



The Distant Rumble of White Thunder

A family's year-long quest to explore America's most endangered parks brings them to Glacier Bay, Alaska.

I HE TWO BIG, DARK MOUNDS OF BEAR POOP make no sound. They speak no words. But they communicate a persuasive argument that we should consider camping somewhere else.

The three oval depressions in the beach sand, where the brown bears had lain down to sleep, bolster that argument, as do the paw prints stamped all over the ground. The scat is fresh, the impressions of long claws still

intact in the sand. These bruins bedded down here last night.

Just minutes ago, my seven-year-old daughter, Alex, and I paddled our two-person kayak to the edge of the beach, and our lead guide, Sarah Rennick, walked over to us.

"We're thinking of camping here. There's just one problem," Sarah told me. "It's a bear highway."

I nodded. Although we met just yesterday, I can already see that, in Sarah, we have not only a skilled and sensitive guide but a master of understatement.

Looking up, I scan the steep, treeless slope above this remote wilderness beach near the mouth of Johns Hopkins Inlet, 55 miles up Glacier Bay in Southeast Alaska. I let my gaze roam over cliff bands and boulders, scrubby vegetation, and

gullies that offer a hundred nooks for a thousand-pound predator to hunker down out of sight yet close enough to know we are here.

Our group of 12 people mills around on the wet beach, stretching stiff legs and backs after spending the past few hours shoehorned inside kayaks. Nate circles me like a satellite, my nine-yearold shark boy almost constantly in motion. He chatters excitedly about the scat and prints, pouring out his streamof-consciousness thoughts on how we could fortify this beachhead and use our pepper spray to fend off an ursine assault. Alex hovers nearby, quietly inspecting this evidence of carnivores 15 or 20 times her size.

The brown bear. Ursus arctos. Alaska's version of the grizzly bear. Can grow to more than a thousand pounds. Can sprint across open ground—and virtually all the ground here is open faster than Lance Armstrong can pedal a bicycle. Brown bears: among the top three concerns my wife Penny and I had about sea kayaking and camping for five days here with the kids, and far more viscerally terrifying than the other two the notoriously wet, cold weather and even the frigid sea, which could suck the life from an adult in 15 minutes if a kayak capsized.

Sarah lays out our options. We could camp here tonight. Bears are unlikely to approach so many people statistically true, but what do bears know about statistics? Of course, if they return, we might have to get into the kayaks abruptly and leave, maybe abandoning camping gear, possibly during the night. Everyone, no doubt, can envision worse scenarios. Alternatively, the next prospective campsite is a "We're thinking of camping here. There's just one problem," Sarah told me. "It's a bear highway."

30-minute paddle from here.

It's mid-afternoon, overcast but not raining, cool but not freezing. Everyone's warm enough in our multiple layers of clothing. No one's tired. We reach a speedy consensus to move on, the sense of relief palpable as we shove off.

Back in the kayak, I ask Alex what she thinks of leaving, and she says, "Well, I wasn't worried about it until I saw those big bear paw prints." That's my sensible daughter. Nate, on the other hand, might like to see us deploy our pepper spray on a bear. To him, weapons are like wings on a bird: no point having them unless you let 'em fly.

It's the second afternoon of our five-day sea-kayaking trip run by Alaska Mountain Guides. We've come to paddle around Glacier Bay's upper West Arm, probing deep within one of the world's largest and most pristine wildernesses, a UNESCO World Heritage Site the size of Greece. We're here to see the original complement of North America's land and sea creatures and towering mountains buried under snow and ice.

Glacier Bay is the third stop in a series of family wilderness adventures I'm taking with my family in 11 U.S. national parks in a year, a magnificent odyssey of backpacking, sea kayaking, crosscountry skiing, canoeing, and rock climbing inspired, ironically, by an impending tragedy: the rapidly escalating impacts of climate change on our parks.

We've come here to witness the last

hurrah of the Ice Age. While conventional thinking has it that Earth's most recent glacial period ended 10,000 years ago, in Glacier Bay you can watch its final act.

Two and a half centuries ago, Glacier Bay did not exist; it lay beneath one solid river of ice 4,000 feet thick, up to 20 miles wide, and 100 miles long, sticking its blue-and-white tongue out into Icy Strait. In 1794, when British Captain George Vancouver sailed HMS Discovery through Icy Strait, he wrote in his ship's log of seeing a "sheet of ice as far as the eye can see."

Since then, Glacier Bay has seen the fastest glacial retreat on the planet. Today, this fjord extends 65 miles into the mountains. In the lower bay, icefree for 250 years, a mature temperate rainforest grows almost impenetrably thick, watered by six feet of rain a year. In the upper bay, bare sea cliffs show the scars left by clawing glaciers that drew back within the past century. Just 60 miles from an old-growth forest, the thin soil sprouts only a few hardy shrubs and flowers. Life rises from the Earth's ravaged skin on the slimmest promise of existence.

The bay is a sort of northern paradise, home to humpback whales, orcas, harbor seals, four species of salmon, sea otters, Steller sea lions, mountain goats, and a multitude of birds from pigeon guillemots and bald eagles to rare horned puffins. Roaring with an explosive sound that the native Tlingit

call "white thunder," several glaciers frequently discharge massive blocks into the bay, at times choking their inlets with icebergs.

But all is not well in paradise.

Like an ice-cream cone in the warm sun, the cold regions of the world are melting fast—faster even than scientists or computer models have anticipated. Over the past 60 years, Alaska's average temperature has increased 3 degrees Fahrenheit, triple the worldwide rate. In the 1970s, 12 glaciers stretched to tidewater in Glacier Bay; today, five do. Some of those may suffer the fate of the Muir Glacier, which 30 years ago was like the Johns Hopkins: spewing bergs into the sea, attracting seals to birth pups on those bergs, safe from brown bears and orcas. Raptors fed on the fish attracted to the nutrientrich waters churned up by the ice. In 1993, the Muir crawled up onto land like a stranded sea creature taking its last breaths. Today it's a "wasting

the annual mean temperature is right about the freezing mark, a very small change in temperature one way or the other makes a big difference on the landscape."

I have been reporting about the impacts of global warming on the natural world since April 2007, when, on assignment for Backpacker magazine, I skied high into the Northern Rockies of Montana's Glacier National Park with scientist Dan Fagre. A research ecologist who runs the Glacier Field Station of the USGS Rocky Mountain Science Center, Fagre had sounded the warning that the 7,000-year-old glaciers in one of America's most revered parks would be gone within a human generation.

As I researched the impacts elsewhere, the news was deeply troubling.

Yosemite's famous waterfalls will peter out earlier in the year as snowfall diminishes. Rising seas will inundate at least one-third of Olympic National Park's 73-mile-long wilderness coastline, the longest in the contiguous glades, one of Earth's greatest sanctuaries of biological diversity, appears fated to sink beneath the waves. We're in the midst of a holocaust that is expected to claim up to 40 percent of plant and animal species worldwide by 2100, including 21 percent of mammals, 37 percent of freshwater fish, and 70 percent of plants.

These events are bellwethers of the tectonic shifts tearing through the natural world, wrought by forces we have set in motion but which now possess a momentum of their own.

We've designated and protected national parks because we need these places. They inspire us. They bring out our best as individuals and represent our highest aspirations as a civilization. But now we have weirdly recalibrated nature. Less than 150 years after the founding of Yellowstone, which introduced the concept of national parks to the world, we are undermining one of our country's greatest achievements.

I wonder what my kids will not experience because of the slow, warm flood inundating nature.

I embarked on this year of adventures in the parks I've mentioned and several others partly because I wanted my kids to learn something about climate change, but also because I wanted them to discover what I've found: the joy of moving under your own power, at human velocity, through a place crowded not with people, artificial noise, machines, or flashing lights but with the abundance of nature. Maybe they'll even communicate to their generation the moral imperative of not ignoring the fact that we're broiling our planet under the hot lamp of selfish indifference.

But mostly, we would spend this year outdoors for our kids—for joy, curiosity, and wonder. Because I want my kids to see these things before they're gone.

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glacier," melting in place. When the bergs left Muir Inlet, the seals followed, as did the orcas, many of the birds, and the kayakers.

Brendan Moynahan, who oversees Park Service research in Southeast Alaska, told me, "There will be big, unexpected changes. For a place like Southeast Alaska, where

United States. Joshua Tree National Park, where I've rock climbed the fingertip-shredding granite towers, will lose its namesake flora. In Yellowstone, long one of the nation's iceboxes—a park where I've skied among geysers and watched wolves pursue stampeding elk—winter is, incredibly, shrinking. Much of Florida's Ever-

Silence summons our attention more insistently than noise. Living in civilization corrupts the senses like that.

I rest my paddle across the kayak. The water of Johns Hopkins Inlet lies flat and still. There's no wind, just some barely audible hum in the distance, a few decibels cut adrift from a howl high in the mountains. A bald eagle screech pierces the quietude briefly but is suddenly gone, like a stone dropped into a pond. The silence feels dense enough to float atop on our backs, arms outstretched, eyes closed.

Yesterday, under an iridescently blue sky, we paddled to visit the source

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of those frequent claps of white thunder, the Johns Hopkins Glacier, which rises a sheer 250 feet out of the water and stretches a mile across, spanning the inlet from cliff wall to cliff wall like a colossal white dam. We kayaked below gray waterfalls pouring over cliffs; we weaved among hundreds of floating and bobbing bergs, wildly sculpted by wind and waves. More than a thousand seals perched on distant bergs, while several swam closer, popping heads above water to watch us. The Hopkins

Glacier bellowed with each calving, every 15 or 20 minutes, as if warning us to stay away. Its frigid breath reddened our cheeks.

Sharing a kayak with Alex, I get to see this wilderness through a sevenyear-old's eyes. I watch her reach out and touch a passing softball of compacted snowflakes from three centuries ago. We look up at a bald eagle in its nest atop a snag high up a nearby sea cliff. "He's watching the kayakers go by," Alex explains to me. When a harbor seal pokes its slicked head above water not 50 feet away, investigating us with dark eyes, I hear Alex faintly catch her breath as she and the seal exchange stares for an instant, before it disappears with a bloop.

At one point, I notice Alex slowly listing to starboard. When she sits upright again after about 40 minutes, I ask her, "How was your nap?" She smiles over her shoulder, pauses, and then tells me, "I like kayaking trips because you can sleep while your partner's paddling." Alex keeps promising to help me paddle, just as soon as the feeling moves her. She's been saying this for two days, and it cracks her up every time.

Our movements out here are just a sigh in the long, slow respiration of this place. In its rawness, Glacier Bay strips away the ornate vestments civilization tends to wrap around our lives. It reveals life as tenuous, and yet driven powerfully by the sole purpose of living.

Black crust, dryas, and spruce trees growing. Steller sea lions braying at one another in a cacophony



that bears a striking resemblance to the playground at my children's elementary school. Penny and I exercising caution in choosing where we pitch the tents that our kids will sleep in. Nate and Alex collecting shells on the beach on their long, circuitous voyage to becoming whole adults with a world perspective partly formed by picking up shells on a wilderness beach below thundering glaciers. Or all of us exulting in dipping a paddle in the water here—these are just different manifestations of the same mission. We live only to live. It's no more complex than that. Sometimes we just need to be reminded of it.

Now, on our final day of paddling,

a mist slowly coalesces into a steady shower, the kind of rain common from Southeast Alaska to the Pacific Northwest-not torrential, but more of a patient drowning. Nate, in the forward cockpit of my kayak, hunkers down inside his rain slicker and hood, folding in on himself against the invasive chill.

"What are you going to tell your buddies at home about this trip?" I ask him, to gauge his mood.

From under his hood, Nate responds, "I think I'm going to need about a week to tell them all the stories from this trip."

My boy's words warm my chest like a hot drink.

We trace a shoreline of mossy cliffs

where one waterfall after another flutters like a white ribbon. A bald eagle perches in a snag high up a cliff; in a nest not far off, its mate stretches wet wings. A porpoise surfaces and dives.

The final act of the Ice Age is an impressive performance. But the show is a mystery that leaves many questions unanswered, including how and when it will end. NP

MICHAEL LANZA is the Northwest editor of Backpacker and creator of TheBigOutside.com. This article is adapted from his new book Before They're Gone: A Family's Year-Long Quest to Explore America's Most Endangered National Parks, published by Beacon Press.



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