



North Slope Borough Department of Wildlife Management



Sketch by artist, Craig George

SPRING 2016

THE TOWLINE

VOL 8 NO 1

From the Director

The spring of 2016 has been unusually warm; however, in spite of the weather, whalers on the North Slope have been very successful! Twelve whales have been harvested in Barrow, seven in Point Hope, one in Point Lay, seven in Wainwright, as well as one bowhead harvested in Gambell and two in Savoonga. The captains and crews harvesting these whales have been very generous in *Sigñataiññiq*, or sharing with others, as is our tradition.

Quyanaq to all of you.
Our Department



is gearing up for the International Whaling Commission meetings, and more details on this year's issues are outlined below. In this newsletter, you will also find out more about the US Russia Treaty on polar bears and how it affects our communities. We have also been busy working on issues related to caribou, migratory birds, ice seals, as well as sampling the bowhead harvest. As always, we welcome input from the hunters and communities on how we can better serve you. Please contact us with any wildlife concerns.

Qiksiksrautiqañniq,
Taquilik Hepa

INSIDE THIS ISSUE:	
US Russia Treaty on Polar Bears	2
Baseline Studies	2
Kids Page	3
Snow Geese in the Ikpiqpuq	4
Sensory Studies of Bowheads	5
Marine Mammal Tagging	6

IWC in Slovenia for 2016

The Scientific Committee (SC) of the International Whaling Commission (IWC) will be meeting in Bled, Slovenia, during June of this summer. During that meeting, the SC will discuss many topics, including bowhead whales. The NSB will be sending our own Craig George, Raphaela Stimelmayr, and Robert Suydam. Other supporting scientists, Geof Givens, John Bickham, and Amy Baird, will also be attending. All of these researchers will be there to provide information about bowhead whales and the harvest. They are also attending in support of the next quota request, which will occur in 2018.

The scientists will present information about the bowhead photo identification

project, the genetics of bowheads, a report from a genetics workshop held in the fall of 2015, basic information about the 2015 harvest, and scientific aspects of the management scheme used by the IWC for bowheads.

A report from the SC will be prepared and given to the IWC Commissioners from the 88 member countries. The Commissioners are scheduled to meet in Portoroz, Slovenia, in October of this year. While we do not expect any controversy about bowheads, we will be prepared to deal with issues that might arise. Our main goal will be to prepare for the quota request in 2018, which will be the next meeting of the Commission. The NSB and the Alaska Eskimo Whaling Commission will be strongly represented at the Portoroz meeting.



U.S./Russia Treaty and Chukchi Polar Bears

In previous newsletters, we told you about regulations that the USFWS is expecting to impose on polar bear hunters in the Chukchi Sea. We had thought those regulations would just apply to Point Lay and other polar bear hunting villages farther south. However, in February 2016, we were told that the regulations may also apply to Wainwright and Barrow.

The USFWS and the US State Department told the NSB that the Treaty established the boundary at Point Barrow between Beaufort Sea and Chukchi Sea polar bears, even though the agencies have been telling people for years that the boundary was at Icy Cape. The US-Russia Bilateral Commission even set a quota based on Icy Cape as the boundary. While the Federal Government is intending to use Point Barrow as the boundary, they have not modified the quota to account for Beaufort Sea polar bears that are harvested between those two points. The result of Point Barrow being



POLAR BEAR SOW AND ONE-YEAR OLD CUBS NEAR BARROW.
PHOTO: ANDY VONDUYKE

used as the boundary is that the quota of 29 Chukchi Sea polar bears per year would be spread even more thinly among the villages from Barrow all the way to Saint Lawrence Island.

The NSB is not happy with the regulations that the USFWS is proposing. Because of this, we are working with the Northwest Arctic Borough, Kawereck, the Marine Mammal Commission, and the USFWS to host a Polar Bear Summit in Nome in early June. That summit is intended to improve the

representation of polar bear hunting villages in co-management. If time allows, the participants will also discuss specific aspects of the regulations that the USFWS is proposing.

Our Department continues to work with the NSB Mayor's Office, the NSB Law Office, and Alaska's Con-

gressional Delegation to try to solve some issues before they become major problems. Feel free to contact our office at 852-0350 with your concerns about polar bear regulations and management.

CAASP—NSB/Shell Baseline Studies Program Coming to an End

In our last newsletter, we reported that the NSB/Shell Baseline Studies Program had a new name — “The Collaborative Alaskan Arctic Baseline Studies Program,” or CAASP. As you all know, Shell decided to leave Arctic Alaska last fall. Unfortunately, that means that CAASP will come to an end because Shell provided most of the funding for that program.

There are still some studies underway, such as the satellite tracking of ice seals, and polar bear genetic studies, which will be completed. We also have some funds to conduct a few others studies such as polar bear health studies, contributing to a subsistence study for the Chukchi Sea in association with the North Pacific Research Board's Arctic Program, and several others. For the remaining monies, we will try to find matching dollars so that we can stretch our available funds as much as possible.

Even though CAASP is ending, we have learned many lessons. In our opinion, one of the most important lessons was from our Steering Committee.

The Committee consisted of representatives from the North Slope coastal communities, independent scientists, and scientists from Shell and the NSB. We learned to work together to identify and prioritize studies that would help address concerns and observations that came from NSB villages. The Steering Committee helped give a louder voice to villages with regards to what studies were needed.

We greatly appreciate all the time, effort, and insights from our Steering Committee, including Qaiyaan Harcharek of Barrow, Lee Kayotuk of Kaktovik, Clayton Kaigelak of Nuiqsut, Ron Oviok and Jack Schaeffer of Point Hope, Willard Neakok and Danny Pikok, Jr., of Point Lay, Ransom Agnasagga and Enoch Oktollik of Wainwright, Victoria Broje, Koen Broker, Louis Brzuzy, and Michael Macrander of Shell, Hajo Eicken and Tom Weingartner of UAF, Brandon Southall of SEA Inc., Sue Moore of NOAA, and Craig George and Robert Suydam of NSB-DWM.

Iñupiaq Matching

Draw a line from the *Iñupiaq* name to the English name for *Tikiġaq* Bowhead Shares

Aglu	Baleen ½ to captain, ½ to crew
Anjrruq	Behind Tavisīnaaq for Captain's share
Avarraq	Blowhole for butcher crews
Inj	Bottom Middle for 1st, 2nd boats
Niksiutaq	Flipper for Captain
Qaa	Flukes for 2nd day of <i>Qagruq</i>
Qaġlu	For fresh boiled Maktak to all boats
Qimiġluk	For Whale Tail Feast after first ice or March
Silvik	Lower Lip and Tongue for 3rd, 4th boats
Suluġaq	Lower Middle Crew, Harpooner
Suqqaich	Middle Belt portion for 7th, 8th boats
Taliġuq	Part of Anjrruq Distributed to all households
Tavisīnaaq	Piece of Uati boiled and eaten on the ice
Tirraġiagruq	Under Mouth for Captain
Tirraġiiq	Upper Lip for 5th, 6th boats
Uati	Upper Middle for Captain's Crew

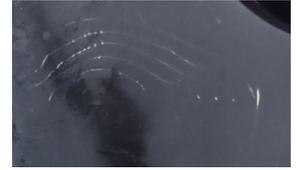
Note: *Iñupiaq* name spellings vary between regions.

What is it?

Write the name of the object in the picture on the line below.



A _____



E _____



B _____



F _____



C _____



G _____



D _____



H _____

Did you know that?

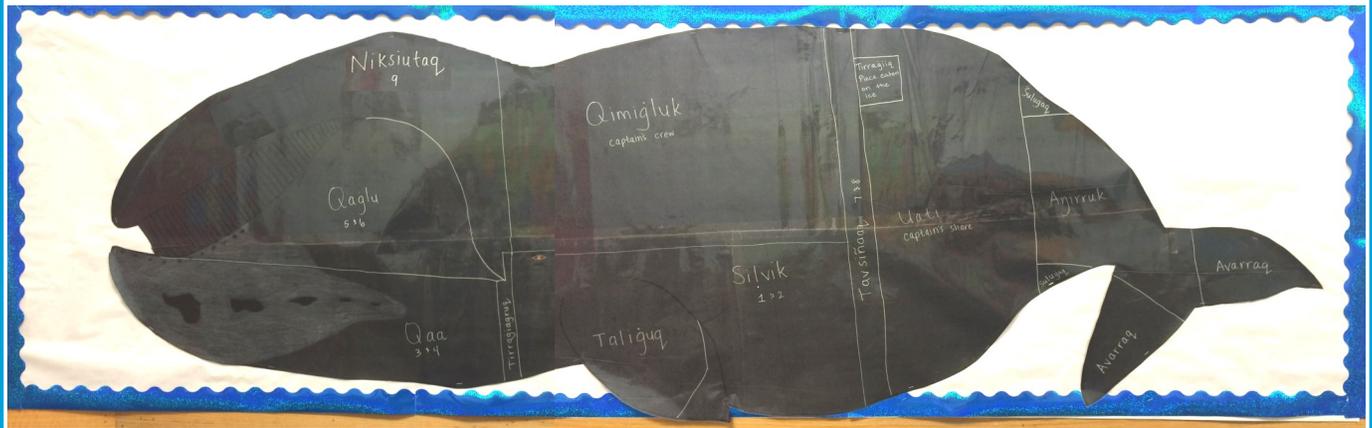
In Point Hope, whaling crews divide shares of the bowhead whale differently than in other villages on the North Slope.

The whale is marked (as in the poster from Tikiġaq School below) while still in the water, using long-handled butchering knives, by crew members in an *umiaq*.

Other crew members on the ice slowly turn the whale, using ropes attached to the flippers, as it's marked. These marks show the division of the whale and how it will be butchered and shared (see the *Iñupiaq* Matching above).

References: *The Tigara Eskimos and Their Environment*. 1992. Written by Berit Arnestad Foote. *Iñupiatun Uqaluit Taniktun Simunijit*. 2014. Compiled by Edna Ahgeak MacLean.

Aġvigmiñ Nijit



Email your answers to *Iñupiaq Matching* and *What is it?* to leslie.pierce@north-slope.org.

Check our website for the winners with the correct answers!

Go to www.north-slope.org/departments/wildlife-management/dwm_newsletters

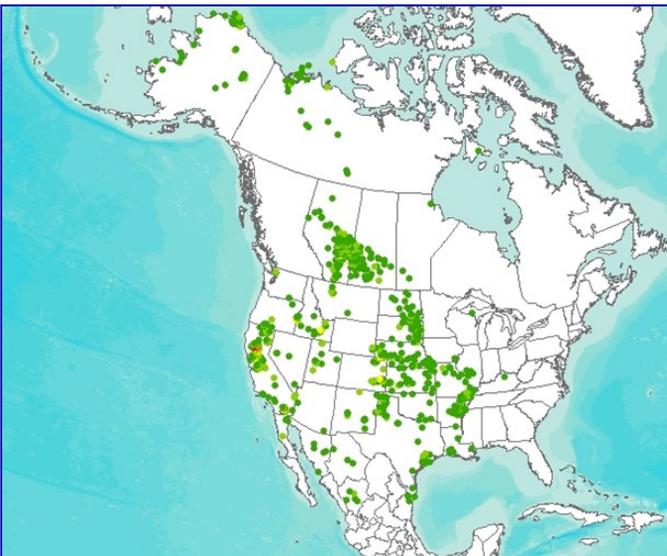
Snow Geese are Good Food and there are Lots of Them!

The DWM has been monitoring a breeding colony of Snow Geese that nest on the Ikpikpuk River Delta since the early 1990's. When we first began to monitor the colony, there were only about 60 nesting pairs. That has changed over the past 25 years. Last summer we counted over 12,000 pairs nesting on the Delta and surrounding area.

We wonder why this colony is growing so fast? In fact, we think that it is doubling in size every three years. The colony is likely growing so quickly for two different reasons. First, nest success, or the number of nests from which goslings hatch, has been moderate to very high since we began monitoring this in the early 2000's. Even in years when nest success was very low because of bear and bird predation (1% in 2009 and 8% in 2010), the adults still came back to breed in subsequent years, because of high fidelity, or loyalty, to the area. This suggests that the population is increasing, in part, from natural growth.

In addition to this natural population growth, we think that the Ikpikpuk colony is increasing because of the birds that are coming to the Delta from other areas. During our banding operations in early August, we have recaptured Snow Geese with young (captured while they were flightless due to molting) that had been previously banded at other colonies. Some of these geese have come from very large colonies in Canada and Russia. Researchers in Canada found that about 8% of Snow Geese breeding in Canada leave their breeding grounds. Because those colonies are so large (in the millions), tens of thousands of Snow Geese could be moving to other colonies - including on the North Slope.

We also think that Snow Geese are coming to the Ikpikpuk from the mid-continent flyway, or the central



THIS MAP SHOWS THE LOCATIONS (COLORED DOTS) WHERE HUNTERS HARVESTED SNOW GEES THAT WERE Banded ON THE IKPIKPUK DELTA BETWEEN 2000 AND 2014. MAP SOURCE: USGS, NOAA.



TOP: ROBIN MONGOYAK AND BRIAN PERSON BANDING SNOW GEES IN THE IKPIKPUK DELTA. BOTTOM: BOB RITCHIE "HERDING" GEES INTO THE NET FOR BANDING. PHOTOS: NSB-DWM

United States. Most Snow Geese that breed in Alaska are considered to be from the Pacific Flyway; however, we have captured geese with bands from the mid-continent. Snow Geese populations in the mid-continent have grown dramatically over the past four decades because of changes in agricultural practices in the Lower 48 and Canada which provide good winter food. In eastern Canada, Snow Geese have caused a great deal of damage to the tundra by grubbing for plant roots before they move on to their breeding colonies. This led managers to liberalize hunting regulations, extend fall season lengths, and to open spring seasons for hunters in Canada and Lower 48.

These management actions did not include Snow Geese from the Pacific Flyway because they mix with Snow Geese that breed on Wrangel Island in Russia. Due to international management issues, it is unlikely that the USFWS will go through the process necessary to further liberalize harvest regulations in the Lower 48 for the Pacific Flyway population of Snow Geese.

We are concerned that the Ikpikpuk Snow Goose colony is growing too fast and may damage the tundra. We want to encourage hunters to harvest as many of them as possible in the spring. Egging alone will not control the population because Snow Geese are a long lived animal that returns to their colony every year. The best control method is to remove the adults, so please take advantage of this delicious resource and fill your freezers! And, please call us (852-0350) with your band numbers so we can add locations to the map!

Sensory Studies of Bowhead Whales

Traditional Iñupiat knowledge held that bowhead whales had a sense of smell, and our studies have confirmed this by finding the parts of the brain that deal with smell. Hans Thewissen, a scientist who studies whales and their development, has been instrumental in assisting the NSB-DWM with these studies. Hans' knowledge of anatomy and his ability to study the sensory cells back in his laboratory in Ohio have contributed to many recent scientific studies on bowhead senses.

After finding the brain cells used for the sense of smell, it remained unknown to scientists whether bowheads could smell, and how they used this sense. Since smell is a sense that is airborne, it seemed odd that an animal that lives submerged would have a use for smells in the air. However, krill produce an odor that resembles that of boiled cabbage, so bowheads should be able to detect this smell

in the air. But, not only does a bowhead need to detect the odor of krill in the air, it also needs to know the direction of that odor.

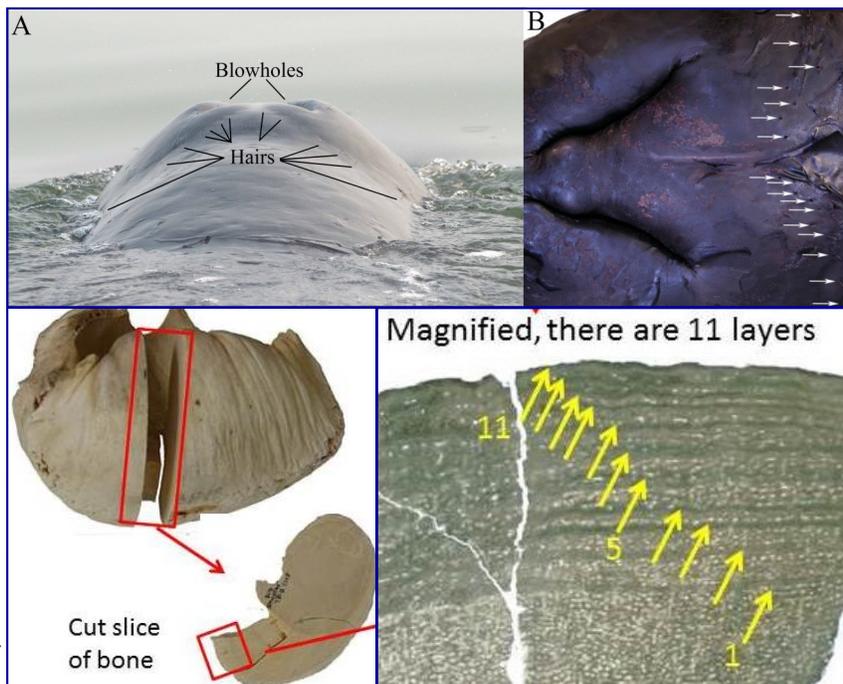
Hans studied the hairs on the head and near the blowhole of bowheads and determined that these hairs are like the whiskers on a cat, very sensitive to bending. Also, the hairs near the blowhole are much thicker than those on the chin and upper lip, possibly acting as weathervanes when the whale surfaces to breathe. Thus, the bowhead can smell the krill and its sensory hairs may tell it where the krill is located.

With it now being scientifically confirmed that bowheads smell, the next question is whether they can taste food in the water where they are swim-

ming. After studying the genes of bowheads, it is clear that they cannot detect sweet and bitter tastes, but they are probably able to detect salty and sour tastes. The question that is not answered is where on their body bowheads can taste these flavors. Humans do most of their tasting with small bumps on their tongues, but bowhead tongues are perfectly smooth and seem not involved with detecting flavors. There are small bumps on the lips of bowheads and it is possible this is where they do their tasting. So if you see Hans crawl around the mouth of a landed bowhead,

he might be looking for taste buds.

Hans is also studying the ear bone, or *siuti*, of the bowhead to possibly determine age. A number of captains have loaned the ear bone from the whales they landed. At Hans' lab, a thin slice was cut out of the ear bone, repaired with epoxy and returned to the captains. The slices that were taken out have rings that form similarly to tree trunk rings. By counting these rings, an approximate age can be determined.



TOP LEFT: BOWHEAD WITH HAIRS BEHIND BLOWHOLE, VIEWED AS BOWHEAD SWIMS AWAY. TOP RIGHT: ARROWS POINT TO HAIR LOCATIONS BEHIND BLOWHOLE, VIEWED FROM ABOVE. BOTTOM LEFT: *SIUTI* WITH SLICE CUT OUT AND AREA WITH LAYERS IN RED BOX. BOTTOM RIGHT: RED BOX MAGNIFIED SHOWING 11 LAYERS, INDICATING AN AGE OF 11 YEARS OLD. PHOTO CREDITS: (TOP) NSB-DWM (BOTTOM) HANS THEWISSEN

The method is not fool proof; some whales have very blurry rings, and in older whales the rings are so thin they cannot be distinguished, even with a microscope. However, this approximate age is useful as another piece of the puzzle for determining the age of landed whales.

Hans continues to work on hearing apparatus and other anatomical features of bowheads (and belugas), and with his help, we hope to gain a better understanding of how whales sense their environment. As has been the case for many years, it takes science some time to catch up with TEK, or traditional ecological knowledge. This work is supported by the BWCA, the AEWCA, the ABWC and is funded by the NSB Shell Baseline Studies Program.



**North Slope Borough
Department of Wildlife Management**

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BOXHOLDER**

CHECK OUT OUR
NSB- DWM **WEBSITE!**

*We thank the NSB Assembly and Mayor Aamodt
for their continued support. **Quyanaqqak!***

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Marine Mammal Satellite Tagging in Summer 2016

Satellite tagging of ice seals on the North Slope, in collaboration with ADF&G, will continue this summer. Ringed and bearded seals will be tagged through the NSB Shell Baseline Studies program and spotted seal tagging funded by BOEM and the Office of Naval Research (ONR). The tags used in the Baseline Studies Program are called SPLASH tags, which record: location, dive depth, dive duration, and water temperature. This data can be used to suggest feeding behavior and feeding activities. For example, a U-shaped dive suggests feeding (more time spent at depth during the dive), whereas a V-shaped dive does not (diving down and back up too quickly to feed).

The tags funded by ONR are called CTD Fluorimeter (or “smart”) tags. In addition to collecting similar data as the SPLASH tags, the smart tags collect oceanographic data including: salinity, productivity (chlorophyll levels), and light penetration at depth.



NMFS Permit No. 782-1719-06
 BOB SMALL (ADFG) AND ALBERT SIMON, OF HOOPER BAY, PREPARING TO RELEASE A SATELLITE-TAGGED BELUGA IN KASEGALUK LAGOON NEAR POINT LAY IN 2007. PHOTO: ROBERT SUYDAM

We will work with hunters at Point Lay this summer to try to attach satellite tags to belugas. We started this work in 1998 and have learned a great deal about where belugas go in the summer after they leave the area near Point Lay. Some large males travel as far as 81° North or about 600 miles north of Barrow. We’ve also learned about migration routes and wintering areas based on a few whales that kept their tags on through the winter and spring. In 2016, we hope to tag up to five belugas to better understand movements but also to have the belugas tell us more about what kind of water they like to use. Similar to the seals, belugas will carry tags that are designed to collect oceanographic data. This is a collaborative project with the ADF&G with funding from ONR. Contact Robert Suydam if you have questions about beluga tagging and Andy Von Duyke for questions about seal tagging at 852-0350.



NMFS PERMIT NO. 15324-01

ANDY VONDUYKE, ISAAC LEAVITT AND JOE SKIN TAGGING A SPOTTED SEAL AT OARLOCK ISLAND IN AUGUST 2015. PHOTO: AARON MORRIS.