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Spring is finally upon us in the ISR, and the FJMC is working on getting ready for our June Community tour and summer field programs. In each of our newsletters, we'll provide a closer look at one of the research projects supported by the FJMC (in this issue Lois Harwood describes her seal monitoring work in Ulukhaktok), and feature some photos from one ISR community (in this issue check out pics from Ulukhaktok!). If you have a photo you would like included in an upcoming issue, please email to Kristin at the FJMC: fjmc-rb@jointsec.nt.ca

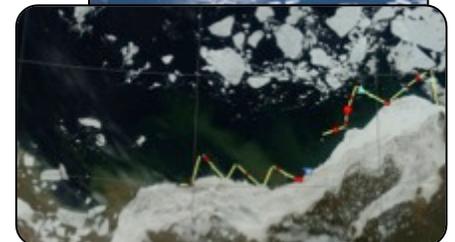
Ulukhaktok. Photo – Inuvialuit Cultural Resource Centre



The FJMC is happy to have a new team member working with us this summer – Paden Lennie of Inuvik! Paden has been hired on as part of the FJMC's student mentoring program, and will be working with Joint Secretariat staff in the Inuvik office as well as in the field with Lisa Loseto (DFO) helping with beluga monitoring work in the ISR. The FJMC is very happy to have Paden aboard and hope that he is able to gain some great new experience this summer.

We would also like everyone to check out the geo-referenced aerial footage of beluga spring habitat use! Lisa Loseto and Carie Hoover of DFO will be collaborating with Environment Canada to provide up to date imagery of belugas entering the Mackenzie estuary during their aerial survey work from June 16-23, 2013. Links to their aerial footage will be posted on HTC and FJMC Facebook pages – and is listed below. Be sure to check it out and let us know what you think!

<http://dev.nwrc.carleton.ca/Projects/BelugaSurvey/BelugaSightings.aspx>



For more information on these topics, other work done by the FJMC, or to be added to our e-Newsletter mailing list, please contact Kristin at the FJMC Inuvik office:

Inuvialuit/Canada Fisheries Joint Management Committee
 PO Box 2120, Inuvik, NT, X0E 0T0
 Phone: (867) 777-2828





Issue 9: Spring 2013

FJMC Community Tour – June 22-26, 2013

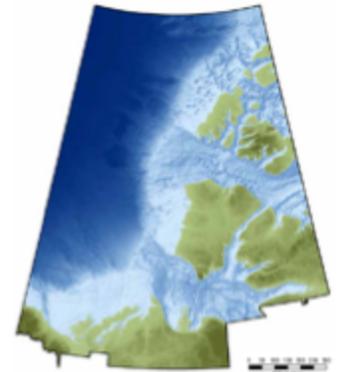
Each June the FJMC travels to 3 communities in the ISR to meet with HTC's and discuss issues related to the co-management of fish and marine mammals. This tour is a great opportunity for the FJMC to hear about community concerns and get feedback from the HTC's on FJMC programs. This year the FJMC will be meeting with the HTC's in Inuvik, Ulukhaktok and Paulatuk and discussions will include:

- 2013-2014 science projects
- ISR Sport Fishing Registry
- Seal illness
- Char management plans
- Animal handling/tagging
- Fish and Marine Mammal Community Monitoring Program

Beaufort Sea Beluga Management Plan – Amended Fourth Printing 2013

The Beaufort Sea Beluga Management Plan update was recently completed by Bob Bell and Hank Rogers Sr. on behalf of the FJMC, and will be ready for distribution in June. The updated plan has some great new maps and photos, and we hope that community members, and particularly beluga harvesters, are happy with the finished product. A copy of the Inuvialuit HTC beluga hunting by-laws and guidelines will be included within each plan. We will be sending copies to each HTC, and will have some extra copies available in our Inuvik office. If you are interested in a digital or printed copy email Kristin at the FJMC: fjmc-rb@jointsec.nt.ca

BEAUFORT SEA BELUGA
MANAGEMENT PLAN
Amended Fourth Printing 2013



FJMC Facebook Page

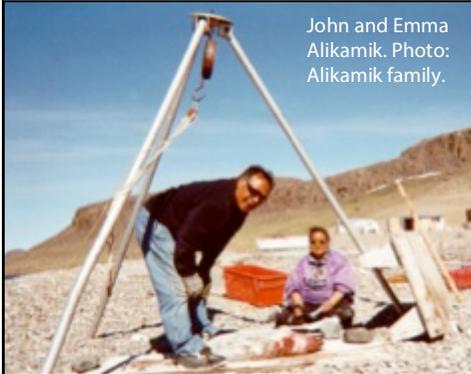
The FJMC has just launched a Facebook page. We'll be using this to post all of our public meetings, our newsletters, pictures, and links to other sites that are relevant to fish and marine mammals in the ISR. Feel free to post pictures or comments on anything related to fish and marine mammals – we'd love to hear from you.

<https://www.facebook.com/pages/FJMC/435296509887871?ref=hl>

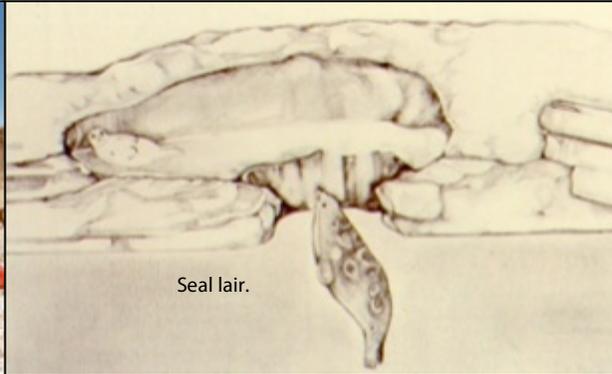




Monitoring fatness and reproduction in the ringed seal near Ulukhaktok: 1992-2012 – Lois Harwood (DFO) & John Alikamik



John and Emma Alikamik. Photo: Alikamik family.



Seal lair.



John measuring blubber thickness at chest. Photo: L. Harwood.

Background

The ringed seal is the most abundant and widespread marine mammal in the Beaufort Sea and Amundsen Gulf. We don't know the exact size of the population in the Western Arctic, but it has been estimated to number at least 650,000. Seals live in the region year-round, they are especially common in the large bays of Amundsen Gulf in winter, and in large offshore feeding clusters in summer. Subsistence harvests of ringed seals in the ISR presently average approximately 1000 seals per year - in the 1960s and 1970s, the annual harvest was as high as 5000 in some years. There are no commercial harvests of seals in the Western Arctic/ISR.

Life Cycle

The main prey of the ringed seal is Arctic cod, particularly in adult seals who are experienced at catching fish. Seals also eat invertebrates – which they find in plankton, on the seafloor, and even from the undersurface of the sea ice. In summer the seals make long trips (1000s km) to 'hotspots' for summer feeding, and most seem to return to their same, core areas for overwintering. During winter, they make maintain several breath holes and an underwater territory, which they defend. Pups are born in snow caves (called 'lair', see sketch above) on the sea ice in late March and early April, the lair provides protection from predators and weather. Pups are nursed by their mothers for about six weeks, and then the seals 'bask' or 'haul out' on the sea ice during June for the annual moult. During winter and spring, the seals depend on areas of sea ice where prey is abundant and the ice is stable - as a substrate for birthing, protection and nursing of pups, and as a place to haul out in spring.

Sampling – when, where and what

We have been working with the Olokhatomiut HTC since 1992 'monitoring' ringed seals in the Masoyak area. What this involves is local harvester John Alikamik, assisted by his wife Emma, measuring and sampling approximately 100 seals per season (between June 1 and August 3) that are taken in the regular subsistence harvest at Masoyak. Measurements and samples are taken to check the seal fatness and reproductive success of the adult females, and also to send some samples down to scientists in the south who are looking at contaminants, disease and diet changes in the seals.

John measuring girth at hip and standard length. Photos: L. Harwood.



John weighing seal. Photo: Alikamik family.



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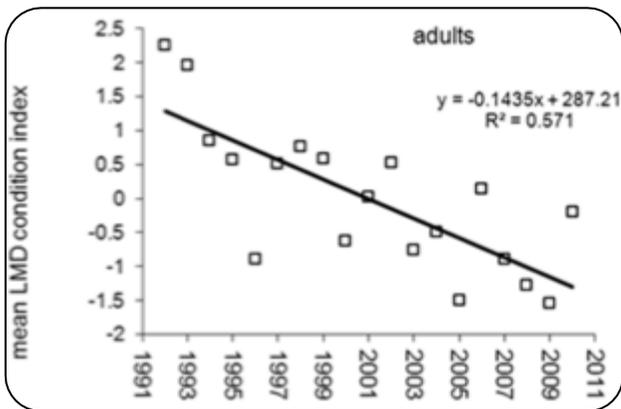
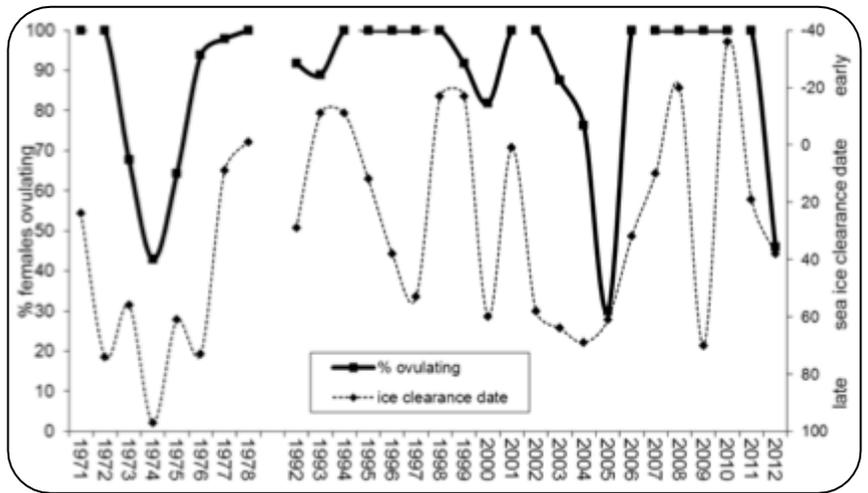


Monitoring fatness and reproduction in the ringed seal near Ulukhaktok: 1992-2012 – Lois Harwood (DFO) & John Alikamik (*continued from page 2*)

Results

There has been four decades of research and community-based seal monitoring in Canada’s Western Arctic. We have been monitoring the relationship between seal reproduction body condition and sea ice in a stable breeding habitat area near Ulukhaktok from 1992 – 2010. This builds on a decade of research by scientists and harvesters back in the 1970s – Tom Smith, Jimmy Memogana, Ian Stirling. Results from this research include:

- a) Ice conditions variable with a trend over the past 40 years toward earlier break up and longer open water periods in Eastern Amundsen Gulf and Prince Albert Sound, significant at the $p=0.10$.
- b) Fluctuations in reproduction (ovulation rates and percent pups in the harvest) that are related to ice break up dates, with strongest signals in years of particularly heavy ice (e.g., 1974, 2005, 2012) and particularly light ice (e.g., 1993, 1998) (graph on right).
- c) We have also documented a long term, slow decline in seal body condition (LMD condition index) over time – in adults and in subadults (lower graph). This suggests a change in the quality or quantity of food may be the reason, and we are investigating this further with stable isotope analyses.



d) The clearing of ice in 1998 was so early that it interrupted lactation for pups on the seaward part of the breeding habitat near Ulukhaktok (Smith and Harwood, 2001), because the fast ice broke free and drifted into Amundsen Gulf six weeks ahead of the usual pattern. The halt to lactation affected the condition, the growth and probably the survival of the affected unweaned pups.

e) However, the early clearing of ice was also linked to a greater local abundance of prey and this resulted in increased body condition in all other age classes. This could ultimately have had a positive influence on reproductive success in the following year.

The Bottom Line: There is a delicate balance between the existence of an ice and snow regime that creates suitable breeding habitat and substrate for the appropriate length of time, and the availability of food.

Recovery: In our studies, reproduction and body condition tend to return to normal levels within 1-2 years following the extremes; the relative abundance of ringed seals in the western Canadian arctic is comparable to estimates from the 1970’s.





Arctic seal sickness: Spring 2013 update – Ole Nielsen, DFO

Starting in the summer of 2011 hunters in Alaska, Siberia and across arctic Canada noticed a strange sickness affecting seals. Hundreds of sick seals have been reported from the Alaska North Slope area alone. Department of Fisheries & Oceans Canada (DFO) is working with American authorities including the Alaskan North Slope Borough Dept. of Wildlife, National Oceans and Atmospheric Agency (NOAA) among others, to investigate this problem.

Sick seals may have one or more of the following problems:

- Easily approachable
- Hair loss
- Sores on the body, flippers, and/or head
- Bloody nose / eyes
- Difficulty breathing / diving

What We Know and What We Don't Know:

- We still do not understand the cause of the illness.
- There is NO evidence that this disease is passed to humans or dogs.
- Virus, bacteria, and infectious disease testing: Negative with some test results still ongoing in Canada and USA.
- Radiation testing: Cesium 137 levels similar to levels from the mid-1990s. Some test results still to be completed by American laboratories
- Bio-toxins / Algal bloom testing: Negative with some test results still to be done in American laboratories.
- 2012: The Bering Strait region in Alaska reported just over 50 sick seals, primarily ringed and bearded seals. All reports from 2012 were of seal "survivors" that had survived the 2011 winter. Many healthy ringed, bearded, and spotted seals were successfully harvested during 2012.
- 2011: Over 175 reports of sick seals were received from northern and western Alaska. There were several reports of sick seals being seen a number of communities in the ISR and Nunavut but the actual number of sick seals is not known. No one has seen this type of sickness before.

Recent news:

As recently as April 2013, at least one bearded seal with hair loss was harvested near Cape Woolley in Alaska. This seal was very fat, very alert, but had a few small healing sores on the belly. This seal was most likely a survivor. No reports of sick seals have been reported so far this year in Canada. We anticipate a successful seal harvest throughout the ISR and Nunavut this year. However, please stay vigilant and continue to REPORT any sick seals you see.



Harp seal – Clyde River (2011).



Ringed seal – Sachs Harbour (2011).

Safe Handling:

Hunters should rely on their best traditional and customary food handling practices.

What's Next:

Coastal community members should remain vigilant and continue to report sick animals. Please **take a picture – if at all possible.**

Please continue to report sick seals!
DFO Inuvik: (867) 777-7500
FJMC Inuvik: (867) 777-2828

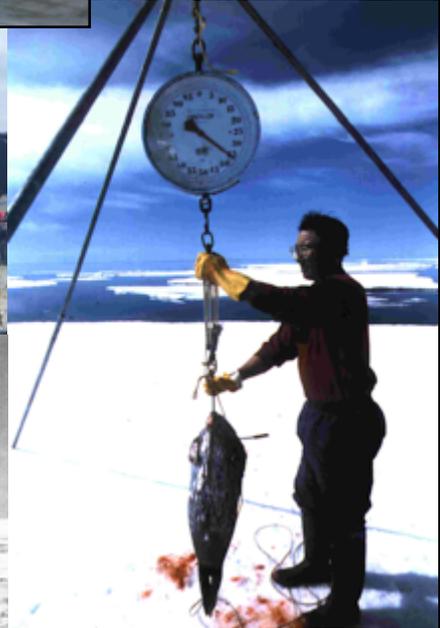
For electronic information about sick seals in Alaska please visit:

www.alaskafisheries.noaa.gov/protectedresources/seals/ice/diseased/



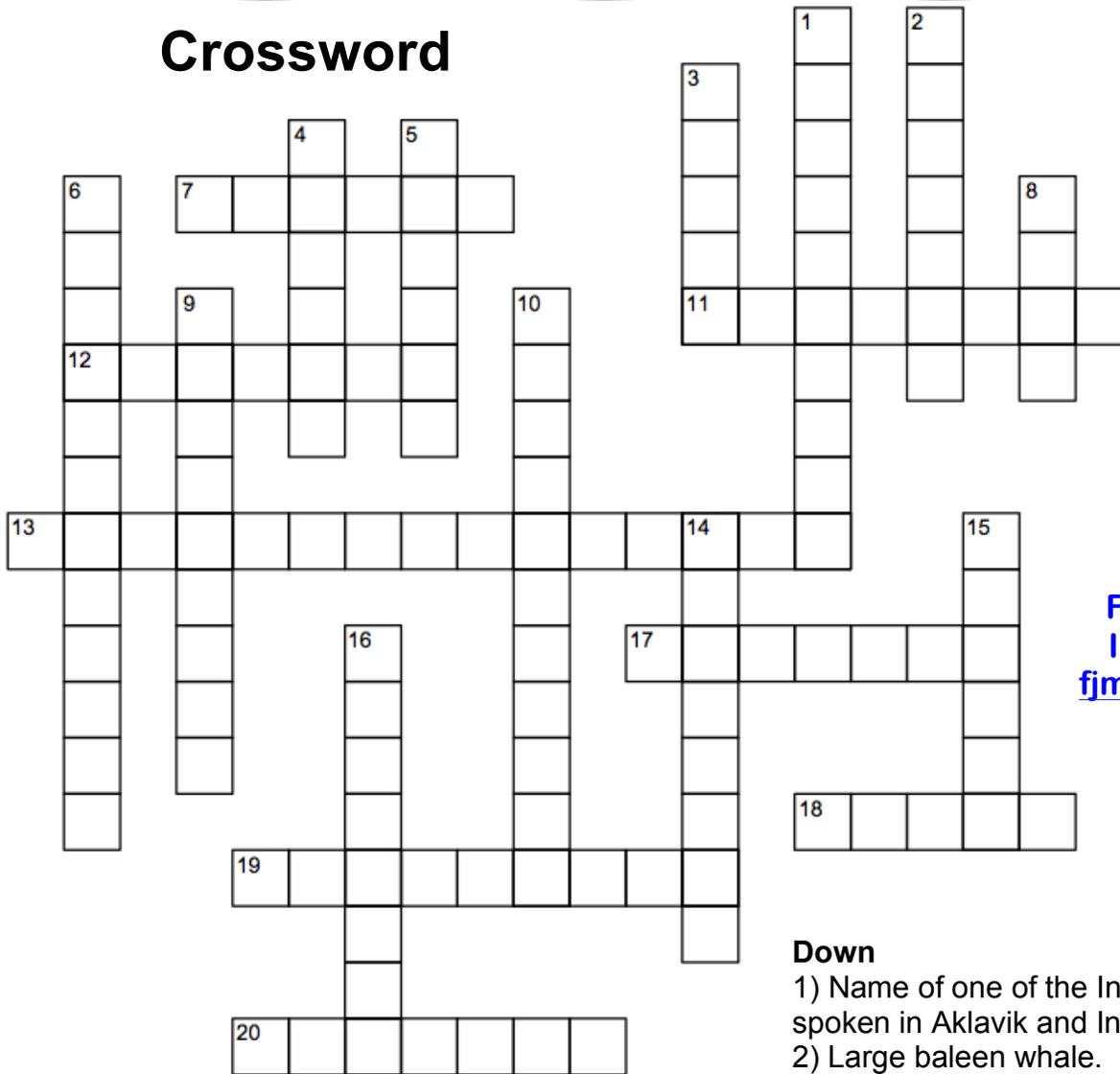
FJMC Quarterly Newsletter

Issue 9: Spring 2013





Crossword



Send in your completed crossword to the FJMC office in Inuvik. Take a picture, scan it, or send it by mail, and if its filled in correctly and received by July 31, 2013 – you'll be entered in our December draw!

FJMC: PO Box 2120
Inuvik, NT, X0E 0T0
fjmc-rb@jointsec.nt.ca

Across

- 7) Type of seal monitored since the 1990s in the Masoyak area.
- 11) A river in the ISR that flows from the western Kitikmeot Region in Nunavut, through Tukturnogait National Park, and empties into Darnley Bay.
- 12) A local name for cisco.
- 13) Name of the Marine Protected Area in the Mackenzie Delta.
- 17) Name of a National Park in the ISR that translates from Inuvialuktun to 'place where people travel'.
- 18) Name of the island where residents of Sachs Harbour live.
- 19) Largest and longest river in Canada.
- 20) ISR community with the motto: Never Say Die.

Down

- 1) Name of one of the Inuvialuktun dialects spoken in Aklavik and Inuvik.
- 2) Large baleen whale.
- 3) A part of beluga that can be used to determine its age.
- 4) Largest community in the ISR.
- 5) Small, white whale.
- 6) Location of this year's ISR celebration of Oceans Day (July 5, 2013).
- 8) One of the favorite fish of the Inuvialuit.
- 9) Small, abundant fish found in the Beaufort Sea that is an important source of food for beluga and seals.
- 10) Type of char found in rivers west of the Mackenzie.
- 14) Large gulf of water in the eastern ISR.
- 15) Three layers of beluga skin and a layer of blubber that is eaten by the Inuvialuit.
- 16) The name of the island north of Ptarmigan Bay and known to many Inuvialuit as Qikiqtaruk.