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POLAR BEARS INTERNATIONAL

Annual Newsmagazine 2025-2026

Polar Bears International's mission is to conserve polar bears and the sea ice they depend on. We also work to inspire people to care about the Arctic, the threats to its future and the connection of this fragile ecosystem to our global climate.

As a science-based organization with staff including leading polar bear scientists and partnerships that span the circumpolar Arctic, we focus on addressing both the long- and short-term challenges that polar bears face, with a goal of sustaining a future for the bears across the Arctic.

02	Foreword
04	A Year in the Life of a Polar Bear
09	Uncovering the Secrets of Polar Bear Dens
12	Profile: Louise Archer
14	Tundra Buggy One®
16	Empowering Arctic Guides
18	Your Impact on Polar Bear Conservation
22	The Building Blocks of Polar Bears
26	Polar Bear Patron: Hovey Burgess
28	Polar Bear Adaptations
31	Take the Polar Bear Quiz
32	Legacy: Freddy Gamble
34	The Power of Collaboration
37	Action: Climate Steps That Matter
38	Young Leaders: Wyatt Daley

Calendar/Events



Krista WrightExecutive Director, Polar Bears International
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"At Polar Bears International, we believe in the power of connection. That's why collaboration is not just part of our mission, it's embedded in our name."

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DID YOU KNOW?

Polar Bears International is a top-rated charity registered in Canada and the U.S.







THE POWER OF CONNECTION

The spirit of unity in challenging times

More than 50 years ago, at the height of the Cold War, something extraordinary happened: the five nations that share polar bear populations, Canada, Denmark (Greenland), Norway, the United States and Russia, put aside deep political divisions to sign a landmark agreement to protect the world's polar bears. It was the first agreement of any kind that all five circumpolar nations signed, united by a shared concern for the future of this iconic species.

For those of us at Polar Bears International, this milestone remains a powerful source of hope. It's a shining example of how wildlife, especially one as symbolic and beloved as the polar bear, can inspire cooperation across borders, even in the most divisive of times.

We need that same spirit of unity now more than ever.

Today, the threats facing polar bears have evolved, from overhunting to the far more complex and urgent challenge of climate change. Geopolitical tensions persist. International collaboration is once again strained, with recent meetings of the Polar Bear Range States moving online due to travel restrictions between Russia and Canada. And in the U.S., a former global leader in conservation, policy rollbacks and inadequate climate action have put polar bear research and protections at risk.

But it doesn't have to be that way.

At Polar Bears International, we believe in the power of connection. That's why collaboration is not just part of our mission, it's embedded in our name. We work across borders and disciplines, bringing together scientists, policymakers, Indigenous communities, educators and conservationists. We know that when diverse voices are heard, when cultures and experiences are respected, solutions become stronger and more enduring.

Together, we've made progress: advancing research, protecting denning habitat, developing tools to reduce human-bear conflict and building global awareness of the link between sea ice and climate. Each step forward reaffirms the importance of listening, learning and leading with compassion and science.

More than half a century ago, the polar bear brought nations together to address a pressing threat. Today, we face an even greater challenge, but also a greater opportunity. Can the polar bear once again serve as a catalyst for cooperation and change?

We believe it can, and we remain steadfast in our commitment to help lead the way.

Krista Wright

Executive Director, Polar Bears International

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A YEAR IN THE LIFE OF A

POLAR BEAR





Last October, as the temperatures dropped around Canada's Hudson Bay and sea ice began to form, the area's polar bears stirred.

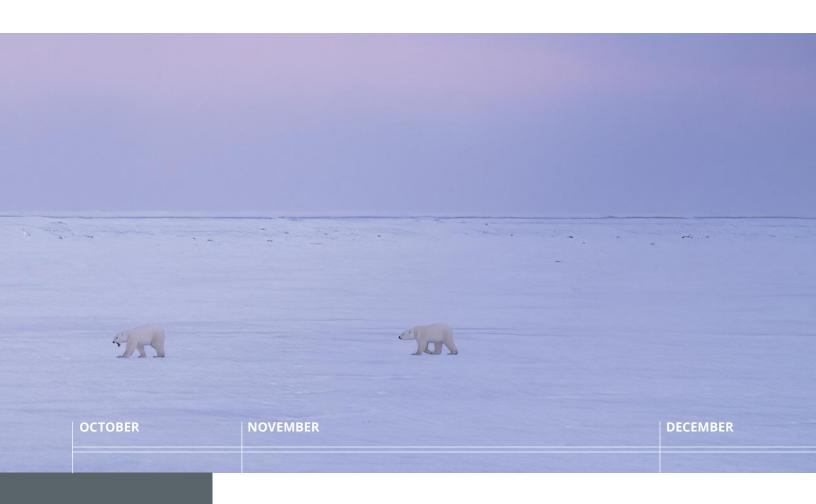
In Wapusk National Park, southeast of Churchill, Manitoba, Anuri, a 25-year-old female with an almost two-year-old cub, roused herself from a summer-long torpor. Neither she nor her offspring had eaten since coming ashore when the ice melted in July, and the pangs of hunger were making themselves felt.

For the next several weeks, they did not travel far, making their way up the coast to the promontory known as Cape Churchill, turning west — still hugging the shore as the early sea ice began to spread out into the bay — and then, in early November, heading out onto the frozen Hudson Bay and away from land.

Further north, on the Nunavut coast near the community of Arviat, 13-year-old Betty White and her two cubs-of-the-year were beginning their own journey toward the sea ice. Likewise following the coastline, by November 15 they were east of a small bay called Whale Cove; a few days later, they made a sharp right turn and made a beeline onto the ice.

Wandering is what polar bears do, frequently over what are, to us, mind-boggling distances. They wander because they must—their sea ice landscape is constantly changing, literally shifting beneath their feet, opening cracks to the water below and then closing them up again; and because as seasons change, so does the availability of their seal prey. And because the seals will not come to them, they must go in search of the seals.

The polar bears' ability to cover vast distances, combined with their inhospitable environment, makes it extremely difficult for researchers to observe them at length in the wild — and effectively impossible during the long, dark winter months. Fortunately, it is possible to track female bears with the use of satellite collars that transmit location and some other data for a couple of years before they automatically fall off. (The necks of adult males are too thick for collars, which is why Polar Bears International has been leading and supporting research into other options, such as temporary "Burr on Fur" tracking tags and ear tag transmitters.)





WHERE ARE THEY NOW?

Follow Anuri, Betty White, and many other bears on our Polar Bear Tracker. It's updated regularly with new information on the bears' whereabouts.



pbears.org/tracker

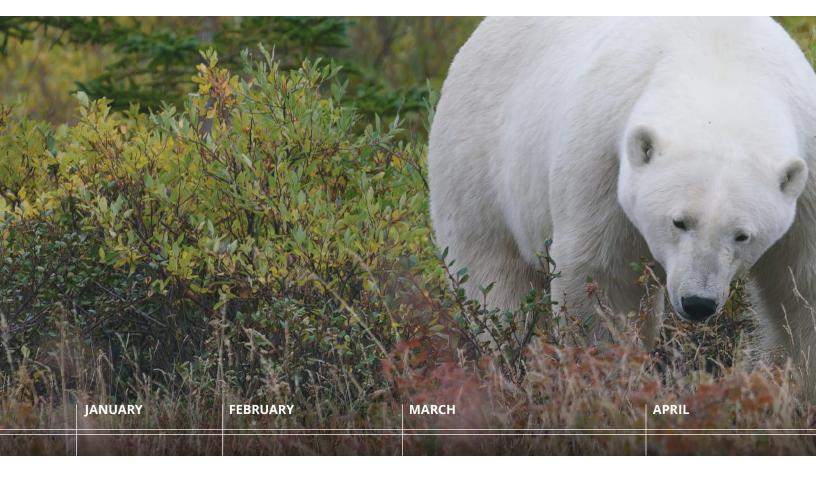
Late fall is a time for polar bears to fill their empty stomachs as they crisscross the ice in search of leads (large cracks within an expanse of sea ice) and breathing holes through which they can snatch the ringed seals that constitute the great majority of their prey. However, the bounty of fall soon bleeds into the relative barrenness of the Arctic winter. Temperatures plummet, the sun disappears and the wind howls across the ice. Cracks in that ice freeze over, and seals become harder to locate. There are times when even a polar bear can do nothing other than hunker down, find shelter and wait for the worst weather to pass.

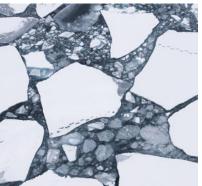
But a polar bear has to eat, too, especially a bear with a cub or cubs. And so both Betty White and Anuri kept walking in search of food. They walked and they walked, crossing hundreds of miles until they were all the way to the east, on the opposite side of Hudson Bay from where they started. On January 29th, Anuri was near the southeast corner of Hudson Bay, among the Belcher Islands just north of James Bay; Betty White was a little farther north, off Quebec's Ungava Peninsula, but still as far east as it was possible for her to be without leaving Hudson Bay.

It is not typical for Western Hudson Bay bears to head so far east in such an apparently direct fashion: Betty White, who was first collared in November 2022, had never done so before. But a clue as to the two bears' reasoning can be found by overlaying their movements with sea ice maps of the bay, and comparing them with 2024. During the earlier winter, winds pushed sea ice to the west, so bears had no option but to spend most of their time on that side of the bay, closer to Churchill. But during the winter of 2025, ice was thick across the bay, except in the very easternmost areas, where it was broken up with multiple large leads: perfect seal-hunting conditions.

Dr. Andrew Derocher of the University of Alberta says that he doesn't believe either Betty White or Anuri actively made a beeline for the eastern shore of the bay; rather, they most likely started walking in search of food, guided by the presence and quality of ice and the smell of seals carried dozens of miles on the wind, and just kept on walking until they either found what they were looking for or realized they could walk no further.

© Daniel J. Cox / naturalexposures.com





The polar bears' sea ice landscape is constantly changing, literally shifting beneath their feet, opening cracks to the water below and then clasing them up again

© Daniel J. Cox / naturalexposures.com

"It's probably very much just based on the sea ice conditions in front of them, and maybe where the wind took them that day," adds Alysa McCall, Polar Bears International's staff scientist and director of conservation outreach. "Maybe they smelled something good, and when they went in that direction they found the sea ice was pretty good. It's probably a case of choose your own adventure every day."

There is, she adds, almost certainly a method to their wanderings. "Polar bears generally walk perpendicular to the wind," she explains. "And then when they smell something good, they'll turn upwind and follow that — unless a better smell suddenly comes their way."

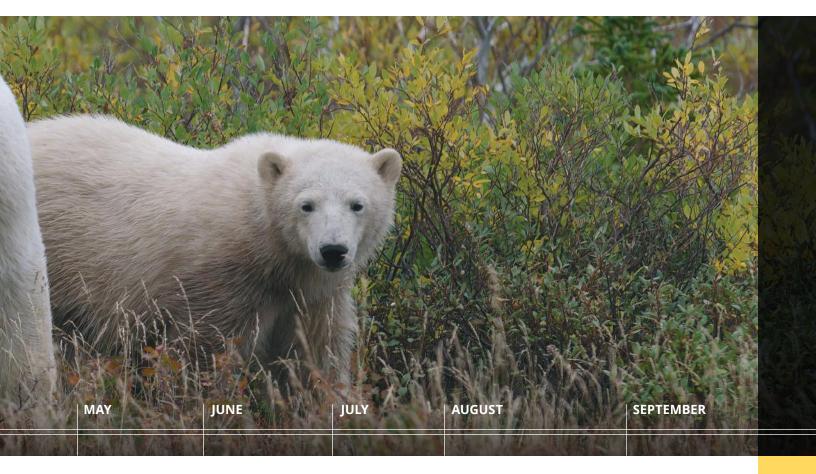
Derocher continues, "At some point they feel the pull" of their home range. Although Derocher and colleagues have found there is no evidence that polar bears return to the same spots on the ice year after year, they unquestionably know which areas have proven consistently bountiful; and by February, both bears were heading west. By March, they were in similar parts of the bay, offshore to the east of Churchill and environs. And here, more or less, they stayed.

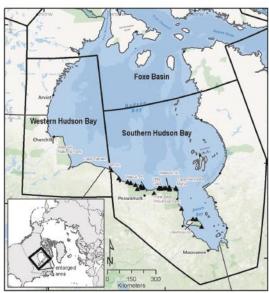
In March and April, the returning sun brings warmth and light and the Arctic comes to life. Polar bear mothers and newborn cubs emerge from maternity dens in the snow, and ringed seals build lairs on the ice to raise their new pups, in the process providing hungry polar bears with a landscape of seal meat, there for the taking.

Betty White and her two now-yearlings greeted this new season as a time of plenty. The youngsters watched and learned as mom made her kills, and they were likely old enough to make some of their own, with her help.

For Anuri and her cub, however, their relationship was reaching the end of the road. Anuri had looked after her cub and nurtured it for almost two-and-a-half years, and was now feeling the stirrings of a desire almost as old as life itself. She was once more ready to mate. As she signaled her readiness through pheromones released through the pads on her paws, eager males tracked her scent across the ice by following her footprints. The presence of single-minded adult males, and its mother's sudden indifference, signaled to the cub that it was time to move on, to reluctantly strike out by itself and begin its own life.

By mid-summer, the ice in Hudson Bay almost completely melts, forcing the polar bears to begin coming ashore, where they remain on land until the ice returns in the fall.





Location of the Southern Hudson Bay and Western Hudson Bay polar bear subpopulations in May 2025.

Map: Middel, K. & Obbard, M, 2024

Top photo: $\hbox{@}$ Daniel J. Cox / natural exposures.com



For bears like Betty White and her cubs, this year's summer thaw marked their final summer together, a final fall and winter spent out on the ice, and then a parting of ways.

© Daniel J. Cox / naturalexposures.com



Similar to this mom, Anuri had looked after her cub and nurtured it for almost two-and-a-half years. Now, the presence of single-minded adult males, and its mother's sudden indifference, signaled to the cub that it was time to move on and begin its own life.

© Jenny Wong

For Betty White and her cubs, the thaw marked their final summer together, a final fall and winter spent out on the ice, and then a parting of ways.

For Anuri's cub, the summer was an anxious time as it navigated life by itself for the first time. It had to learn where to rest, where to go, what to avoid and how to survive on its own four paws. The next year or so will likely be the hardest and most hazardous of its life.

If Anuri mated successfully again, she won't head back onto the ice in fall. Instead, she will make a den for herself and, in the depths of winter, give birth. In the warm, dark den, she will nurse and nurture her cub(s) until springtime, when they will emerge into the daylight together for the very first time.



UNCOVERING THE SECRETS OF

POLAR BEAR DENS

There's still plenty to learn about the most vulnerable days of a polar bear's life

One of the many remarkable aspects of polar bear behavior is the fact that these huge carnivores begin life weighing no more than two pounds, born inside dens that their mothers have carved out of snow.

Almost as remarkable is the fact that, despite being created by fully grown, heavily pregnant bears, most dens are — from a human perspective — "claustrophobic," says Geoff York, Polar Bears International's senior director of research and policy.

York examined a number of dens in Alaska in the 2000s when working as a researcher with the U.S. Geological Survey with Dr. Steven Amstrup, who later led the Polar Bears International (PBI) research team for more than a decade and is now PBI's chief scientist emeritus.

EARLY RESEARCH IN ALASKA

During those early days of den research, Amstrup, York and colleagues would use data from bears that had been fitted with radio collars to infer both the locations of dens and when they had been vacated. Then they would visit the sites, locate the dens and — after thoroughly checking to confirm they were empty — crawl inside for measurements. Narrow tunnels, several feet in length, would lead to small den areas "just large enough for a 300- or 400-pound polar bear to turn around," says York. It was, he muses, always quite the sight when a female that had not yet fully vacated her den would return and "jog along and then dive nose-first into this tiny hole, her butt sticking out until she wriggled inside."

No matter how cramped the experience, being inside a den is "pretty special," says York. "All the walls have claw marks, intermixed with little pieces of the female's hair that have come off through abrasion." Throughout the winter, the female is not only nursing her cubs and keeping them warm, but also actively maintaining the den. "In all dens I've entered, the female has clearly spent time scraping ice buildup from the walls and ceiling of the den — presumably to regulate airflow."

The Alaska den studies led by Amstrup followed on the heels of pioneering work by Dr. Thor Larsen in Norway, Dr. Ian Stirling in Canada and Dr. Stanislav Belikov in Russia. They focused initially on understanding fundamental basics, such as den location and structure. "We were trying to see, for example, are the dens always on the east side of a slope, or is there some other characteristic that would increase the predictability of where they might be?" explains York.

Amstrup was the first scientist to document that as many as half the bears in the Southern Beaufort Sea denned on the sea ice, the only population known to do so. By the early 2000s, however, Amstrup and team had confirmed that they largely no longer did so: The sea ice in the region was now too thin, too active and broke up too early in the year for denning on the ice to be anything other than a foolhardy option.

The shift from denning on the ice to denning on land shows the rapid pace of change in parts of the polar bears' range, and in the Southern Beaufort Sea, it presented another issue. With the entirety of the population now denning along the coast of northern Alaska, how vulnerable were pregnant and nursing mothers to disturbance from the oil and gas industry that dominates areas of Alaska's North Slope?

Top photo: View from inside a polar bear's den near Churchill, Manitoba, Canada. Claw marks show how the mother bear scrapes ice buildup from the walls and ceiling.

© Daniel J. Cox / naturalexposures.com

Bottom left: A polar bear cub in its den. © Mike Lockhart / Polar Bears International

Bottom right: In late winter in Svalbard, the team encountered record warm temperatures and icy conditions.

© Kieran McIver / Polar Bears International

MONITORING DENS WITH CAMERAS

Studies to determine the vulnerability of denning polar bears to disturbance in Alaska began by placing recording instruments in artificial dens to gain a sense of how strongly different sounds and vibrations were transmitted into them. That was then superseded by observers in tents watching dens and emerging bears directly — although it soon became clear that the observers were being observed by the bears as much as the other way around. Finally, says York, the need to monitor the bears with as little possible disturbance, "led to the development of what we called cooler cameras, where we put a mini cam into an insulated cooler with a bunch of car batteries, and we'd go set it up and let it go to work."

The den-cam monitoring work in Alaska lasted nearly a decade and yielded valuable data. It was led by Dr. Tom Smith of Brigham Young University, with funding and field support from PBI. In 2020, York, Smith and Wesley Larson published a study which showed that bears in Alaska seemed highly reluctant to leave their dens even when disturbed by human activity. They found that, during the approximately two-week period in spring when polar bear mothers and cubs begin to emerge from the dens, the mothers in particular showed overt responses to most human activities, particularly low-flying aircraft; their reactions were, however, less than expected, suggesting that a mandated one-mile buffer zone around the dens was proving somewhat effective. However, they noted that they could only document overt responses, and that they didn't have data to assess whether or not bears were stressed in ways that did not obviously manifest.

While the study confirmed that protective buffer zones are important, the research team realized that, in order to protect dens, managers first need to know where they are located, not an easy task for dens hidden under the snow. For more than a decade, the oil and gas industry had been relying on forward-looking infrared radar (FLIR) to locate dens, a technology also developed by York and Amstrup while at USGS. But a 2020 study led by Smith and coauthored by Amstrup and York showed that those surveys failed to find up to 55 percent of known dens — which, given bears' seeming reticence to abandon those dens, may make them especially vulnerable to heavy equipment or high-intensity disturbance.

In response to FLIR's high failure rate in finding dens, PBI scientists began studying higher resolution synthetic signature aperture radar (SAR) and wide-band radar as more accurate tools, conducting tests in Alaska and Svalbard, Norway. Research on this promising technology will hopefully be finalized in the coming years.

DEN RESEARCH IN SVALBARD

In 2016, PBI began conducting an annual den-emergence study in Svalbard, using far more advanced versions of the cameras that Smith and team had used years ago in Alaska. Powered by solar panels and with digital hard drives rather than tapes that must be swapped out periodically, the cameras could be set up while bears were in their dens, left unattended and retrieved long after the bears had left, ensuring minimal to no disturbance.

PBI's Svalbard Maternal Den Study, conducted in cooperation with the Norwegian Polar Institute and the San Diego Zoo Wildlife Alliance, ran through 2025. It yielded rare footage of moms and cubs emerging from dens, and revealed a great deal of variation in how long they spent outside the den before popping back in for safety. The study also measured how quickly the den was abandoned altogether as the family left for the sea ice.

While not yet a quantifiable trend, one thing the PBI teams conducting the studies noticed is that bears in Svalbard may be leaving dens earlier and earlier in response to warming conditions.

"I think the last two years, we arrived in Norway a full week earlier, and we still struggled to get out and stay ahead of the females exiting their dens," recalls York. "We also saw record warm temperatures and even rain in February and early March. So to some extent, it's not surprising bears might be drawn out of their dens earlier in those conditions. It will be interesting to see what the long-term research shows."

Further possible areas of study include denning areas in Manitoba or Ontario, where conditions are rapidly changing and where little is documented about den emergence behavior. In a world where both climate warming and human activities are increasing in the Arctic, it is clear that ongoing den studies are necessary to understand and protect polar bears during this fascinating but vulnerable period in their lives.

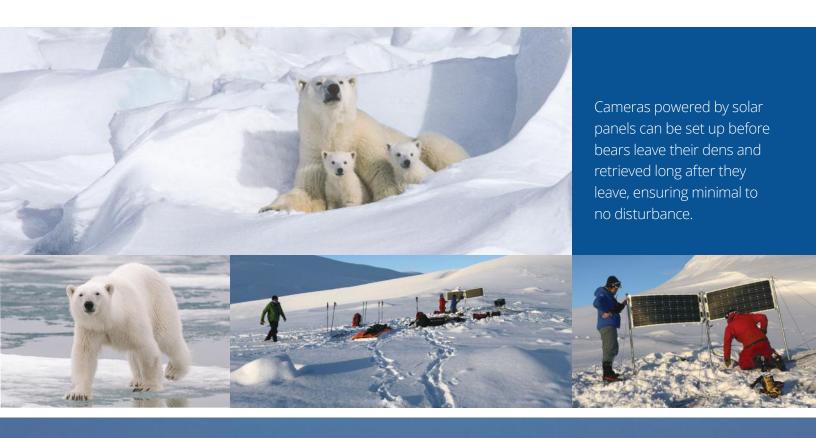
Top photo: Polar bear mother and cubs, North Slope of Alaska.

© Dr. Steven C. Amstrup / Polar Bears International

Bottom left: Polar bear on ice © Daniel J. Cox / naturalexposures.com

Bottom center and right: Cameras powered by solar panels can be set up before bears leave their dens and retrieved long after they leave, ensuring minimal to no disturbance.

© Kieran McIver / Polar Bears International







MODELING A FUTURE FOR POLAR BEARS:

DR. LOUISE ARCHER



Originally from Ireland, Dr. Louise Archer is now based in Canada as a Polar Bears International (PBI) postdoctoral fellow at the University of Toronto Scarborough. Here, she talks with us about her background and her work with PBI.

Let's start with your background: How does someone from Ireland find herself in the Arctic studying polar bears?

I was always obsessed with animals as a kid, and I studied zoology for my undergraduate degree in Cork, Ireland, with a focus on marine biology.

I became increasingly fascinated with how ecologists use modeling and data to better understand and predict how ecosystems respond to climate and habitat changes, so I went on to study quantitative biology — which, basically, is biology that uses mathematics and statistics — at a postgrad level.

Around the same time, a fieldwork stint in Iceland got me interested in cold places, and particularly in Arctic and Subarctic ecosystems. Following my PhD, I took up a postdoc position at the University of Toronto in 2021, and I focused on applying these skills to model how polar bear populations respond to sea ice loss from climate change. This is important in terms of understanding the challenges polar bears face in a warming Arctic and to motivate action to provide them with the protections they need.

For me, polar bears are a truly fascinating species to research. As a wide-ranging marine mammal that lives primarily on the sea ice, they are difficult or sometimes even impossible to study directly for most of the year. Part of the challenge I enjoy is trying to learn as much as we can from each piece of data.

Can you explain for us what your research specialty entails?

Broadly speaking, my work focuses on understanding how species — from individual animals to entire populations and communities — respond to environmental change. I've looked at this through field studies and laboratory-based research, but in recent years, I've really honed in on using ecological modeling to answer these questions.

My work on polar bears has focused mainly on modeling polar bear energetics. This might seem a bit obscure, but is quite a straightforward concept: Animals need to take in energy through feeding, which in turn gives them calories to move, grow, produce offspring and keep cells and tissues healthy.

Like other animals, polar bears have energy requirements. In their case, they need to take in vast amounts of energy to fuel their impressive bulk, but their ability to hunt is being compromised by declines in the sea ice habitat where they catch seals, their primary food. Reductions in hunting habitat mean fewer seals and less energy — or, if you prefer, fewer calories — coming in, and ultimately less energy available for bears to spend on reproduction and to sustain themselves. By modeling this process of "calories in, calories out," we can better understand how the polar bears' health, reproduction and survival are affected by sea ice loss from climate change, now and into the future.

How has Polar Bears International supported your postdoc work?

My first involvement in polar bear research was a postdoc position at the University of Toronto working alongside Professor Péter Molnár, a position that was supported by PBI. Since then, I've moved into a three-year research fellowship position with PBI, made possible by the support of Opus Technology. I've also been lucky enough to join PBI over the years for their outreach efforts in Churchill, Manitoba, and in Svalbard, Norway.

What does your work with Polar Bears International entail?

I'm particularly excited about a new project in which we're applying energetic modeling to understand how polar bears will likely fare in three populations where declining sea ice is forcing more polar bears on shore for longer periods, but where they experience quite different conditions when on land.

In Alaska's Southern Beaufort Sea population, for example, polar bears on land have access to the remains of whales that are harvested by local communities; in the Chukchi Sea population, which ranges between Russia and the U.S., walrus haulouts may offer some limited scavenging opportunities; but in Canada's Western Hudson Bay, there is little for that population to eat besides vegetation. Polar bears in all three regions are expected to spend longer and longer stretches on land in the future, so addressing these differences in feeding behavior on land should give us good insight into how the populations will fare.

I've also been contributing to PBI's long-term Maternal Den Study in Svalbard, Norway, which is helping us understand the needs of polar bear moms and cubs during the sensitive denning period. I've been analyzing data from earlier years and, this year, joined the team in the field to deploy remote cameras that allow us to study the behavior of mothers and cubs as they emerge from the den.

Added to that, I also really enjoy sharing our research work with the public, whether through talks, school presentations, podcasts, popular science articles — or interviews like this!

Do you have any tips for people wanting to enter this field?

I think finding your niche and figuring out what you can bring to the field is a really important step. For example, conservation (and scientific research in general) needs people with a variety of skills and from different backgrounds: good communicators; people who are good with data and logistics or excel at fieldwork; and, in the case of polar bear conservation, folks who enjoy being outdoors in cold and harsh places! There are lots of different skills that would be valuable in this line of work, so identifying what you like and are interested in and then trying to develop these skills further is a good start. It's also really useful to get experience in a related area; if you have the chance to get involved in any local or community-based wildlife or environmental projects, that could be a good way to start dipping a toe in research. Or if you're already studying biology, looking for opportunities to do a summer research placement is also a really good entry point. **

Tundra Buggy One®

From their early days as a rough and ready tundra vehicle to the sophisticated, battery-powered research station of today, Tundra Buggies have been safely transporting Churchill visitors to polar bears for over 45 years. We've been delighted to be part of their history.

1979



Len Smith ventures out onto the tundra in the first Tundra Buggy® and a fledgling bear-watching industry begins in Churchill.

@ Dan Guravich

2000

Frontiers North Adventures (FNA) acquires Tundra Buggy Tours Inc. Soon, the company starts experimenting with the Polar Bear Cam and sharing live images of wild polar bears from the tundra.

© Daniel J. Cox / naturalexposures.com



1980



Smith develops the first iteration of the Tundra Buggy Lodge for camping at Cape Churchill, where the big male bears congregate; it includes a Tundra Buggy and a supply trailer. Later, he adds a dining car converted from an old school bus.

@ Dan Guravich

1992

The organization that will become Polar Bears International (PBI) launches.

| | 1979 | 1980 | 1992 | 2000 |

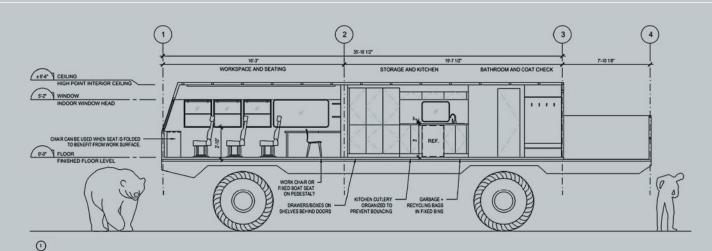
Meet Tundra Buggy One EV

We're on the cusp of a new era in polar bear conservation and education. This isn't just a vehicle, it's a bold leap forward for science, storytelling and sustainability in the subarctic. Take a look at the stunning new renderings of our reimagined mobile broadcast studio, designed with both form and function in mind.

In partnership with FNA, Polar Bears
International hosts polar bear scientists, zoo
professionals, tour operators, civic leaders
and community members on a Tundra
Buggy to facilitate an understanding of each
other's work and identify ways to work
together for the benefit of polar bears.

2001

2001



Energy-efficient: Replacing the gas-powered buggy with an efficient battery-powered model means a cleaner, quieter future for Arctic fieldwork and outreach. The new fiberglass materials offer amazing thermal efficiency, and the windshield and windows are lighter and larger.

Next-level broadcasts: A fully equipped, state-of-the-art media studio allows our team to produce world-class programming with enhanced lighting, screens and power access, sharing polar bear conservation stories with millions around the globe.

14

2003



PBI experiments with a distance learning program, later called Tundra Connections®, that connects students with a scientist on a Tundra Buggy.

© Daniel J. Cox / naturalexposures.com

2005

PBI and FNA set up a high-speed Internet link on the Cape Churchill Tower and stream live footage of the polar bear migration from Tundra Buggy One to the PBI, FNA and National Geographic websites.

2013



Google Street View mounts a Trekker backpack on top of Tundra Buggy One and maps the tundra near Churchill, capturing polar bears and other wildlife.

© Simon Gee



2020

In response to a surge in demand during the pandemic, PBI launches a spring Tundra Connections series with partners. Viewership of PBI's educational programs skyrockets by 900%.

© Kt Miller /Polar Bears International

2023



The LEGO Group joins PBI in Churchill during bear season, partnering on a Tundra Connections webcast that greatly amplifies PBI's reach.

© Handcraft Creative

2003

2005

FNA provides PBI with exclusive access to Tundra

Buggy One for outreach efforts, including the Polar

Bear Cam and Tundra Connections. Partnerships

with companies, other

2009

nonprofits and zoos help greatly expand the reach.

2009

2010

2011 2013

PBI and FNA partner with explore.org on the Polar Bear Cam, expanding on earlier efforts. It reaches over four million viewers in its first year.

2011

The Martha Stewart Show visits Churchill and broadcasts live from Tundra Buggy One, the first of many live media broadcasts in the years to come.

2010

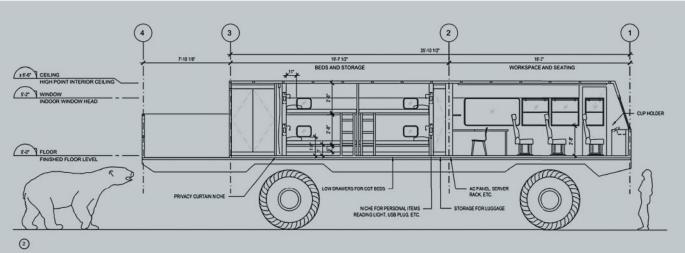
2023 2025

2020

After bringing polar bears to the world for 16 years, the original Tundra Buggy One gets a well-deserved retirement as a permanent attraction near PBI's interpretive center at the Polar Bears International House.

A fully electric Tundra Buggy One debuts.

2025



Expanded Capacity: We've increased space to accommodate up to 12 researchers, media teams and guests during day trips, and overnight accommodations for six, enhancing our ability to host critical missions in the field.

Quality of life improvements: Our staff spend days at a time working aboard Tundra Buggy One. Now buggy life will be more comfortable, with increased privacy, temperature and lighting controls, plus a kitchen, sink and shower.



"This is a place that I deeply care about, and to share it with guests is such a privilege. To see them fall in love with the natural world up in Svalbard or wherever they are is important to me, because I think it's easier to protect something if you care."

— Hilde Fålun Strøm

Polar Bears International Ambassador-at-Large

Top right photo: Visitors and guides explore the sea ice near Svalbard, Norway.

© Handcraft Creative

Top left: Professional guides on Arctic expeditions feel a powerful responsibility to send visitors home with actions they can take to protect this fragile ecosystem.

© Handcraft Creative

Bottom: "Being an expedition leader and guiding is what I love," says Hilde Fålun Strøm, Arctic guide, explorer and Polar Bears International's ambassador-at-large.

© Handcraft Creative



ARCTIC GUIDES ARE AT THE FOREFRONT OF POLAR BEAR EDUCATION EMPOWERING ARCTIC GUIDES

For most people, visiting the Arctic is a once-in-a-lifetime opportunity to see one of the most beautiful and wildlife-rich regions on Earth, with sightings of polar bears high on most guests' bucket list. The professional guides on these expeditions share their knowledge and love of the Arctic and feel a powerful responsibility to send visitors home with actions they can take to protect this fragile ecosystem.

"Being an expedition leader and guiding is what I love," says Hilde Fålun Strøm, Arctic guide, explorer and ambassador-at-large with Polar Bears International (PBI). This is a place that I deeply care about, and to share it with guests is such a privilege. To see them fall in love with the natural world up in Svalbard or wherever they are is important to me, because I think it's easier to protect something if you care."

To ensure that Arctic guides are equipped with the most accurate and up-to-date information on polar bears and their sea ice home, Strøm has been supporting PBI's work to develop resources exclusively for those guiding in the region. The Polar Bear Handbook for Arctic Guides, written by PBI experts, is designed to help guides answer questions from guests about every aspect of polar bear biology, ecology and conservation. It will be updated annually in response to guide feedback, new scientific findings and emerging conservation challenges.

Complementing this work, PBI hosted our first of two new annual webinars for guides in April exploring their critical role in polar bear conservation, the research behind PBI's conservation efforts in Svalbard and how guides can foster nuanced conversations about climate change and sensible climate action.

To date, hundreds of guides have joined the network, downloaded the handbook and taken part in the first webinar. They're part of a fastgrowing network of trusted messengers reaching the audiences who care most about the future of polar bears.

Strøm is often struck by visitors' emotional response to the fragile beauty of the Arctic and its wildlife.

"Any time we're sailing in an area where we might expect to see polar bears, and we get a chance to actually do so, that's always a highlight for me as a guide," she says. "And all the wildlife we see is very special. And the nature more generally, the remoteness, it's so different. I've seen guests moved to tears because they're blown away with the nature they've experienced. So, yeah, it's really a privilege to be a guide."

At the same time, she continues, while guests obviously want to have a good time and make special memories, it is important for her that they leave with an understanding of what is at stake for polar bears and the Arctic ecosystem.

"The median temperature on Svalbard has risen by 10° F (5° C) since I moved here in 1995," she explains. "And we need big shifts in our society to address that. In addition, I personally really like to connect with people heart to heart when they're visiting the Arctic. I believe that if we can open people's hearts, we can make sure they feel the connection to the natural world. I do believe that action done by individuals collectively is going to move the needle."

Experience the Arctic like never before

Travel with purpose. Protect what matters.

Join Polar Bears International on an unforgettable journey to the front lines of polar bear conservation. Travel with our experts to Churchill, Manitoba or Svalbard, Norway—two of the most breathtaking and critical regions for polar bears in the wild.



CHURCHILL, MANITOBA, CANADA

In Churchill, the "Polar Bear Capital of the World," view polar bears in their natural habitat and explore firsthand the work being done to ensure their survival in this sub-Arctic region.



SVALBARD, NORWAY

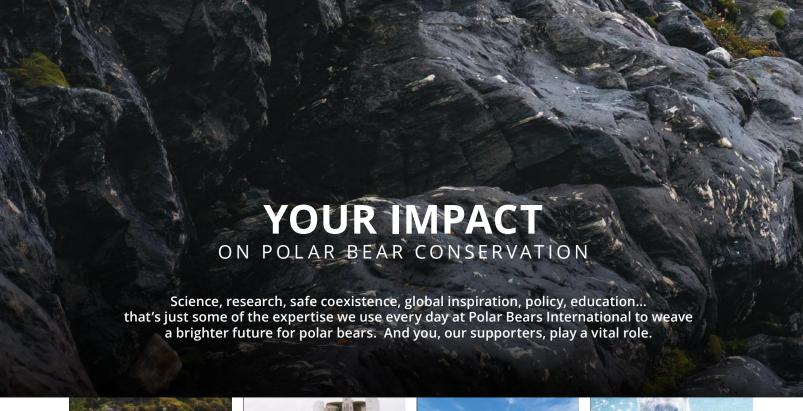
In Svalbard, witness dramatic glaciers, Arctic wildlife, and the stark beauty of a world few ever see—all while learning how climate change is reshaping this remote archipelago.



Be part of something extraordinary. Each trip offers exclusive access to PBI scientists, immersive learning opportunities, and the chance to see the Arctic up close.

Visit **pbears.org/travel** or email **travel@pbears.org** to learn about opportunities to join us in the Arctic.







© Daniel J. Cox / naturalexposures.com

© Handcraft Creative

Maternal Den Study

We placed **five remote cameras** at den sites in Svalbard, Norway. What we witnessed were profound, tender moments between mothers and cubs, as well as the quiet strength of survival in harsh conditions. This footage isn't just heartwarming; it has led to a groundbreaking paper with fresh insights into polar bears' behavior.

Tech Innovations

We're not afraid to think outside the box. Your generosity enabled **three tech research projects** this year. These include finalizing field research on the use of "Beardar" to detect approaching bears and working with partners to fine-tune the AI component of this radar system. We also published a paper on our "Burr on Fur" tracking tags, a valuable new tool to monitor polar bears.



© Annie Edwards / Fabric Media

Next Generation Researchers

Securing the future of conservation requires investing in the next generation of leaders. Your support helped us fund three postdoctoral researchers and mentor early-career scientists, equipping them with the tools to lead, communicate and inspire. Whether serving as ambassadors in our interpretive centers, contributing articles to our website or joining outreach efforts, these rising scientists are helping bring polar bear conservation to new audiences around the globe.



© Brookfield Zoo Chicago

Arctic Ambassador Centers

We celebrated the 20th anniversary of this network of zoo and aquarium partners across the United States, Canada and Europe. Together we reach 49 million visitors and 360 million social media users. We collaborate to share the story of polar bears and climate change with audiences of all ages, inspiring action for a better future.





© Mike Spence

Churchill Bear Smart Working Group

We continue to support Churchill in becoming the world's first Polar Bear Smart Community, building on the town's already robust efforts. Thanks to your generosity, we provided six bear-resistant waste bins, enhanced protections around the landfill and initiated work on designing a more effective electric fence system adapted for Arctic conditions.



© Hilde Fålun Strøm

International Collaboration

We hosted the first-ever Polar Bear Safe Community Exchange in Churchill, Manitoba, bringing together residents from Manitoba, Ontario and Svalbard. The result? A vibrant exchange of ideas and experiences on living safely with polar bears. Participants are already applying what they learned, inspiring safer practices and stronger community connections.



© BJ Kirschhoffer / Polar Bears International

Expert Commentary

Policymakers and the media rely on our scientific expertise. Your support allowed us to provide in-depth expert commentary, grounded in the latest scientific data, on a range of topics—from implementing an international polar bear conservation plan to advocating for stronger protections in the United States and vital coexistence measures in Canada. Together, we're ensuring polar bears stay at the forefront of conservation conversations.



© Dave Allcorn / Polar Bears International

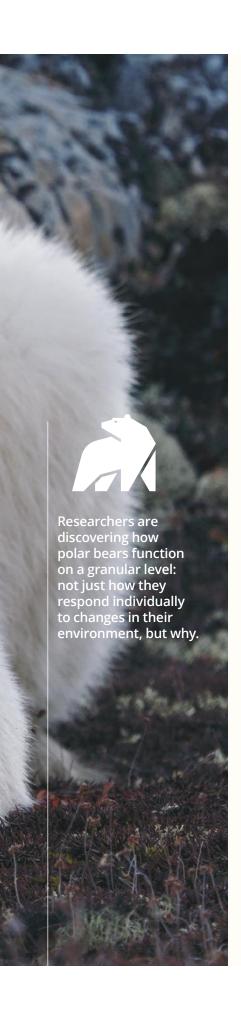
Global Media Reach

Because of you, science-based stories about polar bears, sea ice and climate change reached a global audience. We were featured in **over 3,000 media stories** by outlets including *The New York Times, BBC News, National Geographic* and The Associated Press. Your support ensures polar bears stay in the headlines.









THE BUILDING BLOCKS OF

POLAR BEARS

What makes polar bears tick?

THE NEW FRONTIER OF POLAR BEAR RESEARCH **GETS BACK TO BASICS**

Despite the fact that polar bears are inherently difficult to study, researchers have, over the last few decades, managed to learn a great deal.

We know their geographical range, their preferred diet, the vast distances they can wander, the normal number of cubs in a litter and more. We have a best estimate of their global population, we divide them (for now) into 20 populations and recognize that as the climate warms and sea ice diminishes, polar bears — at least in parts of their range — are having less reproductive success, are becoming nutritionally stressed and are declining in numbers.

What still is not fully understood, however, is how polar bears function on a granular level: not just how they respond individually to changes in their environment, but why. To Dr. John Whiteman, chief research scientist with Polar Bears International (PBI), that's the new frontier of polar bear research, and it's one in which PBI is intimately involved.

"Population level monitoring has substantiated the strong link between polar bear abundance and sea ice conditions," Whiteman says. "But it takes an incredible amount of effort, and even when you are able to do that, it leaves open the question of: What is the mechanism? So sea ice did this in year X, and in the following year, the population did this. Why? Exactly how?"

Understanding with greater precision how individual polar bears interact with their environment is, Whiteman continues, key to understanding variations in how populations respond when that environment changes.

Even resting is a workout for a polar bear. They need a great deal of energy simply to keep their heart beating, blood pumping and organs functioning.

© Daniel J. Cox / naturalexposures.com



One key to answering these questions is a field of study known as energetics. As its name implies, this aims to establish how much energy a polar bear uses in a range of activities, from walking to resting, and how much it gathers from eating seals and other food. In theory, with enough data, it is possible to figure out how much energy a bear would lose by, for example, being forced ashore by melting ice a week earlier than usual, what that might mean for its physical condition and how that might translate to the population were it to happen to multiple bears for multiple years.

BREAKING IT DOWN

The first step is to determine how much energy a polar bear uses when it is simply resting. And the easiest way to do that is with a bear in captivity.

Dr. Anthony Pagano of the U.S. Geological Survey and colleagues sought to do just that in a 2018 study of metabolic rates in Southern Beaufort polar bears. For comparison, they measured the oxygen consumption of bears in captivity and found, says Whiteman, that the species has "a higher resting metabolic rate than was previously appreciated."

What that suggests is that polar bears already have the odds stacked against them because they need a great deal of energy simply to keep the heart beating, blood pumping and organs functioning. Which means that they are likely to be especially vulnerable when a larger number of ice-free days limits their ability to find food.

The next step is to measure energy consumption in wild polar bears — by weighing, or injecting a harmless tracer called doubly labeled water, which tracks energy



A polar bear makes its way over the rugged ice of the Beaufort Sea. Kaktovik, Alaska. A precise understanding of how individual polar bears interact with their environment is key to understanding how populations respond when that environment changes.

© Daniel J. Cox / naturalexposures.com

expenditure — and then recapturing and reexamining those same bears later.

The challenge then is to combine these two data sets — existing and extensive satellite data on polar bear movements and newly acquired information on energetics — to create a clearer image of how individual bears respond to environmental changes and how that might be reflected at a population level.

NEW FRONTIER

At the forefront of such work is PBI research fellow Dr. Louise Archer, who this year has published two studies that show how effective it is to combine the two approaches.

One study, written with Pagano and Stephen Atkinson and published in *Arctic Science*, examined the body condition of polar bears at two different points in the spring up to 39 days apart and then modeled what that revealed about their eating habits. Several bears showed a significant weight difference — some heavier, some lighter — between the two captures, highlighting that, even during







their peak hunting season, polar bears tend to either feast or fast — they are gorging or not eating at all. The study also showed that the window in which feasting takes place is apparently shorter than previously believed.

The second study, published in Science and written with Atkinson and Péter Molnár, developed an "energy budget model" for polar bears, which tracks the energy balance of an individual polar bear across its entire lifetime, accounting for incoming energy from feeding and energy spent on movement, growth and reproduction, amongst other processes. It then compared those model simulations to four decades of historical data from the Western Hudson Bay polar bear population. Not only did it underline a quantifiable link between sea ice and bears, it also showed that cubs are by far the most vulnerable to climate change, and their survival significantly impacts the population.

PBI is continuing to support the work of Archer and other researchers, as they continue to drill into the minutiae of what makes polar bears tick. Not only is it exciting that scientists are still gaining fundamental insights into polar bears, but understanding the basics could unlock new ways of understanding populations across the Arctic, providing guidance to help ensure their continued survival.

Top photo: A polar bear breaks through the newly forming ice of Hudson Bay and has to swim. Manitoba, Canada. New studies in polar bear energetics can give us insights into how much energy a polar bear needs to walk, rest and swim.

© Daniel J. Cox / naturalexposures.com

Center: Polar bear jumping on ice floe in the Northwest Territories, Canada.

 $\ensuremath{\texttt{O}}$ Daniel J. Cox / natural exposures.com

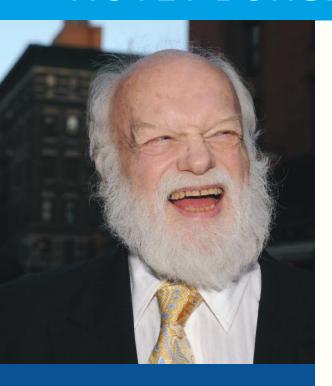
Bottom: Hunting isn't always an active affair. Polar bears can locate seal breathing holes with their powerful sense of smell and wait for the seals to emerge. And the wait can be long — sometimes hours, or even days.

© Madison Stevens / Polar Bears International



MEET POLAR BEAR PATRON

HOVEY BURGESS



"The Arctic is warming twice as fast as anywhere else. Some people see that as an opportunity for industry. I see it as a call to protect what's left."

—Hovey Burgess



Becoming a **Polar Bear Patron** is one of the most powerful ways to support polar bear conservation year-round. It's simple, impactful and ensures that together, we can keep this iconic species in the wild for generations to come.

From the circus ring to the Arctic tundra, Hovey's life is anything but ordinary — and his commitment to polar bears is just as inspiring.

Why do people support polar bear conservation? Ask ten supporters and you'll hear ten unique stories. But none quite like that of Hovey Burgess.

Now 84, Hovey has spent a lifetime performing under the big top — mastering the art of juggling, teaching circus arts at NYU for 50 years and even performing with (and as!) a polar bear. A showman at heart, he's inspired generations of performers, including actors Debra Messing and Mahershala Ali.

But it's not just the stage that captures his heart, it's the polar bears themselves.

Hovey's passion for polar bears began with his mother, who adored them. In her memory, he began symbolically adopting polar bears, eventually finding a meaningful home with Polar Bears International. Today, Hovey is a proud Polar Bear Patron, giving monthly to support our research, outreach and advocacy.

"My apartment is full of polar bears," he laughs. "Stuffed animals, sculptures, artwork — you name it. But I want to help protect the real ones, too."

In 2018, Hovey visited Churchill, Manitoba, the polar bear capital of the world. Even though the bears had mostly moved on to the ice by the time he arrived, he still calls it one of the most magical experiences of his life. He's even made a short film about the trip, starring himself as a polar bear, of course.

His support as a monthly donor helps ensure that Polar Bears International has reliable funding to plan ahead, respond quickly and sustain the long-term work needed to protect polar bears and their fragile Arctic habitat.

"I don't know what's more important than saving these canaries in the coal mine," Hovey says. "The Arctic is warming twice as fast as anywhere else. Some people see that as an opportunity for industry. I see it as a call to protect what's left."

Hovey gives monthly. Will you?

Becoming a Polar Bear Patron is one of the most powerful ways to support polar bear conservation year-round. It's simple, impactful and ensures that together, we can keep this iconic species in the wild for generations to come. **



Become a Polar Bear Patron and give monthly to protect what's wild and worth saving. Your steady support powers research, education, and climate action throughout the year.









Why Give Monthly?

- Provides reliable, ongoing support
- Maximizes impact throughout the year
- Enables quick response to urgent needs
- Strengthens efforts to protect polar bears
- Connects you to a dedicated community
- Makes giving simple and convenient



Be their constant.

Become a Polar Bear Patron today.

Scan the QR code or visit **pbears.org/polarbearpatron** to start your monthly gift.







Two layers of fur

Polar bears have 2 layers of fur that prevent almost all heat loss. In fact, the fur keeps the so warm that adult males can quickly overheat when they run. Surprisingly, their fur isn't actually white. It just looks that way. Each hair shaft is pigment-free and transparent with a hollow core that scatters and reflects visible light.





Massive paws

Polar bear paws are ideal for getting around in the Arctic. They're huge — as big as dinner plates — and measure up to 30 cm (11.81 in) across. This helps the bears walk on thin ice without falling through. The polar bear's super-paws are also great for swimming. The forepaws act like large paddles and their hind paws serve as rudders.

WONDERFULLY **ADAPTED**

Big, bold and built for cold





In the Arctic, temperatures can plunge to -40° or -46° C (-50° F) in winter and stay that way for days or weeks. But polar bears are built for those conditions.

From fur to skin, to paws and claws, the sea bear's physique is designed to protect them from the cold, hunt seals and dominate the Arctic.

Photography: © Daniel J. Cox / naturalexposures.com Illustrations: © Peppermint Narwhal



There are many ways you can contribute to our mission, each offering unique benefits that allow you to make a meaningful impact while also maximizing your giving potential.

Together, we can ensure a future for polar bears



Explore these alternative giving options and discover how your support can go even further.

Donor-Advised Funds (DAFs)

Do you have a Donor-Advised Fund (DAF)? It's an easy way to make a meaningful gift to polar bear conservation. Simply recommend a grant from your DAF to Polar Bears International and help protect the Arctic.

Give from your IRA

If you're 70% or older, you can make a tax-free gift from your IRA directly to Polar Bears International. This is a simple way to support our mission while reducing your taxable income.

Donate appreciated stock

Turn your investments into a lasting legacy. By donating appreciated stocks or securities, you not only support polar bear conservation, but you can also benefit from tax savings.

For more information or to discuss the best giving options for you, contact **Amy Lester**, **Major Gifts Officer**, **at** (406) 530-5435 or **alester@pbears.org**.



polarbearsinternational.org/act-now/other-ways-to-give/

Take the Polar Bear Quiz



What is a group of polar bears called?

- a) A blizzard
- b) A pack
- c) A celebration
- d) A herd

Why do polar bears have small ears and tails?

- a) To make them look cuter
- b) To help them blend in with the snow
- c) To conserve body heat
- d) To look like grizzly bears

On average, how long do polar bears typically live in the wild?

- a) 10-18 years
- b) 19-29 years
- c) 30-39 years
- d) 40-49 years

How does polar bear fur help keep them warm in freezing Arctic temperatures?

- a) It traps warm air in two layers
- b) It contains antifreeze proteins like some Arctic fish
- c) It changes color with the seasons
- d) It converts UV light to heat via fiber optics

What percentage of polar bear hunts are successful on sea ice?

- a) 10%
- b) 50%
- c) 20%
- d) 2%



A PASSION FOR POLAR BEARS

FREDDY GAMBLE



"How can we imagine a world without polar bears for our children and grandchildren? I can't, and I won't — and that's why I'm so passionate in my support of PBI's work."

— Freddy Gamble

Top photo: © Daniel J. Cox / naturalexposures.com Bottom: Courtesy of Freddy Gamble As one of the original contributors to the creation of Polar Bears International (PBI), Freddie Gamble holds a unique place in our history. It all started with a conversation that took place on a Tundra Buggy®, with polar bears outside. While she was already a passionate fan of polar bears and the Arctic ecosystem, the experience sparked Gamble's decades-long involvement with PBI and polar bear conservation.

The story began nearly 40 years ago when Gamble's mother, who shared her love of nature and wildlife, urged her to travel north to Churchill, Manitoba, Canada, to see polar bears on the shores of Hudson Bay.

"She knew the experience would stir my soul, and so, on an extremely cold November day in the mid-1980s, I saw my first polar bear — and I was hooked," Gamble recalls.

Riveted by the experience, Gamble returned to Churchill time and again as part of a group led by photographer Dan Guravich, sometimes joined by her mother, who traveled to wild places well into her eighties. During one of those trips, as the group watched the bears from a Tundra Buggy, Guravich broached the subject of founding a nonprofit focused on polar bears and their sea ice home. "Polar bears need a voice, someone to speak up for them," he said. "There are organizations for elephants and pandas — why isn't there anything for polar bears?"

The growing concern that Gamble felt for polar bears led her to embrace the idea, along with others on the buggy. And so the organization now known as Polar Bears International was born. "Today it is a global force in polar bear and Arctic conservation," Gamble says, "with a lean, focused, whip-smart team."

When PBI was founded, Gamble was tapped as a board member. She held the position for more than 30 years before becoming a board advisor. And because she remains so committed to polar bear conservation, she has included a bequest for PBI in her estate, making her part of a passionate group of Arctic Circle Legacy Society members.

"I support the work of Polar Bears International because I care about polar bears, and I'm convinced that PBI's science-based, collaborative approach is the right formula for success," she says. "Polar bears face a daunting challenge, and the planet faces a daunting challenge, but quitting is not an option. If you care, you have got to be involved."

Gamble says that her mother's love of nature and wild places was one of her greatest gifts to her, a gift guided by her mother's generous spirit and belief in conservation. Carrying on that legacy through a commitment to the bears and to PBI is important to Gamble, now and in the future.

"How can we imagine a world without polar bears for our children and grandchildren?" she asks. "I can't, and I won't — and that's why I'm so passionate in my support of PBI's work."

Leave a legacy for the Arctic

A legacy gift will contribute to our long-term growth to ensure that our children and grandchildren will experience the beauty and majesty of wild polar bears.

Ways to Give:

- Include Polar Bears International in your will or as a beneficiary of your estate.
- Contribute to our Endowment Fund to secure long-term conservation.
- Gift of Securities
- Life Insurance Gifts

Join us in making an impact on our shared future.

For more information, contact: **Amy Lester**, Major Gifts Officer (406) 530-5435 alester@pbears.org or visit **pbears.org/makeawill**

Photography: © Daniel J. Cox / naturalexposures.com









THE POWER OF COLLABORATION

The surprising partnerships at the heart of polar bear conservation

Polar bear conservation, to borrow a phrase, takes a village. It takes scientists to do research, journalists to report their findings, policymakers to set guidelines and people like you to support research and education. It also requires the involvement of Arctic communities that live on the frontlines of climate change and share a landscape with these large and powerful carnivores.

The challenge is to bring these disparate voices together so they can learn from each other's perspectives. This is why Polar Bears International (PBI) works to convene community members, scientists, managers and others to share information and advance polar bear conservation.

CHURCHILL LEADING THE WAY

Churchill, Manitoba, is synonymous with polar bears for many, and PBI has been committed to collaborating and working with the community for decades. What began as seasonal visits by PBI staff to observe polar bears has become a year-round presence.

Education has always been an essential pillar of PBI's mission, and when it comes to communities like Churchill, that cuts both ways: we are there to learn as well as share.

In 2022, PBI's then-Director of Field Programs and Relations Kt Miller began a project to document Indigenous knowledge of human-polar bear coexistence in Churchill, as part of her role at PBI and for her master's thesis at Royal Roads University — work that was also supported by Environment and Climate Change Canada. Using a storytelling approach, Miller collaborated with Cree Elder and lifelong Churchill resident Georgina Berg to explore how Indigenous people in the region coexisted with polar bears in the past, how they live with them in the present and how they envision coexistence in the future. They are sharing their findings through scientific publications and conferences, and Miller created podcasts of the stories to share with the community using a storytelling approach.

In 2019, the town of Churchill approached PBI for assistance and advice in establishing a "bear smart" program to help keep both bears and people safe. Over the last several years, the program has purchased and placed bear-proof garbage containers around town, produced bear-safety videos and other

materials and established regular end-of-season debriefs between provincial officials and tour operators. The working group has also recommended changes to the capture and relocation of bears that get too close to human activity.

SHARING SKILLS ACROSS THE ARCTIC

Churchill is not the only community where polar bears and polar bear tourism are important elements of life and the economy. Another is Longyearbyen, Svalbard, Norway, where PBI also maintains an ongoing presence. Naturally, both places experience some of the same issues and challenges — but each also has its unique experiences and solutions.

In 2024 PBI initiated an ongoing information exchange program between the two communities so they can discuss concerns, problems and solutions. Topics range from managing human-bear conflict and tourism to strategies for managing polar bear attractants like garbage in such remote locations.

At an exchange held in Svalbard this summer, the inspiration flowed both ways between the Svalbard residents and visiting representatives from Manitoba and Ontario in Canada. The Canadian team shared their deep generational knowledge of bear behavior, while gaining fresh ideas from Svalbard's efficient waste management — a key tool in reducing polar bear encounters with people.

But the true value of the exchange is what happens after the participants have returned home.

At an exchange held in Svalbard this summer, the inspiration flowed both ways between the Svalbard residents and visiting representatives from Manitoba and Ontario in Canada.

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© Aaron lanzen / Oceans North

O Daniel J. Cox / naturalexposures.com

© Daniel J. Cox / naturalexposures.com

"What we're really after is helping people create long-term relationships," says Geoff York, PBI's senior director of research and policy, and lead on the exchange. "A week from now, a month from now, five years from now, they can reach out to their counterpart in another northern community when a problem arises."

INNOVATIVE SOLUTIONS FROM SURPRISING PARTNERSHIPS

How much energy does a polar bear use while swimming? What seems like a basic research question becomes extraordinarily difficult and expensive to answer when it comes to wild polar bears and their famously inhospitable and remote habitats. A collaboration between zoos and field researchers is allowing scientists to gather information about polar bears that would otherwise be impossible to collect.

The Polar Bear Research Council is an ad hoc group of scientists and conservation professionals supporting polar bear research in zoos and aquariums in North America. It arose from a meeting that PBI convened at a conference of the International Bear Association in 2013 that identified crucial research needs zoos could address, fostering collaborations between zoos and field researchers.

That led to the development of the Polar Bear Research Masterplan, which guides and prioritizes scientific studies involving AZA (Association of Zoos and Aquariums) facility polar bears, and emphasizes the important role zoo-based research plays in advancing conservation outcomes for the species. Today, the masterplan is used by zoos across North America and has inspired a similar project in Europe.

"WE BRING PEOPLE TOGETHER... AND THAT RESULTS IN COOL THINGS"

Sometimes, the most productive cooperation springs up informally, in the course of other work.

"That's one of our strong suits, if you will," says Geoff York, PBI's senior director of research and policy. "We're conveners. We bring people together who wouldn't otherwise be in the same room at the same time, and that often results in cool things. That could be something as simple as holding a

reception saying, 'Hey, let's all gather and just informally hang out."

PBI has held such gatherings regularly at meetings of the International Bear Association, with one such gathering leading to the development of a paper that urged governments to develop management and conservation plans for polar bears in the event of a "worst case scenario" such as two or more consecutive bad ice years.

"Our thought at the time was 'Let's look at some scenarios. Let's look at what could happen and what there might be public pressure to do in response and let's also ask the question of whether governments are prepared," York explains.

A similar gathering prompted the convening of genetics researchers in Winnipeg, Manitoba. That led to the sharing of knowledge on the growing field of polar bear genomics and the production of several papers on what such research can tell us about how polar bear populations are likely to respond to climate change. The lead author of the papers was PBI's postdoctoral fellow Ruth Rivkin.

BRINGING THE RIGHT PEOPLE TOGETHER FOR MAJOR LEAPS FORWARD

In polar bear conservation as in so many other walks of life, sharing ideas, experiences and information can often lead to unanticipated revelations and solutions. Protecting polar bears is about so much more than simply declaring them a species in danger. It involves field research, computer modeling, policy decisions, education, community support and even waste management. No one group can address so many disparate topics alone.

"We've learned that bringing the right people together can lead to major leaps forward," says York. "What makes us different is that we're committed to taking those risks and having a bigtent approach to polar bear conservation."

Such broad-based cooperation is challenging and requires substantial investment — of expertise, time, and finances. But for PBI, it is the cornerstone of polar bear conservation. We are forging a coalition that transcends borders and disciplines, dedicated to securing the polar bears' future. **



STAYING HOPEFUL WITH CLIMATE STEPS THAT MAKE A DIFFERENCE

KAYLA MCCURRY



Polar Bears International's Kayla McCurry inspires visitors to the Polar Bears International House in Churchill to bring climate optimism and action back home to their communities.

© Larissa Thelin / Polar Bears International

"My definition of hope is a verb."

— Kayla McCurry

Conservation Outreach Manager, Polar Bears International For those of us who care about the Arctic, polar bears, and the impact of global climate change on communities, it can sometimes feel as if we're being overwhelmed with relentlessly bad news.

If you've ever felt your hope begin to fade from time to time, don't worry: you're not alone. Our chief climate scientist, Flavio Lehner, says that he sees what he calls "climate despair" in his students at Cornell University.

But, he notes, while understandable, such despair can be paralyzing.

"We can't afford for these young people to start out their careers with such a mindset," he says. "Instead, we need constructive optimism to help bring about the changes we need."

The good news is that the situation is far from helpless; and there are so many ways we can make a difference, together.

Sensible steps, big change

I remain hopeful, but not in a magical or abstract sense. My definition of hope is a verb. There are many, many ways in which all of us can contribute, and being hopeful primes us to look for those collective solutions that will reduce our energy use, and shift our societies to renewable energy. It all starts within our communities, and our impact can be exponential.

Lean into your skills and interests

You are going to be able to have a larger impact by taking action in an area that you are passionate about and brings you joy.

Find your sphere of influence

Think about home, work, school, and your community. Can you influence the workflow or identify areas of inefficiency? Are you in a decision-making position that could impact the way you do your work or purchasing at your job? Is there a community solar project you can rally support for?

Talk about climate

Research tells us that a majority of people are concerned about climate change, but they are self-silencing because they're convinced they have the minority opinion. If we can empower the majority who are already concerned to start talking with their friends and families, we can continue to turn the tide on this misconception and really start mobilizing for change.

In other words: instead of worrying about what we can't control, we should concentrate on what we can. In the words of marine biologist Dr. Ayana Elizabeth Johnson, "No one can do everything, but everyone can do something."

In so doing, she says, we not only nourish our own joy, we restore our sense of hope. And hope, she explains, "is a motivation for a better world. It won't be a perfect world, but it will be filled with beauty and wonder."

We can come together to address climate change, and keep working so that sustainable choices are the easier choice for more people. It is all of us as a collective that will move the needle, and the power in that keeps my hope alive.



SHAPING THE FUTURE OF CHURCHILL

WYATT DALEY

Wyatt Daley is an owner, with his father Dave and family, of Wapusk Adventures, an Indigenous owned-and-operated tour company in Churchill, Manitoba, Canada. The company is famed for its sled dog tours and introduction to the region's Indigenous culture. Here, Wyatt shares his thoughts about growing up and living in Churchill and the importance of youth involvement in decision-making.

What is it like growing up mushing dogs in the polar bear capital of the world?

It's definitely special. That said, it was always just normal for me. I've had dogs my whole life, and for as long as I can remember, I've been involved in tourism. And the polar bears are just a part of life when you grow up here.

We're right on the main street of town, so it's just tundra and train tracks behind our place. And so we've always had bears basically in the back yard. My dad has almost been eaten three or four times!

My son's going to be four in September, and in bear season, especially at the peak, when there are bears basically everywhere, you have to change your routine. You can't play outside at night.

Obviously, Churchill's uniqueness attracts a lot of tourism, and I'm sure some people chafe at the number of visitors. But that tourism supports the community, doesn't it?

Companies like Frontiers North Adventures, Natural Habitat and Great White Bear make positive impacts on our community. They're not just here to, you know, pull every dollar out and then they're gone. They're ethical businesses that invest in our community by always donating to different local programs and even doing stuff like making breakfast for the kids at our school or big events to feed our community.

So I feel like we've got a great network of tourism businesses. And they not only support the community, they work with the local Indigenous businesses to help share Indigenous stories and experiences with their guests, making them feel more connected to Churchill and to the place. It's about more than the bears and the belugas and the northern lights.

As an outsider, it feels that Indigenous voices are finally being heard more and more in Arctic affairs. Is that true, and as an Indigenous person yourself, how does that affect you?

If you look at Arctic Gateway, the company that bought the train tracks and restored train service to Churchill and is looking to revive the port, they're a consortium of First Nations communities. Having that Indigenous input, and Indigenous people of this area being so involved with the comeback of the port and moving the town forward, I think that's really important. Because this is the land that we're from, that we've been from, for generations.

When you look at tourism as well, Indigenous tourism is obviously a growing market. And that's been huge for the tourism industry in Churchill as well. It's important for Indigenous people to have their own businesses and to share their culture. It's important for us to be able to stand tall, be proud of who we are, keep our traditions alive and maybe inspire younger generations to say "This is who we are, and we're proud of who we are."

Polar Bears International recently supported your attendance at the first Arctic Youth Summit, held in Tromsø, Norway. Tell us about that.

That was such a great experience, especially to be able to hear from people across the Arctic and to share my perspectives on how we coexist with polar bears in Churchill. There was a strong emphasis on science and policy, which was a little out of my comfort zone, given that my focus is more on Indigenous tourism. But it was really interesting to be able to hear, for example, Sámi reindeer herders talking about their way of life being under threat, or an Indigenous woman from Alaska who explained how her community is fighting to be able to continue to catch salmon for subsistence, even as trawlers are taking huge amounts in the Bering Sea.

The whole conference was about youth leadership and involvement in decision-making. Across the Arctic, young people are dealing



It's really important to have spaces like this conference where we can share our stories and priorities and grow more united. I walked away educated and connected, with thoughts in my head and feelings in my heart.

What do you want people to know about life in Churchill?

People in big cities often have to worry about crime and look over their shoulders and we don't have that. I mean, we still have to look over our shoulders but for a very different reason! You've always gotta pay attention; I'm teaching my son that you've always gotta keep your head on a swivel.

If you're visiting in October or November — or even the summertime — and it's 10 o'clock at night, make sure you have a ride home.

But it's also special. It's a special place to grow up, a special place to share with the people that come here and a special place that we need to protect for future generations. Whether you're coming for the northern lights, the beluga whales or the polar bears, it's a wow factor every time you come here. It resonates with people. I love that I get to share my family, our story, our culture, our dogs. I love it. And I'm proud to be from here.

Top and bottom photo: @Wyatt Daley



Polar Bear Quiz: Answers (from page 31)



1: C) A celebration

Though polar bears are mostly solitary, this fun term can be used when they gather together. Polar bear scientists are more likely to use an older word: sleuth!

2: A) It traps sunlight and air in two layers

Polar bears have a dense, woolly undercoat and longer guard hairs on top. The outer layer repels water and snow, while the inner layer traps heat. Polar bear fur is also hollow, which helps provide insulation.

3: C) To conserve body heat

Smaller extremities lose less heat — perfect for surviving the Arctic chill!

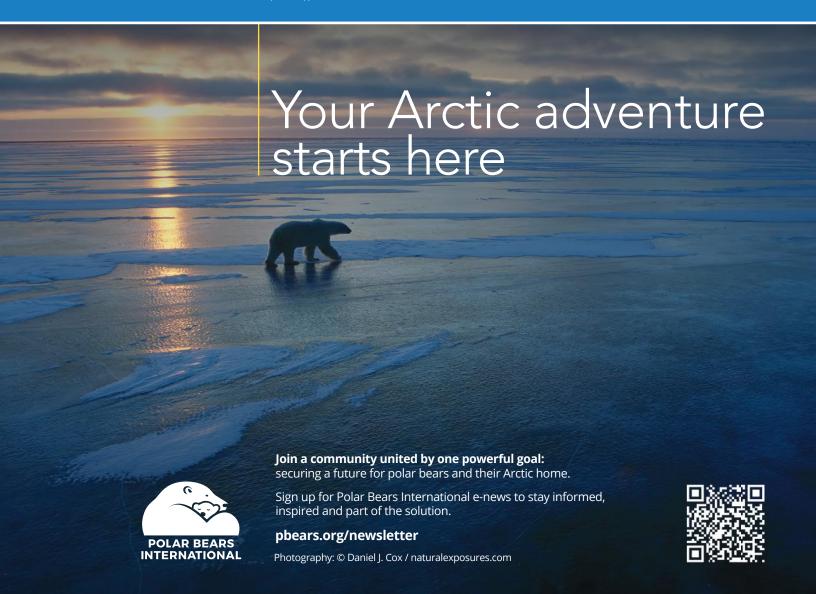
4: D) 2%

Despite polar bears' ability to hunt seals on the ice (and rarely on land and in the water), their success rate remains low — meaning they need to be incredibly resilient.

5: B) 18-29 years

Age ranges depend on whether a bear is male or female. Males can reach early to mid-20s in the wild, but some females can reach their early 30s if conditions are good.

Graphics: Peppermint Narwha



CANADA GOOSE













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