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25 Years After the Exxon Valdez: Hidden Damages Below Prince William Sound

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23 Years After the *Exxon Valdez*

Hidden damages below Prince William Sound

Lisa Densmore



MY WHOLE BODY TREMBLED AS THE SHADOWS DARKENED OVER our campsite beside Shoup Glacier near Valdez, Alaska. Sea kayaking in the rain on a 40-degree day on 35-degree water induced the chill. As night closed in, the wind picked up, and the rain came in horizontal sheets. The threat of hypothermia scared me, but there was no place to get warm, no chance to build a fire on the treeless gravel beach on which I huddled under the tarp-covered bug shelter that served as a community tent.

My wool knit hat had grown three sizes. Each of my seven layers of clothing—long underwear, a turtleneck, two fleece pullovers, a down sweater, a Gore-Tex paddle jacket, and a Gore-Tex shell over it all—felt soggy by the second as water wicked up my arms, up my pant legs, and down my neck. The situation was grim.

When I concocted this Alaskan adventure, I didn't fully grasp the conditions I might encounter the third week in September. I'm no stranger to northern realms where the weather can be harsh. I've called the Rockies in Montana, the Adirondacks in New York, and the White Mountains in New Hampshire home, but Alaska is farther north, bigger, and more extreme in every way. Late September in the state nicknamed the Last Frontier is the equivalent of November below the 49th parallel, leafless and gray with snow-inducing temperatures on the coast and much colder inland.

I planned to paddle from Valdez Harbor to Shoup Bay, camp beside Shoup Glacier for two nights to allow time to explore the area, and then paddle back to Valdez. The trip would cover about 25 miles out-and-back on the water and 8 miles on land and ice. I had three work-related agendas: (1) GPS-ing and photographing the route; (2) photographing a well-known rookery of black-legged kittiwakes, small gull-like birds; and (3) shooting video of the kittiwakes for two projects. But I also had a personal agenda.

Valdez has always held a dubious place in my conservation conscience. As a preschooler, one of my first memories of a natural disaster was the Alaskan earthquake of 1964. The strongest earthquake ever recorded on the North American continent, it measured 9.2 on the Richter scale with an epicenter a mere 45 miles west of Valdez. The quake triggered a massive underwater landslide, killing 115 in Alaska and destroying the fishing port of Valdez. The

A tanker waits near the pipeline terminus in Prince William Sound in Valdez. Scientists have estimated that more than 26,000 gallons of oil remain in the sands of the waterway.

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quake created a tsunami that killed 33 people, mostly children, who were swept away while standing on the wharf watching a supply ship unload.

Post-quake, the original site of the town was considered so unstable that the Army Corps of Engineers moved it to its current location, 5 miles south but still deep in the Valdez Arm, a fjord off Prince William Sound. After rebuilding, Valdez emerged a stronger and more diverse outpost. In 1977, the Trans-Alaska Pipeline was completed with Valdez Bay as the location of its southern terminus. The well-publicized, controversial pipeline gave the town's 3,500 residents new job opportunities both in the oil and the tourism industries. Visitors came to Valdez to peek at the pipeline and to see the plethora of wildlife and glaciers that graced this sheltered finger of Prince William Sound. Most tourists ogled the whales, seals, and seabirds by cruise ship, though a few adventurous souls trickled in for more challenging outdoor pursuits such as sea kayaking and heli-skiing.

The pipeline, an 800-mile artery from Prudhoe Bay to Valdez, transports crude oil through the Alaskan interior, crossing 34 major rivers and hundreds of streams; the Brooks, Alaska, and Chugach mountain ranges; and three major earthquake faults. An average of 226 million barrels of oil per year passes through the pipe to Valdez, where the oil is loaded onto supertankers and then shuttled to refineries along the West and Gulf coasts of the Lower 48. One of those supertankers was named *Exxon Valdez*.

In 1989, just three days shy of 25 years after the earthquake, the *Exxon Valdez* ran aground on Bligh Reef at the mouth of the Valdez Arm about 25 miles south of Valdez Harbor. Eleven million gallons of black gold spilled into Prince William Sound. Currents and weather spread the oil along 1,300 miles of coastline and more than 11,000 square miles of ocean.

The investigation surrounding the highly publicized oil spill placed the blame on the captain of the ship, Joseph Hazelwood. The popular story suggested Captain Hazelwood was drunk and ran the ship aground. Today, The Pipeline Club in Valdez where Hazelwood purportedly drank before the incident serves the Captain's cocktail, a gin and tonic, which the pub renamed a "Hazelwood."

Although Captain Hazelwood never denied imbibing in Valdez before his ship departed, he maintains his faculties were fully intact and that he was technically off-duty in his quarters and asleep when the ship hit the rocks shortly after midnight. Regardless, Hazelwood became a scapegoat in the disaster, which cost billions of dollars and employed 11,000 people to contain and clean up the initial mess. In fact, Hazelwood was ultimately

found *not* guilty of operating a vessel under the influence of alcohol. The ensuing investigation concluded the third mate and the helmsman failed to turn the ship because of a combination of fatigue and the inability to get an automated warning from a piece of broken navigation equipment, and the Coast Guard's lack of an effective vessel traffic navigation system.

Though the *Exxon Valdez* oil spill ranked 34th at the time on the list of the world's largest oil spills and has now dropped below 50th, it hit a conservation nerve. No human lives were lost in the shipwreck (four died in the massive cleanup effort); however, the toll on the region's fisheries and wildlife remains incalculable, and the sense that this wild area has been permanently tarnished remains lodged in many of our minds.

According to the Exxon Valdez Oil Spill Trustee Council, a joint state and federal partnership charged with monitoring the environmental damage and the recovery from the oil spill, 250,000 sea birds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, 22 killer whales, and countless salmon and herring died during the period immediately following the oil spill, though these numbers may be low as many carcasses sank uncounted.

When the government drafted the initial restoration plan, biologists assumed that whatever oil remained in the environment after the cleanup effort would dissipate and wildlife populations would recover at various rates depending on the species. I wondered how much the ecosystem had actually repaired itself during the last two decades. Would I be able to see evidence of the oil spill? When the opportunity arose to visit Valdez for other reasons, I secretly looked forward to a firsthand look at the scene of this infamous environmental accident.

I arrived in Valdez accompanied by three friends: Bill Powell, a lawyer by trade and an avid outdoorsman who had climbed Kilimanjaro and trekked in the Canadian Rockies with me; Jim Low, an information officer with the Missouri Department of Conservation; and David Low, Jim's son, an information ranger with the National Park Service who was between jobs. All four of us were experienced in a breadth of backcountry skills, though none of us had sea kayaked in Alaska. We eagerly anticipated the trip. What we didn't anticipate was the extreme weather. The heavily timbered coastline around Valdez is similar to the Oregon coast in appearance but better characterized as "Arctic rainforest." Some summers, the temperature never crests 70 degrees Fahrenheit, and the region receives more than 65 inches of rain and more than 300 inches of snow per year. Nine inches of it fell on us in 24 hours!

On our departure morning, heavy clouds shrouded the snow-capped peaks surrounding Valdez Harbor as we toted dry bag after dry bag onto the docks. Josh McDonald, our outfitter and guide, met us with a mug of steaming coffee in one hand and a paddle in the other. A 33-year-old snowboarder from Wisconsin, Josh came to Valdez a half-decade earlier for its plethora of steep powder pistes, then started a sea kayaking business to support his winter habit. He lives year-round on a sailboat in the harbor and keeps his kayaks on the sailboat's deck when they aren't in use.

"What's the weather forecast?" I asked as we began hauling sea kayaks to a waiting water taxi.

"We'll probably get a little rain," replied Josh, unconcerned. "It always rains here. Do you have Gore-Tex?"

"Sure. I never leave home without it," I quipped. The hairs on the back of my neck quivered an early warning, but I disregarded them, blaming the chilly morning air for their ticklish state. Normally, I keep careful track of the weather when I'm about to venture into an untamed place, but I had spent the last week in a communication void in the Alaskan interior. What's more, every guide I had ever met monitored Mother Nature. Josh did too, but as I would later discover, our ideas of what constituted weather adverse enough to cancel a kayak trip differed drastically.

By late morning, the water taxi deposited our small fleet of kayaks and a mound of food and gear on a gravel beach near the mouth of Shoup Bay. It took an hour to cram our supplies into every available nook. When we finally launched the boats, a light rain made temporal dimples in the glassy gray-blue water.

We had only a short three-mile paddle to the end of Shoup Bay known as Shoup Lagoon, and its namesake glacier. The bay and the glacier were not named for a historical figure of any note. In fact, they were already named when Captain William Ambercrombie visited the area in the late nineteenth century. Ambercrombie was likely the first westerner to sail into Shoup Bay, which was deep under glacial ice when Captain James Cook explored Prince William Sound in 1778. Ambercrombie only saw the outer bay, not the inner lagoon. Shoup Glacier has receded more than three miles in the last 235 years, with half of that occurring since the 1964 earthquake. We would be camping on "new" land near the base of the glacier, revealed within the last year. The prospect made the journey special if only for that unusual honor.

The timing of our departure coincided with the incoming tide that we needed to ride through a channel between a large rock outcropping and an



The kayakers pitched their tent above the high tide line across from the shrinking Shoup Glacier. LISA DENSMORE

island about halfway to our tentsite. The rain became more persistent as we paddled, but there was too much to see to pay the weather much heed. The bay was framed by massive dark gray cliffs that made us feel like insignificant intruders in this remote, rugged landscape. Small fragments of ice and miniature icebergs floated nearby reminding me of the *Exxon Valdez*, which had veered out of the normal shipping lanes in Valdez Arm to avoid icebergs. Perhaps those icebergs had calved off Shoup Glacier.

I felt aware of something watching us and scanned the water more carefully. A seal poked its silvery head from the briny water to spy on our progress. Then I spotted another one, and a third. Curious but shy, they dared come only close enough for a look at us, but if I turned toward them to take a photo, they quickly disappeared underwater.

The sea otters were braver. They floated happily on their backs, plying open clams with their dexterous paws and mostly ignoring us as the powerful current swept our kayaks past them through the cut.

About a half-mile later, I spotted a bald eagle perched in a scraggly tree atop a large rocky island. Bird guano covered the ledges below the eagle. The kittiwake rookery! However, only a handful remained of the 40,000

black-legged kittiwakes that nest annually on the island. A few young-of-the-year flitted here and there over the water, but most had departed to the Bering Sea for the winter. Judging by the amount of guano, we had missed them by only a few days. After trying in vain to get a close-up photograph of at least one kittiwake, I kicked myself under my spray skirt for misjudging the onset of the Alaskan autumn. In the Lower 48, most migratory birds were still at least six weeks away from their biannual commute.

Disappointed about missing the kittiwakes, I felt wetter and colder as we paddled past the rookery, but my mood lifted moments later as Shoup Glacier came into view at the other end of the lagoon. The glacier flowed out of the clouds and down the far wall of the massive cirque that rose around us. Though the lagoon was a mile and a half in diameter, I felt like we paddled in a forgotten cup of cold soup at the bottom of a mammoth cauldron. The superlative proportions of the Alaskan landscape inspired awe if only for their sheer size.

We paddled toward the white spires poised above the water. From afar, the glacier looked like the back of a lolling white dinosaur with an enormous spiked tail. Despite the expanse of the place, it seemed unusually quiet, the drumming rain silencing even the moans of the melting ice.



A raging torrent rushes by a 20-foot pile of rubble left behind by the melting glacier.

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We set up camp about a quarter-mile from the glacier on a long gravel beach on the eastern side of the lagoon, taking care to place our tents above the high tide line. I was so cold after unloading the boats that I lost the dexterity in my fingers. Bill graciously set up my tent for me, while Josh brewed some hot tea in the bug shelter. Holding the hot mug warmed my hands and sipping the hot beverage warmed my core enough to stop my incessant shivering.

A few minutes later, the others returned to the bug shelter. Josh suggested a hike beside the glacier to warm up, urging us to wear the tall rubber boots he had provided for us rather than hiking boots. I quickly learned why.

We waded across a number of streamlets that flowed in a wet web down the mountainside. After walking the quarter-mile of beach between our tents and the nearest wall of ice, we climbed one of the 20-foot mounds of rubble for a view into a crack, then hiked a short way past two huge ice caverns, through both of which a raging torrent roared.

"The land where we are now is only a year old," explained Josh. "It might be here next year, or it might not. We're the first to walk here."

As we continued our ascent, we observed a succession of plant life. The barren rubble below gave way to solid rock covered with moss and clumps of alpine fireweed, long past blooming but with leaves still ablaze in hues of red, hot pink, and golden-yellow, the color made more intense by the rainwater that continued to pour down in an endless stream. The higher we went, the older the land became and the taller the alders and other shrubby plants. Despite the heavy sky, we gained an increasingly broad view of the bay as we climbed.

Josh led us up a shallow drainage, following a series of cascades. The ribbons of water connected several deep pools carved into the rock, eventually leading to a short slot canyon. We scrambled through the canyon taking care on the slippery rock and suddenly found ourselves facing a 100-foot waterfall. The waterfall fed a deep aquamarine pool. The contrast between the black rock, the white waterfall, and the turquoise water was stunning, like an enchanted secret hideaway for magical mountain elves. However, no elves scolded us for finding their private pool, nor was there any evidence of life in this newly carved canyon.

We backtracked out of the slot and climbed another 0.2 mile to a mossy shelf and another view of the bay and the glacier, then turned toward our tents now two miles below. Upon returning to the beach, Josh began preparing

dinner. No longer moving, my shivers returned. I worried about the coming night and the accompanying subfreezing temperatures.

"Is there any way to get a weather report?" I asked.

Josh pulled a weather radio from a dry bag and turned it on. The fabricated voice eventually came around to the Valdez area of Prince William Sound.

"Calm seas building to three feet by morning, nine feet by midday," said the electronic voice. "Winds gusting to 60 miles per hour, continued rain, extremely heavy at times. . . ." A typhoon was bearing down on us!

"Cool!" remarked Josh. Other less savory four-letter words went unspoken in my mind.

"I've never been out in a typhoon," exclaimed Josh. "Bring it on!"

While I admired his go-for-it attitude, I didn't share it. His internal thermostat was hotter than mine, and I had a much higher respect for bad weather. The incoming storm was not just adverse, it was downright life-threatening, but it appeared we had a short window in the morning to avoid the worst of it. When Bill, Jim, and David returned to the bug shelter, I explained the situation. Josh sat quietly as the rest of the group made plans for an early departure in the morning. The only snafu would be the tidal current through the cut. If it flowed against us, the effort to escape the lagoon would require more strength than the rest of the 13-mile paddle back to Valdez Harbor.

I slept fitfully that night. The wind and rain pounded my tent. Wearing every article of dry clothing I had, my mummy bag held me in a restrictive yeti-hug. Twice during the night, a large crash echoed around the lagoon as chunks of the glacier calved. And that niggling feeling of danger had turned into a screaming alarm inside my brain. By morning, I wrestled to be patient with the others as they ate breakfast and packed. I couldn't depart Shoup Bay fast enough.

Ironically, as we pushed off, the rain let up a little. As we neared the cut, I felt my kayak gain speed with each pull of my paddle. Luckily, the tide was going out. I felt warm again from the physical exertion of paddling and more optimistic as we made our way to the mouth of Shoup Bay.

It took six hours to paddle back to Valdez. The alarm inside my head mellowed the closer we came to the harbor, and I began to look around again. Several sea lions paused to look at us. A rare Sabine's gull glided past my bow. There was little evidence of the oil spill, at least on the surface.



The Trans-Alaska Pipeline ends in Valdez Bay. The pipe, infrastructure, and tankers are a part of the modern landscape. LISA DENSMORE

Most of the lingering effects of the oil are not apparent to the naked eye, but Prince William Sound is far from fully healed. If you dig a few inches below the surface of the intertidal beaches that were heavily oiled during the spill, various amounts of oil will fill the hole depending on the location. According to a 2007 study by National Oceanic and Atmospheric Administration, more than 26,000 gallons of oil remain in the sands of Prince William Sound, more than the cleanup effort was able to remove, and though it is dissipating, the rate is a slow, only 0 percent to 4 percent per year.

The NOAA study concluded that this contamination produces chronic low-level exposure among most wildlife, with more acute effects on species such as mussels and other creatures that live in the intertidal zone, not to mention the sea otters and waterfowl that feed on them. One of the most startling disclosures by the Exxon Valdez Oil Spill Trustee Council is that oil persists in some places at levels nearly as toxic as just after the oil spill. Additional research has found lingering oil 450 miles away on the Kenai Peninsula and the Katmai coast.

As we paddled by the pipeline terminus, a super tanker was taking on a load. Josh pointed out that the oil from the spill didn't affect the inner part of the Valdez Arm. The currents pushed it toward the ocean. That said, the disaster remains very much a factor in everyday life in this isolated port surrounded by the rugged Chugach Mountains. He explained how residents of Valdez, himself included, now practice periodic emergency procedures in case of another accident. In addition, the government has implemented a number of regulations regarding the transport of oil from the pipeline to the sea and by 2015 will require all supertankers be double-hulled (although

if the *Exxon Valdez* had had a double hull, its holding tanks would still have ruptured).

From the *Exxon Valdez* catastrophe, scientists have learned a lot about the lasting impact of an oil spill. We now know that the environmental damage is not only acute at first, but can continue for decades, particularly in areas where there is little wave action and where temperatures are cold.

And what of the boat, *Exxon Valdez*? The supertanker was towed to San Diego, repaired at a cost of \$30 million, and rechristened the *S/R Mediterranean* in 1990. Forbidden by law to reenter the waters of Prince William Sound, it carried oil across the Atlantic for a decade before being sold to a shipping concern in Hong Kong that registered it in Panama and renamed it *Oriental Nicety*. The ship was finally decommissioned and dismantled last summer in India.

In Valdez, natural disasters seem to go in a 25-year cycle. As we approach the 25th anniversary of the oil spill and the 50th anniversary of the earthquake, I wondered if the typhoon bearing down on us would be the next one. As we paddled into Valdez Harbor, the rain returned with a vengeance, and the wind began to pick up. Even with the physical exertion, the cold crept steadily back into my body. I could hardly hold my paddle and needed help climbing out of my kayak onto the pier. I don't clearly remember checking into the Best Western Harbor Inn at the end of the docks, but after soaking in the hot tub in my room and drinking another gallon of tea, I mustered the strength to wander down to the lobby. The Weather Channel flashed a warning on a flat screen TV above the registration desk. The storm had been upgraded to 19-foot seas. I learned from the front desk clerk that the road between Valdez and Anchorage was closed and that the ferry to Cordova had been canceled.

"I hope you're not planning on going anywhere," she said, cheerfully. "You've got a front-row seat for the storm."

I was glad it was a warm, dry one. As we watched the storm pound the harbor, I marveled at the ability of both the residents and the wildlife of Valdez to rebound from natural and human-made misfortunes, though in the case of an oil spill, it definitely takes a while.

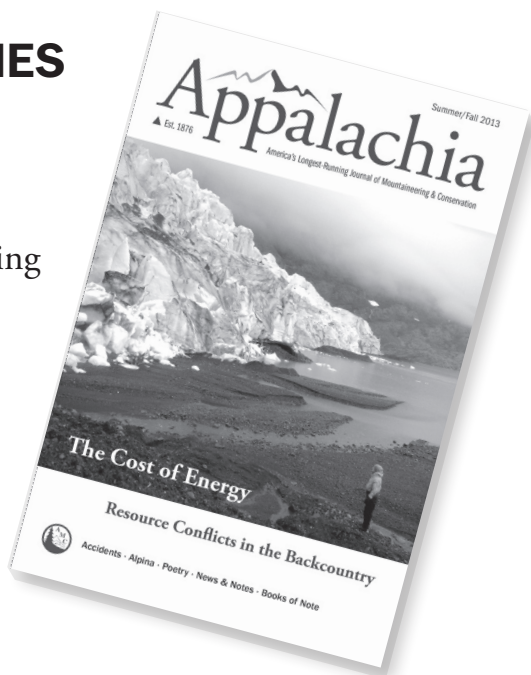
LISA DENSMORE is an award-winning writer, photographer, and filmmaker. She splits her time between Red Lodge, Montana, and Chateaugay Lake, New York, when she's not exploring a wild part of the world.

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