

churchillnorthernstudiescentre



Lords of the Arctic - Page 6

# THE BIRDFISH

SPRING 2018

Churchill Northern Studies Centre  
Newsletter

## inside:

Growcer PAGES 2/3

A Time for Growth PAGE 4

Artist in Residence PAGE 4

**Fresh Faces** PAGE 5

Featured Course:

Lords of the Arctic PAGE 6

BOOK  
TODAY!

# Growcer

brings innovation and fresh herbs



THE FACT THAT THE GROWCER **ARRIVED BY BARGE** ONLY SERVES TO HIGHLIGHT THE ACTUAL NEED FOR IT. FOODS THAT WOULD NORMALLY ARRIVE BY TRAIN ARE NOW COMING BY AIR (AND SEASONALLY BY SHIP) AT MUCH HIGHER FREIGHT COSTS.

**O**n October 19th, 2017 a barge floated in to Churchill carrying a pretty interesting piece of freight destined for the CNSC. Painted green and white and adorned with the Birdfish Logo, the highly anticipated 40-foot-long standard shipping container equipped with hydroponic gardening equipment arrived at Port, was delivered by truck and placed in the fenced compound adjacent to the CNSC facility.

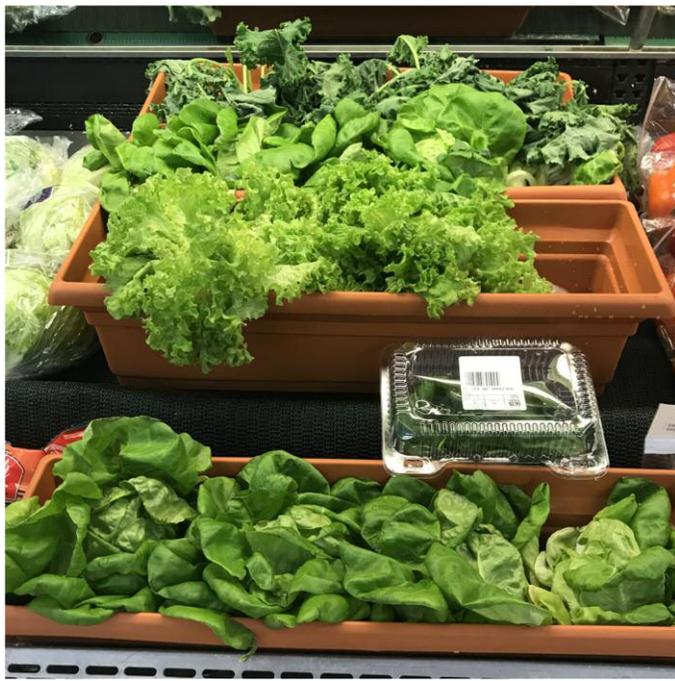
The shipping container, sea can for short, is dubbed the Growcer, which is not only a clever play on words, it is also the name of the Ottawa/Iqaluit based company that has been developing these self-contained gardens to address food security issues in northern and remote locations. The sea can "package" means that it is possible to deliver the system to communities by truck, train, sea and even air!

The Growcer system is heavily insulated and highly efficient, meaning that it can be operated year-round, even at the extreme temperatures we encounter in Churchill. It has a separate nursery for sprouting up to 1200 seedlings in addition to growing spots for 1800 mature plants. We are now continuously providing 250-400 pieces of fresh food a week to the community of Churchill.

There are currently 40+ proven varieties of greens, herbs and even berries that can be easily and viably grown including tasty favorites like spinach, butterhead lettuce and arugula. We also have the unique opportunity to assist the Growcer company with experimenting on new crops and varieties to expand that list including strawberries and cherry tomatoes.

Through one of our funding partners, Northern Manitoba Food, Culture, and Community Collaborative, we will be working with the Community of Norway House, Manitoba when they receive their Growcer system to share our experiences and educate students in both communities on Food Sovereignty. Our other granting partners are the Mitigation Trust Fund, the Northern Healthy Foods Initiative, and the Churchill Regional Economic Development Fund.

The fact that the Growcer arrived by barge only serves to highlight the actual need for it. Foods that would normally arrive by train are now coming by air (and seasonally by ship) at much higher freight costs. Fresh items are even less available than they were before but with the Growcer, we are enjoying fresh herbs like basil and mint alongside lettuce, kale, and chard! ❄️



OVER 5,000 PIECES  
OF FRESH FOOD  
PROVIDED TO THE  
CHURCHILL  
COMMUNITY  
SINCE INCEPTION.





## A Time for Growth

Spring in Churchill is a vibrant, transitional time when temperatures fluctuate and precipitation flirts between snow and rain. Here at the CNSC, we pack away winter gear and begin welcoming seasonal staff, researchers, and students, creating a swell of excitement. And the melodious presence of migratory birds captures well the promise of a dynamic summer.

Our core focus in Spring was science education. In May and June, we hosted programming for students from the Frontier School District with generative engagement from visiting researchers and onsite science staff. In late May, we acted as the host site for the Manitoba high school competition, Envirothon, and provided research talks and judges for the oral presentation aspect of the event as well. Fostering curiosity in science for youth is integral to what we do and these events created rich opportunities for mentoring and knowledge sharing.

Also in May, we hosted an NSERC funded Science Odyssey event focused on the sea ice. Held at the town complex in Churchill, we connected with over 60 local community members through examining ice cores and information stations on birding. Taking an ice sample meters away from the complex highlighted how connected the local community is to the natural world.

The Growcer continues to draw positive attention as an innovative hub, creating possibilities for research and acting as a food security education tool. There's a rotating flush of greens each week with a popularity for pak choi, mustard greens, and fresh herbs. The connections being made over fresh basil open-up important conversations on life in the North.

With the rail line outage stretching into another year, we continue to adapt to the challenges this presents with flexibility, ingenuity, and through the generous support of members, donors, and the many partners who believe in our mission to *understand and sustain the North*. As the new executive director, I'm glad to have you with us on this ever-evolving journey of subarctic science and community building! ❄️

Best Regards,  
Elijah Zimmerman, Ph.D

# Back to the Cold Skies of Churchill

By Kevin Nikkel



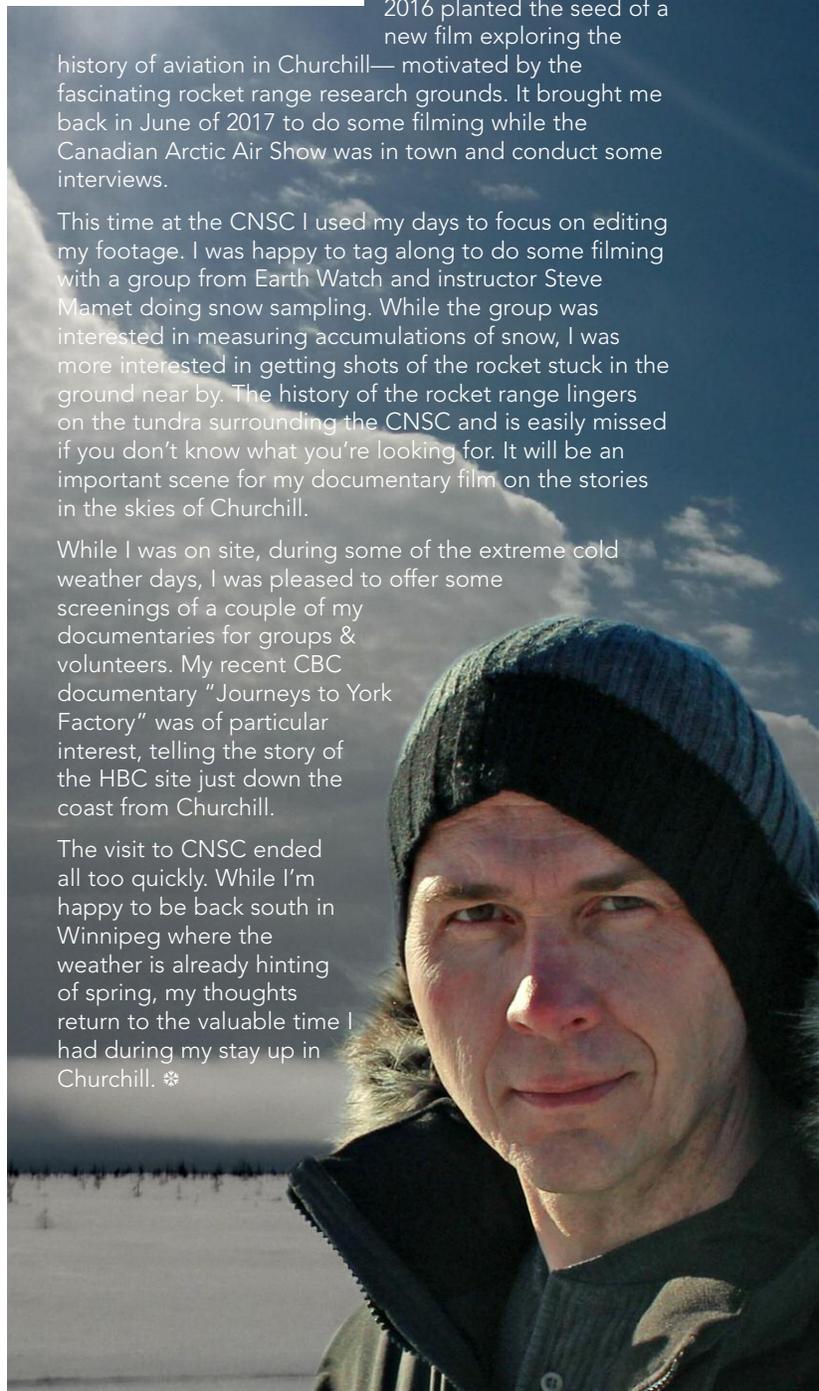
I was excited to be back up to Churchill for another artistic residency through the Manitoba Arts Council, Feb 17-26. As a visiting artist, I was on site to work on several documentary film projects. The previous artistic residency I did at the Churchill Northern Studies Centre (CNSC) in 2016 planted the seed of a new film exploring the

history of aviation in Churchill— motivated by the fascinating rocket range research grounds. It brought me back in June of 2017 to do some filming while the Canadian Arctic Air Show was in town and conduct some interviews.

This time at the CNSC I used my days to focus on editing my footage. I was happy to tag along to do some filming with a group from Earth Watch and instructor Steve Mamet doing snow sampling. While the group was interested in measuring accumulations of snow, I was more interested in getting shots of the rocket stuck in the ground near by. The history of the rocket range lingers on the tundra surrounding the CNSC and is easily missed if you don't know what you're looking for. It will be an important scene for my documentary film on the stories in the skies of Churchill.

While I was on site, during some of the extreme cold weather days, I was pleased to offer some screenings of a couple of my documentaries for groups & volunteers. My recent CBC documentary "Journeys to York Factory" was of particular interest, telling the story of the HBC site just down the coast from Churchill.

The visit to CNSC ended all too quickly. While I'm happy to be back south in Winnipeg where the weather is already hinting of spring, my thoughts return to the valuable time I had during my stay up in Churchill. ❄️



# Fresh Faces!



churchillnorthernstudiescentre

WELCOME TO OUR NEW YEAR-ROUND STAFF:

## -Carley Basler, Assistant Fleet and Facilities Supervisor (Growcer System Manager)

I first came to Churchill in the spring of 2000 to work at the Churchill Northern Studies Centre as the Program Coordinator. I was lucky enough to participate in a Polar Bear Behavior research project with Kim Daley (2002-2004) and spent two summers as the Summer Research Technician (2003-2004). By late 2004, I officially became a Churchill resident when my partner Matt and I purchased a small remote cabin at Spruce Ridge (about 6km West of the CNSC). In 2006, I completed my Bachelor's degree and became the Full Time Research Technician at the CNSC. It was an exciting time to be working here, as the plans for the new building were truly becoming a reality. After the Grand Opening of the new CNSC facility (2011), I took a small hiatus from Churchill to live in Thompson, Manitoba. Over the course of the following 5 years I completed an Apprenticeship Program, was awarded a Red Seal as a Power Electrician and started a Family. After my son Mason was born, we wanted more than anything to raise him in the North, so I am very pleased to have been given the opportunity to return to the CNSC as Assistant Maintenance Supervisor/Growcer System Manager.



Carley and Trigg

## -Evan Roberts, Interim Program Coordinator

I was born and raised in Winnipeg, MB and grew up playing hockey in the winter, and getting outside in the summer. I have a background in Human Rights and Conflict Resolution from the University of Winnipeg. I am an enthusiast of all things photography, and am keen to get out on my bike whenever I can. I love working with young people, and am a huge believer in experiential learning. Previously, I spent three years with the Winnipeg Jets True North Youth Foundation, had many summers as a camp counsellor, and worked as a Research Assistant at Global College at the University of Winnipeg. I'm excited to share my love of Churchill with the world, and hope to facilitate as many learning opportunities as possible for everyone who comes to visit.



## -Elijah Zimmerman, Ph.D., Executive Director

Originally from rural Minnesota, I've lived in several U.S. states, Ontario, British Columbia, and am now pleased to call Churchill, Manitoba my home. Before moving into this administrative role, I served in logistics in the U.S. Army Reserve for 12 years and taught communication studies at the university level for 15 years. My research focuses primarily on creative, qualitative methodologies and cultural performances of identity.

I hold a passion for ecology and scientific inquiry along with a deepening connection to the North. I feel fortunate to work with such an outstanding team at the CNSC to promote and sustain both research and learning in the subarctic. ❄️

# featured course

## The Ecology of Hudson Bay's Polar Bears



# Lords of the Arctic:

**Oct 11 – 18, 2018**

Instructor:

Stephen Petersen

**Participants: 36**

**\$3,415 CDN**

**November 1 – 8, 2018**

Instructor:

Rupert Pilkington

**Participants: 36**

**\$3,415 CDN**

**Special October 2018 Session**

**P**olar bears have been granted an ever-growing voice in the discussions surrounding conservation, ecotourism, and especially climate change. This is unsurprising. Bears have always held the double appeal of danger and fascination. They are like us in many ways – playful, inquisitive, moody – but also enormous, unpredictable, and *wild*. To see something so powerful in a position of such uncertainty, ecologically, cannot help but affect our perception of them.

This October, the Churchill Northern Studies Centre will offer *Lords of the Arctic*, an instructive, immersive Learning Vacation that will shed light on the arctic environment, its diverse ecosystems, and of course one of its top predators, the polar bear. This special session is instructed by Dr. Stephen Petersen head of Conservation and Research for the Assiniboine Park Zoo. His recent research projects have focused on arctic marine mammals (polar bears and seals) and he will engage participants with citizen science projects to help monitor these arctic species (and maybe spot a beluga whale too!).

In October and November, polar bears congregate in the Churchill area to await the return of the sea ice and access to their preferred prey – the ringed seal. Polar bear tourism is nothing new during this time of year, especially in Churchill. What has changed, over time, is the need for a greater understanding of its interactions and role in the ecosystem. Over the course of this learning vacation, guests will spend two full days touring the Churchill Wildlife Management Area aboard a custom-built tundra vehicle. Course participants will enjoy an excellent firsthand view of polar bears in their natural habitat and will have the opportunity to assist with a citizen science project, collecting data as part of a long-term study

contributing to our knowledge of this area. By participating in ongoing research, participants will gain a deeper understanding and appreciation for arctic ecology and the intricacies of the land of the polar bear. Despite its strength and size, polar bears are increasingly regarded as vulnerable, in an environment that, despite its ruggedness, is surprisingly delicate. Participants in this learning vacation have the opportunity to discover that the bear depends upon, and is threatened by, factors that affect our own lives profoundly. Toxins in the environment, less stable ice patterns, and unseasonable weather produce shocks felt throughout the ecosystem.

Recognising the importance of the bears' habitat means learning about it, and Dr. Petersen's program will engage guests directly in related projects. Citizen science, the participation of non-scientists in the collection of data, can provide research scientists with a greater volume of information, the result of many pairs of eyes. It can also bring non-scientists into an active role, igniting curiosity and the drive to explore the natural world. For most people, it is easier to grapple with an environmental problem if they have taken the time to understand it; from the perspective of environmental science, that step is crucial to devising strategies that will produce genuinely positive effects.

Each evening, in-depth presentations explore the remarkable polar bear along with other arctic marine mammal species and the challenges they are facing in a warming climate. And if that were not enough, this program also includes a 45 minute helitour along the rugged coastline of Hudson Bay, an afternoon of dog sledding and a tour of the community, including the world-famous Itsanitaq Museum and its renowned collection of historic and contemporary Inuit art and artefacts.

The regular return of stable sea ice has sustained both bears and humans as a place to hunt seals, as well as to navigate the northern ocean. There is much hanging in the balance of ice and thaw, the precarious position in which it now stands. Though the polar bear's physical adaptations, including large paws for weight distribution, claws to catch seals, and hollow hairs to conserve heat, make it perfectly suited to its environment, those same qualities make change difficult.

Join Stephen and the CNSC to discover this incredible habitat and the beautiful animals that reside here. Although the polar bear is a highly regarded animal, there is so much more to see and learn about its interactions and how this one species is impacted and has an impact on its surroundings. By participating in this program, you will be exposed to the bears, their ecosystems, and actively participate in the ongoing efforts to understand this species and its environment. ❄️

### FOR RESERVATIONS CONTACT:

Churchill Northern Studies Centre, Box 610,  
Churchill, Manitoba, Canada R0B 0E0

TEL: (204) 675-2307 • FAX: (204) 675-2139

cnscc@churchillscience.ca • www.churchillscience.ca

Visit [www.churchillscience.ca/events](http://www.churchillscience.ca/events)





Jody Reimer inspects a tranquilized polar bear

# + Exploring A New Math

I'M CURRENTLY IN THE FINAL YEAR OF AN INTERDISCIPLINARY PHD AT THE UNIVERSITY OF ALBERTA, WORKING IN THE FIELD OF MATHEMATICAL ECOLOGY. For many decades, it was questions arising in physics that inspired mathematicians to develop new techniques and tools. More recently, a pairing between biology and math has led to exciting new discoveries in both fields – with sophisticated mathematical tools providing insight into biological systems, and complex biological questions motivating new mathematics. My little corner of this world focuses on Arctic ecology. Using mathematical models, I am exploring how marine conditions (e.g., the timing of sea ice breakup and formation) affect seals, polar bears, and the predator-prey relationship between them.



I have participated in fieldwork based out of the CNSC a couple of times throughout my degree, most recently in the spring of 2018. The CNSC is incredibly well positioned for studies on the western Hudson Bay polar bears. Even though a lot of my work uses datasets that go back to before I was born (!) the opportunity to get out on the sea ice is invaluable, as it allows me to see firsthand how much of that

data was collected, so that I can work with it appropriately. More importantly, being able to see the sea ice habitat provides important context for interpreting results and hopefully asking the right kinds of scientific questions. ❄️

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

## board of directors

Christopher Storie (Chair) – University of Winnipeg  
 James Kushney (Acting-Vice-Chair)  
 Louise Lawrie (Treasurer) – Member-at-Large  
 Judy Wilson (Secretary) – Member-at-Large  
 Jim Roth – CNSC Users' Representative  
 Bruce Erickson – University of Manitoba  
 Shawn Manning – Duke of Marlborough School  
 Dave Hicks – Manitoba Aboriginal and Northern Affairs  
 Melissa Gibbons – Parks Canada Agency  
 Joe Stover – Member-at-Large  
 Pete Whittington – Brandon University  
 Mike Spence – Town of Churchill  
 Rob Penner – University College of the North  
 Bryan Stefaniuk – Manitoba Conservation  
 Erika Ingebrigtsen – Member-at-Large  
 Janice Hunter – Churchill Chamber of Commerce

## to understand and sustain the north

## staff

Executive Director  
 Elijah Zimmerman, Ph.D.  
 Assistant Director  
 Danielle Thomas  
 Special Projects Assistant/Bookkeeper  
 Kim Daley  
 Scientific Coordinator  
 LeeAnn Fishback, Ph.D.  
 Research Technician  
 Vacant  
 Seasonal Research Intern  
 Tomas Taylor  
 Seasonal Research Technicians  
 Alex Windsor, Hilary White  
 Growcer System Manager  
 Carley Basler  
 Management Consultant  
 Stephanie Puleo  
 Interim Program Coordinator  
 Evan Roberts  
 Cooks  
 Laura O'Sullivan, Peggy Hart  
 Housekeeping  
 Sharon Anderson, Patsy Neepin  
 Fleet & Facilities Supervisor  
 Edgar Botelho  
 Maintenance Assistant  
 Henry Spence

The CNSC is a registered Canadian charity in part supported by the Manitoba Department of Education and Advanced Learning and Manitoba Conservation.

The Birdfish Newsletter is produced by CNSC staff with assistance from researchers and program participants.

Latitude: 58° 44.16'N Longitude: 93° 49.09'W  
 P.O. Box 610, Launch Road  
 Churchill, Manitoba  
 R0B 0E0 Canada  
 email: [cnscc@churchillscience.ca](mailto:cnscc@churchillscience.ca)

p: 204.675.2307

f: 204.675.2139

[www.churchillscience.ca](http://www.churchillscience.ca)

[churchillnorthernstudiescentre](http://churchillnorthernstudiescentre)



Printed in Canada on 100% recycled paper using vegetable based inks. PLEASE RECYCLE.

# thanks



Thank you for being a partner of the north through your support of research and education at the Churchill Northern Studies Centre. You have been a part of our family through volunteering, course participation, giving generously, conducting your research, instructing a course or any combination of participation. Our

collective efforts continue the legacy of promoting and supporting innovative research and educational programming for environmental stewardship.

You can continue to help sustain the north by strengthening your partnership with a donation or membership renewal.

**We appreciate your continued support!**



**Help Us Save \$\$\$\$ and Trees...**

**Did you know that you can receive the *Birdfish* via email?**

Help the CNSC save on postage and save trees by opting to receive your *Birdfish* via email.

Contact Kim at **204 675 2307** or [daley@churchillscience.ca](mailto:daley@churchillscience.ca) and say I want to save trees! ❄️

# contribute

Your contribution is still needed to ensure that WE meet all the expectations that YOU, our participants, researchers, educators, donors and members have for the future of the CNSC. No contribution is too small. Every gift counts.

## How to contribute:

Visit our website [www.churchillscience.ca](http://www.churchillscience.ca) – click the **"Donate Now"** button to donate securely through our partner Canada Helps.

Visit our Canada Helps Giving Page – <https://www.canadahelps.org/en/charities/churchill-northern-studies-centre/>

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

Clip the form below and mail to **CNSC, Box 610, Churchill, MB, ROB 0E0, Canada**



# join, renew, support

the Churchill Northern Studies Centre Today!

We rely on our membership to provide the support and funding needed to make the CNSC a place for world class research and education programs in the Canadian subarctic. Join us now and be part of these exciting times at the CNSC. Already a member? Use this form to ensure your membership remains current. Renew or Join today!

Name: \_\_\_\_\_ E-mail: \_\_\_\_\_ Tel: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ Province/State: \_\_\_\_\_ Postal/Zip Code: \_\_\_\_\_

In accordance with the Personal Information Protection and Electronic Documents Act, names, addresses or other personal information collected by Churchill Northern Studies Centre is used for internal purposes such as informational mailings, membership renewals and other communications, and is not shared with any third party. Complete details of our privacy policy are available by contacting the CNSC.

NEW\* membership  RENEW\* my membership  I would like to receive my copy of *The Birdfish* in electronic form

Individual \$50  Student/Senior \$40  Family \$80  Corporate \$500 \*One-year CNSC membership

I want to support the CNSC Please use my donation of \$ \_\_\_\_\_ for:

General Operations  School and Youth Programming

Northern Research Fund  Birdfish Endowment Fund

Tax receipts are provided for Canadian donations of \$25 or more. Membership fees are not tax-deductible.

Please detach and mail to:  
Churchill Northern Studies Centre  
P.O. Box 610, Launch Road  
Churchill, Manitoba  
ROB 0E0 Canada  
or call (204) 675-2307



churchillnorthernstudiescentre

## Payment Information

Total amount \$ \_\_\_\_\_

cheque or money order payable to the CNSC enclosed. (Preferred)

Visa  MasterCard  American Express

card number: \_\_\_\_\_

expiration date (mm/yy): \_\_\_\_\_

name on card: \_\_\_\_\_

signature: \_\_\_\_\_

We appreciate your support of the Churchill Northern Studies Centre. Your donations support research and education that makes the world a better place. Thank you very much.

