

۵۵۶۰ مرمه



Whale frozen in to the ice منجا∠ح⊀ه⊲۲ ⊲د⊇



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Repulse Bay Killer Whale

In mid-October 2009 a killer whale washed up on shore near the community of Repulse Bay. Government of Nunavut Conservation Officer Logan Paul and several community members were able to locate and collect samples from the whale. The samples were then sent to Winnipeg to be archived and analysed. We would like to thank all the people involved in collecting samples for our research program.

This issue of the Aarluk News will explain what information and samples we can collect from stranded whales and present the results of our laboratory analyses of the Repulse Bay whale. If you see a dead killer whale please report it to your local HTO, fisheries or conservation officer, and to us at OCA@dfo-mpo.gc.ca.

Tissue Samples

Samples of skin, blubber, muscle, and organs can tell us many things about killer whales. For example, we can learn: what it was eating; what sex it was; who it was related to;

if it was in good health; and which chemicals it may have been exposed to. Our research is still under way but from the genetics this whale was a female, and she did not have any of the diseases that are regularly tested for. Preliminary tissue analyses indicate that she likely fed more on bowhead whales than either narwhal or beluga whales.

Sample	Analysis	Information learned
₠₽₽₽₽₽₽₽	᠋᠄ᡃ᠋᠔᠋ᠵ᠅᠘	ϽዋϟϽϹϷϟͽͽͺͽϷϷϟϞͽϣ;Ϲ
Teeth	Yearly line count	Age of whale
PJU	᠆ᡧᡃ᠋ᡬ᠋ᡃ᠋᠘ᡄ᠙ᡃᠧ᠊᠋᠋᠋᠊᠋᠆ᡘ᠘᠊᠋ᠴ᠋᠅᠋᠘	⊳₽⊳∿ل ظَ`ےٰ<
Teeth	Trace elements	What the whale was eating over its life
PJU	٩ <i></i> ٵ٥٠٤٩٩٩٩	᠙ᡝᠣ᠋᠈᠂ᡬᠴ᠈᠂ᠳ᠋᠋ᠺ᠄᠋ᡃᡉᢗᠣ᠋᠋᠋ᡗ᠋᠃᠘᠅᠋ᢑ
Muscle and Skin	Stable Isotopes	General information about what the whale was eating weeks to months before its death
এ°∿ل ⊲۲∿ل	ᡃ᠋ᡪᠲᡝ᠋᠘᠋ᠴᢩ᠕ᢩᢝᢉᡃ᠋᠘ᢞ᠋᠋ᡶᢑ ᢗ᠋᠋ᡥᡗᡥᡶᡠᢩᡨᠦ᠋᠋	ᢗ᠘ᅀ᠋᠊᠋ᡠᡄ᠋᠋᠋᠋᠋᠅᠋᠘᠆᠈᠘ᢣᢣ᠋᠘᠈ᢣᠿ᠋᠋᠈ᢣᠣ᠋᠈ᡩ᠘᠆ ᢐ᠋᠋ᠺ᠋᠋᠋᠋᠋᠋᠋ᢐ᠖ᠺᡆᢣ᠋ᢂᢓᢣ᠋᠋ᠶᠳᢄ᠙᠋᠋᠋᠋ᢄ᠆᠋᠘᠋
Blubber	Fatty acids	Specific information about what the whale was eating
⊳٩٢	⊳₅⊳∠∆⊂	᠌ᡔ᠋᠋᠋₽ᠡᠵ᠋᠘᠈ᢣ᠘᠈ᢣ᠘᠂ᢣᡄᡄ᠋ᢏ
Skin and Muscle	Genetic sex	Was the whale a male or female
حا∿۹م ا∿۲	᠂ᡃᠣ᠘᠊ᠫᠣ᠋᠆᠈ᡃ	ᢀ᠋ᡃᡝᢗ᠌᠌ᢨᠣ᠋᠋᠋ᠳ᠖᠕᠋ᠳᡆᢂᡔᡦ᠉ᡃᡠᡄ
Skin and Muscle	Genetics	How is this whale related to other killer whales
حا∿۹م ا∿۲	ڡ٩ۺڶ٩٢٤٤٩	᠂ᡃᠣ᠋ᠴᡃ᠂᠘ᡄᢉᢣ᠌ᢄ᠂᠋ᠴ᠅᠘᠅᠘᠖᠆ᡘ᠅᠋ᡗ᠅᠖᠕ᢞᠬᡨᠴᡗ᠂ᡬ
Blood	Disease	What diseases and parasites did the whale have
⊲⊳∿∪	؇۫ [ٟ] ڡ؇ؚٮڵ؞؋	᠋᠂ᡃᠣ᠘ᡗ᠋ᡔᠦᡰ᠂ᡬᢪᠣ᠋᠆ᡏ᠖ᡃᠳ᠋᠋ᡗᡄ᠋᠅ᡁ᠅᠂ᡬ᠕᠂ᡝ᠋ᡗ᠋ᡃᢐ᠋᠆ᡬ᠋᠅
Liver, Kidney	Contaminants	what pollution was the whale exposed to
∩ზJ∿ს, ⊂∿⊃∿ს	᠂᠘ᢣᢛ᠋᠆᠈᠆ᡔ	᠈ᠳ᠘ᠫᠴ᠋᠋᠘᠆ᡎ᠘᠊ᢐ᠘ᠼᢛ᠘᠆ᡆᢕᢛ᠘ᡔ᠘ᡔ᠖ᢙ᠘᠊ᡆ᠖
Reproductive tract	Corpora lutea counts	How many calves did a female have
᠂᠋ᡏᠫ᠅ᢉᢂ᠋	᠄᠋ᡏ᠋ᠫ᠋᠋᠋᠋᠋᠋᠋᠋᠋᠅᠋ᡗᢄᡨᠧ ᡄ᠋᠋᠋᠋᠋᠋᠋᠋᠋ᡪᢛᢕᠵ᠋᠆ᠬ	᠂᠋ᡃ᠋᠖ᠳ᠋ᠴ᠋ᠴᢄ᠆᠘᠋᠂᠘᠋᠆᠘᠆᠘᠋᠆᠘
Stomach	Contents	What was the whale's last meal
⊴₅₽⊲₽₅₽		᠙᠘᠋ᡏ᠈᠋ᢩ᠂ᡩᠴ᠈᠊᠙ᢞᢧᡄ᠋᠆ᠵᡬ᠆ᠳᠺᢩ᠂ᠳ᠘᠅᠋ᡁ᠋᠉
Lung, Heart, intestine	Parasite counts	What parasites did it carry and how many
>∿∟, Þ⊔∩∿Ს, ∆৹_⊃°Րণ	۶dΛ۶ʔ۶b۶L°Ū۶ŀ	᠂ᡃᠣ᠋᠋᠘᠊᠋ᠫᡔ᠋᠆᠂ᡠ᠕᠄᠌ᡝ᠋᠋᠄ᡃᡉ᠋᠋᠋᠋᠋ᠴ᠋᠄ᡃᠥ᠘ᡐ᠋ᠴ

Teeth

A tooth from a killer whale can tell us about the whale's ag and also what it was eating in the past and where it may ha travelled. This is because each year a new layer is added to the whale's teeth and each layer is made up of elements fro its food, such as carbon and nitrogen.

Counting the number of layers will tell the whale's age, an studying the elements in every layer will tell us what the whale ate over its lifetime. This whale had 30 visible grow layers in her teeth indicating she was at least 30 yrs old. The elements in this whale's tooth were similar across mos growth layers, suggesting little change in her diet over her life.



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http://www.umanitoba.ca/faculties/science/zoology/faculty/ferguson/OCA/OCA.htm

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We can learn a lot about the age and health of a whale from body measurements. For example, a big whale with a tall dorsal fin indicates that the animal is a mature male. This whale was 5.7 m (18 ft 9 in) long, its dorsal fin was 69 cm (27 in) tall, and its front fins were 113 cm (3 ft 8 in) long this was an adult.

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(http://www.umanitoba.ca/faculties/science/zoology/faculty/ferguson/OCA/OCA.htm)





Digging the whale out of the ice ۲۰٫۵۰۲ کی ۲۰۵۲ کی

We can learn many things about killer whales and about the Arctic by taking advantage of opportunities such as when a whale dies and washes on shore. However, we need your help. If you see a dead whale please take photographs and record the date and location. If it is safe to do so, collect some tissue which can be kept frozen. Contact your local HTO, GN conservation officer, DFO officer, or us so we can try to organize people to help sample the whale.

We would also like to thank all the people who reported killer whales in 2010. All sightings we received can now be seen on our website.

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