

Reflection

The Moments That Made Me Understand What Before I Only Knew

Nancy Lord

Between 2007 and 2010 I researched and wrote a book (*Early Warming: Crisis and Response in the Climate-Changed North*), published by Counterpoint Press in 2011. My goal with the book was to tell narrative stories about how people and communities in the North (specifically Alaska and the Canadian Northwest) were coping with and adapting to climate change. It was not a book to document climate change—this had been done well by many others before me—but was meant to portray the reality of living with the change. Because of the loss of sea ice and the feedback loops related to it, the Arctic has experienced greater warming relative to the rest of the world, with disturbing effects *right now*. My hope was that by presenting localized pictures of how difficult, expensive, and even life-threatening the effort to address this change already is, I might help convince others that we really do need to address the root problem—to reduce, globally, greenhouse gas emissions.

Besides being a place where warming is playing out in dramatic fashion, the North is home to peoples who have lived generationally—for thousands of years—in a very challenging environment and are, still today, closely attuned to weather and the nuances of ice and snow conditions, the lives of the animals and plants on which they rely, and other aspects of the natural world. Their attentiveness, innovation, adaptability, and resilience are all well demonstrated. It seemed to me that there would be much to learn from them about preparing for the future.

I had already been reading and hearing a good deal about “climate change tourism” and in fact had participated in it as a cruise ship naturalist showing off Alaska’s melting glaciers and pointing out spruce forests killed by warmth-loving bark beetles. When I began the research for my book, I travelled from my home in southern Alaska to Arctic communities as a

kind of hybrid—part journalist, part activist, part tourist. I was well aware that villagers were weary of media folks dropping in to ask about climate change and hoping to see a hunter fall through the ice. Many, I knew, were discouraged about telling their stories again and again only to have nothing happen in the way of assistance. Indeed, “climate change” was an old story now, replaced in the news and our nation’s conscience by “newer” and more urgent (to the general public) stories such as the faltering economy and the bad behaviour of various politicians. I committed to being respectful of people’s time and trust and to sharing their stories with accuracy and sensitivity.

What I quickly learned in the northern communities I visited is that villagers don’t talk about climate change the way I and others grounded in the dominant culture do. They speak instead of strange weather and odd animal behaviours, of all the rapid change (social and economic as well as environmental) that affects them daily, of the wisdom of their elders, and about wanting to be self-reliant within their communities. Indeed, within cultures that understand that everything is connected, it’s difficult to pick out “climate change” from the rest. My book became a testament to human rights, a plea to us all to care about our fellow beings living already in difficult circumstances. And beyond that: to care for the earth systems we all depend upon and to leave a livable planet for future generations.

There are certain moments from my encounters in the North—a look on a face, anguish or resignation in a voice, an insight like a bulb burning over my head—that stay with me as the book itself settles onto history’s dusty bookshelves. You might say those moments haunt me.

Shishmaref

Shishmaref is one of the six “immediate action” communities in Alaska that needs to move within a very few years, due to erosion from waves no longer blocked by sea ice for much of the year combined with permafrost thaw that has loosened the sand on which the village of 600 Inupiat sits. (Of Alaska’s 213 villages, at least 184 are affected by erosion and flooding due, at least in part, to climate change.) Shishmaref, on Alaska’s northwest coast, is located on a narrow barrier island with its highest point twenty-six feet above sea level.

~ Women of middle age and a bit older were smoking on the porch of the community centre. They told me how as children they used to play on the gradual beach on the sea side of the island, how it stretched a long way off. They described it now as a “cliff”—and indeed it was, a sharp drop armoured

with giant blocks of rock barged in from a thousand miles off, with the sea clawing at its base and digging deeper. The island and everything on it, they said, shook with the big storms, and they fled their homes to crowd in with others farther from the edge. But what really moved me was the look in their eyes when they told me how much they feared the community breaking apart and moving to towns or cities elsewhere in Alaska. They knew that in Anchorage that summer nine homeless men, most of them Native, had died outdoors—most from alcoholism but one from a beating by teenagers who stole his beer. “We’re afraid,” they told me. “We’re all one family here.”

~ In an office in the church basement, the village’s transportation planner showed me an aerial map of the island. “It looks like there’s still a lot of room,” he said, indicating the tundra area on the island’s leeward side; that was not, however, usable land, since it was both in the airport’s clearance zone and in an area that flooded whenever there were storm surges. He pointed out, in turn, the newest houses, situated on the abandoned airstrip that had gotten too short; buildings that had already been moved back from the edge; the teacher housing and school right at the edge; the washateria and its sewage lagoon also at the edge, next on the list for seawall protection if money came from the government and, if not, the next place to be washed out. He showed me, again on the map, the village’s water source—a lined artificial pond that depended on snow and snowmelt and was too small, in any case, to serve the village. Shishmaref was a “honey bucket” village, and they could not have water and sewer services because there wasn’t enough water—and besides, the expenditure couldn’t be justified if they were going to move soon. Same with the clinic—too small and inadequate, but they could not get funds for a new one if they were going to move. I looked from the map to the man: the weight of an island dragging him under.

~ Another resident took me in his boat from the island to the mainland and up a winding creek to the area, known as Tin Creek, that the villagers had selected for their new location. From the hillside there I looked back twelve miles across the lagoon at Shishmaref shimmering in the light—miniature boxes that belied, from the distance, just how much “infrastructure” and modern American consumption was heaped in that place. The question pounded in my ears: *Who in his right mind would ever put all that stuff on an eroding sandbar?* The fact that I knew the answer did not stop the question. There had not been a mind, only a progression: the seasonal occupation for seal hunting, the supplies for miners, a post office, the church and the school and prefab houses, the electrical system and fuel tanks. The island had been an easy place for barges to off-load.

~ After Tin Creek, our party stopped at nearby Goose Creek to pick sour dock, a plant preserved for winter use. When we had stuffed pillowcases with it, we sat in the boat and laid out snack foods between us. I'd brought a bottle of water and a bag of beef jerky from the village store—together they had cost most of a twenty-dollar bill—along with an apple from my grocery store at home. My hosts set out chopped bearded seal, salmon and Pilot crackers, sour dock packed in seal oil, *agutak* of whipped caribou fat and seal oil, Spam, and store-bought cookies. The foods in their origins and arrangements made the point I'd heard, repeatedly, from elders in the community: "We've lost so much. Our subsistence is the last thing we have, and we need to keep it intact for the future."

~ At a meeting of the Shishmaref Erosion and Relocation Coalition, the group prepared for a visit from the Coast Guard; an admiral and his advisors were coming by helicopter for a tour of the town and specifically to see the landfill and sewage lagoon and to speak with elders. No one stated the reason for the visit, but I had heard in Nome that the Coast Guard was checking out the whole northwest coast, planning to establish a base for patrolling Arctic waters once the Bering Strait became a major sea route. (Nome lies on the south side of the strait, and Shishmaref is the first community on the north side.) Already, with the decline in sea ice, the number of ships docking in Nome had increased from 34 in 1990 to 234 in 2008. Cruise ships I worked on beginning in 2002 had gone all the way through the Bering Strait to the Arctic Circle and stopped in Nome for bird watching and gold panning. My thought: did the Coast Guard want to meet with elders to be polite, or did they hope to learn from them about local conditions? I better understood their desire to see the landfill and sewage lagoon: could the facilities handle more waste?

~ I stopped in the village to see someone I'd known years before, and shared a cup of tea—"the water filtered twice and boiled," he assured me. We talked about old times and people we both knew. When I asked about the relocation, he just shook his head. "It would be nice," he said, "but it's not going to happen. It's never going to happen." He knew, as I knew, that the 2006 cost estimate for moving the whole village was \$179 million. We both also knew that the studies underway that summer had discovered poor soils for constructing roads and that the lagoon across which I'd travelled to the mainland was too shallow for fuel barges to navigate. The new village, however much its residents might want it to be a model of renewable energies and efficiency, would need fossil fuels and a delivery system for them.

Kaktovik

Kaktovik is an Inupiaq village on Barter Island on Alaska's north coast. It has become known in recent years for its "polar bear tourism"; bears, waiting for sea ice to form, feed on the carcasses of bowhead whales hunted in the fall. When I was there in late November the coast was iced-in and most of the bears had left the area. Two (soon three) had been shot because they were judged a danger to villagers, and the village was actively working on plans to protect both bears and people. Residents were also studying the options for relocating the flooded airport to higher ground.

~ A grandmother talked to me about how strange it was not to see sea ice in the summers anymore and about the erosion of the barrier islands where families camped in summer to escape mosquitoes and mice. She said, "We lost two people this year," and then added, emphatically, "We never had an accident like this in this village." Haltingly, trembling with emotion, she told me about the family that had camped on a barrier island in July. Rough seas cut through the island and separated them from their boat. In trying to reach the boat, both the father and son were knocked down and swept away by waves. This was a unique and painful tragedy, but it was also a story not dissimilar from others I'd recently heard. On Canada's Mackenzie River a sudden fierce storm had overturned a boat and drowned three villagers. Near Gambell, Alaska, in the northern Bering Sea, a whaling boat returning to the village from a hunt was also caught in sudden high winds and rough water; four villagers, including the mayor and two children, drowned. In every case, the storms were like nothing elders had ever experienced before.

~ At the school, the children were well aware of the coastal erosion that threatened their future on the island. They told me, matter-of-factly, that the land was washing away. When I asked what they thought would happen, they said, also matter-of-factly, "People will move away." They would move to Fairbanks, they said. Or to Canada. I looked at their innocent round faces and thought of the young boy who that morning had read to me his writing about hunting his first seal and how he'd presented the animal to his elders. And I thought of the tiny girl I'd watched dancing at the community centre, bending to the beat of hoop drums.

~ At the Thanksgiving feast, after we'd filled ourselves with sheep soup and fried fish and fry bread and even turkey and after the whaling captains had passed out shares of muktuk and whale meat to all the households, I

watched a very small boy with a child's-sized ulu cut up slivers of muktuk on a piece of cardboard and feed them to his mother.

~ At the same feast, the fire chief showed me a photo on this camera—a polar bear with its head in a Dumpster. He said, "It was getting some whale scraps someone threw in there."

~ My friends and I, bundled in heavy parkas, followed bear tracks along the snow-packed beach. Huge blocks of frozen tundra—some as large as houses—had broken from the bluffs in fall storms and lay now on the beach. We stopped so I could take a picture of a giant ice wedge. Ice wedges form in permafrost over a long period of time. Once exposed, they'll melt quickly. Indeed, the whole side of the exposed bluff, once summer came again, would thaw and collapse and wash into the sea.

Fort Yukon

Fort Yukon lies on the Yukon River just above the Arctic Circle. Its residents are Gwich'in Athabascans. I visited there because the village is surrounded by boreal forest—some of which the oil industry was hoping to lease for drilling. That forest of spindly trees, cold soils, and wetlands stores more carbon on a per-acre basis than the famed tropical forests—thus playing an important role in keeping carbon dioxide out of the atmosphere. I had also heard that village leaders were forward-looking regarding self-reliance and climate change issues.

~ When I met with the director of the Council of Athabaskan Tribal Governments, a regional organization whose goal is to protect tribal lands and resources while supporting economic development, he told me, "People here are concerned about survival." He went on to list issues that were largely connected to environmental change: food security, energy costs, health (forest fires for two summers had filled the lowlands with smoke and forced villagers indoors, away from their fish camps). Lakes and meadows were drying up, he said, affecting species like muskrats and moose. Chinook salmon were plagued with "white spot disease," from the *Ichthyophonus* parasite associated with warm river water. Elders complained they could no longer predict the weather. His organization was leading efforts to grow more local food, to replace fuel imports with wood in an efficient biomass system, and to reintroduce wood bison (a species extirpated in the 1800s, perhaps by a combination of climate change and overhunting.) "Climate change isn't even on a back burner," he said.

~ At the river I stood and stared at the boarded-up home of Alaska's lone congressman (for almost forty years), Don Young. He was once a riverboat driver and schoolteacher in Fort Yukon and married a local woman. He doesn't often return to Fort Yukon; if he did he would surely have to notice the same weather and climate changes that residents do—and would have to hear their troubles. Would he not be concerned about his neighbours choking on forest-fire smoke and catching mealy salmon unfit for anything but dog food? He is famous for claiming that humans have nothing to do with global warming (“the biggest scam since Teapot Dome”), that warming and cooling are natural cycles, and that, anyway, people and wildlife will adapt to whatever happens. There at the river I asked myself, not for the first time, whether Congressman Young is just ignorant and unwilling to educate himself or whether he knows better but is corruptly covering for corporate interests—or perhaps a toxic combination of the two, willed ignorance abetting corporate greed.

~ At the village's only bed and breakfast, the proprietor showed me her “plant book,” a journal of watercolour paintings she'd made of local wildflowers. It was really an ethnobotany, with each plant identified by name, date, location, and food or medicinal uses. She pointed out several that she'd discovered for the first time only recently; they had not been present before the weather and climate had changed. She'd recently noticed, too, a red bug she'd never seen before, and a scarcity of bees. Outside, she showed me a sickly willow with brown and shrivelled leaves. Winter snow, that had been dry and light, was wet and heavy now; she'd had to buy her first-ever snow shovel to take the place of a broom.

~ In the evening, a pale blue bus passed me on the dusty road, with smiling tourist faces pressed to the windows. Fort Yukon had neither a hotel nor a restaurant, but it had tourists. A Fairbanks company flew planeloads in for about three hours—long enough to take a bus tour through the village with a local guide, dip their hands into the Yukon River, and lay claim to crossing the Arctic Circle. I had two simultaneous thoughts: the economic benefits for Fort Yukon had to be very small, and the carbon footprint of that travel (290 air miles round trip) was large.

The Bering Sea

In Bethel, a hub town in western Alaska, I attended a meeting of the Bering Sea Elders Advisory Group. The Yupik elders who had gathered from around the coastal region were poring over maps on which they'd recorded their traditional knowledge of resources and resource use in the northern Bering Sea, in an effort to provide data that would lead to the protection of the seabed from bottom trawling. The fish that trawlers target were moving north in a warming ocean, and the fishing industry wanted to follow. Those northern waters are home to ice-dependent species like polar bears, walrus, and seals already threatened by the loss of sea ice—and are also relied upon by Native people for their subsistence.

~ At the beginning of the meeting a visitor from Anchorage talked to the elders about what scientists were studying in the Bering Sea—things like changing ice and currents, prey availability, how those changes cascade through the whole system. Among the slides of scientists taking ice cores and collecting plankton was a cartoon from *The New Yorker*. In it, several fancy women were socializing around a tea set and one was saying, "I know I should care about the bottom of the ocean, but I just don't." Yupik people as a rule have fabulous senses of humour, but no one in that room cracked a smile.

~ When I said "Bering Sea," a man kindly corrected me. "It's not the Bering Sea. That's the name from a newcomer. It's *Imarpik*." *Imarpik*, I later learned, translates literally as "big container." The sea is a big bowl, filled with things to eat and to otherwise supply the needs of those who live beside it.

~ The elders conversed mostly in Yupik, only some of which was translated for the non-Yupik speakers in the room. They spoke of their dependence on seals and geese, and of the interdependence of all things. They spoke of what they'd learned from their own elders. This I heard: "My grandmother told me, 'you will protect the Bering Sea.' When you talk about the Bering Sea, you're talking about me." And this, indicating a circle where the world's entire population of spectacled eiders winters in an open-water lead and dives to the bottom for clams: "This needs to be protected. Let the fish and the rest grow out there."

~ I listened to hear if any of the elders would speak of ocean acidification, the “other CO₂ problem” threatening our oceans. Just as the effects of global warming are amplified in the North, the colder seas absorb more CO₂ from the atmosphere—at levels in the Bering Sea and Arctic Ocean scientists are finding are already corrosive to shell-building. When I asked a meeting organizer if this was something the elders were aware of and considering, her eyes widened in alarm. She chose her words carefully: “The combination of a warming Bering Sea and ocean acidification is a lot to swallow all at once.”

What more can I say? These scenes, these northern voices, this collection of what most stuck to me from my travels and inquiry: they speak for themselves. Now, what do we *do*?

Author

Nancy Lord, a former Alaska Writer Laureate, is the author of *Early Warming: Crisis and Response in the Climate-Changed North* and *Rock, Water, Wild: An Alaskan Life*, among other books related to northern life and cultures.