



North Slope Borough Department of Wildlife Management



Sketch by Jean Craighead George

FALL 2017

THE TOWLINE

VOL 9 NO 2

From the Director

This issue of the DWM's Towline is dedicated to some of our work with students on the North Slope. Our staff visit NSB classrooms whenever possible; however, we are also seeking out students to mentor and encourage to pursue a career in wildlife biology.

The dedicated biologists that work for DWM have come to the NSB from other states or countries and do a great job for the Borough and the people of the North Slope. However, as some of our biologists reach retirement age, we are hoping that we can hire "locally grown" biologists to replace them. A local biologist will bring with them their first-hand experiences in our local Arctic environment, as well as the traditional knowledge handed down through their families. Working towards our mission of managing subsistence animals and supporting subsistence hunting for the residents of the NSB will come as second nature.

Our NSB Interns attend colleges in Alaska and other states as well. We would also like to remind any NSB

college students that we have an MOA with ANSEP to provide student internships.

Some student programs highlighted here include the Mystic Educational and Cultural Exchange Program and our Wildlife Intern Program. We also spotlight several past interns who have graduated from college or graduate school, and continue to work towards a career in wildlife biology or subsistence policy.

Finally, watch your mailbox for our 2018 Subsistence Harvest Documentation Calendar, Qaaniqsitchiñiq Iłisimmanmik or Passing on the Knowledge, coming to all NSB communities. The calendar can be used to document your harvest, and you will enjoy the winning contest photos of our young people learning to participate in subsistence activities.

*Qnyanaq,
Taqulik Hepa*



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Malissa, We Will Miss You!

We are saddened to announce that Malissa Langley passed away on November 26, 2017, after a long and hard battle with illness. Malissa was the NSB-DWM Division Manager for the Shell/Baseline Studies Program since 2011. She handled all of the contracts, meetings, and many people associated with the studies that came out of the Program. She was always cheerful and quick to laugh and entertain with her southern accent. Malissa will be greatly missed by the DWM, but also by the other Departments where she spent many years and made many friends. She remains in our hearts and in our memories.

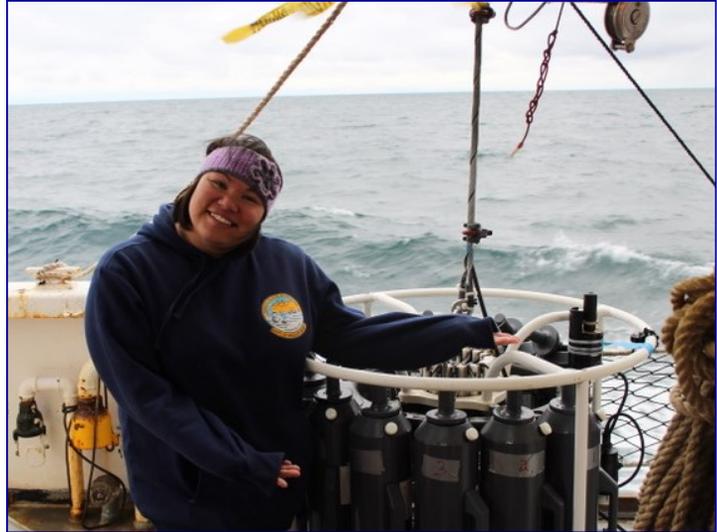


Gadgets, Gizmos and Gorgonocephalus by Alicia Itta Flores

I lived on the research vessel (R/V) Ocean Starr in the Arctic Ocean for five weeks in August and September of this year. The moment I stepped onto the ship, I felt that this is where I needed to be. I was very excited to be given the chance to learn more about the marine ecosystem that our Arctic Slope coastal communities depend on - but from a scientific perspective. My experiences of the Chukchi Sea were based on subsistence hunting and whaling, continued through traditional knowledge and Inupiaq ingenuity. It seems that the years it takes to be adept in the scientific world is comparable to the time it takes to gain mastery of hunting and providing for others. Being a part of the scientific community will allow me to become more adept and able to give back to my home communities.

As part of the Arctic Integrated Ecosystem Survey, funded by the North Pacific Research Board, one of the main goals of this expedition was to gather information from the Arctic marine ecosystem to help understand the impact of drastically receding sea ice. The scientists working on the ship come from all disciplines of study, from acoustics, oceanography, to fish diets. We also had bird biologists who counted thousands of seabirds from their post in the ship's wheelhouse. The chief scientist communicated with our local whaling communities to check on the bowhead whale migration. It is important that the location of the ship and work are not in the way of the whales and the hunters, and I was impressed to hear that the timing of the cruise was planned to avoid the fall migration.

Aboard the 160 foot sea vessel, basically a floating laboratory, we worked 12-16 hour days from checkpoint to checkpoint, or stations, which were located every 30 nautical miles. At each station, a series of equipment was deployed to take samples at various



Alicia with the CTD, which measures conductivity, temperature and depth

depths. The benthic zone (ocean floor) was sampled by a beam trawl net that gently combed the sediment layer and revealed hundreds of sea stars, snow crabs, hermit crabs, snails, juvenile fish, sculpin, sea cucumbers, anemones and more! My most favorite invertebrate was the basket star with its curly coiling arms and bright orange colors. The best part about field research is that the organisms we find are still alive. As we count and sort the different species, they wriggle their legs (or fins), crabs scuttle across the table, or snails hoist up their shell as they maneuver. Most of our catch gets sent back into the ocean and the next sets of nets are deployed for midwater and ocean surface sampling.

Types of fish found in the nets of the midwater and surface trawls were arctic cod, pink salmon, capelin, short-horn and staghorn sculpin, as well as jellyfish. It was hilarious watching professional researchers measure the same jellyfish I had fun playing with on the shores as a kid. I could not believe the abundance of some the smallest fish; it is remarkable that they can survive in near freezing water.

The organisms we catch in the nets let us know what is living in our waters. These organisms range from microscopic phytoplankton, which feed the tiny zooplankton, which feed one of the largest and longest-lived mammals on our planet, the bowhead whale. Phytoplankton, such as algae and bacteria, live under the sea ice and are fed upon by krill and other organisms. They are the primary producers and gain their energy from the sun through photosynthesis, converting carbon dioxide into breathable oxygen. The oceanographer on our ship took water samples from 10-40 meter (33 to 132 foot) depths and filtered out these microscopic phytoplankton. The abundance of these microorganisms indicates the health of our ocean. The animals higher up in the food chain reflect how well primary production is occurring, and the studies on this ecosystem will help us predict what may happen in the future.

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Basket star, or *Gorgonocephalus*, specimen from the benthic trawl

Iñupiaq Matching

Draw a line from the *Iñupiaq* name to the English name for Terms to Travel

<i>Aḡayuk</i>	Against the wind
<i>Anisaaq</i>	By boat
<i>Arguq</i>	By car
<i>Kiluliñaaq</i>	By dog team
<i>Kiluvaq</i>	By airplane
<i>Kivaliñaaq</i>	East
<i>Niḡḡum kiluliñaaḡa</i>	North
<i>Niḡḡum salliñaaḡa</i>	Northeast
<i>Qamatmuaq</i>	Northwest
<i>Qamutitaaq</i>	South
<i>Salliñaaq</i>	Southeast
<i>Tiḡḡutitaaq</i>	Southwest
<i>Ualiñaaq</i>	To travel
<i>Umiaqtuq</i>	Toward the Ocean
<i>Uḡallam kiluliñaaḡa</i>	Travel inland
<i>Uḡallam salliñaaḡa</i>	West
<i>Uniḡaaq</i>	With the wind

Note: *Iñupiaq* name spellings vary between regions.

Aḡvanḡaaq

Did you know that?

Aaḡruliḡvik, another name for December, means the “time when the two stars, *Aaḡruuk*, appear.” *Aaḡruuk* are the Big Star, Vega or *Uvluḡiaqpak*, and a smaller star in the constellation Lyra, called *Suvulliik* or the Morning Star. The appearance of these two stars in late December, the larger Vega above the smaller Morning Star, signals the start of the New Year, *Aḡvanḡaaq*, and the beginning of longer days.

Reference: Iñupiatun Uqaluit Taniktun Sivuniḡit. 2014. Compiled by Edna Ahḡeak MacLean.

Iñupiaq Games for Winter

Aakkuu - one team calls a member of the second team to come over and retrieve an object, but they must not smile or laugh

Aanaruuraaq - two people kneel side-by-side, knees touching, and grasp each other around the shoulders or under armpits, and try to unbalance the other one

Isaqqiḡauraq - one person hops on hands with feet twisted around arms, like an injured bird

Kakisugaaq - swing a neck bone (vertebrae) attached by a string to a stick; try to get the hole in the neck bone to fall on the stick

Magrikaqtaq - one jumps up from the knees to a standing position and kicks something

Maq - players take turns making silent gestures and funny faces to make others laugh; the winner is the one who does not laugh or smile

Paqqaurraaq - play ice hockey

Piannaq - play cards

Pisiktanḡuaq - to throw fur mittens, turned inside out, at each other and whoever is hit is “it”

Taammak - play checkers

Taptauraaq - one player pulls down parka hood over eyes, holding it in teeth so she/he cannot see, and tries to grab others

Reference: Iñupiatun Uqaluit Taniktun Sivuniḡit. 2014. Compiled by Edna Ahḡeak MacLean.

Marine Policy Fellowship Experience with Nicole Kanayurak

An NSB-DWM intern alumni and young scholar from Utqiagvik, Nicole Kanayurak, conducted a Marine Policy fellowship in Washington, D.C. after receiving her Master's Degree in Marine Affairs from the University of Washington in Seattle. Nicole may be the first Alaska Native to receive the Sea Grant/NOAA John D. Knauss Marine Policy Fellowship, a nationally competitive year-long fellowship within the federal government. During her time in Washington D.C., Nicole worked for the National Oceanic and Atmospheric Administration (NOAA) in International Fisheries. As Nicole's fellowship draws to a close, we asked her a few questions.

Why did you want to do this fellowship? What does NOAA do, and why international fisheries?

I recognized that our communities on the North Slope will always need to work with the federal government on Arctic and marine policy issues as well as meeting federal requirements, and I wanted to put myself in their shoes to gain a broader perspective on the management of our resources. NOAA is a U.S. federal agency that oversees a range of oceanic services, from providing satellite based weather information to managing a few of our subsistence resources including *aqviq*. I decided to do my fellowship in international fisheries because I enjoy working on international issues and wanted to challenge myself in doing work outside of the Arctic. I am glad I did this, as I was able to represent the United States internationally by doing outreach in Vietnam on seafood trade to assist in preparations for bilateral fisheries management meetings with Europe and China.



Nicole in Hanoi, Vietnam, conducting Seafood Trade outreach.

What are your plans now that you are wrapping up your fellowship?

I know what I am passionate about and that is working for our communities on Arctic Ocean governance and natural resource management. Our communities need to continue to manage our way of life and I would like to help us continue to do this.

Alicia Itta Flores continued from page 2

Growing up in the Arctic, I wondered about the survival of living things in our frigid environment. Some days it was hard working outside amidst crashing waves and icy winds to sort fish, and I gained much respect for those who work out on the ocean. It was interesting to be on a boat so close to the subsistence hunting waters where I grew up, different boats of the same water, each continuing to gather their traditional or scientific knowledge.

This journey, which I had dreamed of doing since touring vessels near Utqiagvik, took me over 450 nautical miles north of the Bering Strait into the Chukchi Sea. We weathered many storms and had to take cover a couple times, once near Wainwright during a two-day storm and once near Point Lay. One of the most fascinating aspects was to see the different landscapes we passed by - Point Hope, Point Lay, Russia, Big and Little Diomedea, Wales and the Kotzebue Sound - places I have never set foot on but had the privilege to view from our ship.

Being so close to my hometown, 70 nautical miles north of Utqiagvik, helped drive my passion for this Arctic science. This opportunity allowed me to gain an astounding amount of knowledge for which I am grateful. Living on a ship with scientific researchers and witnessing their passion and professionalism to study more about the Arctic Ocean gives me hope and pride. Scientists on the same cruise in 2013 were noticing a huge lack of sea ice; this year, even as we reached our most northern checkpoint, the sea ice was still over 50 miles away. This observation, as well as living in the Arctic and experiencing first-hand the receding sea ice, calls me to further my studies and to gain a better understanding of our beloved Arctic land and sea.

NOTE: Alicia is also a former NSB-DWM Intern and is preparing to pursue a master's program with our DWM biologists. You can read more about Alicia's cruise, starting with her first blog entry, on this webpage: blog.arctic.nprb.org/blog/2017/8/29/a-nome-away-from-home.

Mystic Aquarium Educational and Cultural Exchange

In November 2017, eight high school students and four chaperones from the North Slope headed to Mystic Aquarium in Mystic, Connecticut. The trip took two days with a flight into Boston, Massachusetts, for a starter. From there, the group visited the New Bedford Whaling Museum in New Bedford, one of the largest ports during the Yankee whaling era. Visiting the museum, seeing the skeletons of blue whales, sperm whales, and North Atlantic right whales, as well as many artifacts brought back to the East Coast from the Arctic communities by the Yankee whalers, was “a dream come true” for one of the chaperones. Another highlight of the museum was seeing a *qayak* given to a Yankee whaling ship captain by a man from Point Hope who he had found blown 60 miles out to sea; it probably dated back to the late 1800’s.

This was the seventh time that NSB-DWM has brought NSB students on this Educational and Cultural Exchange. The idea for these trips came from Robert Suydam and a collaborating biologist, Tracy Romano, from Mystic Aquarium. The thought was to let the



Jamie Panik getting “kissed” by a beluga

students “follow the samples” that scientists collect from subsistence-harvested animals back to the lab where they are analyzed. The students can learn more about what happens to these samples, as well as more about the biology of the animals.

This year’s students included Nichole Hank from Point Hope; Jacquelyn Henry, Caitlin Koonuk, and Gerilynn Stalker from Point Lay; and Nathan Nayakik, David Panik, Jamie Panik, and Arthur Tagarook from Wainwright. Acquilluk Hank from Point Hope and Madeline Hickman from Wainwright were chaperones along with Leslie Pierce and Robert Suydam from NSB-DWM. Our students interacted with five students from the Mashantucket Pequot Tribal Nation in Ledyard, Connecticut, and their chaperones throughout the week, learning about the science together, but also sharing each other’s cultural traditions. The Tribe was a



The North Slope group (plus a few Connecticut friends) with a modern whaling cannon outside of the New Bedford Whaling Museum.

natural addition to the trip as they are donors to the Arctic Exhibit at the Aquarium.

Students were able to learn about the feeding and training of Mystic Aquarium’s two captive belugas. They observed a routine blood draw and were able to prepare stained slides of the beluga blood cells and look at them under a microscope. A favorite activity was the Beluga Encounter, where students were able to get into the water (waist-high) with a beluga and interact with the animal.

A penguin encounter, sea lion show and “meet and greet,” as well as lots of other aquarium animals were part of the experience. Students were “immersed” in the local environment with a trip to Misquamicut Beach in Rhode Island and a jump into the Atlantic Ocean, a seine net activity in a nearby lagoon, and a cruise on a research vessel with UConn’s Project Oceanology. Mystic Seaport houses the last whaling ship from the Yankee whaling days and walking through the C.W. Morgan gave all the feeling of being on a whaling ship at sea.

The trip ended with a visit to the Mashantucket Pequot Museum for a tour, watching their Veteran’s Day Powwow, and being hosted for a lobster dinner by the Tribal President, Rodney Butler. Our action-packed week will never be forgotten and we hope that it inspired the students to continue to learn more about science, possibly choose science as a career, and consider working for the NSB-DWM in the future!



Arthur Tagarook getting a “high-five” from the beluga



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

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Wildlife Interns at DWM

The DWM Wildlife Intern program has been ongoing since 2011 with 17 NSB college students participating. The main goal of our Intern program is to help “grow our own scientists,” especially as our work force is aging. Our young people have a lot to offer the North Slope and with our mentorship, we hope to help prepare them for these future career opportunities.

During the summer of 2017, four student interns worked with us: Archie Gordon, Chan Charoonsophonsak, Olive Kanayurak, and JakyLou Olemaun. Archie attended UAA this fall and is considering biology or another related field. Chan is soon to graduate from UAF with a degree in statistics and will likely attend graduate school. Olive is soon to finish her AA at Ilisagvik College and is interested in



DWM wildlife veterinarian Raphaella Stimmelmayr giving interns Olive, Chan and Archie an eider anatomy lesson.

attending UAF for wildlife biology. JakyLou is attending UAS in Juneau with an interest in marine biology.

According to Olive, “getting hand-on experience with [those] in their field of expertise and meeting other students” with similar interests was the best part of her internship. She also enjoyed the opportunities that she had to travel, including going to Point Lay to help with beluga harvest and camping on the Ikpikpuk River Delta to help with snow goose banding.

Interns are encouraged to attend professional conferences, like the Alaska Marine Science Symposium held in Anchorage every January, or the Sitka Whalefest which includes workshops and college seminars. These opportunities allow students to interact with many different scientists and to network with many students from around the state and beyond.

If you know of an NSB high school student preparing to graduate, or an NSB college student, who may be interested in wildlife biology, please have them contact us at 852-0350. They could be our next NSB-DWM biologists!



Olive, Alicia Itta Flores, and JakyLou geared up to participate in a seal necropsy at the Sitka Whalefest.