



churchillnorthernstudiescentre

# THE BIRDFISH

SUMMER 2023

Churchill Northern Studies Centre  
Newsletter

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Cover Photo by CNSC



*The Churchill Northern Studies Centre is committed to taking action to advance reconciliation. We would like to acknowledge that we operate on Treaty 5 territory — the traditional land of the Cree, Dene and Inuit people, and the homeland of the Metis Nation. Through our work, we aim to show respect and appreciation for the treaty that allows us to share this land.*

# Eye on the Sky

## The Northern Lights Season

Photo: Travel Manitoba

**W**e had an exciting and eventful northern lights season. We welcomed several groups onsite for multi-day programming and hosted thirty groups throughout February and March for day programming. Our multi-day Learning Vacation programs are segmented into three separate categories: research, tourism, and cultural teachings.

We are located in the Churchill Wildlife Management Area, separated from the light pollution produced in town. The Churchill Northern Studies Centre (CNSC) is directly under the auroral oval, which gives us an unobstructed view and photo opportunity.

When you join our Winter Skies Learning Vacation <https://churchillscience.ca/visit/learning-vacations/winter-skies/> you will experience dogsledding, town and area tours, and nightly viewing of the northern lights while you stay on-site for six days at our active research centre. Your expert astronomy instructor will also provide you with nightly lectures to understand the science and trends we see in the northern lights. You can also gain some helpful advice on how to capture the lights from all types of cameras, even on your phones!

On your final night during our Winter Skies Learning Vacation, you will be invited to our farewell dinner, which is paired with a cultural demonstration. You will enjoy a teaching from an indigenous partner, which could include drumming, smudging, story telling, beading and more.

We also offer a unique outdoor experience during our multi-day Learning Vacations which can also be booked as a single experience. During our Outdoor Adventure program, you will get a better understanding of the subarctic snow ecology, understand how temporary shelters such as igloos and quinzees have historically been used, then cut your own snow blocks to create an inukshuk.

### **THE CNSC IS THE FOREMOST LOCATION TO VIEW THE NORTHERN LIGHTS IN CHURCHILL.**

Since we are separated from town, we have the ability to control all interior and exterior lights, and use red lights in stairwells – we can ensure that your experience will be unparalleled by others. That is why Explore.org chose our research centre to place their live cameras in order to display the northern lights. View at [Explore.org](https://explore.org) and search Northern Lights Cam. from anywhere in the world. Guests on site can view our live [Explore.org](https://explore.org) camera in the comfort of their beds at any time of night. Visitors can then walk to our indoor aurora dome to watch the lights dance in the comfort of their pajamas! They also have access to our elevated Observation Deck 24/hr a day. ❄️



Visit our website under Visit > Learning Vacations > Winter Skies to book your 2024 Winter Skies Learning Vacation or visit our Talks and Tours page and book your next day visit to the CNSC.

# Plant Invasion in Churchill

By Peter M. Kotanen, University of Toronto



Common Dandelion (*Taraxacum officinale*), another common invader



Not all dandelions are non-native; this is a native species (*Taraxacum lacerum*)



Temporary greenhouses



INVASIONS BY NON-NATIVE SPECIES ARE A PROBLEM WORLDWIDE, WITH SIGNIFICANT IMPACTS ON BIODIVERSITY, AND ECONOMIC COSTS IN THE HUNDREDS OF MILLIONS OF DOLLARS IN CANADA ALONE. Plants are among the most frequent and damaging invaders: while most are innocuous, some have the potential to permanently change invaded

ecosystems. However, not all regions are equally at risk.

In Canada, southern areas have far more invaders than the north, reflecting higher population densities and associated disturbance, trade, and travel, as well as a less severe climate. In contrast, subarctic and arctic Canada have historically been much less affected by invasions — these regions remain almost completely dominated by native vegetation. The town of Churchill is an interesting exception.

More than 100 non-native plants have been recorded in town and associated sites like the old dump and along the railway and power lines. Most species have failed to establish lasting populations, but dozens have persisted for decades. This is a remarkable number of invaders for a region of this latitude, and it reflects Churchill's history as a settlement, port, and railway hub.

Intriguingly, very few of these plants have spread beyond town into natural areas.

My lab's research goal is to understand what prevents these potential invaders from spreading into surrounding tundra and boreal forest. Is this because sites in town are warmer

and more sheltered than the surrounding area? Is it because soil in town is richer or more disturbed than natural soils? Is it simply because they're not being transported from town to new sites?

We are investigating these possibilities by mapping locations of invaders in town to better understand the kind of sites that non-native plants like. We also are establishing a series of experiments at the CNSC where we are transplanting non-natives from town into plots with temporary greenhouses, added nutrients, or disturbed soil, in order to see which (if any) of these factors might allow non-natives to survive where they don't normally occur.

(Don't worry — we will be removing any non-native plants from our plots when our experiments are done. We don't want to start an invasion of our own!)

We already have evidence that some invaders, like dandelions, may be using warmer sites in town, such as the south sides of buildings, and that moving soil can transport such species to new sites.

Northern climates, including the Churchill area, are warming rapidly, while shipping and other forms of transportation are increasing. These changes may expose northern ecosystems to an elevated risk of plant invasion.

Understanding why non-native species locally can persist only in settled areas will help us to identify the factors currently excluding them from natural areas. This should help to clarify whether future changes in climate will transform these species into successful invaders of native-dominated habitats, or whether other factors may keep them trapped in town. ❄️



# Volunteer Expeditions

## Are a Great Way to Get Involved

THERE IS A NEW IMMERSIVE WAY TO VISIT THE CHURCHILL NORTHERN STUDIES CENTRE.

In 2022, our staff launched an initiative that invites guests to join us for a minimum of two weeks to get a variety of in-depth, hands-on experiences while supporting our staff and appreciating Canada's breathtaking subarctic.

The program – called Volunteer Expedition (VE) – sees participants provide 36 hours of work per week in exchange for accommodations, meals, and experiences in and around the CNSC. The financial contribution associated with VEs will help offset costs and bolster our ability to continue to offer accessible research support to scientists.

**“ I had a once-in-a-lifetime science outing; we visited several sites to witness science in action. ”**

worked with the awesome staff in sustainability, harvesting herbs and vegetables and transplanting seedlings,” she says. “I had a once-in-a-lifetime science outing; we visited several sites to witness science in action.”

Some of the research she supported — and participated in — included collecting bugs, recording potential polar bear activity, measuring the impact of invasive plant species, and counting seals to add data to local Hudson Bay seal populations. These contributions provided meaningful, tangible benefits to our science team and to the important research projects being facilitated at the Centre.

But Sherri was not just here to work; she also got to participate in the incredible experiences that draw people to Churchill. “On my time off, I went kayaking and boating with beluga whales in the Churchill River. I’ve never had such an amazing experience. The belugas were the absolute greatest. I will never forget this.”

She also explored the CNSC and the Churchill area, taking part in community events, and making loads of new connections. “This was a great experience. I think this is a great way to get to know Churchill and meet new people... It is hard work, but the rewards are worth the effort.”

Sherri Ryan had never been to Manitoba. She wanted to see wild polar bears, and she was looking for an immersive experience.

After reading about VEs, Sherri became our first participant, arriving in Churchill in June. “It was like being part of a real nice family,” she says of joining the CNSC team. For the next few weeks, Sherri got involved in a variety of departments and programs at the Centre. “I



Volunteer Jason Walczak

Sherri's Volunteer Expedition would not have been possible without the help of the wonderful Jason Walczak. Jason has been volunteering at the Centre regularly since February 2022. He has been assisting all over the Centre, from administrative tasks at the front office, to technical troubleshooting with staff computers, to beautiful photography and videography projects, to assisting our science department staff.

And when we asked about supervising and directing volunteers in the VE program, he graciously agreed and is now our Volunteer Expedition Coordinator. Jason helps choose applicants during the selection process and communicates with them prior to their arrival. He greets them at the airport, provides orientation at the Centre, and helps guide them throughout their Expedition.

Jason has been instrumental in our success so far, and we are so thankful for his efforts (and his ice cream).

Volunteer Expeditions run year-round, both during the off-season as well as during Learning Vacations, when participants will get a chance to join in on select excursions and tours.

If you are interested in joining the CNSC in a VE, apply soon, as spots are extremely limited. You can find all the details on our website under Visit > Volunteer. ❄️





# Salad Days!

## Our Growcer Turned 5

This year we celebrate five years of our Rocket Greens project! We have been successfully growing fresh greens for the town of Churchill, distributing over 80,000 units of various leafy greens and herbs. Last fall we had to pause our operations, while we completed some much needed updates to our equipment.

Our new system now includes an online platform called Growlink, that continuously monitors several variables including humidity, light, temperature and CO2. With this advanced system, our Growlink is able to schedule and automate features to control the environment to maintain ideal conditions for our garden. This platform also allows us to monitor these conditions on a computer or phone in real time.

Our on-site Fleet and Facilities Supervisor updated our water system, in order to make the flow of the nutrient filled water

more efficient and make cleaning and maintenance more manageable.

We have some exciting things planned this year for our Rocket Greens Department, so keep an eye on our social media and the Fall edition of The Birdfish!

Radio Canada visited us this winter to celebrate our 5 years – read here (<https://ici.radio-canada.ca/nouvelle/1964981/rocket-greens-churchill-agriculture-legume>)

Thank you NMFCCC, Nutri-Spirit, the Churchill Regional Economic Development Fund and all our generous supports and subscribers!

If you would like to support our Rocket Greens project, please visit [churchillscience.ca/donate](http://churchillscience.ca/donate). ☘





# featured courses

## Belugas in the Bay & Wild Planet

Photo: Travel Manitoba

**BOOK  
ONLINE!**

We are looking forward to a busy summer with researchers and can't wait to invite guests back for our Beluga Season!

Every spring, over 20,000 belugas migrate from the Northern Hudson Bay to the Churchill River.

During the spring and summer months, the belugas use this unique environment for calving, as it provides protection from predators.

**We offer two different Learning Vacations during the summer.**

Our Belugas in the Bay and Wild Planet Learning Vacation brings participants up close and personal with thousands of belugas as they migrate to the Churchill River Estuary. Be prepared to see the river teeming with belugas of all shapes, sizes and colours (the babies are pink)! Learn more about your next trip by visiting our website under Visit > Learning Vacations. ❄️



## MEMBERSHIP Incentives

You are or have been a Churchill Northern Studies Centre member — that's why you're receiving The Birdfish newsletter. But did you know that we have added other great reasons to be a CNSC member, too? As a member:

- You may stay in the Churchill Northern Studies Centre guest accommodations
- You may use CNSC laboratory and storage space for approved research projects
- You may sign up for the Rocket Greens launch box program (Churchill residents only)
- You may visit the CNSC at no charge, for a self guided tour and browse our library and collections
- You may stop by for refreshments and use our high-speed internet

Of course, the ultimate perk is the satisfaction of strengthening subarctic science and ensuring that the CNSC can continue to offer affordable accommodations and logistical support to researchers.

Membership is \$50 per year, with special rates for seniors and families. If you'd like to show your long-term commitment to the CNSC, consider a lifetime membership, available for \$500.

Renew your membership today by visiting our website under Support > Membership.



## Visit the CNSC

Are you in Churchill this summer or fall, but not staying with us at the Centre? We offer many day programs including our Green Building Tour, Current Research Lecture, Rocket Range Tour and many more! Learn more on our website at Visit > Tours and Talks for all options, including transportation to and from town. ❁



## Online Shop Launched

All of your favourite Churchill Northern Studies Centre products are now available to browse at any time of the day, from anywhere in the world.

In response to COVID, our staff — with the help of Travel Manitoba and Winnipeg-based marketing company Dalilu — developed a new way for you to show your love for CNSC: an online store. It's a win-win solution, since our supporters get to look amazing and act as ambassadors for our Centre, and we get an added revenue boost.

Of course, the perennial favourites from our physical store are available (most notably, the classic hoodie). However, our online shop allows us more flexibility to offer exciting new designs and products. For example, we are super excited about our new neon styled Birdfish with a retro feel.

Visit our website to see all your favourites under SHOP ❁

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

Chair **Michael Goodyear** – Member at Large (Churchill)  
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Executive-at-large **James Kushny** – Director at Large (General)  
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**Louise Lawrie** – Director at Large (Churchill)  
**Open Seat** – Manitoba Indigenous and Northern Relations  
**Open Seat** – Manitoba Advanced Education and Literacy

### to understand and sustain the north

### staff

Executive Director - **Dylan McCart**  
Field Station Coordinator - **Michlynn Gulick**  
Bookkeeper & Special Projects Assistant - **Kim Daley**  
Scientific Coordinator - **Lara Grevstad**  
Research Technician - **Baxter Naday**  
Seasonal Research Technician - **Mia Oprandi**  
Sustainability Coordinator - **Jayden Chapman**  
Sustainability Intern - **Katherine Branson**  
Program Coordinator - **Alex Berg**  
Fleet & Facilities Supervisor - **Brian Gulick**  
Maintenance Assistant - **Richard Fredlund**  
First Cook - **Tanya Lystiuk**  
Second Cook - **Terrance Palmer**  
Housekeeping - **Sharon Yassie**  
Volunteer Expedition Coordinator - **Jason Walczsak**  
Research Associate - **LeeAnn Fishback**

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

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**churchillnorthernstudiescentre**



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# Thank you for your support

to understand  
and sustain  
the north



Have you made a lasting impact on northern research and education? If you are receiving this newsletter, you have. All of you have created a lasting impact by donating directly, participating in an educational course, conducting

research, instructing a course, volunteering your time, or by becoming a member of our organization. We would like to take this opportunity to thank you and let you know that you have made a difference. Every year, we face new challenges, but what remains consistent is your dedication to helping us continue our mission in the North. **Thank You!**

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 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 academic 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!**

In honour of Dennis Macknak, we are starting a scholarship fund to annually award a local youth pursuing science and/or education. If you want to help us jump-start this fund, please choose to donate to the Birdfish Fund and make a note that you support the scholarship!

# 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 **"DONATE NOW"** or explore our Support page and become a monthly donor, renew your CNSC membership or become an advocate for our research station.

Clip the form below and mail to **CNSC, Box 610, Churchill, MB, R0B 0E0, Canada**



## We're Going to Save Trees!

We have augmented our efforts to reduce our use of paper. We will be delivering all copies of The Birdfish electronically, unless you request a physical copy. Contact us at **204 675 2307** or email [daley@churchillscience.ca](mailto:daley@churchillscience.ca) to let us know if you would like a physical copy. ❁



# 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 a physical copy of The Birdfish.
- ☐ 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  
R0B 0E0 Canada  
or call (204) 675-2307



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## Payment Information

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

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

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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.