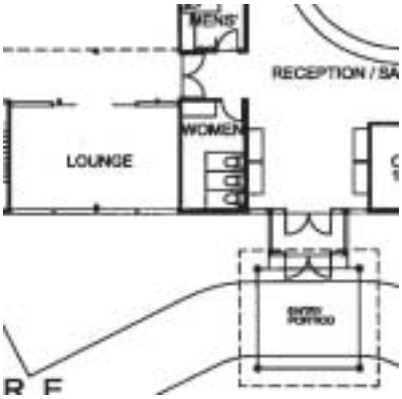
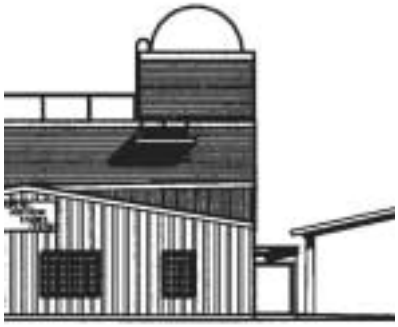
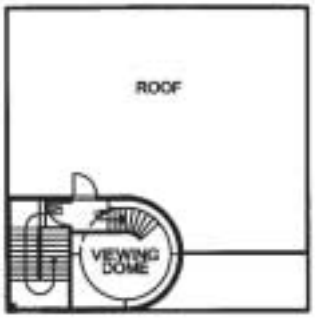
Churchill Northern Studies Centre







DOME LEVEL

2004 Annual Report

Blueprint For Change

Annual Report
2004

Blueprint for Change

Statement of Activities
April 1, 2004 – March 31, 2005

Churchill Research Centre Inc.,
operating as Churchill Northern Studies Centre
Box 610 Churchill, Manitoba, Canada R0B 0E0
(204) 675-2307
(204) 675-2139 (fax)

email:cnsc@churchillmb.net

Visit us on the World Wide Web
www.churchillmb.net/~cnsc

The operation of CRC Inc. is supported, in part, by an operating grant from the Manitoba Department of Advanced Education and Training and a Natural Sciences and Engineering Research Council of Canada Major Facilities Access Grant.

Cover: CNSC facility upgrades conceptual design (Jack Cram, Roseisle Design & Consulting)

Message From the Chair

In 2004 the Churchill Northern Studies Centre marked its 28th year and can proudly state that, in spite of some ups and downs over the years, the Centre has consistently maintained its original vision to ***understand and sustain the North***. It now enters a new era of growth and new challenges for the years ahead while building on the efforts of the array of committed characters whose insight, innovation and energy are the driving forces which have sustained the CNSC in the past and will continue to nurture it in the future. Truly, the CNSC has achieved a unique niche in the scientific world of research and education by fostering stewardship, respect for the environment and most important - community among all who come through its doors. In its unique and special way the CNSC continues to share and unravel the true mysteries of the North.

The Board of Directors are pleased to report that **Michael Goodyear** has once again provided the CNSC with strong leadership through 2004 in his role as Executive Director and together we are looking forward to an exciting year in 2005. As a result of new recruitment, we are pleased to have **Dianne Howell** and her daughter join the CNSC and the Churchill community in her new capacity as Assistant Director. Dianne has been a welcome addition offering much strength and support in a number of key areas.

During the past year the CNSC moved forward with progressive steps to address our aging facilities and initiated a planning process for renovation, renewal and rejuvenation. An architect has been retained and options for strategically moving forward are being explored. Many of you may have had the opportunity to meet with Michael as he provided updates on the Centre and our plans for expansion. If not, please contact the Centre and we'll be glad to provide a complete update - even better, watch for an opportunity in the months ahead to join in the new initiatives toward renewal and moving forward at the CNSC.

On that note, I am pleased to announce that we are on the threshold of launching a special initiative toward raising capital investment to fulfill our renewal plan. In the time ahead we will be looking to our alumni, to our community of users from the past and present, to reach out and join with us toward building an even stronger niche for the Churchill Northern Studies Centre of the future. We look forward to your help and assistance along the path ahead.

Dave Wotton
Chair,
Churchill Northern Studies Centre

The Churchill Northern Studies Centre

Subarctic Research and Education Since 1976

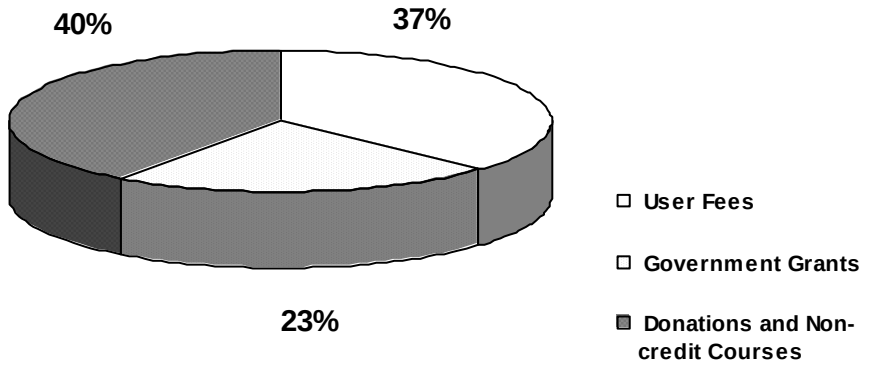
Established by members of the local community, university researchers and government officials, the Churchill Northern Studies Centre is an independent, non-profit research centre with a mandate to facilitate research and education in the western Hudson Bay region.

Our objectives are:

- To facilitate northern studies through research and education
- To be a point of contact between scientists and teachers from the south and residents of the Churchill area and north
- To make available (to northern and southern citizens), a high-quality educational experience in a northern setting
- To coordinate research and teaching activities in the Churchill area

The CNSC operates year-round and is funded by user fees, government grants, and member donations. The Centre subsidizes the high cost of services to researchers through revenue generating activities such as non-credit learning vacations and contract services to university and government clients.

Sources of Revenue (2004/05 Unaudited)



The Churchill Northern Studies Centre is experiencing a dramatic increase in activity. In fiscal 2004/05, the CNSC recorded 6032 user days, a 20% increase from 5088 in the previous year. More importantly, 1155 of those days were recorded in the winter months, setting new records for facility use in January, February and March. The promotion of winter research was a key objective of a three-year **Major Facilities Access Grant** awarded to the CNSC by the **Natural Sciences and Engineering Research Council of Canada**.

Centre Usage 2004/05 (by category)

Research	1427 User Days	24%
Earthwatch	721 User Days	12%
Credit Courses	709 User Days	12%
Non-credit Courses	1124 User Days	18%
School Groups	399 User Days	6%
Instructors	126 User Days	2%
Independent Educational Tours	472 User Days	8%
Staff	683 User Days	11%
Volunteers	296 User Days	5%
Others	75 User Days	1%

Infrastructure Renewal

A Blueprint for Change

The present home of the Churchill Northern Studies Centre was constructed by the U. S. Army Corps of Engineers in the mid-1950's to serve as the operations building for the former **Churchill Research Range (CRR)**, Canada's first and only dedicated sounding rocket launch facility.

From 1976 to 1984, the Centre was based at Akudlik Marsh located 4 km from the Town of Churchill. In 1985, following the decommissioning of the Range, the CNSC purchased the Operations Building and some adjacent property from the **National Research Council of Canada** for the sum of $1 CDN. The move allowed for the expansion of programming and enhanced logistic support for researchers.

Staff and researchers quickly made the new site home. It has become increasing clear, however, that in order to continue to facilitate world-class research in the decades ahead, major upgrades to the facility are needed. Limitations with respect to laboratory and classroom facilities are obvious and the environmental efficiency of the mechanical systems is unacceptable given the number of energy efficient options currently available. On a positive note, the building is structurally sound and major renovations are possible, alleviating the need to construct costly new facilities.

With the assistance of architect Jack Cram of **Roseisle Design & Consulting, Faraci Engineering, Hanuschak Consultants and P. C. Engineering Ltd.**, a detailed conceptual plan for facility renovations has been prepared. The various draft configurations resulted from detailed consultations held in Winnipeg and Toronto with a broad range of our users. The utility and arrangement of the plans reflect the careful consideration of staff and long-term researchers. Generous support for conceptual planning was provided by the **Murphy Foundation, SM Blair Family Foundation, Siobhan Richardson Foundation and the McLean Foundation.**

In the months ahead, CNSC staff and directors will continue to work diligently to secure the capital investment required to proceed with these critical facility upgrades.

Research

To Understand and Sustain the North

Managing the unique environment of western Hudson Bay requires an understanding of the complex processes that govern the physical and biological diversity of the region. For over 28 years, the CNSC has facilitated the work of hundreds of world-class scientists in a variety of disciplines. Many have benefited from financial support provided by our annual **Northern Research Fund (NRF) Program**. In 2004, twelve projects shared in over $26,000 of in-kind and direct monetary support provided by **CNSC**, **Manitoba Conservation** and **Calm Air International Ltd.**

The CNSC, under contract to **Parks Canada**, is currently documenting the extent of local and traditional knowledge on climate change as it relates to polar bears. This 18-month study is being led by CNSC Contract Biologist, **Maria M'Lot** who is working closely with a variety of knowledge holders in both the local and scientific communities. One of the major goals of the project is to explore how these two ways of knowing may be used in the future management of the **Wapusk National Park** ecosystem.

Churchill is experiencing a welcome resurgence in research activity with two dozen studies initiated during the past year. This increase is being led by several major projects, including **ArcticNet**, a **Network Centres of Excellence** multi-year, multi-university exploration of the Canadian Arctic. Theme 3 of ArcticNet, ***Managing the Largest Canadian Watershed in a New Climate****,* is examining the land-ocean interactions along Hudson Bay's subarctic coast from sites near the boreal forest and on the sea ice. The CNSC is providing logistic support, accommodations, storage, and maintenance services.

Research Projects 2004-05

David Barber, University of Manitoba, Winnipeg. *ArcticNet: the integrated natural/medical/social study of the changing coastal Canadian Arctic, Theme 3 – HB watershed.* (Technical Staff: Bob Hodgson)

Ben Cash, Maryville College, Maryville, Tennessee. *Breeding habitat characteristics and circadian calling dynamics of the wood frog and the boreal chorus frog.* (B.Sc. Students: Matt Robinson, James Ramsey, Anne-Marie Wiest) NRF RECIPIENT

Kim Daley, Missoula, Montana. *Polar bear (*Ursus maritimus*) behaviour and tourist activity at Gordon Point, Churchill, MB, Canada.* (Field Assistant: Carley Basler) NRF RECIPIENT

Andrew Derocher, University of Alberta, Edmonton. *Long-term patterns of polar bear distribution in western Hudson Bay relative to climate change.* (M.Sc. Students: Emily Parks and Lindsay Towns) NRF RECIPIENT

LeeAnn Fishback, Churchill Northern Studies Centre. *Long-term freshwater geochemistry monitoring of lakes and ponds near Churchill, Manitoba*. (Field Assistants: Jen McCulloch and Carley Basler)

LeeAnn Fishback, Churchill Northern Studies Centre and G. Peter Kershaw, University of Alberta. *Snowpack geochemical loading in selected environments across the arctic treeline near Churchill, Manitoba.* (Field Assistants: Jen McCulloch and Jennie Rausch)

Roger Green, University of Western Ontario, London, Ontario. *Studies on the bivalve mollusk* Macoma balthica *in Alaska and Hudson Bay.*

Marie-Ève Houde, Université du Québec à Rimouski, Quebec. *Clonal diversity in space and time in* Daphnia*.* (M.Sc. Supervisor: France Dufresne)

Dr. Robert Jefferies, University of Toronto. *Phosphate limitation for plant and microbial growth in mire soils.* (M.Sc. Students: Kate Buckeridge, Kate Edwards, and Sarah Hargreaves. B.Sc. Student: Anna Simonen) NRF RECIPIENT

Peter Kershaw, University of Alberta. *Long-term ecological monitoring and treeline dynamics.* (B. Sc. Students: Michelle Blade, Wendy Markowski and Steve Mamet. M. Sc. Student: Eleanor Edye-Mazowita)

Jane Kirk, Ph.D. Candidate, University of Alberta, Edmonton. *A comparison of mercury inputs to Hudson Bay from hydro reservoirs with springtime atmospheric Hg depletion events.* (Supervisor: Dr. Vincent St. Louis. Field Assistants: Allison Kirk, Paul Venturelli) NRF RECIPIENT

David Knudsen, University of Calgary. *Mid-winter auroral observation campaign*. (Collaborators: Mark Ball, Geoff Holmes, Noora Partamies, Laureline Sangalli, Mikko Syrjasuo, and Trond Trondsen)

Peter Leskiw, Manitoba Industry, Development and Mines. *Reconnaissance visit to Churchill.*

Nick Lunn, Canadian Wildlife Service, Edmonton, Alberta. *Population dynamics of western Hudson Bay polar bear.* (Field Staff: Evan Richardson and Greg Thiemann)

Jennifer McCulloch, Churchill Northern Studies Centre. *Phenology of* Saxifraga oppositifolia*,* Dryas integrifolia *and* Salix reticulata *in Churchill, Manitoba.*

Robyn Millan, Dartmouth College, Hanover, New Hampshire. *An Arctic winter balloon campaign to study mechanisms of relativistic electron precipitation.* (Campaign Team: Michael McCarthy, Erin Lay, Jacqueline Allen, Kimberly Cochran, Werner Ostwald, Leslie Woodger and David Klumpar) NRF RECIPIENT

Elizabeth Miller, York University, Toronto, Ontario. *Chamber-based CO_2 flux measurements on mosses and lichens in the Hudson Bay Lowland.* (B.Sc. thesis supervisor: Rick Bello, York University)

Nestor I Field Camp *Waterfowl ecology and population dynamics.* (Murray Gillespie, Manitoba Conservation, Winnipeg)

Nestor II Field Camp - La Perouse Bay *Ecosystem studies of coastal Arctic tundra.* (Rocky Rockwell, American Museum of Natural History, New York) See http:// research.amnh.org/users/rfr/hbp/ for more details.

Erica Nol, Trent University, Peterborough, Ontario. *Climate change effects on arctic-breeding plovers* (Field Assistants: Anna Birchall and Taeko Knockaert) NRF RECIPIENT

Tim Papakaryiakou, University of Manitoba, Winnipeg. *Coastal zone interactions in Hudson Bay: a systems' response to climate change – Project 3.2 of ArcticNet.* (Collaborators: Rick Bello and

Peter Taylor, York University; Mario Tenuta and David Lobb, University of Manitoba.) NRF RECIPIENT

Matthew Perry, USGS-Patuxent Wildlife Research Center, Laurel, Maryland. *Breeding ecology of long-tailed ducks.* (Collaborator: Joseph Jehl, Jr.)

Pierre Richard, Fisheries and Oceans Canada, Winnipeg, Manitoba. *Surveys of the stock size of western Hudson Bay belugas*. (Collaborators: Klaus Hochmeim, Pierre Carter, Jean-Francois Gosselin, Courtenay O'Brien-Moran, Natalie Asselin, Stephen Smeltzer, Dominic Turenne and Jules Hope-Dubois)

Richard Staniforth, University of Winnipeg *Seed banks along a sucessional gradient along the Churchill River* (B.Sc. Student: Matthew McBurney) NRF RECIPIENT

Gary Stern, Fisheries and Oceans Canada, Winnipeg and Feiyue Wang, University of Manitoba, Winnipeg. *Carbon and contaminant cycling in the coastal environment – Project 3.4 of ArcticNet.*

Jacques Tardif, University of Winnipeg. *Dendroecology of* Dryas integrifolia *and tree growth at the tree-line in Manitoba.* (Field Assistants: France Conciatori, Kim Monson, Derrick Ko-Heinrichs) NRF RECIPIENT

Wendy Untereiner, Brandon University. *Patterns of diversity in onygenalean fungi isolated from the dens of arctic fox (*Alopex lagopus*).* (B.Sc. Student: Matthew O'Hara) NRF RECIPIENT

Jane Waterman, University of Central Florida, Orlando. *Sociality in Polar Bears* (M.Sc. Student: Gillian Eckhardt. Field Assistants: Jennifer Laible and Namoi Coty) NRF RECIPIENT

Selected Recent Publications

Berglund, E. 2003. Dendroecological evidence of the absence of larch sawfly (*Pristiphora erichsonii*) outbreaks in subarctic Manitoba over the last 250 years. B.Sc. thesis, Department of Biology, University of Winnipeg, Winnipeg, MB

Buckeridge, K. M. 2004. The allocation of inorganic nitrogen ($^{15}NH_4^+$) to soil, microbial and plant biomass in an arctic salt marsh. M.Sc. thesis, Department of Botany, University of Toronto, Toronto, ON

Derocher, A.E., Lunn, N.J. and Stirling, I. 2004. Polar bears in a warming climate. Integrative and Comparative Biology 44:163-176.

Dubois, J. and Monson, K. 2004. Mammals of Wapusk National Park: Survey results and a provisional checklist. Blue Jay 62(3): 160-166.

Dyck, M. G. and Baydack, R. K. 2004. Vigilance behaviour of polar bears (*Ursus maritimus*) in the context of wildlife-viewing activities at Churchill, Manitoba, Canada. Biological Conservation 116: 343-350.

Giradin, M. P., Berglund, E., Tardif, J. C., and Monson, K. 2005. Radial growth of tamarack (*Larix laricina*) in the Churchill area, Manitoba, Canada, in relation to climate and larch sawfly (*Pristiphora erichsonii*) herbivory. Arctic, Antarctic, and Alpine Research. *In Press.*

Graham, K. A. R. 2004. Semipalmated plover breeding success and adult survival: effects of weather and body condition. M.Sc. thesis, Watershed Ecosystems, Trent University, Peterborough, ON

Lie, E., Larsen, H.J.S., Larsen, S., Johansen, G.M., Derocher, A.E., Lunn, N.J., Norstrom, R.J., Wiig, Ø. and Skaare, J.U. 2004. Does high organochlorine (OC) exposure impair the resistance to infection in polar bears (*Ursus maritimus*)? Part I: Effect of OCs on the humoral immunity. Journal of Toxicology and Environmental Health, Part A 67:555-582.

Lunn, N.J. and Stirling, I. 2004. Population re-assessments of polar bears in western and southern Hudson Bay. Interim report (Project 5130-03-2) to the Nunavut Wildlife Management Board, Canadian Wildlife Service, Edmonton, 5 pp.

Lunn, N.J., Stirling, I., Andriashek, D. and Richardson, E. 2004. Selection of maternity dens by female polar bears in western Hudson Bay, Canada and the effects of human disturbance. Polar Biology 27:350-356.

Macrae, M. L. S., Bello, R. L. and Molot, L. 2004. Long-term carbon storage and hydrologic control of CO_2 exchange in tundra ponds in the Hudson Bay Lowland. Hydrologic Processes 18: 2051-2069.

Monson, K. M. M. 2003. Fire history and secondary vegetation succession in the forest-tundra near Churchill, Manitoba. M.Sc. thesis, Department of Botany, University of Manitoba, Winnipeg, MB

Richardson, E.S. and Brook, R.K. Excavation of an Arctic Fox, *Alopex lagopus*, den by a Polar Bear, *Ursus maritimus*. Canadian Field-Naturalist. *In Press*

Stirling, I., Lunn, N.J., Iacozza, J., Elliott, C. and Obbard, M. 2004. Polar bear distribution and abundance on the southwestern Hudson Bay coast during open water season, in relation to population trends and annual ice patterns. Arctic 57:15-26.

Tam, Ling. 2005. Estimation of functional and genetic diversity of sub-arctic tundra soil microbial communities (Churchill, MB, Canada). M.Sc. thesis, Department of Environmental Biology, University of Guelph, Guelph, ON

Education

Strengthening the North Through Shared Knowledge

Education is the cornerstone of a healthy community. The Northern Studies Centre provides educational programming to the public of all ages, be they youth, university students or elder citizens.

In February 2005, seven students representing the **University of Winnipeg**, the **University of Manitoba**, and **University College of the North** in the Pas, were issued a challenge: travel north to Churchill and speak with local residents, documenting on video their views on climate change, and then share this information with a southern audience. Their video **South Meets North & Back Again** was screened at the **Quest: North** conference held at the University of Winnipeg, March 4 and 5 where it was well received by conference delegates and international guests. When asked to summarize their experience, many of the students expressed a strong desire to help people better understand the reasons and causes behind observed variation in northern weather patterns, whether they be from the South or the North.

Youth Education

The CNSC has recently partnered with **Global Explorers** of Colorado Springs to deliver high-quality educational programs for middle and high-school students from throughout the United States. In addition to destinations in Mexico and Peru, students may now explore Churchill's subarctic environment in either summer or winter. Inaugural visits in 2004/05 included students from **Pace Academy** in Atlanta, Georgia and **Westridge School** in Pasadena, California. Churchill is also a popular field trip destination for Canadian schools including **Ste. Rose**, Manitoba and **Swift Current**, Saskatchewan.

In mid-July, the CNSC also hosted Manitoba Hydro's ***Building the Circle*** **Summer Science Camp**. Ten young aboriginal women from throughout Manitoba worked with local Girl Guides to learn more about rockets and model rocketry. Beluga whale watching and tours of local interest rounded out their unforgettable trip. This ongoing initiative is designed to foster a greater interest in science and promote careers with Manitoba Hydro for aboriginal women.

University Credit Courses

A remarkable number of today's northern scientists and wildlife managers were first introduced to the North through field courses at community-based institutions like the CNSC. The CNSC was pleased to support five university-level credit courses in 2004:

University of Iowa
Ecosystems of North America
July 1 – July 9, 2004
Instructor: Diana Horton
4 Participants

University of Guelph
Arctic Ecology
July 31 – July 13, 2004
Instructor: Paul Hebert & Peter Kevan
22 Participants

University of the Arctic
Arctic and Boreal Entomology
July 31 – August 13, 2004
Instructors: Peter Kevan & Rob Roughley
4 Participants

University of Manitoba
Wildlife & Ethnoecology of the Manitoba Coastal Region
August 10 – August 23, 2004
Instructors: Paul Watts & Ryan Brook
6 Participants

University of Winnipeg
Geography Field Camp
August 24 – August 30, 2004
Instructors: Geri Sweet, Mark Krawetz, Weldon Hiebert, Brian McGreggor and Geoff Scott
14 Participants

Dr. LeeAnn Fishback, CNSC Scientific Coordinator, is currently instructing an online course for the Faculty of Earth, Environment and Resources at the University of Manitoba. Lands and Environment II is a third year course in **University of the Arctic's** Bachelor of Circumpolar Studies program. The course deals primarily with the impacts of natural and physical change on the peoples and conditions of the Circumpolar North. Students from Canada, Norway and Russia are participating in this interactive program through web-based course modules and online "chats".

Non-Credit Courses

The Churchill Northern Studies Centre provides high-quality learning vacations to hundreds of visitors each year. These expert-led five day courses, offered either through Elderhostel International ™ or as a CNSC Learning Vacation, focus on a variety of wildlife and outdoor topics. All proceeds go directly to supporting the activities of the Centre.

As the tourism market recovers from the tragic events of a few years ago, enrolment in CNSC continuing

education programs has improved. The following courses offered in 2004/05 highlight the many educational opportunities available to the public:

Elderhostel Birds, Blooms and Bergs
June 3 – June 7, 2004
Instructor: Bob Alison
5 Participants

Learning Vacation Spring's Wings
June 8 – June 14, 2004
Instructor: Rudolf Koes
4 Participants

Learning Vacation Into the Wildflowers
June 24 – June 28, 2004
Instructors: Elisabeth Beaubien & Linda Kershaw
16 Participants

Elderhostel Beluga Whales & Wildflowers
July 8 – July 12, 2004
Instructors: Kim Monson & Jack Dubois
18 Participants

Elderhostel Polar Bears Lords of the North I
October 16 – October 20, 2004
Instructor: Kim Daley
33 Participants

Elderhostel Polar Bears Lords of the North II
October 23 – October 27, 2004
Instructor: Michael Goodyear
32 Participants

Elderhostel Polar Bears Lords of the North III
October 30 – November 3, 2004
Instructor: Rupert Pilkington
32 Participants

Learning Vacation Polar Bears Lords of the Arctic I
November 6 – November 10, 2004
Instructors: Rupert Pilkington & Markus Dyck
32 Participants

Learning Vacation Polar Bears Lords of the Arctic II
November 11 – November 15, 2004
Instructors: Rupert Pilkington & Markus Dyck
15 Participants

Elderhostel Northern Lights and Astronomy I
February 3 – February 7, 2005
Instructor: Roger "Starman" Woloshyn
8 Participants

Elderhostel Northern Lights and Astronomy II
March 3 – March 7, 2005
Instructor: Chris Brown
15 Participants

Learning Vacation Winter Skies
February 10 – February 14, 2005
Instructor: Roger "Starman" Woloshyn
4 Participants

Learning Vacation Subarctic Survivor
March 10 – March 14, 2005
Instructor: Michael Goodyear
6 Participants

Community Outreach

Proud Member of the Churchill Community

To fully realize the benefits of research carried out in Churchill, it must be effectively communicated to the public. The CNSC employs a variety of means of promoting and communicating science.

The **Birdfish** is a light-hearted, information rich quarterly newsletter published by the Centre with a distribution of 2000 copies. In addition, evening presentations are held during the summer months and are open to the public.

In the late 1960's **Dr. Joseph R. Jehl, Jr.** and local resident, **Blanche Smith** collaborated on the book ***Birdlife of the Churchill Region*** (Manitoba Museum, 1970). This publication proved to be an invaluable resource for both avid birders and researchers alike. The Churchill Northern Studies Centre is pleased to have supported Dr. Jehl in his latest publication, **Birdlife of the Churchill Region: Status, History, Biology**. This long awaited volume is a comprehensive look at the current and historical status of birdlife in the Churchill region, with a particular emphasis on shorebird ecology. Printing costs were underwritten by **Manitoba Conservation's Special Conservation Fund** ensuring that all proceeds from sales will go towards future ornithological research in Churchill.

The Northern Studies Centre Team

Serving the Diverse Needs of Our Clients

Board of Directors (representing)

Chair – Dave Wotton (Manitoba Conservation)
Vice-Chair – Dr. Rick Bello (User Representative)
Treasurer – Roxanne Chan (Member-at-Large - Churchill)
Secretary – Steacy Courtney (Member-at-Large - Churchill)

Lorraine Brandson (Member-at-Large – Churchill)
Cam Elliot (Parks Canada)
Wally Hyska (Town of Churchill)
Dr. Peter Kershaw (Member-at-Large – South)
Darren Kinden (Frontier School Division)
Dr. Leslie King (University of Manitoba)
Louise Lawrie (Churchill Development Corporation)

Monika Oepkes (Manitoba Advanced Education and Training)
Penny Rawlings (Churchill Chamber of Commerce)
Geri Sweet (University of Winnipeg)
Dr. Wendy Untereiner (University of Brandon)
Ken Vipond (Manitoba Aboriginal & Northern Affairs)

Staff

Executive Director - Michael Goodyear
Assistant Director - Dianne Howell
Program Coordinator - Heather MacLeod
Fleet and Facilities Supervisor - Clifford Paddock
Maintenance Technician – Brian Stover
Scientific Coordinator - Dr. LeeAnn Fishback, Adjunct University of Winnipeg, Adjunct University of Manitoba
Research Technician - Jennifer McCulloch
Summer Research Technician - Carley Basler
Housekeeping – Mary Spence, John Spence, Vicki Spence
Cooks – Don Cleaver, Audrey Chislett, Joyce Chislett-Jones
Grant Writing/Fundraising – Kim Daley
Contract Biologist (Traditional Knowledge Project) – Maria M'Lot

Volunteers

Debbie MacLeod
Sue Jennings
Melanie Gamache
Anna Pulford
Jane Pulford
Mike Hargreaves
Alex Hamilton
Andrew Bulmer
Jennie Rausch
Brent Wetters
Kim Daley
Alannah Howell
Chris Dodge

How You Can Help

Supporting Research at Arctic's Edge

Like many non-profit organizations, the Churchill Northern Studies Centre relies on the generosity of our many friends and members to ensure the financial health of the organization. All membership dues and every donation goes back into the operation of the facility.

You can help by:

- volunteering your time at the CNSC,
- supporting research and education through financial contributions,
- donating surplus scientific equipment, supplies of linens & kitchen items, or reference materials (please call first)

- acting as local “ambassadors” promoting CNSC activities and programming in your local community
- urging your public representatives to encourage and fund scientific research in the North

Our Donors

Ames, D.
Bandick, L.
Basler, C.
Calvez, H.
Carey, E.
Danyluk, D.
Denten, D.
Dodge, C.
Ewin, G.
French, R.
Frith, R.
Gillespie, M.
Global Explorers
Goodyear, M.
Hatt, B.
Heshka, L.
Higenbottam, G.
Holberton, R.
Hudson Bay Helicopters
Johnston, A.
Lamborn, K.
Lindenwoods Scout Troup
MacLeod, D.
MacLeod, H.
Mattson, L.
McCammon, H.
McDonald, M.
Miller, P.
Nature Encounters
Okada, H.
Paris, O.
Penner, C.
Rahamut, A.
Roman Catholic Diocese of Churchill Hudson Bay
Sheathelm, D. & K.
Shephard, K.
Sheviak, C.
Smail, L.
Smart Connections
Summerhill Entertainment
Walmsley, W.
Westbrook, J.

Calm Air International Ltd.
Human Resources Development Canada – Summer Career Placement Program
Manitoba Advanced Education and Training
Manitoba Conservation – Special Conservation Fund
Manitoba Energy, Science and Technology - Manitoba Climate Change Action Fund
Manitoba Industry, Trade and Mines – Community Connections
McLean Foundation
Murphy Foundation
Natural Sciences and Engineering Research Council of Canada - Major Facilities Access Grant
Siobhan Richardson Foundation
SM Blair Family Foundation
VIA Rail Canada

Photo Credits:

Jack Cram, Roseisle Design & Consulting (Cover, Page 5)
Alex Hamilton (Page 6)
Ryan Brook (Page 7, Page 10)
Rick Bello (Page 8 *top*, Page 9 *top*, Page 13 *bottom*)
LeeAnn Fishback (Page 8 *bottom*, Page 9 *bottom*)
CNSC (Page 9 *bottom*, Page 11)
Jospeh Jehl, Jr. (Page 13 *top*)
Jennie Rausch (Page 14)

Financial Statements

(Year Ending March 31, 2004)

Statement of Financial Position, as at March 31, 2004. Audit performed by Chambers, Fraser & Co., Winnipeg, Manitoba.

Assets	**2004**	**2003**
Current Assets		
Cash and short-term investments	$73,269	54,343
Accounts receivable	25,632	39,705
Inventory	15,080	14,851
Prepaid expenses	9,780	11,245
	123,761	120,144
Restricted Cash	5,582	16,344
Capital Assets	565,268	638,423
	694,611	774,911
Liabilities and Net Assets		
Current Liabilities		
Accounts payable	22,861	18,388
Deferred contributions	22,473	16,344
Deposits	16,292	10,583
	61,626	45,315
Deferred Contributions	383,523	419,969
Net Assets		
Invested in capital assets	181,745	218,455
Unrestricted	67,717	91,172
	249,462	309,627
	694,611	774,911

Statement of Operations	**2004**	**2003**
Revenue		
Operations	525,422	549,859
Outside support	280,077	136,663
Donations and memberships	6,805	7,980
Amortization of deferred contributions	36,446	36,446
Gain on disposal of capital assets	2,500	-
	851,250	730,948
Expenditures		
Service delivery	824,752	769,791
Amortization of capital assets	86,663	85,534
	911,415	855,534
Net Revenue (Expenditures)	(60,165)	(124,377)