

churchillnorthernstudiescentre



# THE BIRDFISH

FALL 2018

Churchill Northern Studies Centre  
Newsletter

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# Symbolic Beluga

*A beluga whale breaking the surface.* Photo Credit: Maryse Goudreau

**M**Y STAY AT THE CHURCHILL NORTHERN STUDIES CENTRE DURING THE BELUGA MIGRATION AND BIRTH PERIOD WITH THE SUPPORT OF THE STUDIO AND RESIDENCY BILATERAL EXCHANGE PROGRAM WITH THE MANITOBA ART COUNCIL AND CONSEIL DES ARTS ET DES LETTRES DU QUÉBEC, FACILITATED MY RECORDINGS OF BELUGAS FOR A FILM PROJECT.

I also stayed in the center of Churchill to have access to the town's people, guides, and eco-tourists. In addition to making images of the beluga whale, I focused on their communication system and spent several hours recording their sound and local stories about them. In short, my journey has allowed me

**In the course of my research, I will build an exhibition project based on the correlation between the important Beluga congregations and the proximity of sites related to space exploration.**

to open-up a dimension to my work that tends towards a new narrative in which the scientific as well as symbolic role of the beluga is very present. I will continue with an in-depth exploration of the sound medium in post-production in the winter 2019. I started to explore a narrative link between the presence of large numbers of belugas and the presence of portals to space. In the course of my research, I will build an exhibition project based on the correlation

between the important Beluga congregations and the proximity of sites related to space exploration. I have observed this phenomenon in Canada and in Russia and this coincidence will be a special focus on their unique communication system.

I work by developing thematic archives where sociological, political, spiritual or even anthropological glances intersect. Through this combination of approaches, I release images from their static relationship to an official story to create narrative, pictorial and literary spaces. From the social history of beluga, inserted in an anthropocene perspective, I extract and create images that will no longer be of a scientific, documentary or political nature. My next research place will be at sea off the coast of Svalbard for new materials that will fuel this long-term project called: Archives of a social history of the beluga.

Maryse Goudreau is an artist, filmmaker and independent scholar. She lives in Escuminac on the Gaspé coast of eastern Canada. Disseminated in different parts of the world (North America, Mexico, Cuba & Europe), her work is also included in national collections such as: the Montreal Museum of Fine Arts and the Musée national des beaux-arts du Québec. ✨

# Who's Eating Rocket Greens?

12,000 Pieces Consumed & Counting!



The Rocket Greens project at the Churchill Northern Studies Centre is happy to report that at the end of October 2018 (44 weeks of harvesting), we have sold over 12,000 pieces of produce in our community!

Our first harvest of 200 heads of lettuce occurred on December 22, 2017 and we dubbed our produce 'Rocket Greens.' We were also very excited to donate the newly named and freshly harvested lettuce heads to the Churchill Community Christmas Feast.

Following that event, we hosted a brief pop-up market in early January of 2018 where the first 330 pieces of produce were officially sold to community members. We thought the market would last about 3 hours, but we were pleasantly-surprised to sell almost everything in the first hour! We used the market as a chance to talk to the community about interest in a home subscription service where you would pay monthly and receive a set amount of Rocket Greens. There was strong interest and on January 10th, the very first CNSC Launch Boxes were established.



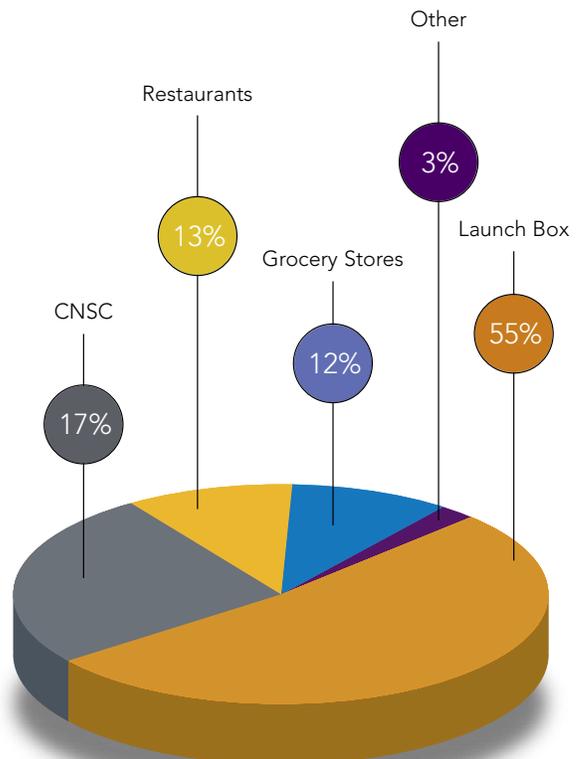
The following pie-chart shows how Rocket Greens are currently being distributed in Churchill.



The Launch Box is a service where you pay in advance for a Standard Launch Box (6 pieces of produce/week) or a Mini Launch Box (3 pieces of produce/week). The produce is picked on Wednesday (weekly harvest day), packed into a

'Launch Box Bag' and either delivered to you directly for an additional fee, or picked up from a central location on Wednesday evenings. The Launch Box has really....Taken Off! (pardon the pun) – we currently have 40 subscribers utilizing the service which accounts for almost 60% of all Rocket Greens grown.

We also supply the two local grocery stores with Rocket Greens so that local community members who aren't interested in a subscription, but are interested in fresh, locally grown produce can still access Rocket Greens each week. Grocery store sales account for about 10% of all Rocket Greens. As Aurora Season got underway we were finally able to serve Rocket Greens in the CNSC cafeteria. The Aurora Season groups, a busy summer research season and great start to Polar Bear Season has allowed us to use almost 20% of all Rocket Greens grown right here in our own kitchen! We used Aurora Season and the busy summer season to establish a working relationship with a couple of local restaurants and a remote lodge. Chefs enjoy the fresh greens and especially the Genovese Basil. Restaurants use just over 10% of all Rocket Greens grown. ❄️





Earthwatch participants monitoring the wetlands

## RESEARCH IN CLIMATE STEWARDSHIP

The Climate Change at the Arctic's Edge project led by Drs. LeeAnn Fishback and Steven Mamet is a long-term collaboration with Earthwatch Institute to deliver programs for citizen

scientists from around the world to be involved in their research program. This project has been in operation since 1999 and creates opportunity for long-term monitoring of key baseline variables in the environment (e.g. permafrost temperature, wetland ecology, treeline surveys). In 2016, we initiated a research project to examine the impact on the participants of this place-based citizen science project. Over the course of a year, we surveyed the participants to hear more about how their time on the project impacted their lives.

**The results of our study showed that citizen scientists feel more empowered to make choices on climate change after participating with scientists in active research.**

We examine CS because rather than "informing individuals about climate science", CS positions the public as a partner in the scientific process. Within this context, we explore whether, and how, a climate change focused CS experience might influence climate stewardship perceptions and actions among participants, and by extension, what this experience might teach us about working with the public in general on climate action.

The program experience takes place at the CNSC and in the arctic landscape surrounding Churchill, which is both threatened by visible climate impacts and highly novel to participants. This offers a rich context for exploring the types of public programming and community engagement that is required to build a broader civic commitment to climate stewardship. The Arctic's Edge program research used a mixture of methods including a pre-post experience survey and semi-structured interviews.

With 10 teams a year in Churchill, there were opportunities for

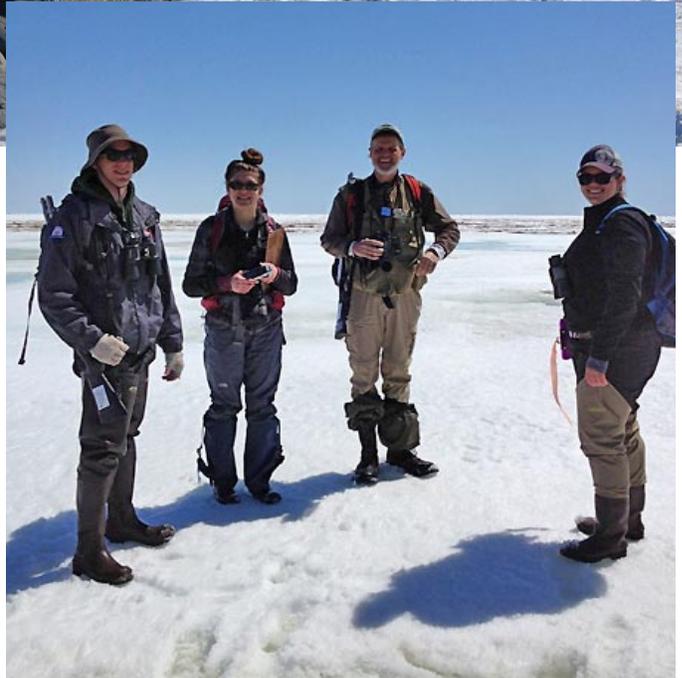
people to be engaged in CS all seasons of the year. The CNSC is as an ideal location for this project as our active research centre allows participants an opportunity for subarctic immersion. One of the most powerful aspects of CS is the potential to provide citizen scientists knowledge and experiences to participate within confidence around questions within climate change.

The results of our study showed that citizen scientists feel more empowered to make choices on climate change after participating with scientists in active research. Specifically, the lesson from the Arctic's Edge program is that climate action work can be both more effective and more meaningful when the practice of science is democratized. Ultimately, what left a mark on participants in the Arctic's Edge program was not simply the opportunity to take part in the scientific process, but the opportunity to be invited into the craftwork of each CNSC scientist. The impact is partly derived from the invitation to experience the dedication and passion of individuals working in science, which is often distant from public life. Behind all successful climate action work is at least one dedicated and passionate person and this study is a reminder that sharing who we are and why we persist is at least as important as sharing what we know. ❄️





*Blast from the past.  
Field Course  
participants in front  
of the CNSC  
Akudlik site.*



*CNSC Users' Representative, Jim Roth and graduate students*

# Moving Science Forward

By Dr. Jim Roth

**T**hrough my long-term research program on species interactions involving Arctic foxes and lemmings, I've exposed many students from my university and elsewhere to Churchill and given them first-hand field experience with Arctic and sub-Arctic research. But my research program really began in 1994, when I was a graduate student in Minnesota. Back then I did not have much funding, or any experience with Arctic research. The CNSC and its staff were instrumental in guiding my development as an Arctic researcher from the moment I first stepped off the train (it was 30°C that day, the hottest spot in Canada – so much for my introduction to “the Arctic”!). They taught me how to tie a komatik and operate an ATV (the fuel reserve switch was a phenomenal revelation), and how to be vigilant for polar bears and use a cracker shell safely and proficiently. In fact, the CNSC deserves as much credit for my PhD as my academic mentors. But the CNSC doesn't just provide logistic support, it creates an exciting and stimulating environment for people

living and working out of the Centre. We get to know people from all over the world with expertise on so many different facets of the northern environment, just through informal interactions over meals or in the lab. I could have breakfast with experts on biodiversity of aquatic invertebrates or shore-bird incubation patterns, while sharing a room with someone studying methane emission from wetlands, and as I'm learning about their diverse research interests I may realize new implications for my own research program, in ways I wouldn't have thought about otherwise. Now as a professor I've brought up 22 university research students, plus another 36 students in field courses, and facilitated trips to Churchill for over 100 high school students to conduct field research on Arctic flora and fauna. The cascading impacts of the CNSC's support of northern research and our ability to share these research experiences with budding scientists is how we will fulfill the CNSC's vision to understand and sustain the North. ❄️

## SLW



Science Literacy Week highlights Canada's outstanding scientists and

science communicators from coast-to-coast-to-coast. The goal of this week is to showcase the excitement, excellence, and diversity of Canadian science. For one week in September, libraries, universities, museums and other partners put on a spectacular nationwide festival of science. The Churchill Northern Studies Centre celebrated Science Literacy Week from September 17-23, 2018 and this included the productions of seven short videos that highlighted research programs in the Churchill area. These videos featured researchers discussing their research and are located on our Churchill Northern Studies Centre YouTube channel as well as our Facebook page. The CNSC is located adjacent to the former Churchill Research Range (CRR), where approximately 3,500 suborbital flights by rockets were launched from the site. Two of the videos produced focused on the incredible discoveries that were made during the operation of the rocket launching facilities between 1956 and 1985. These videos highlight Canada's past role in space rocketry and upper atmosphere research. We hope you enjoy viewing these videos and learning more about science happening around the Centre! #SciLit. ❄️



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*Tomas Taylor is our Seasonal Research Intern and resident videographer*



# Love of the North

By Rachael Beasley

**HAVING LOVED POLAR BEARS MY ENTIRE LIFE**, it seemed inevitable that I would eventually end up in Churchill during bear season. This opportunity finally came just a few months after I graduated from University, when I arrived as a volunteer for the CNSC. Another motivator for the trip was to get more information for my future directions; for the longest time, I have had an interest in Arctic biology, but my home country, the UK, is neither academically or geographically bountiful in this field. Yet, at the CNSC, I was finally engaging with a variety of related activities ranging from lectures on Arctic trees and marine mammals (including polar bears presented by Dr. Nick Lunn and Dr. Martyn Obbard!) to nature tours and, excitingly, citizen science research with an Earth Watcher group. Therefore, I really got to marvel at the magnificent diversity and dynamics of northern ecosystems, alongside experiencing for the first-time temperatures well below freezing, hauntingly beautiful snow storms and the northern lights!

Although I would be lying if I said the cold never bothered me, being within the landscape here has made me fall in love further with the North; I will always remember the first polar bear I saw off a Tundra buggy (she came right beneath my window!), and the mesmerising rhythm of grease ice against the shores of Hudson Bay. I was also lucky enough to be surrounded by some exceptional naturalists who, with their keener eyes, pointed out gyrfalcons, snowy owls, ptarmigans and voles, and many types of flora and lichen species. It emphasised for me the necessity and significance of northern ecosystem research and has rooted further my love of Arctic biology.

On another note, volunteering at the CNSC has allowed me to meet many inspiring and wonderful people from so many different walks of life; all of them have contributed greatly to what has been one of the best experiences of my life. I have learnt so much from these people and feel very privileged to have shared my time with them here in this stunningly beautiful and unique part of the world. ❄️



Photos are of Robin Williams on a Learning Vacation and the spot where her ashes were laid to rest

## In Memorium

Robin Williams had a love for all things Churchill, especially the polar bears. Robin first participated in our Lords of the Arctic Learning Vacation in 2008 and returned for the same program in 2011. In 2014, Robin and her husband John participated in our Winter Skies Learning Vacation. This November, John Williams returned to the CNSC and spread Robin's ashes on the coast, so she could be laid to rest with the bears. It was a beautiful day with the sun peeking out from the clouds when John spread her ashes and read this poem:

*"Do not stand at the shores and weep, I am not there, I do not sleep. I am a thousand winds that blow; I am the diamond glints on snow. I am the sunlight on ripened grain; I am the gentle autumn's rain. When you awaken in the morning hush, I am the swift uplifting rush of quiet birds in circled flight. I am the soft star that shines at night. Do not stand at the shores and cry. I am not there; I am roaming free with the bears."* ❄️

Established in 1976, the Churchill Northern Studies Centre is an independent, non-profit research station located along the western coast of Hudson Bay.

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to understand and sustain the **north**

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How can you continue to make a Lasting Impact on the north? Tell everyone around you about your experience with us in Churchill. By becoming an ambassador for the Churchill Northern Studies Centre (CNSC) your impact on northern research and education will be limitless. You can recommend us as a destination for learners of all ages, school group trips, conferences and meetings, credit and non-credit university courses, a place to conduct research from any discipline and as a charity worthy of support of any amount. **Thank you for all you do for us!**



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Contact Kim at **204 675 2307** or [daley@churchillscience.ca](mailto:daley@churchillscience.ca) – and she will process your donation personally.



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