

**ALL
THINGS
BRIGHT**

**ALL
CREATURES
GREAT**

CHURCHILL, CANADA, IS ONE OF THE BEST PLACES TO VIEW THE NORTHERN LIGHTS. THEY DANCE OVERHEAD 300 NIGHTS A YEAR, BUT TEAR YOUR EYES FROM THE HEAVENS AND YOU'LL SEE POLAR BEARS PLAYING ON THE TUNDRA AND BELUGAS FROLICKING IN THE WAVES

PRODUCED IN PARTNERSHIP WITH TRAVEL MANITOBA

WORDS
AMELIA DUGGAN
SARAH BARRELL
PAUL ENGLISH

IMAGE: AMELIA DUGGAN





DANCING IN THE DARK

PREVIOUS PAGE: Polar bear mural
FROM LEFT: Aurora display at the Churchill Northern Studies Centre; enjoying a spectacular Northern Lights display at the Churchill Northern Studies Centre

IMAGES: SUPERSTOCK



Nature flexes its muscles and casts an almighty spell upon the remote, subarctic port town of Churchill during winter, smothering this settlement under thick snow drifts and stilling the tides of the Hudson Bay with a counterpane of ice. Tundra winds blow in from the north west, stripping the branches from spindly spruce trees, and the mercury plummets to well below freezing. Life quietens. Tourist numbers are as low as the winter sun, which slinks lazily across the southern horizon. And yet this harsh, monotonous season is the most beloved by many locals, for its quietude and glittering snowscapes. But also for the spectacular Northern Lights, which dance vividly through the crisp night skies. It's the promise of this ultimate bucket list experience that coaxes me off the warm airplane and into the breathtaking cold. It's -40C.

"A very warm welcome to Churchill," quips Evan, the Churchill Northern Studies Centre (CNSC) programme coordinator, when he meets me at the airport. "I should warn you," he says with mock sternness as we bundle into a van, "the windows might freeze if you insist on breathing." Sure enough, as I peer out at the binary landscape of blinding snow and brilliant sky, my exhalations manifest as fractals on the glass. We follow a coastal road for 14 miles outside of the town to reach my home for the next five nights: a state-of-the-art scientific research facility built among the launch towers of a former rocket range.

After a hearty dinner, my fellow aurora-seekers and I gather in the lecture room to meet astronomy expert Alan Dyer. Our

evenings at the CNSC start with talks from Alan to deepen our appreciation of the Northern Lights, and segue into sky watching — either out on the wrap-around viewing deck or under a cosy glass dome. There's an air of nervous excitement in the room. Alan dims the lights, flicks on the projector, and takes us out into the cosmos. We watch a simulation of the Earth being blasted with solar wind from a coronal hole on the bubbling surface of the sun, and follow these particles as they collide with the atmosphere to create rippling bands of colour. He points out Churchill on a map: we're right under the auroral zone. "We could be in for quite a show this week — scientists have noted a coronal hole turning to face us," Alan concludes with a smile. "The height of any display tends to be around midnight, but shall we go take a look now?"

Outside, I tuck my gloved hands into my armpits, stamp my feet and squint through my hood's furry halo. I can't see much at first. The Northern Lights 'learning vacations' at the CNSC are scheduled to coincide with the new moon for optimum dark skies. It takes a while for my eyes to adjust. Slowly, I begin to make out the multitude of stars, and then I notice something new: a faint arc stretching across the sky, east to west, like the trail of some celestial being. Through it, the stars continue to shine like diamonds. It's the aurora borealis.

A few hours and multiple mugs of hot chocolate later, the display peaks. A shout goes round the building, and I rush upstairs in my slippers to the viewing dome. Directly overhead, the aurora is dancing, snaking, merging and dividing. ▶



Its lines are crisp green, its delicate curtain of rays shimmer violet. It's bewitching — and humbling — and like so many beautiful things, gone too soon. This show lasts only a few minutes. But I find that later, when I curl up in my dormitory, the hypnotic, flickering colours dance once again in my mind.

During the daytimes at the CNSC, I get a glimpse of life in an active research facility. Through the staff, I learn about ongoing projects examining polar bear ecology, botany and climate change. I explore the surrounding wilderness, too, walking on frozen lakes and learning how to build a quinzee (snow shelter) and an igloo, touring the former Cold War-era rocket base, built by the US Army to study the upper atmosphere. In the shadow of a launch building, Evan tells our group about Project Waterhole, an attempt in 1980 by American scientists to “turn off the lights” by shooting a specially designed rocket into the aurora. It largely failed, much to the local community's delight.

One blustery afternoon, we drive to the outskirts of Churchill to meet David Daley, the owner of Wapusk Adventures, who takes us out on a sled pulled by his beloved huskies. We glide through the forest, David crying out commands and encouragement. It's spectacular to move like this through nature. I can feel frost forming on my eyebrows and eyelashes, and notice wisps of hair turning white in the cold. And up ahead, in the blue sky, the sun appears splintered — two bright parheliions, or sundogs, glow on the rim of a wide halo, refracted through the icy air.

Another day, we're taken on a tour of the town. Life in a remote community can be challenging, Evan explains, but with the train line reopened in November 2018 after 18 months, things are definitely on the upswing in Churchill. We stop by the Itsanitaq Museum, where we admire the collection of Inuit art. One painting depicts the ancient belief that the aurora ('aqsrarniit' in Inuktitut) are the souls of the dead kicking a walrus skull between them.

Churchill has historically been the meeting place of different cultures. First, for the Inuit, Cree and Dene, and later for the Métis and those of European descent. It was a place of trade — not only furs and food, but also, inevitably, ideas and culture. So it feels fitting to learn about Inuit cosmology here. One widely held local belief about the Northern Lights is that whistling at them makes them dance — although another superstition holds that such an act invites misfortune, and can lead to the whistler being spirited away. I don't need to risk whistling at the lights: throughout my stay, they appear of their own accord every evening in playful swirls, crowning Churchill's snow-whitened wilds with waves of light, dancing to the rhythm of the cosmos. **AD**

CLOCKWISE FROM ABOVE: Climate change mural in Churchill entitled *The Last Winter*, painted by the Spanish artist Dulk in 2017 as part of the Sea Walls project; two sled dogs at Wapusk Adventures; CNSC's scientific coordinator, LeeAnn Fishback, leads a tour into the boreal forest

AURORA WATCH

Auroral displays are caused by solar storms, the most dazzling of which happen roughly every 11 years (the next is due in 2024). Displays are also triggered at other times during this cycle by bursts of solar wind (electrically charged particles emitted by the sun). Having said this, the sun emits solar wind constantly so there's always some geomagnetic activity. Aurora watchers monitor this using the Kp index.

Solar wind particles collide with atoms in our atmosphere, gaining energy upon impact. When they slow down, they release photons, whose wavelengths we perceive as colours: oxygen atoms generally emit green and yellow light, while nitrogen emits red, purple and (very occasionally) blue.

Northern Lights appearances tend to be quite dim, while red hues in particular are often hard to see. This is because the wavelengths are at the limit of human vision. Cameras are far more sensitive, however, and can pick up colours and displays that the naked eye cannot.

IMAGES: AMELIA DUGGAN



Polar bear investigating a Tundra Buggy in Churchill
RIGHT: Sightseeing on a Tundra Buggy



BEAR WITNESS

THE POLAR BEAR

The world's largest land carnivore, an adult male polar bear can weigh up to 2,000lbs. Their fur is translucent, and only appears white because it reflects the light. Beneath the fur, their skin is actually jet black.

The Churchill Wildlife Management Area covers 3,280sq miles, all of which is protected boreal terrain just outside town. From June to November, the subpopulation of polar bears around Churchill sometimes forage for food on land, leading to an increase in conflicts with humans. Fortunately, in Churchill, the few bears that do make pests of themselves (usually juveniles) are sedated, quarantined in the Polar Bear Holding Facility, then helicoptered back onto the tundra to be released.

Polar bears live in territories that ring the Arctic Circle: Canada, Russia, Alaska, Greenland and Norway.

IMAGES: SUPERSTOCK



The jaw closes, swallowing our driver Neil's head whole. The mandible is massive, dwarfing not just Neil's head but his neck and shoulders too, but all I can focus on is the beast's enormous nasal cavity: a pit-like depth recalling that of a colossal prehistoric predator. "Now I know what a seal feels like," laughs Neil from inside the skull. "He's not wrong," says our resident scientist, Melanie Hout. "Hunting bears clamp down over a seal's breathing hole in the ice, trapping its head. And... well we know who wins there."

We're glad Melanie is with us in the Tundra Buggy. Outside the enormous all-terrain vehicle, sleet is whipping across Northern Manitoba's flat tundra wilderness. Melanie is a volunteer scientist from conservation organisation Polar Bears International. A welcome distraction, her demos are accompanied by fascinating ursine facts that paint a rich picture of what, we hope, is to come. Sightings are near-guaranteed on the Hudson Bay's shores in October, when the nomadic beasts gather in the hundreds, waiting for sea ice to form so they can step out across the frozen bay to hunt.

Wildlife tourism — boosted by huge numbers of polar bear sightings in recent years — has put this outpost in the far north of Manitoba firmly on the map. Its fur trade heritage and remote location (access is by air, rail or sea only) make for an absorbing frontier town vibe. Roads peter out in the boggy tundra just beyond the centre. With nowhere to go, car theft is pointless, so residents leave vehicles unlocked, providing useful refuges from a charging polar bear. Although the chances of that happening are greatly

diminished now the town's rubbish dump has been replaced with a secured facility.

It's on the tundra that the real action happens. For tourists with deep pockets, overnight stays in the Tundra Buggy Lodge offer the chance to spot bears from the comfort of your own bed. Alternatively, all-terrain, low-impact Tundra Buggies, like the one Frontiers North Adventures has taken us out in, make bumpy progress across the ice in pursuit of bears.

Being out here in a blizzard is no joke, but our patience is soon rewarded when Neil notices that one of the tundra's unhelpfully bear-shaped boulders is, in fact, a bear. The sleepy young male is momentarily revealed, coal-black eyes blinking into the wind. His nose comically rotates, tracking a scent that could be up to 20 miles away, before he returns to his stone-like doze. Soon the sightings come thick and fast, and we spend a mesmerising hour watching another young male clawing and licking at piles of nutrient-rich kelp. He's only 30 feet away, his garden-rake-sized claws a chilling spectacle.

Later, in a scene that draws a collective 'awwwwww', we watch as a rag-tag group of juveniles scratch and sniff along the shore of a frozen lake; one female stops to make perfect teddy bear rolls in a patch of heather. It's hard not to be taken by the bears' puppy dog charms. But then one moves — fast — reaching our vehicle's viewing platform before there's even time to adjust my camera's focus. He rears up, paws thudding onto the buggy, epic nasal cavities at work, sniffing me out; his oil-black eyes fixed on mine. "Buggy love," says Neil on seeing my dumbstruck expression. It's a goofy look I'm to wear for days to come. **SB**



Beluga whale, Churchill

SINGING FOR WHALES

“What’s that you’re singing?” asks Lazy Bear Expeditions guide, Jason Ransom, drifting silently on a rigid inflatable on Manitoba’s Churchill River as I paddle alongside him, scanning a surface dappled in late August sun for telltale bubbles.

The day before, Jason had driven me around the town, and while admiring the Sea Walls mural trail, telling the story of the town’s First Nations history, industrial past and symbiosis with nature, two fellow travellers had half-joked that you’ve a better chance of spotting belugas if you sing for them. Hence why I’m belting out the refrain from Canadian band Arcade Fire’s song *Wake Up*. The high notes are proving a challenge, but the song choice is relevant. This is Manitoba, after all, and only a song of such epic proportions would be appropriate for my surrounds.

This small frontier town on the southwestern shore of Hudson Bay holds the unofficial title of polar bear capital of the world, but I’m not singing for bears. A kayak in open water is hardly the safest spot from which to search for apex predators with gold-medal swimming credentials, after all.

Instead, I’m looking for one of the most enigmatic inhabitants of polar seas: the beluga whale; tens of thousands of which

gather in the waters off Churchill each summer. It’s testament to their charm that when, five days later, I see polar bears feasting on a whale carcass, the stunning spectacle doesn’t eclipse the magic of my beluga encounters.

But, half an hour in to my three-hour kayak trip, sightings are no more than distant glimpses. It seems setting my subconscious playlist to cetacean-shuffle isn’t working. I switch to Deacon Blue, changing the first line of the chorus from ‘The Believers’ to ‘The Belugas’, and am so chuffed with my new game of whale-song that when a plume of bubbles erupts to my left, I react like a jittery cyclist after a close call at the traffic lights.

“Woaaaaaaah!” I whoop, staring into the depths. Something bumps me, left, right, underneath, and suddenly the brilliant white of a beluga appears at the side of my kayak, nudging me gently through the water; its muscular, elegant body glistening in the sun.

I spend the next hour and a half in exquisite delirium, being toyed with and tailed by these beautiful creatures; my disbelieving squeals of excitement echoing, I’m sure, around every nautical mile of Hudson Bay.

The next day I sing again, offering the belugas a Flaming Lips song: “Do you realise that you have the most beautiful face? Do you realise we’re floating in space?” My guide lowers a hydrophone into the water and suddenly — incredibly — I can hear them chirruping around me. They surface, eying me inquisitively as I giggle in gratitude, lost to this life-affirming moment in which I almost convince myself these Arctic spirits know what I’m chanting. And that maybe, just maybe, they’d been listening all along. PE □

THE BELUGA WHALE

Beluga whales are normally found in the Arctic Ocean, as well as the seas around Canada, Alaska and Russia, and can live in both saltwater and fresh water.

They can grow up to over six metres, and lack a dorsal fin, enabling them to swim more easily under ice.

Belugas rounded foreheads are easily distinguishable, containing tissue known as melon, which they use for echolocation, although belugas are also thought to communicate using facial expressions.

They breed in the summer months, coming to estuary areas like Manitoba’s Churchill River to feed and calve. These are the best times to see them.

ESSENTIALS

GETTING THERE & AROUND

Air Canada offers flights from Heathrow to Winnipeg via Toronto from £456 return. From Winnipeg, fly with Calm Air to Churchill from C\$727 (£411) return, or take a 43-hour train, departing twice-weekly, with VIA Rail, with fares from C\$447 (£262). aircanada.com calmair.com viarail.ca/en

WHEN TO GO

Winters in Churchill see temperatures get as low as -40C. Summers reach 22C and it’s the warmer months that are best for beluga spotting. October and November, meanwhile, are best to see polar bears. February and March are good for dog sledding and the Northern Lights.

HOW TO DO IT

Winter Skies: Aurora and Astronomy in Churchill educational programmes at the Churchill Northern Studies Centre are scheduled for 14-19 February and 15-19 March 2020, and cost C\$1,525 (£893). Includes accommodation, meals, lectures, activities and transfers.

The five-day Churchill Town & Tundra Adventurer tour costs CAD\$3,249 (£1,905) per person including accommodation in Winnipeg, flights to Churchill, accommodation, transfers, activities and meals (international flights extra). frontiersnorth.com

For beluga whales, Lazy Bear Expeditions offers a two-day tour including transfers, accommodation and meals (excludes airfare) for CAD\$577 (£330) per person. lazybearlodge.com