



WAPUSK NEWS

THE VOICE OF WAPUSK NATIONAL PARK



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The History of Nestor Two: A Long-term Study of a Snow Goose Colony

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Travelling east from Churchill for about 40 km, you will find a collection of small buildings on an island in the Mast River, which flows out of Norton Lake near La Pérouse Bay in the northern part of what is now Wapusk National Park.

This camp, known variously as Camp Finney, Nestor Two, Queen's University Tundra Biology Station and the Snow Goose Camp has a long history. It was established more than 40 years ago and is still in use today. In this article I describe some of that history, the people who played important parts in the camp's foundation and early history, and some of the contacts between researchers and the Churchill residents who played such an important role in its success.

The beginnings were in 1968, 45 years ago, when two young and rather naïve Queen's University biologists, Ken Ross and myself, came to Churchill with funds from the Canadian Wildlife Service to study the then recently discovered snow goose colony near Cape Churchill. With logistical help from



Pierre Mineau

Camp Finney, 1976.

Pat Worth of the Churchill Rocket Research Range, we established that La Pérouse Bay would be a good place for a long-term study.

In the first few years, we lived in a cabin called Camp Flicek, which earlier had been built on Knight's Hill Esker. However, it was some distance from the snow goose colony, so George Finney, a graduate student who was leading the project in 1972, decided that a new camp nearer the colony was essential. With the help of Dave Yetman and Lindy Lee, who worked at the Rocket Range in Fort Churchill, a building was prefabricated and dragged out on a huge track vehicle in

early May before the ice had melted, along with two trailers brought out as sleeping accommodation.

The cabin, subsequently called Camp Finney, had been located on some islands in the middle of the Mast River. From that point on, those working at Camp Finney always had to put on hip waders before starting work. Typically the researchers arrived at camp in late April before the geese arrived and stayed until late July after large numbers of flightless geese had been rounded up and banded.

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The History of Nestor Two

continued from front page...

The researchers maintained good relationships with the people in Churchill and Fort Churchill. The Rocket Research Range staff helped with radio communications, which was our lifeline in case of emergencies. To reach Camp Finney we either flew or travelled on tundra vehicles as far as the Knight's Hill Esker, then walked through the boggy tundra to the camp itself.

In the mid-1970s, I was heavily involved in the development of the Churchill Northern Studies Centre (CNSC) as its first Scientific Director, and one of my roles was to encourage universities to teach courses in the Churchill area. This gave me closer contact with the Churchill community. A course on Arctic Biology given by Queen's University not only brought students from the south but also attracted several Churchill residents. Rev. Jerry Stretch, Bonnie Chartier, Diane Erikson and Louise Laurie were all enthusiastic students in the course. Bill Erikson, Bishop Robidoux and Lorraine Brandson were active with the CNSC at the time and I got to know them well. We used Camp Finney for the field courses too, with students spending a week in Churchill and a week at La Pérouse Bay. It was at this time that the



Martin Edwards

Research group outside Camp Flicek, 1970.

camp became the more prestigious sounding Queen's University Tundra Biology Station.

In the 1970s and 1980s, the station continued to expand. We carried out studies on other species of birds and the research was becoming widely known and respected internationally. Several television films of the work done there were produced by CBC, BBC and Télévision Française. The goose study was recognised as the largest avian population study in the world and it received several international awards.

At the same time, snow goose numbers were increasing rapidly by about 8% annually, causing many environmental problems. The geese were destroying large areas of the arctic salt-marsh, which in turn resulted in the reduction of other wildlife in the area. Consequently, research at La Pérouse Bay became more focussed on the interaction between geese and the vegetation. This work was led by Bob Jefferies from the University of Toronto, who



Pierre Mineau

Camp Finney in early Spring.



Pierre Mineau

Sleeping quarters early in the season.

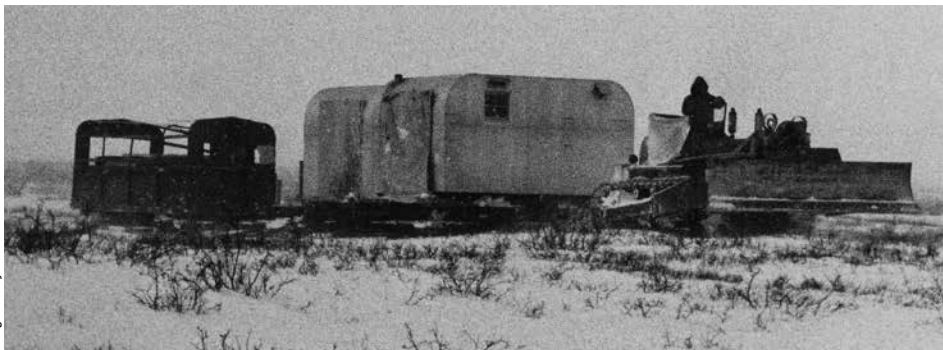


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Researchers at Nestor 2, 2005. Left to right: E. Horrigan (graduate student); G. Jackman; R. Rockwell.

continued until his death in 2010. I left the project in 1992, but the goose research continued under the leadership of Rocky Rockwell from the American Museum of Natural History, who continues to work there to this day.

A snow goose cull was attempted in North America in the 1990s to reduce the numbers; however, goose numbers continued to increase. Many snow geese can still be found in Wapusk National Park, but few now nest in the La Pérouse Bay area itself, as the vegetation they depend upon to raise their goslings has largely disappeared.



George Finney

Lindy Lee and Cat.

Superintendent's Update

Sheldon Kowalchuk

Acting Superintendent

Wapusk National Park and Manitoba North National Historic Sites

I write this report with mixed emotions as this will be my final Superintendent's Update. I have accepted a position at Saskatchewan Landing Provincial Park in southwestern Saskatchewan. The more than six years I have spent working for Parks Canada in Churchill has been a great adventure and experience. I was able to meet and work with many wonderful people as both the Resource Conservation



Sheldon Kowalchuk



Cam Elliott

Manager for four and a half years and as the Acting Superintendent for the past year and a half. Cam Elliott, who has been on an assignment with the Protected Areas Establishment Branch

of Parks Canada working on a national park proposal for the Manitoba Lowlands natural region resumes his position at the beginning of April 2013 as the Superintendent for Wapusk National Park and the Manitoba North National Historic Sites.

The following is an update on a variety of topics on behalf of the Wapusk Management Board (WMB) and Parks Canada staff.

Throughout December 2012 and January 2013, Parks Canada advertised the opportunity for *continued on page 4...*

Parks Canada Receives Award for Conservation Work in Wapusk National Park

What makes a champion? It isn't the glory of goals scored, overtime drama or trophies hoisted high; rather, it is hard work, dedication and perseverance.

These are the qualities that have made Parks Canada a conservation leader, and it was for leadership in protecting polar bear habitat in Wapusk National Park that Parks Canada was honoured with a *Champion of Polar Bears* award by Polar Bears International Inc. (PBI).

PBI co-founders Carolyn and Robert Buchanan presented the Honourable Peter Kent, Canada's Environment Minister and Minister responsible for Parks Canada, with PBI's highest honour in a ceremony at the Toronto Zoo on February 21, 2013.

"For the past 15 years Parks Canada has played a worldwide role in polar bear conservation through research and monitoring, education, and conservation in Wapusk National Park," Carolyn Buchanan said in presenting the award. "The scientific data gathered and its analysis, along with the park's extensive educational programs, have allowed Canada's most iconic species to be better understood throughout the world."

"The Government of Canada is proud to receive the *Champion of Polar Bears* award from Polar Bears International in recognition of Parks Canada's work to conserve polar bears and their habitat in Wapusk National Park," said Minister Kent in a press release issued for the presentation ceremony. "Wapusk National Park includes one of the largest known concentrations of polar bear maternity denning habitat in the world and is a tremendous example of what Parks Canada does each and every day on behalf of Canadians at all of our parks and sites."



The Honourable Peter Kent, Canada's Environment Minister and Minister responsible for Parks Canada (second from right), accepts the Champion of Polar Bears award from Carolyn Buchanan (second from left), co-founder of Polar Bears International Inc. (PBI), for Parks Canada's work to conserve critical polar bear habitat in Wapusk National Park. Also in the photo are Marilyn Peckett (left), Superintendent of the Manitoba Field Unit of Parks Canada, and Robert Buchanan (right), co-founder of PBI.

Within the park, Parks Canada works with research partners to learn about the park's ecology; manages human activity to limit the impact on its ecological integrity; and monitors the impacts of stressors, such as climate change and overgrazing by lesser snow geese, on the local ecosystems.

PBI is committed to supporting the protection of polar bears in the Churchill region and beyond. Parks Canada and PBI have enjoyed a longstanding collaboration on a variety of activities, including the annual PBI Youth Leadership Camp and an *explore.org* polar bear webcam situated at Cape Churchill.

Superintendent's Update

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commercial businesses to apply for a business licence to guide paddlers down the Owl River in Wapusk National Park (NP) via canoe or kayak. This first offer for a commercial opportunity to offer paddling trips did not result in any licences being awarded at this time. However, Parks Canada is pleased to make this unique expedition opportunity available to independent travellers in 2013 as part of the new activities being offered to visitors to the park. In addition, a Notice of Intent will be advertised during the summer of 2013 and potential tour operators will be contacted who may be interested in pursuing a business licence to conduct guided dog sledding tours, guided over-snow vehicle tours and guided hiking and overnight stays in the park.

As part of the second phase of issuing business licences in Wapusk NP, licences have been prepared for aircraft charter companies and businesses hauling freight by oversnow vehicles. Addressing another opportunity identified in the park's management plan, Parks Canada staff have been busy identifying locations that may be

considered for development of a backcountry lodge. Areas not to be considered are those ecologically and culturally sensitive regions such as calving areas for the Cape Churchill caribou herd and polar bear summer congregation areas. This will help to ensure that if a backcountry lodge is developed in the park, the impact on the park's ecological integrity will be minimal.

Public consultations took place during February 2013 on the implementation of a number of proposed new user fees for Wapusk NP. Overall, general support was expressed for the fee proposals, which are anticipated to come into effect later in 2013.

Parks Canada formalized working relationships with various partners through the signing of several Memorandums of Understanding, including with the Churchill Northern Studies Centre; ArcticNet (Schools on Tundra); and Manitoba Conservation and Water Stewardship (in review).

Both Frontiers North Adventures and Wat'chee Expeditions continued to take visitors into Wapusk NP in 2012-13. A project initiated by Polar Bears International and *explore.org* in the fall of 2012 provided Internet viewers access to live footage of polar bears from Cape Churchill in the park.

This project is expected to continue in the future and possibly expand to include opportunities to view caribou.

The WMB reviewed eleven research and collection permit applications at a conference call meeting in March 2013. Two projects will be of primary focus for the Board over the next couple of years. The first is to engage the trapping community on the management of trapping in the park, including the possibility of moving towards a Registered Fur Block, depending upon support for this initiative. The second project is the proposal to name approximately 30 currently unnamed lakes, creeks and other geographical features in the park. There will be opportunities for the public to participate and send in suggestions.

As I depart Churchill after six years, I recall that on my last trip to Wapusk NP I observed a wolverine and approximately 60 caribou in mid-March. Seeing this was as memorable as my first trip to the park in November 2006 when I observed approximately 15 polar bears. In closing, I hope all Canadians will visit their favourite park, connect with nature, and create similar memories to those that I have had the privilege of creating during my experiences in Wapusk NP.



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Did You Know?

Cape Churchill, world-renowned as a special place for polar bears, is also a vibrant hub for other wildlife. The Cape Churchill caribou herd calve in this area and can be seen in large numbers, usually in June. Red and arctic foxes den and hunt all summer at Cape Churchill, and many breeding birds nest on the ground, laying their camouflaged eggs in shallow depressions on the pebbly beaches.

◀ Cape Churchill caribou herd

A new opportunity for high school students and teachers

Ecologist, Wapusk National Park

Ten students and two teachers from Manitoba, and from as far away as Nunavut and Québec, arrived by train in Churchill on February 26 and immediately headed to the Churchill Northern Studies Center to begin their sub-arctic learning adventure. Over the course of their seven days in Churchill, the students and teachers were introduced to a variety of sub-arctic science topics, including snowpack and tree line monitoring,

Schools on Board – ArcticNet

Left to right – Bayley Bird (Winnipeg); Isabelle Dupont (Quebec City); Andrew Hamilton (Montreal); Victor Zhao (Montreal); Nickolas Poulakos (Quebec City); Lars Qaqqaq (Baker Lake); Tyler Rowe (Iqaluit); Max Hegel (Winnipeg); Michelle Watts (Schools on Board Program Coordinator); Andrew Werner (CNSC volunteer).

On a seasonally cold March 1, Parks Canada interpreters Duane Collins and Karyne Jolicoeur-Funk, accompanied by polar bear attendant Jill Larkin, led the Schools on Tundra participants on a healthy, brisk walk across the frozen Churchill River

Not to be left out of the fun, on March 5 Jill Larkin, Parks Canada Resource Management Officer, and I went to the Churchill Northern Studies Center to introduce the students and teachers to the science side of our work in Wapusk National Park. Before long, everyone was equipped with snowshoes and heading out on a trek to check a wolverine post. The posts are part of a project Parks Canada is piloting to monitor wolverine abundance using passively collected hair samples (see article *Parks Canada Research & Monitoring Highlights* for more details). The students even got some hands-on experience as they set up an additional four posts that we will continue to monitor as spring arrives. Working in the cold and handling lure and fish, the students acquired a new appreciation for the realities of sub-arctic field research!

Parks Canada wishes to express appreciation to ArcticNet and the Schools on Board program, including Michelle Watts, Schools on Board Coordinator, for initiating the collaboration on this exciting new program. Parks Canada is also grateful to the Churchill Northern Studies Centre for its contribution to the success of the program.



A student from Schools on Tundra puts the final touches on a wolverine post.

Economic Impact of Research and Field Courses in Churchill

Ryan K. Brook Ph.D

Assistant Professor

Indigenous Land Management
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The town of Churchill plays an important role in supporting the many researchers and students who pass through the town every year, working on a wide range of studies and field courses. What are the benefits of all this activity to the people of Churchill? One measure is the economic contribution to businesses in Churchill. Researchers and students rely on the town of Churchill in many diverse ways, but there has not yet been a systematic study of all of the economic benefits of this relationship. So, as a starting point I decided to summarize all of the expenditures of Wildlife and Ethnoecology of the Manitoba Coastal Region, a joint University of Manitoba - University of Saskatchewan field course that I have taught every August since 2004. Students and course instructors are based out of the Churchill Northern Studies Centre and spend approximately one week at Nester One camp in Wapusk National Park (NP).

The field course relies on many services from the town of Churchill. These include a range of activities with local tour operators; presentations by Aboriginal elders and other community members; transportation, including helicopter flights and fuel to travel into Wapusk NP; restaurant meals; hardware and supplies, ranging from batteries to bolts to band-aids; and an extremely large order of



Ryan Brook

The University of Saskatchewan – University of Manitoba annual field course involves teaching students how to organize and conduct northern fieldwork, including purchasing all of the food and supplies needed for one week in Wapusk National Park.



Ryan Brook

Students participating in the University of Saskatchewan – University of Manitoba field course at Nester One camp in Wapusk National Park rely heavily on the food and supplies purchased in Churchill and are eager to buy souvenirs in town before leaving. The overall economic impact this two-week course has on the town of Churchill is \$25,500 in direct spending every year.

groceries and fresh bread to satisfy 20 hungry people while they are in the park. Additionally, students eagerly purchase souvenirs of their once-in-a-lifetime trip to the Churchill region. In total, during an average year, this one field course spends \$25,500 in Churchill during two weeks in August. Overall, during the past nine years the course has spent a total of \$230,000 directly in Churchill. The joke is made that researchers and students only come into town to buy beer, but the analysis shows that research and field courses such as this one rely on the town in important ways that benefit both the research and teaching as well as bringing value to the town.

The purchase of goods and services in Churchill has two benefits. First, it supports employment for the people in Churchill who provide the goods and services. Secondly, there is a “multiplier effect” in that this employment helps to provide income for the people of Churchill, who in turn spend money on goods and services in the town. Everyone, including the researchers and students, benefits.

Did You Know?

In 2012, Parks Canada staff and the *Breeding Bird Atlas of Manitoba* confirmed the presence of golden eagles (*Aquila chrysaetos*) in Wapusk National Park. These majestic birds are known to have a home range of over 155 km². Golden eagles may return to the same area year after year, where both the male and female will incubate 1-4 eggs for approximately 40 days. Stay tuned for information about golden eagles breeding in the park in future *Wapusk News* articles.

◀ Golden eagle

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New Multi-Use Fenced Camps in Wapusk National Park

As activities in Wapusk National Park increase, so too has the need for safe facilities to accommodate work projects and overnight stays. From 2008 to 2010, Parks Canada constructed two multi-use fenced camps in the park, located on Broad River and Owl River, approximately 5 kilometres from the Hudson Bay coast. In the past, Parks Canada staff and other researchers used existing trappers’ cabins at these sites; however, with funds from the Arctic Research Infrastructure Fund and Aboriginal and Northern Affairs Canada, Parks Canada was able to construct its own facilities.

Each camp consists of a small cabin and a shed surrounded by a bear-proof fence. At Broad River there is also a water/wastewater treatment and power generation unit. While previous facilities were constructed primarily to be used by researchers, the new, larger camps (100 ft. X 200 ft.) can comfortably accommodate the set-up of tents. Now, canoeists travelling down the Owl River will be able to set up tents inside the Owl River camp. As more new visitor activities are developed in the park (such as hiking), the fenced camps will



Parks Canada

Owl River fenced camp.

provide access to water and waste services, a safe location for tent camping, and the opportunity for potential infrastructure development by licensed tour operators. Use of these facilities will be administered through either entry permits or business licenses.

The two new multi-use fenced camps are mainly used by staff; however, they are potential nodes for future development in this remote national park. To learn more about these facilities please contact Parks Canada at 204-675-8863.

Broad River fenced camp.



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Leadership Camp 2012

Calming.

This is nothing here but animals and the land...a place to breathe and think.

— Lateesha Redhead

Diverse.

The way everything worked together. If one element was taken away it would create a ripple effect and possibly cause a total collapse in the environment.

— Aimee Scribe

Leadership campers traversing raised beach ridge along coast of Hudson Bay in Wapusk NP

Heather MacLeod

Heritage Presenter

Wapusk National Park & Manitoba North National Historic Sites

Parks Canada was pleased to offer the 4th annual Wapusk National Park Leadership Camp from July 5-10, 2012. Manitoba youth in grades 10 and 11 were selected from northern, urban and rural communities to participate in this adventure learning

camp which aims to provide new opportunities for young Manitobans to discover one of Canada's most remote national parks as they build on their knowledge of the environment and develop leadership skills.

The adventure began with a journey by train to Churchill. Some students started the trip with the camp chaperones in Winnipeg, while others joined the group along the way for

a total of 13 campers and 2 staff on the northbound train. Upon arrival in Churchill, the students were whisked out of town to the Churchill Northern Studies Centre (CNSC), a research station located 23 km east of Churchill, for an evening of presentations. Mother Nature had some say in the plans as heavy fog descended, delaying the helicopter flight into the park by one day. However, this delay provided the opportunity for the camp participants to explore the area around the CNSC

History/Ancestors.

My past ancestors roamed this land. It's their history and mine. It's in my blood.

— Lateesha Redhead

Hidden Treasure.

There is so much more to this park than you think.

— Roxana Akhnetova



Leadership Camp participants and facilitators on the shore of Hudson Bay.

and enjoy a talk by Churchill trapper Stanley Spence who spoke about life working a trap-line.

If the participants thought that CNSC was remote, the helicopter trip to the Nester One research camp in Wapusk National Park (NP) was one step beyond. This small facility, surrounded by a bear-proof fence, would be our home for the next two nights. Surrounded by ancient, raised beach ridges, the expansive tundra landscape and the dramatic ice floes on Hudson Bay captured the students' attention completely.

B-e-a-utiful.

It's just breathtaking, the way the land moves and twists.

— Aimee Scribe

Surprising.

While we were out on the land there was so much to look at. It seemed that every few minutes there was something new to learn about.

— Anaïs Scribe

Each student was responsible for some aspect of camp life during the Leadership Camp, and everyone helped with additional daily chores such as cooking and clean-up. The days were spent outside as much as possible since Mother Nature made up for the initial delays with pristine weather. This was actually the warmest camp so far! An important aspect of the Leadership Camp is for the participants to share the experience with others. To this end, the students gave presentations to the Churchill community after they arrived back in town and it was standing room only! The students also committed to making presentations in their own communities to talk about their experiences in this wondrous place and to further develop their leadership skills.



Dr. Larry Dyke and student taking a water sample.

The Leadership Camp experience is best described in the words of the participants themselves. While the students were spending time discovering Wapusk NP on foot, they were asked to use keywords to describe the park and to explain why they chose those words. Some of these thoughts are shared in the boxes sprinkled throughout the article.

All of the students contributed to the camp blog. Each day a question was posed for the students to ponder. Here is an excerpt from a response to the question "What does the word 'Leader' mean to you?"

"When I think of a leader I think of all the people I know who continually push themselves out of their comfort zone to benefit others... All of us are leaving behind the ordinary to venture out into a place we have never been before, Wapusk National Park, to learn how to be leaders for our planet and our lives."

This amazing group of students gained unique insight about themselves and the natural and cultural treasures of Canada as they matured before our eyes during their participation in Wapusk National Park's Leadership Camp. We expect to hear more about the park as our "Leaders for Our Planet" wrap up their community presentations and continue to share this unique experience in the future.

For information about the 2013 Leadership Camp, visit the Parks Canada website at: www.pc.gc.ca/wapusk

Pristine.

It is so preserved and ancient; it almost feels like a new world.

— Joshua Guenther

Inspirational.

It really gets you to look past buildings, electronics and everything and just think about life and breathe.

— Cameo Argan

Did You Know?

In addition to records kept in historical journals, small artefacts found in Wapusk National Park also provide historical evidence of people travelling to and from York Factory using the beach ridges found in what is now the park. This ceramic sherd (image1) has a similar design to another piece (image 2) found at York Factory National Historic Site.



▲ Top: Ceramic sherd found in Wapusk NP. Bottom: Ceramic sherd found at York Factory NHS.

Polar Bear Webcams Bring Wapusk to the World!

Linda Sutterlin-Duguid

Public Outreach and Education Officer

Manitoba Field Unit

The 2012 Polar Bear Season in northern Manitoba attracted the anticipated train and plane loads of eager visitors, hoping for a glimpse of these iconic animals in their natural habitat. This year also brought thousands of “virtual” visitors into Wapusk National Park (NP). These armchair travelers were able to experience the annual congregation of polar bears along the Hudson Bay coast through their computers, tablets and smartphones.



Webcam image of polar bears at Cape Churchill.

Each autumn, polar bears gather at Cape Churchill in Wapusk National Park and in similar areas along the Hudson Bay coast, waiting for the sea ice to form. Polar bears depend on sea ice as a platform from which to hunt ringed seals, their main food source.

A New Webcam in Wapusk National Park

For several years, Polar Bears International (PBI) has been working with Frontiers North Adventures, an authorized commercial tour operator in Wapusk NP, to operate two very popular polar bear webcams broadcasting from tundra vehicles.

In 2012, for the first time, PBI and *explore.org* placed a webcam on a remote tower at Cape Churchill, in Wapusk NP, and broadcast live footage from November 5th to 26th. You can watch past highlights from 2012 on the *explore.org* website.

The polar bear cams operated by *explore.org* attract millions of viewers worldwide yearly. In 2012, the three webcams in



A tiny spot in a vast landscape, the new polar bear webcam is mounted on the tower seen here at Cape Churchill.

Churchill totalled more than half a million online pageviews in addition to the estimated one million views on CNN.

The new Cape Churchill webcam attracted approximately 5,000 viewers watching daily for polar bears!

Twitter and Facebook were abuzz as people excitedly shared polar bear sightings from these webcams. An article announcing the new polar bear webcam was also among the most popular topics on the Parks Canada website.

Watch for Webcams in 2013

Planning has begun for the operation of the Cape Churchill webcam again in the fall of 2013. Parks Canada is excited to be working with PBI and *explore.org* to offer this window on the polar bears' world in Wapusk NP. Like Parks Canada, both of these organizations are dedicated to providing authentic learning experiences about wildlife.

Parks Canada thanks...

Polar Bears International (PBI) is a nonprofit organization dedicated to the worldwide conservation of the polar bear and its habitat through research, education, and action. PBI provides scientific resources and information on polar bears and their habitat to institutions and the general public worldwide.

explore.org is a philanthropic media organization and multi-media arm of The Annenberg Foundation, as part of its Pearls of the Planet initiative, a variety of live feeds that aim to help people fall in love with the world again.

Frontiers North Adventures specializes in authentic adventures in Canada's North, providing guests with the opportunity to experience the wildlife, history, and culture of the people of the North. Owners and operators of the world-famous Tundra Buggy® Adventures, Frontiers North offers a variety of wildlife-viewing programs, the most popular being polar bears in Churchill.

Cape Churchill Webcam – The Bear Facts ...

Chances are, you will see mostly large male polar bears on the Cape Churchill webcam. These big males claim this prime coastal area pushing out the smaller bears (juveniles and mothers with cubs).

The male bears, seen in autumn along coastal areas like Cape Churchill, are waiting for the ice to form on the Bay. Once they are back on the ice they are able to hunt seals again.

While male bears, non-breeding females and juveniles gather along the coast, waiting for the ice, the pregnant females are in the denning areas, approximately 70 km inland, within Wapusk NP. The cubs are born from late November to early December. Mothers and cubs emerge from the dens in February/March to make the trek to Hudson Bay, where the females begin their hunting season.



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Fireweed (Cree: hapaskwa, askapask)

Heather MacLeod
Heritage Presenter

**Wapusk National Park & Manitoba
North National Historic Sites**

Wapusk National Park (NP) and the surrounding region is internationally recognized for its biological diversity. The park protects many important and diverse habitats and populations of polar bears and birds and includes approximately 400 species of plants. Let's take a close-up look at one of these plants, commonly known as fireweed (*Chamerion augustifolium*).

Fireweed is a hardy plant that grows throughout the circumpolar north and in mountainous zones in much of North America. Fireweed is also found as far away as Iceland, Greenland and northern Eurasia. These showy, purple-pink, fragrant flowers are unforgettable!

As its name suggests, fireweed is one of the first plants to re-colonize the landscape after a fire, or when an area has been disturbed, such as along roadsides or building sites.

The unfolding summer season in Wapusk NP can be measured by the progressive blooming of various plants. Even as the snowbanks are retreating, the early spring blooms of the purple saxifrage (*Saxifraga oppositifolia*) seek the sun. These small, bright purple flowers are a welcome splash of colour on the otherwise monotone spring landscape. As the season progresses, the fragrant blooms of northern hedsarum (*Hedysarum mackenzii*) indicate that the summer wildflowers are at their peak. Finally, the



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Fireweed at the height of bloom in early August.

appearance of the prolific fireweed reminds us that autumn is just around the corner. There is a saying in the North that when the fireweed blooms are at their best, the moose are fat enough for good hunting!

Fireweed has a long history of use as a traditional medicine and is known to have high concentrations of beta carotene, vitamin C and vitamin A. Prepared by an experienced person, the leaves of the plant have been used as a remedy for urinary tract disorders and general inflammation of the digestive tract and skin, while tea made from the whole plant has been used as a treatment for intestinal worms, asthma and whooping cough. Chewed roots, applied topically, are thought to draw the infection out of boils and abscesses. **A word of caution: some plants may cause unpleasant or deadly side effects. Know your plants well before harvesting and using them.**

Fireweed has also been used traditionally in a number of different, non-medicinal ways. Layers of fireweed can be made into a mat or work surface, referred to as "Old Timer's Plywood," and the fibrous stems can be used as twine. Fireweed can be used to make a delicious jelly. You will find many jelly recipes posted on the Internet. The young, tender shoots are very tasty in salads and can also be cooked as a pot vegetable and the flowers and buds make an eye-catching addition to any dish.

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A spectacular panorama carpet of fireweed.

Parks Canada Research and Monitoring Highlights

Natalie Asselin

Ecologist, Wapusk National Park

As part of Parks Canada's mandate to protect the environment and monitor the ecological integrity, or "health", of our national parks, the Resource Conservation staff in Churchill have been testing new monitoring projects in Wapusk National Park (NP). Changes in the numbers and distribution of animals in the park can indicate changes in the overall health of the ecosystem. With no road access, long cold winters and the risk of encountering polar bears year round, monitoring wildlife in Wapusk NP poses unique challenges. Research projects must be planned to overcome these challenges while at the same time fulfilling the goal of gathering good information. Sometimes, the only way to know if a project will work is to give it a try! Scientists like to call these test runs 'pilot projects'. Here are some details on three projects we are currently piloting to study wolverines, caribou and polar bears.



Rodney Redhead,
Parks Canada Resource
Management Technician,
attaching bait to the
top of a post for the
wolverine project.

Over the past two winters, we have been testing a project that may be useful in estimating the abundance of wolverines in Wapusk NP by collecting samples of their hair. The basic methods are simple: first, set up a series of 6-foot tall posts at regular intervals using a 4" x 4" piece of lumber, or by cutting the lower branches off a tree. Next, wrap the posts in barbed wire, place some fish or an animal carcass at the top of the post for bait, and add some smelly lure to draw the wolverines from far and wide. If all goes well, a wolverine will be attracted by the lure, climb the post to eat the bait, and leave some hairs on the barbed wire in the process. The wolverines aren't harmed and may repeatedly climb a post over the sampling season, hopefully leaving hairs behind each time. We then check the posts regularly, every two weeks or so, to collect hairs. The hairs are analyzed at a genetics laboratory and individual wolverines are identified using the DNA found in the hairs. Voilà! The result is that we now have a record of the movements of individual wolverines and we can use a mark-recapture statistical formula to estimate the total number of wolverines in the study area.

In 2012, we scheduled time to set up and check the posts using snowmobiles in the spring. Unfortunately, when we checked the posts we didn't find any wolverine hairs. Not to be discouraged, this year we are back at it, testing out a new combination of bait and lure with the hope of enticing these elusive creatures to climb our posts and leave behind some hairs.

In August 2012, Parks Canada Resource Conservation staff, working with Darryl Hedman and Vicki Trim from Manitoba Conservation and Water Stewardship, conducted an aerial helicopter survey to determine if this would be an effective method to estimate the number of caribou in the Cape Churchill herd. The survey involved flying lines perpendicular to the Hudson Bay coast in the northeast portion of Wapusk NP and counting small groups of caribou as far as 10 km inland. We also followed the coast to look for larger groups and photographed one consisting of 582 caribou! By combining visual counts and photos, we were able to cover a large area in only one day and count both small and large groups efficiently. By flying a test survey in August 2012, we learned how to improve the survey plan, and as a result, are optimistic that in 2013 we will be successful in determining how many caribou make up the entire Cape Churchill herd.



Wolverine in Wapusk NP.

Why Monitor Wolverines?

Wolverines are good indicators of habitat quality as they require large, contiguous tracts of land. As opportunistic scavengers and predators, they also play a unique role in arctic and subarctic food webs and the health of the wolverine population reflects the health of the system as a whole.



Caribou in Wapusk NP.

Why Monitor Caribou?

Caribou are an important resource for local and Aboriginal hunters. Changes in population numbers of this large herbivore can serve as an indicator of changes in the health of tundra vegetation.

In Wapusk NP, polar bear mothers and cubs leave tracks in the snow from mid-February to early April, when they travel from the dens where the cubs are born to the sea ice where they feed on seals. By counting these sets of tracks, we hope to be able to estimate the number of polar bears denning in the park, how many cubs they are having, and when they are travelling

from their dens to the sea ice. In 2012, we travelled by snowmobile along almost the entire coast of Wapusk NP, counting the number of polar bear tracks we found. This trip was repeated four times, taking 2 to 6 days each time. Wind and snow hindered our progress and we were forced to hunker down in a cabin more than once to wait out a winter storm. Also, the wind and

snow made tracking difficult and we found very few tracks -- only eight sets.

In winter 2013 we undertook a similar project, but this time by helicopter. Instead of taking days to look for tracks, we were able to search the entire coastline in only 4 hours! Also, from a helicopter, tracks can be spotted over a much larger area. The helicopter track survey has worked very well and on March 1 we found 19 different sets of tracks from polar bear family groups travelling to the sea ice. Return trips on March 7 and March 18 resulted in our finding a few sets of tracks each time. Next year, we plan to begin early in February when we think the first mothers and cubs will start leaving their dens.

Watch future issues of *Wapusk News* to find out how these new monitoring projects are coming along!



Thorstein Milse

Why Monitor Polar Bears?

Wapusk NP was created to protect one of the largest known concentrations of polar bear maternity dens in the world. As the earth's climate changes, polar bears are facing challenges both on the sea ice and on land in western Hudson Bay. By monitoring the number of polar bears with cubs travelling to the sea ice in the spring, we will better understand how their reproductive success is being impacted by these changes.

Visit Wapusk National Park

An Authentic Experience!

Admittedly, Wapusk National Park (NP) is not the easiest place in the world to visit. Visitors must be prepared for the presence of extreme temperatures in the winter, an abundance of wetlands in the summer, in addition to polar bears and bugs. But it is these challenges that can make the Wapusk experience a memorable "trip of a lifetime". Check out the current opportunities for visiting the park listed below.

Licensed tour operators

Currently, access to Wapusk NP is mainly via licensed commercial tour operators in Churchill. Visitors are strongly encouraged to use the services of a licensed commercial operator when travelling in the park.

Two companies are licensed by Parks Canada to offer guided trips in Wapusk NP. Please contact the companies directly to obtain details on trips offered, as well as current information on travel dates and costs.

Wat'Chee Expeditions provides a unique opportunity to witness polar bear mothers and cubs emerging from the maternity dens along the Western edge of Wapusk NP in February and March. Combined with other wildlife viewing opportunities while staying at Wat'Chee Lodge, this trip is the ideal adventure for both recreational and professional photographers. <http://watchee.com/>

Frontiers North Adventures offers Cape Churchill polar bear viewing and learning experience in late November. With an interpretive guide and a professional photographer on board the Tundra Buggy Lodge, this trip provides an excellent opportunity for visitors interested in viewing, photographing, and learning more about polar bears. <http://www.frontiersnorth.com/adventures/>

Expeditions

A call for interest to canoe outfitters who may have an interest in operating in Wapusk NP did not result in any business licences being

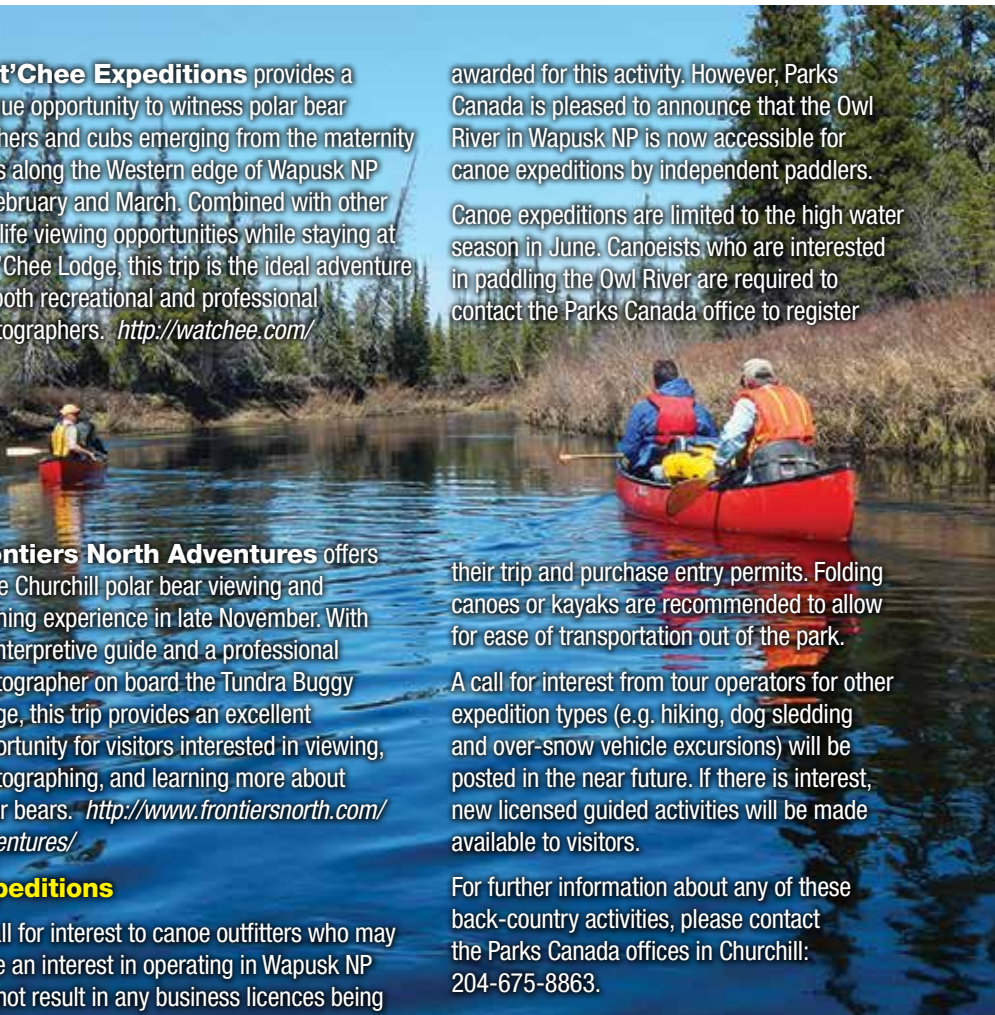
awarded for this activity. However, Parks Canada is pleased to announce that the Owl River in Wapusk NP is now accessible for canoe expeditions by independent paddlers.

Canoe expeditions are limited to the high water season in June. Canoeists who are interested in paddling the Owl River are required to contact the Parks Canada office to register

their trip and purchase entry permits. Folding canoes or kayaks are recommended to allow for ease of transportation out of the park.

A call for interest from tour operators for other expedition types (e.g. hiking, dog sledding and over-snow vehicle excursions) will be posted in the near future. If there is interest, new licensed guided activities will be made available to visitors.

For further information about any of these back-country activities, please contact the Parks Canada offices in Churchill: 204-675-8863.



YOUTH CORNER: Who Am I?

I am a small, arctic rodent that is active all year long. I look a bit like a small hamster. My legs, ears and tail are short and I can hide them in my fur to keep warm. In the summer, my fur may be one colour or patchy with many different colours, including black, grey and brown. In the fall, I grow a thick white winter coat to give me camouflage in the snow. My front claws also grow longer to help me dig through deep snow. In the summer, I build underground burrows where I sleep, raise babies (called 'pups'), and hide from predators. I may have 3 litters or more in a single year with up to 7 pups at a time. My pups are born in spring, summer and sometimes during winter too! **Can you figure out how many pups I can have in one year?**

In the winter I live in the bottom layer of the snowpack, where I spend lots of time sleeping and looking for plants to eat. I build a warm and cozy bed using dried grasses and shrubs, which I shred with my sharp pointy teeth. I also have an area to use as a toilet (scientists call these latrines), and I make tunnels through the snow where



Parks Canada



Parks Canada

Jill Larkin, Parks Canada Resource Management Officer, conducting small mammal monitoring in Wapusk NP.

I look for plants and roots to eat. In the summer, keep an eye out for my winter nests on the ground, as they remain there after the snow melts!

I am a lemming.

The number of lemmings in the Arctic is not the same every year.

About once every 4 years there are so few lemmings that the animals that eat us, like arctic foxes, don't have enough food and so can't have as many babies as usual. Other years, there are so many lemmings in the summer that we sometimes try to swim across big lakes and rivers to look for a less crowded place to live. Some of us drown from exhaustion while crossing. This is where the myth that lemmings try to commit suicide by jumping off cliffs comes from. The Inuit have a legend saying that lemmings fall from the sky, probably because so many of us suddenly appear in the spring in good years when we have had many pups in the winter.

I have a LOT of predators, including snowy owls, arctic fox, red fox, eagles, falcons, and ermines. Basically any predator bigger than me that lives on the tundra will eat me if they get a chance! I am a very important part of the Arctic food web. **What do you think happens in years when we are found in large numbers?**

Original text: Tereza Tomek, University of Manitoba Wildlife and Ethnoecology Field School 2008

Latin (scientific name)	<i>Dicrostonyx richardsonii</i>
English & French	Lemming
Denee	dlv̄n [brown lemming]
Cree	cheputsoowapikoses [northern collared lemming]
Inuktitut	Avinngaq [lemming] or kilangmiutak [collared lemming] "one-who-comes-from-the-sky"

References: Brandson, Lorraine E. Churchill Hudson Bay: A Guide to Natural and Cultural Heritage. The Churchill Eskimo Museum, 2011.

Canadian Wildlife Services: <http://www.lemming.com/wildlife.htm>

Here is an example of a simple food web in Wapusk National Park. See how important I am!



What's Happening!

Programs & Events – 2013

Wapusk National Park Leadership Camp



Parks Canada

Leadership Camp participants hiking in Wapusk NP

Wapusk National Park Leadership Camp is held annually in early summer, bringing together grades 10 and 11 youth from Manitoba to discover the remote wilderness and wonders of Wapusk National Park.

For more information, check our website at: www.parkscanada.gc.ca/wapusk

Canada Day Bay Dip



Parks Canada

Hardy participants in the Canada Day Bay Dip

Parks Canada organizes this popular annual event in Churchill, bringing together hardy participants who gather on the shores of Hudson Bay, eager to plunge into the frigid waters in a team relay race challenge. Prizes are awarded for the fastest team and best costume.

Parks Day – July 20th



Parks Canada

Visiting Prince of Wales Fort NHS on Parks Day

Join Parks Canada staff for a full day of events at Prince of Wales Fort National Historic Site (weather permitting).

Transportation will be provided.

Night at the Fort: A Time Travel Campout



Parks Canada

Night at the Fort

Have you ever wondered what it would be like to stay overnight in an authentic 18th century fort? Now is your chance with the launch of the new overnight interpretive experience at Prince of Wales Fort National Historic Site. Participants will spend two days and one night exploring the fort and the surrounding area with Parks Canada staff, learning what life was like for a Hudson's Bay Company employee assigned to Prince of Wales

Fort during the mid-18th century. Get in touch with your inner fur trader as you watch the sunset over Hudson Bay from the fort ramparts. Feel the 21st century fade away.

Sloop Cove Hikes



Parks Canada

Hiking at Sloop Cove

Take a Hike! This summer, join Parks Canada staff for half-day hikes from Sloop Cove to Prince of Wales Fort National Historic Site. The hike is a 4km trip that begins once you have been dropped off by boat at Sloop Cove and ends at Prince of Wales Fort where you will be picked up once again by boat for the return trip to Churchill. Explore Sloop Cove where the Hudson's Bay Company dry-docked their ships and sailors carved their names into the rocks above the cove. Get an up-close look at the tundra and the shoreline ecosystem of the Churchill River estuary. Learn about the nearly 4000 years of human history in the Churchill area by visiting some of the many archaeological sites.

For more information about any of these programs: 204-675-8863 or email: ManNorth.NHS@pc.gc.ca

The Wapusk Management Board

The Wapusk National Park Management Board was established in 1996 to consider matters relating to the planning, management and operation of the park, and to make recommendations on these matters to Canada's Environment Minister and Minister responsible for Parks Canada. The ten member board is made up of representatives of Government of Canada; Province of Manitoba; Town of Churchill; Fox Lake Cree Nation; and York Factory First Nation. The work of the Board reflects the philosophy, expressed in the Wapusk Park Establishment Agreement, that people are Keepers of the Land.



Parks Canada

See past issues of **Wapusk News** on-line at www.parksCanada.gc.ca/wapusk

Wapusk News is produced by Parks Canada and the Wapusk Management Board.

We want to hear from you!

Parks Canada and The Wapusk Management Board would appreciate any comments about this issue of **Wapusk News**, or suggestions for future issues.

Scissors icon Your name: _____
Your phone number or e-mail: _____

Your comments: _____

Send your feedback to:

Wapusk National Park of Canada
P.O. Box 127, Churchill, MB, R0B 0E0
Telephone: 204-675-8863
You are also invited to bring your comments to the Parks Canada Visitor Centre in Churchill, Manitoba, or send us an e-mail at: wapusk.np@pc.gc.ca

