

Falling Hard

words by Jon Waterman

A 40-year journey through the Arctic climate crisis, and the book that captures it.

Forty-one years ago, I began an enduring affair of the heart. Focused on a place rather than a person, I embraced the Arctic with faithfulness and passion. Over the years, however, I observed the change: a climate crisis of such manifold proportions that it affected the whole world. I paid careful attention.

For me, it began on the Noatak River of northwestern Alaska in late August 1983. Thousands of caribou shook the tundra with staccato hoofbeats, their antlers held high as they splashed out of the river past our tent as if trained in dressage. Then we discovered a wolf den with five fur-ball pups—heads twisting in curiosity as they laid eyes on humans they'd never seen before. By week's end, we watched a blood-snouted grizzly repeatedly muzzle into the chest cavity of another large mammal and yard out the entrails.

Amid the primal strangeness and astonishment, I found the Arctic scented with aged spices: the sweet turpentine of Labrador tea and the lilac perfume of the tiniest and most delicate pink twinflowers amid the biggest, pollen-gathering bumblebees I had ever seen. The place was ribboned with streams that were, in turn, finned by peculiar and beautiful fish; playful ground squirrels chirped throughout; and the midnight sun burnished the hillsides in gold. Beneath it all, the weeping permafrost tundra presented as a giant live body and irrigated an abundance of blueberries,

bunchberries, crowberries, lingonberries, salmonberries, cranberries and bearberries. I learned to ignore, if not appreciate, clouds of mosquitoes that pollinated the abundant wildflowers. And to take deep breaths and let the landscape open up my soul and fire my imagination like no place on Earth.

Fall this hard and you have to return repeatedly. To make sense of this infatuation, and to feel less lost in the land above the trees, I learned all I could about the animals, particularly the birds. The Arctic terns that wheel through the air, the rattle and bugle of sandhill cranes, the jerky stream dance of dippers.

I learned to listen carefully to the Inuit, the toughest and kindest people on the planet. In 1997, I first heard an Elder speak directly to the change, when I paddled off the unruly Beaufort Sea and onto the sandy shore of an Inuvialuit hunting camp in the Northwest Territory. After being alone for several days, the people treated me to coffee and fish eggs.

There in a shack out of the icy wind, an Elder told me how he had never seen bluebirds, robins and red salmon that now regularly came to his Banks Island village of Sachs Harbour. Or that mosquitoes weren't a nuisance in the 1960s, but in the 1990s, warm temperatures had brought these insects to his once breezy village. They used to run sled dogs in early July but by 1997 the snow had all melted by early summer.

I carried the Elder's story after that on all my northern journeys. His knowledge became a disconcerting intrusion upon my adoration of a place.

At one point, I skied and paddled across the Northwest Passage—mostly alone, often chased by bears, breathing the same air as the seals and belugas that blew alongside my kayak. I learned that the



In 2006, permafrost thaw had already begun to collapse bluffs into the Beaufort Sea, amid the highest erosion of any coast in the world, due to warming temperatures and diminished sea ice. Arctic National Wildlife Refuge. **Jon Waterman**

We will all grieve as the crisis escalates. The place that I love, while not gone, is irrevocably changed. In 2022, studies broke the news that the Arctic had warmed nearly four times faster than the rest of the world—much more than previously believed.



transformation of the Arctic affects the rest of the world through the loss of sea ice, which in turn alters shifts in global ocean currents (which allowed me to paddle a more than expected thousand miles in ice-free waters east across Canada in 1998). I knew that the Arctic cooled the entire world, but with sea ice fast disappearing, the world's air conditioner had broken. Conversely, as the polar jet stream of the Arctic is destabilized by warmer air, it dips south and blankets the Lower 48 in subzero polar vortexes.

I finished that long journey in the Atlantic tides. I felt hopeful that there were still icebergs left: They rushed by in the wind like ships under sail, their unknowable keels pinioned in swift currents below. You could hear the gunshot-like crack and whooshed collapse and splash of bergs that turned and splintered in the inbound tide. Compared to the pastoral tundra and placid Pacific tides to the west, this felt like a postapocalyptic Arctic: sullen, wintry-boned and sepulchered in twilight.

Up there, you can't avoid the polar bears, increasingly driven to land. As the legendary creature of the Arctic, the ever-vulnerable creature holds a sacred place in our imaginations. At risk of extinction from the loss of sea ice, the polar bear is reputed as a bloodthirsty killer of humans who venture north—but this is largely myth. An Inuit belief is that the bear is a spiritual being, more curious than aggressive. According to ancient stories, the Raven created the world and its animals but saved the polar bear for last, to humble humans so they wouldn't destroy everything else.

After several more trips, in 2006 *National Geographic* sponsored my fact-finding trip about the crisis. Through scientists at a research station, an oil economist in Fairbanks, the Gwich'in of Arctic Village and more weeks spent out in the northern wilderness, the extent of the crisis unveiled itself.

We visited thermokarsts where permafrost melted and the tundra had collapsed into suppurating sores in the earth. The loss of sea ice has caused storms to erode shorelines and flood villages. Through the greening of the Arctic—directly linked to loss of sea ice—the tree line is moving north. During this time, migrating grizzlies had mated with landlocked polar bears, and now new generations are roaming the islands of the Arctic Archipelago.

How could I not pay attention as the lump grew in my throat?

Thawing permafrost is now releasing carbon and methane into the atmosphere and causing a rapid increase in greenhouse gases. Lakes disappear

as hillsides collapse like frozen spinach left out on the counter. Unprecedented lightning storms have brought wildfires that sweep across tundra dried out in weird heat cycles that haven't existed in the Arctic for hundreds of thousands of years. To call it simply "change" or think that nature or the inhabitants can blithely endure is a naive estimate of the crisis.

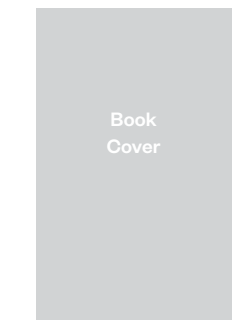
I was shocked in 2021, when, after a three-decade absence from the Noatak, I returned to those cherished headwaters with my 15-year-old son, Alistair. The wolf den we had discovered in 1983 on a high riverbank of the Noatak amid knee-high dwarf birch and sedges was overgrown with head-high willows. The caribou herd, once a half million strong, had shrunk to a third of its former size. Climate change, along with dwindling food sources, had altered their migration.

We saw only one caribou. I felt gutted for the world that my son had now inherited.

Saddened, Alistair asked about the lack of caribou, the bizarre thermokarst landslides, the new shrubbery, warm temperatures and diminished sea ice. I replied that the best cure would be to reduce our carbon footprints and rethink our habits as consumers. Badger local and federal governments to eliminate fossil fuels, and share climate crisis information with the world.

Brokenhearted, I am not alone. We will all grieve as the crisis escalates. The place that I love, while not gone, is irrevocably changed. In 2022, studies broke the news that the Arctic had warmed nearly four times faster than the rest of the world—much more than previously believed. So that summer, I returned and took one final journey from the Noatak headwaters to the sea to document the crisis, talk to villagers and share what we stand to lose.

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Find *Into the Thaw*
by Jon Waterman



To avoid bushwhacking, Jon Waterman tows his packraft up Kalulutok Creek en route to the Noatak River in 2022, beneath thermokarst landslides created by permafrost thaw. **Chris Korbolic**