



# THE BIRDFISH

SPRING 2016

Churchill Northern Studies Centre  
Newsletter

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# Behaviour and local abundance

Dr. Stephen Petersen, Assiniboine Park Zoo, Conservation and Research Department

# of harbour/ringed seals in Churchill

**S**EALS ARE A KEY COMPONENT OF THE ARCTIC ECOSYSTEM AND ESPECIALLY IMPORTANT TO INUIT AND TO POLAR BEARS. THE AREA WHERE THE CHURCHILL RIVER MEETS THE HUDSON BAY IS BIOLOGICALLY RICH AND HOME TO MANY RINGED SEALS AND HARBOUR SEALS. RINGED SEALS AND HARBOUR SEALS ARE ICE ADAPTED SEALS AND are therefore predicted to be affected by climate change, in particular by the shortening of the sea ice season. It is expected that the relative abundance of ringed seals and harbour seals is likely to shift as environmental conditions shift toward a warmer Hudson Bay. In particular, longer open water seasons may be advantageous to the temperate-adapted harbour seal and disadvantage to the ice-adapted ringed seal. Monitoring population numbers and developing ways to track the trends in population is an important part species conservation and management. This makes Churchill an ideal



Dr. Stephen Petersen

area to study ringed seal and harbour seal behaviour and population dynamics.

The objectives of this project are to understand how the ringed and harbour seals use the sea ice and Churchill River Estuary for basking in the sun during the springtime. While these seals are hauled-out on the sea ice observations of their behaviour will help understand their activity budgets and investigate photo identification methods to refine estimates of population size. Basking locations are also ideal for the collection of hair samples for non-invasive behavioural research and estimates of population size.

Systematic counts of ringed seals that are hauled out on the ice at specific vantage points along the Hudson Bay coastline between Cape Merry and the CNSC were carried out in late



Counting seals on the ever shifting sea ice

May and early June. Harbour seals were systematically counted through direct observation in the spring and with Gigapan® photography in the summer and autumn ([gigapan.com](http://gigapan.com)). During systematic counting of the seals, behavioural observations were also made using direct observations and video recordings. Collections of hair samples were made from known ringed seal basking areas.

#### RESULTS:

- Harbour seals were observed earlier in 2015 (June 3) than 2014 (June 6) as the ice broke earlier in the spring.
- Harbour seal pups were first observed at the weir on 7 June, three days earlier than seen the year before. In comparison, in the late 1990s and early 2000s there were no observations of pupping in the Churchill River estuary.
- Harbour seal counts fluctuated during the shoreline observation period, a maximum number of seals were counted on 8 June and was 80 animals. This number is double what was seen in the late 1990s.
- 24hr observations taken on the weir indicated the largest number of hauled out harbour seals between 19h30 and 20h00.
- Number of ringed seals fluctuated during the field observations and location of these seals also changed as ice break up resulted in less near shore ice for haul-out.
- 15 harbour seals and 47 ringed seals were observed for vigilance behaviours in relation to group size and orientation (data yet to be analyzed).
- Hair and scat samples were collected from haul-out locations on the sea ice. These samples are being archived and will be analysed at the laboratory in the Leatherdale International Polar Bear Conservation Centre to obtain genetic profiles. ❄️



Sculpture: Charlie Kittosuk, Samikiluaq



# We're Ready to Rumble!

## The Manitoba Liquor & Lotteries Small Capital Sponsorship Program Truly Helps

For the CNSC to stay at the cutting edge and offer the best to researchers and learners, we need the support to make capital improvements of our facilities and equipment. Manitoba Liquor & Lotteries Small Capital Sponsorship Program has generously provided support to help the CNSC make some of these vital improvements in the past year.

The support of Manitoba Liquor & Lotteries has helped the CNSC to acquire:

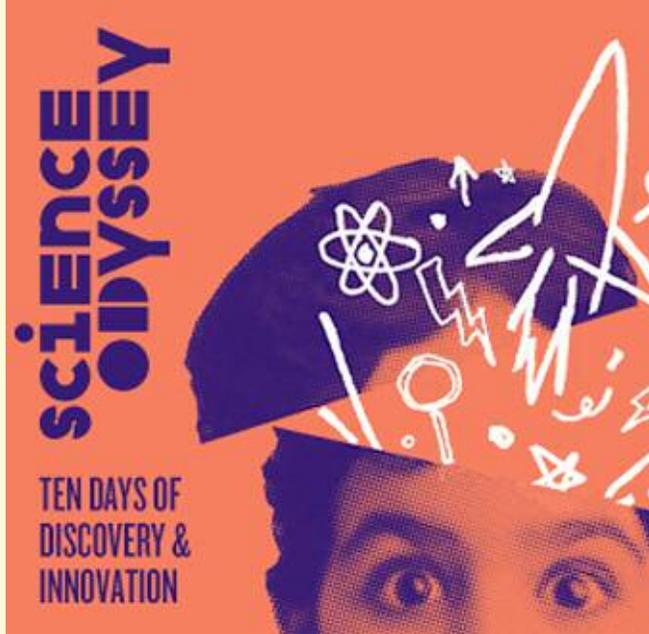
- **Garage Doors:** Before the support of Manitoba Liquor & Lotteries, CNSC maintenance staff had to work on our buses outside. Given the risks of cold and polar bears, this was not a safe situation for our staff! Now, we can keep our buses running for researchers and learners, without having to worry so much about the local wildlife!
- **Classroom Computers:** In order to provide engaging learning experiences, the CNSC requires up to date technology. The support of Manitoba Liquor & Lotteries provided support for 3 desktop computers and 2 laptops. These are being used to by learners to process data and conduct research.



Students and staff check out the new classroom additions.

- **Bombardier Tracked Vehicle:** This historic vehicle is ideal for the work of the CNSC; powerful enough to haul freight to remote locations for researchers, but with enough passenger room to take groups to the tundra, boreal forest and sea ice for one of a kind learning experiences!

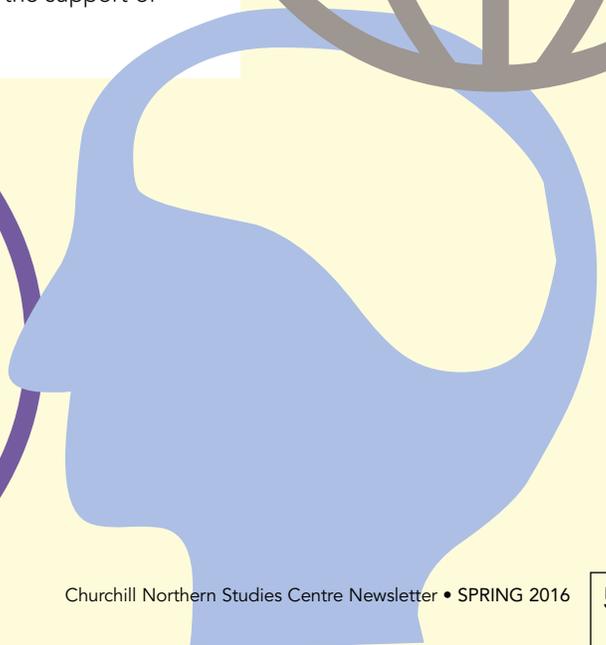
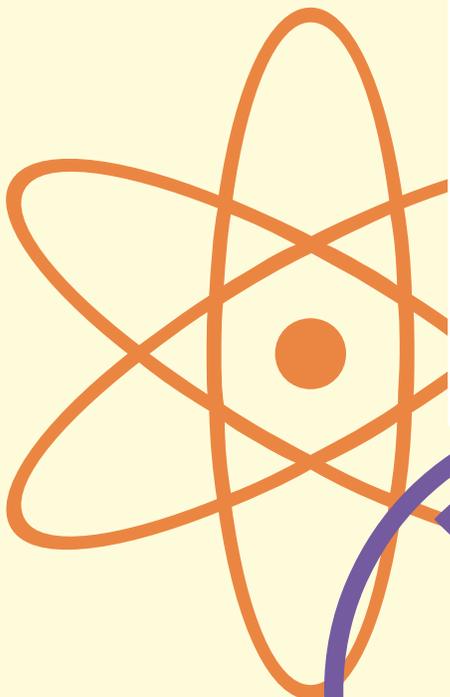
The CNSC is grateful for the support of Manitoba Liquor & Lotteries and their commitment to research and education in the North. ❄️



# The Churchill Science Challenge

Science Odyssey brings together a series of fun activities across the country from Friday May 6 through Sunday May 15 and the CNSC was proud to participate and celebrate science along with other national partners. Our activities were 'The Churchill Science Challenge' and consisted of two parts - an online contest which ran the length of the Science Odyssey campaign and opened up to audiences across the country; the other focused on our local community. To enter our online contest, participants submitted a science question related to Churchill that you would like to learn more about!

Submissions were accepted through email and social media by adding the hashtags **#Churchillsciencechallenge** and **#OdySci**. The winning entry was given a live chat presentation with CNSC staff sharing knowledge regarding their question. The CNSC gratefully acknowledges the support of the Natural Sciences and Engineering Research Council of Canada and the Canadian Association of Science Centres for the support of this event. ❄️



# featured course

## Wild Planet: Whales & Wonders of the Subarctic in Summer

August 18-23, 2016

Get ready for our most active program! 5 days of exploring the diverse landscapes that make Churchill such a special place! Explore the tundra and learn about the flora and fauna that call it home. Take a short drive from the CNSC and visit the boreal forest to see the forest in the subarctic. On a walk through the intertidal zone, you can find some of the marine life that lives in Hudson Bay, and maybe even find a fossil on your walk on the beach dunes. Learn about the research happening in some of the coastal ponds and wet lands in the region. We will hop a ride on a boat to see the belugas that visit each summer and see the Churchill River, and explore Prince of Wales Fort. While we explore these awesome ecosystems, your instructor James will have a sharp eye for the hundreds of polar bears that call the area home in the summer. After a day in the field, nothing beats coming back to the CNSC for a home cooked meal and great conversation with your fellow learning vacation participants and some of the researchers who call the centre home during the summer. Your evening will end with a lecture with your instructor to provide even more insight into this fascinating place! Whales and wonders of the subarctic in summer; come see the best that Churchill has to offer!

BOOK TODAY!



Course Instructor: James Kushny

### Upcoming Courses

#### CNSC Learning Vacations:

**Spring's Wings** June 9-14, 2016 *Space Still Available!*

**Belugas in the Bay: Through the Camera Lens**  
June 23-28, 2016 *Space Still Available!*

**Wild Planet: Whales & Wonders of the Subarctic in Summer** August 18-23, 2016

**NEW!** **Lords of the Arctic: Ecology of Hudson Bay's Polar Bears** **SPECIAL SESSION** October 11-18, 2016

~~Lords of the Arctic: Ecology of Hudson Bay's Polar Bears~~ November 3-10, 2016  
*Sold Out*

~~Lords of the Arctic: Ecology of Hudson Bay's Polar Bears~~ November 10-17, 2016  
*Sold Out*

**Winter Skies: Aurora and Astronomy in Churchill**  
January 19-24, 2017

**Winter Skies: Aurora and Astronomy in Churchill**  
February 16-21, 2017

**North of 58: Subarctic Winter Ecology**  
March 7-11, 2017

BOOK ONLINE!

#### Upcoming Road Scholar Programs:

**Summer in the Subarctic: Beluga Whales and Natural Wonders in Churchill** July 26-August 3, 2016

**Lords of the North: Ecology of Hudson Bay's Polar Bears** October 19-24, 2016

**Lords of the North: Ecology of Hudson Bay's Polar Bears** October 24-29, 2016

**Lords of the North: Ecology of Hudson's Bay's Polar Bears** October 29-November 3, 2016

**Into the Arctic Skies** January 25-30, 2017

**Into the Arctic Skies** February 22-27, 2017

For more information on Road Scholar programs visit [www.roadscholar.org](http://www.roadscholar.org)



#### FOR RESERVATIONS CONTACT:

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Churchill, Manitoba, Canada R0B 0E0  
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cnscc@churchillscience.ca • www.churchillscience.ca

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

Join us in Sustaining the North for the Future



## 4 for 40 Campaign Update

2016 Marks the start of our 40th anniversary year. Since 1976 we have been working to "understand and sustain the North" and we are excited that so many of you have joined in our 4 for 40 campaign! Since the start of the campaign last June we have experienced a huge outpouring of support!

The majority of our support has been from members like you! Your support has provided:

A full time programming coordinator to assist school and youth groups in visiting the Churchill Northern Studies Centre.

Hundreds of days of accommodations, vehicle use and financial support for researchers.

The Birdfish Fund, a greatest needs fund to support the CNSC into the future.

What's next? September marks our 40th anniversary, and we have lots of great events planned to celebrate 40 years of understanding and sustaining the north.

August 28th is CNSC Day! Stay tuned for a full list of the day's events!

Already a donor? Consider becoming a monthly supporter. Help sustain the CNSC and enjoy exclusive benefits! Visit <https://www.canadahelps.org/en/charities/churchill-northern-studies-centre/> and become a monthly donor today!

Support the CNSC into the future. For information about including the CNSC in your estate planning, contact us for more information.

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

Louise Lawrie (Chair) – Churchill Community Development Corporation  
Christopher Storie (Vice-Chair) – University of Winnipeg  
Richard Bello (Treasurer) – Member-at-Large  
Erika Ingebritson (Secretary) – Member-at-Large  
Mario Tenuta – CNSC Users' Representative  
Mary Benbow – University of Manitoba  
Matthew Bunka – 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  
Shane Hutchins – Town of Churchill  
Rob Penner – University College of the North  
Wayde Roberts – Manitoba Conservation  
James Roth – Member-at-Large  
Dwight Allen – Churchill Chamber of Commerce

## staff

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Grant MacNeil  
Assistant Director  
Heidi den Haan  
Special Projects Assistant/Bookkeeper  
Kim Daley  
Scientific Coordinator  
LeeAnn Fishback, Ph.D.  
Research Technician  
Matt Webb  
Seasonal Research Technicians  
Fiona LeTaro and Robyn Nairn  
Program Coordinator  
Stephanie Puleo  
Program Assistant  
Evan Roberts  
Cook  
Terrapin Harvich  
Second Cook  
Ella Wills  
Housekeeping  
Patsy Neepin and Sharon Anderson  
Fleet & Facilities Supervisor  
Phillip Park  
Maintenance Assistant  
Rene Preteau

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.

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churchillnorthernstudiescentre



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Join us in Sustaining the North for the Future

4  
FOR  
40

### The CNSC Turns 40 in 2016!

It's an incredible time to be a part of this organization. For the last four decades we have welcomed up to 200 researchers per year, facilitated cutting-edge scientific studies that catalyze change, hosted the public in hands-on education opportunities, been a hub for culture and heritage and helped support Churchill's economy. We even moved into a beautiful new

facility. The board and staff of the CNSC are grateful to everyone who has contributed to the success of the Centre over the past 40 years. We are leaps and bounds from where we began, and we're excited for the future.

### What is 4 for 40?

We have launched a campaign to raise \$4 Million to celebrate 40 years of leading research and education in the Canadian sub-Arctic! We will focus on expanding and enhancing our school and youth programming, so that we can be a better learning centre, our Northern Research Fund, so that we can be a better research facility and our Birdfish Endowment Fund, so we can better plan for the future. We want to be the best that we can possibly be, and we can't wait for you to join us to help achieve this.

# 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 OE0, Canada



### 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! ❄️

# 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 OE0 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.