctic waters.

If you have information on past or present killer whale sightings, please contact us or visit your local HTO/HTA or Wildlife Officer to obtain a sighting form. Your assistance is vital to help understand killer whales in the Canadian Arctic and make this project a success. In thanks for each sighting form we receive, we'll send the participant an 'Orcas of the Canadian Arctic' (OCA) ball cap.









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Photo-identification of Eastern Arctic Killer Whales

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Photographs have been used to collect information about many types of whales. Individual killer whales can be identified by the size and shape of the dorsal fin, saddle patch, eye patch, and by unique scarring patterns. We are using photographs to identify individuals to learn more about

abundance, distribution, movements, and group structure of these whales in the Arctic.

So far we have collected photos from many communities from 2004 to 2008 which include a minimum of 67 different whales. Based on dorsal fin size 25 males, 31 females or large juveniles, and 11 small juveniles or calves have been identified.

Some interesting results include:

- •1 male and 2 females photographed in 2007 traveled between Churchill and Rankin Inlet in 17 days.
- •1 male was photographed near Pond Inlet in both 2005 and 2008.
- •1 male appeared at both

Buchan Gulf (offshore near Pond Inlet) in 2004 and Pond Inlet in 2005.

As we receive more photographs and more sightings reports, we will be able to use this information along with traditional knowledge to help answer important questions about killer whales in the Arctic.



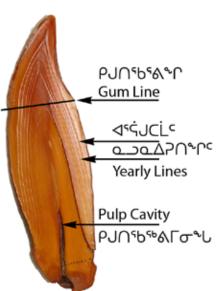
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More killer whales could significantly change Arctic ecosystems, but it is difficult to know what may change when we have little basic information about killer whales. Northerners have told us that killer whales in Nunavut feed primarily on other whales but they may also eat large numbers of fish. There may be two types of killer whales – one that eats whales and seals and another that eats fish. We also know that killer whale occur throughout the Arctic during the summer but where they go during winter is a mystery. More information is needed to understand the effect of more killer whales on marine mammals and fish that are important to northerners.

We are studying what killer whales eat and where they go using the elements in their teeth. As teeth grow, they are built using nutrients from food and each year a new layer is added to each tooth. By examining the tiny building blocks that make up each tooth layer we can learn what the killer whale ate and where it was hunting.

We are currently looking for teeth to use in our study. If you, or someone you know, has a killer whale tooth and would like to let us borrow it, or if you would like to learn more about this research, please contact Cory Matthews. (cory_matthews@umanitoba.ca)

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Next Issue

Traditional Knowledge Collection Report Bowhead - Killer whale Interactions Why more killer whales in Hudson Bay?

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