
# THE FUTURE OF SOUTHEAST ALASKA AND BRITISH COLUMBIA'S WILD SALMON

STORY BY BJORN DIHLE

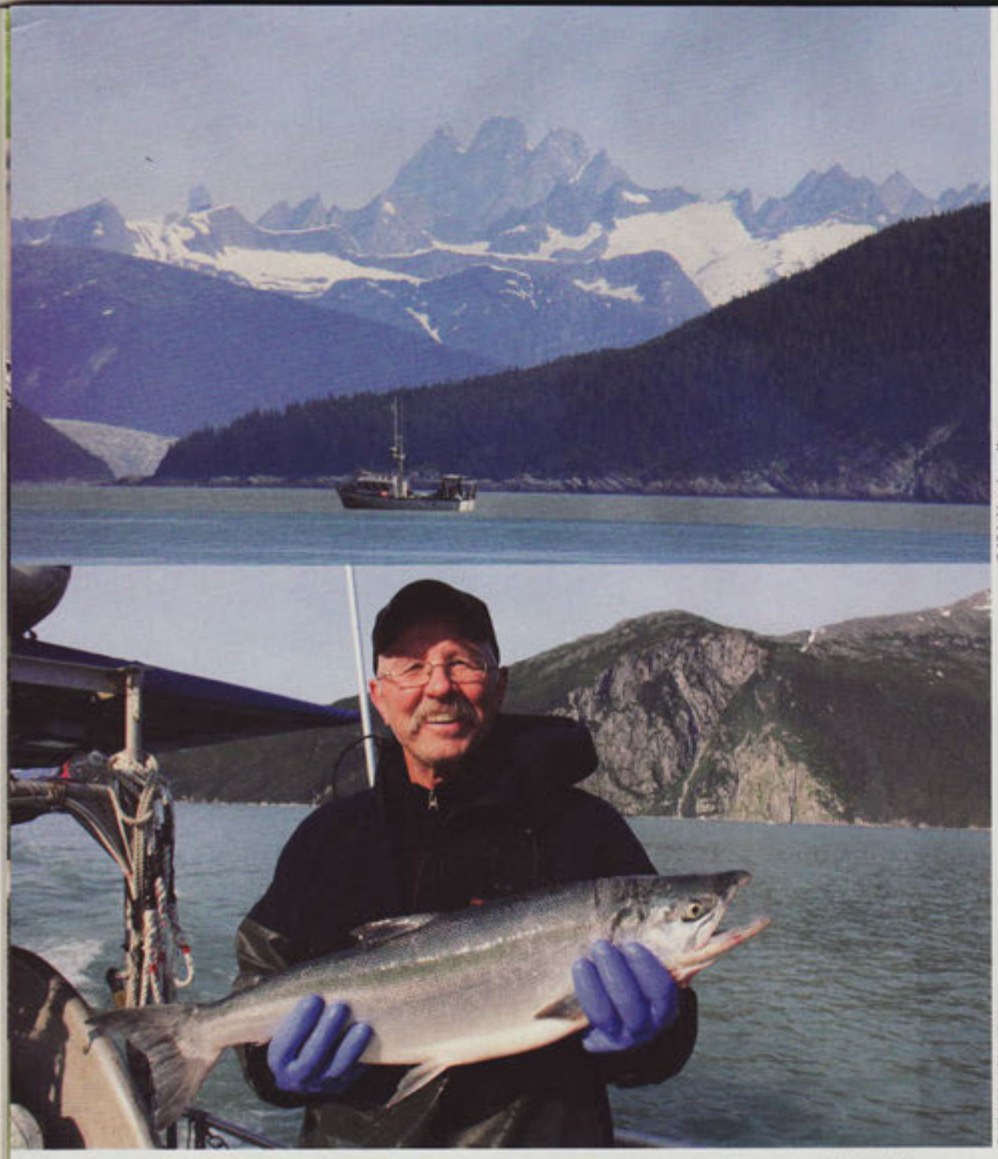
Our civilization can't run on pixie dust, unicorn farts or ultra-alternative energy generated by howling wolf puppies for very long. One would have difficulty building a truck or fishing boat out of hemp. Ever try to go hunting with a hand-carved atlatl from a tree you cut down with a stone ax? I've always wanted to, but I have a hard enough time getting game with my rifle.

Most of us benefit from the mining industry. If done in a properly regulated and considerate manner, mining can have minimal negative effects on the environment and be a part of a sustainable and healthy economy. But if we try to develop mega projects in certain places, such as the Pebble Mine near Bristol Bay, or if proper mitigation isn't in effect to ensure surrounding watersheds aren't polluted long after a mine is closed, mining can spell disaster for water quality, fish and our economy.

My dad and mom moved to southeast Alaska in their early twenties because their home state of California had exterminated all its brown bears, dammed its rivers and killed off most of its wild stocks of salmon. The rest of the world's wild salmon runs had died off or were vastly diminished, but in Alaska and northern British Columbia populations remained healthy. For 12,000 years before my dad and mom arrived—beginning at the end of the Pleistocene when the massive glaciers receded from what is now

Southeast—Tlingit, Haida, Tsimshian and other Native people lived here, largely depending on the bounty of salmon to sustain their rich cultures. To this day salmon are an intricate part of the cultures of the Tlingit, Haida, Tsimshian and many other people who live along the rain-sodden coast and rivers snaking deep into the rainforest. Salmon are our food and a big part of our livelihoods. Paula Dobbyn, Director of Communications for the Alaskan chapter of Trout Unlimited, wrote in an *Indian Country* article that southeast Alaska seafood industry produced $641 million worth of fish in 2011, which created 17,500 jobs and $468 million in wages. A million visitors tour the area every year, spending about a $1 billion. Many come hoping to hook into a salmon.

Sometimes when I'm away too long from my home, the smell of salmon will suddenly permeate me. When I'm really homesick the stench becomes particularly rich—like a spawned-out and rotting chum carcass. To this day my



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Top to bottom: A gillnet fishing vessel drifts in the mouth of the Taku River. The 8,584-foot. Devil's Paw, the high point of the Juneau Icefield, on the Alaska-British Columbia border rises in the distance. Gillnet fisherman, Greg Turner, holds a sockeye caught in Taku Inlet.

mom sometimes chases me with a stick of deodorant upon my homecoming—kind of embarrassing when you're 32 years old. But smelling fishy is something I've learned to be proud of, so much so that if I see or experience something good or cool, I often just say "that's fishy." I'm hoping the term catches on. Smelling fishy will finally become a good thing.

Lame jokes aside, last winter I heard a murmuring of something very unfishy going on in northwest British Columbia along the sensitive headwaters of the Taku, Stikine, Iskut, Skeena, Unuk, Nass and other salmon-rich rivers. A nearly billion-dollar, 214-mile-long transmission line, heavily subsidized by Canadian taxpayers, was coming to completion. It wasn't being built to save money for the village of Iskut, population 400, or get them off using diesel for their generators like some press relations folks touted. It was being built to power a wave of mining, petroleum and hydro projects that have the buzz and none of the charm of the Klondike gold rush.

At first I shrugged the gloom and doom off—as much as I appreciate wild places and want them preserved so future generations might have some sanctuary from civilization, it wasn't my place to get worked up over what was happening in another country. Every country deserves a chance to develop its resources and better its economy. My retirement plan may be living under a tarp on Admiralty Island while growling at brown bears, but I know other people have different ideas about how they'd like to live out their golden years. Over beers and halibut nachos, Chris Miller, who works as a commercial fisherman and photographer, shot me a questioning look when I expressed my tentativeness to get involved in another country's affairs.

"But the mining developments in B.C. are one of the biggest environmental threats southeast Alaska and our fish have ever faced," Miller said.

I brushed off the morbidity of the statement the best I could, but my halibut and beer buzz rapidly faded when I began to research what's going on. British Columbia's economy is firmly rooted in mining—there are at least 1,200 mining exploration companies in Vancouver alone—and the province has rolled out a blueprint that shows that northwest B.C. will be the focal point of its future mining interests. As I've already said, I believe a country has every right to develop its resources, but there's a problem in this case. Many of the mines—one projected to be one of the largest open pit mines in the world—are along the headwaters of Southeast's biggest producing salmon rivers. The potential for billions of tons of contaminated tailings to mix with some of the last wild salmon rivers in the world is a serious threat to a 12,000-year-old legacy of salmon giving themselves to people, our economy and way of life.

I'm not a biologist, or particularly intelligent for that matter—and, if I'm going to be honest, I'm a lousy sport fisherman. I frequently mooch off my brothers, who fill their freezers with king, sockeye and coho salmon every summer. But I'm intelligent enough to know that Southeast's fisheries—a sustainable resource that nets millions for the state's economy, feeds millions of people and provides multitudes with the only real meaning they have in life—is something worth standing up for and protecting. Richard Peterson, newly elected President of Central Council of Tlingit and Haida Indian Tribes of Alaska, made it very clear at a May 14 meeting in Juneau of some of the Tahltan, Tlingit and Haida leaders that he believed some of the mega mining projects will have devastating effects on Southeast. He said he's pro-development, but "not at the sake of our resources." Peterson, other Native Alaskans, First Nation people of Canada, sport- and commercial fishermen, biologists, Trout Unlimited, Rivers Without Borders and other non-profits are working together to try to slow, and in certain cases prevent, developments in B.C.

Beginning in the late 1990s a "tsunami" of development, driven by Asian markets hungry for minerals, had begun rolling across northwest British Columbia. Previously protected by its remoteness, the region has been the home to Tahltan, Gitanyow and other First Nation people for thousands of years. The 214-mile-long Northwest Transmission Line will soon be completed and able to power close to two dozen mega-projects the Province wants to build. According to the

B.C. Environmental Assessment Office's (EAO) job plans, the province aims to get eight new mines operational and aims to expand and upgrade nine mines by 2015. One, Kerr-Sulphurets-Mitchell (KSM) mine—a project that is arguably the most worrisome—is being called the next Pebble. Annita McPhee, Tahltan Central Council President, stated there is "so much development" going on in her B.C. homeland that she has a hard time keeping track of what's going on—as many as 250 exploration permits at any given moment.

"Some we're saying yes to. Some we're definitely saying no to. Some we don't know enough about," McPhee said at the meeting. The Tahltan's greatest concern, which McPhee said her people speak with one voice against, is fracking and mining developments in the "sacred headwaters" of the Stikine, Skeena and Nass rivers. McPhee introduced her elder, Mary Dennis, who along with several other Tahltan people was arrested while peacefully protesting Shell Oil Company's proposed fracking in the "sacred headwaters." Recently, Shell withdrew its interests in the region, a testament that people like Mary Dennis, who stand up for what they believe, do have the power to stop big corporations. Now Dennis, McPhee and many others are trying to prevent a massive open pit coal mine from being built by Fortune Minerals in the same area.

During the last few years the Canadian government has been hard at work slashing and weakening its environmental regulations. In 2012 Canada made a very controversial move and significantly revised its Fisheries Act—doing away with a prohibition on "harmful alteration, disruption or destruction of fish habitat." That same year, hundreds of Canadian scientists sent a letter to the prime minister stating their disapproval of axing the habitat protection from the Fisheries Act. "We believe...that the weakening of habitat protection in section 35 of the Fisheries Act will negatively impact water quality and fisheries across the country, and could undermine Canada's attempt to maintain international credibility in the environment," they wrote.

Anne Casselman, a respected science writer, wrote in an article for *Nature: International Weekly Journal of Science* that "A 1989 study of North American fish extinctions found that almost three-quarters of extinctions in a 100-year period were caused by habitat alteration."

In 2012, Canada's prime minister, Stephen Harper, also weakened the Navigable Waters Protection Act. B.C. Premier Christy Clark and the EAO are working to shorten the environmental assessment process as well as using provincial reviews instead of federal whenever possible. Christopher Pollon, a Canadian environmental journalist, wrote in a December, 2012 issue of *High Country News* that "Some of northwestern B.C.'s key rivers—the Taku, the Unuk, the Nass and the Stikine—will no longer be protected." The article goes on to say that "Harper (also) repealed the Canadian Assessment Act... thousands of projects that would have undergone federal environmental scrutiny will no longer be assessed."

There are no boundaries separating B.C.'s water from Alaska's water. Our fisheries are interconnected—much of the salmon we catch were born in Canada before migrating to Alaska and out into the Pacific Ocean. Both countries are dependent on the other to keep our shared resource healthy—harkening back to the Boundary Water Treaty of 1909 between the U.S. and Canada. The treaty essentially states that neither country should generate water pollution that causes injury to the health or property of its neighbor. With many of the proposed mines and existing mining projects along the Taku, Stikine, Iskut and Unuk rivers, the probability of Canada violating the treaty and significantly impacting southeast Alaska's fisheries is high. Furthermore, in the case of all these mines, Alaska will see none of the economic benefits but will assume a tremendous amount of the environmental and economic risk. An overwhelming concern is who is going to pay the billions of dollars once these mines close down to prevent acid mine leakage into watersheds—and if they'll stay good to their word. The mining industry's track record is remarkably poor in this regard. Many mining companies have cashed out huge dividends to employees in the upper ranks and shareholders before declaring bankruptcy and leaving the mess for taxpayers to deal with. Cleanup and water treatment mitigation programs' incredible costs frequently make this impossible for taxpayers to accomplish. British Columbia has offered no believable guarantees their mines will be cleaned up after they're shut down.

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Top to bottom: Acid drainage from the Tulsequah Chief Mine discolors a leaking contaminate pond next to the Tulsequah River in British Columbia, Canada. Sandy Craig, a Cross Sound troller and long-liner, holds a nice king salmon. Coho salmon on the cleaning table of a Cross Sound troller.

Alaska's government appears lackadaisical, even apathetic over what's happening in the transboundary region.

## THE FIVE MOST WORRISOME MINING PROJECTS IN BRITISH COLUMBIA THAT HAVE SIGNIFICANT POSSIBILITIES OF NEGATIVELY IMPACTING SOUTHEAST'S FISHERIES ARE:

1. **Kerr-Sulphurets-Mitchell Mine (KSM):** Located on a tributary of the Unuk River, the most productive salmon river in southern southeast Alaska and a spawning ground for all five species of Pacific salmon, hooligan and other species of fish. This project poses the single greatest threat. The mine, being developed by Seabridge Gold, Inc., if approved, may produce 10 billion pounds of copper, 133 million ounces of silver, 38 million ounces of gold and 200 million pounds of molybdenum, making it one of the biggest undeveloped gold projects in the world. Three massive pits would be mined, and one would be as deep, at nearly a mile, as the deepest mine in the world. Over its projected 52-year life, it's estimated to produce more than 2 billion tons of tailings, more than 80% of which would produce acid. Two dams, as tall—nearly a thousand feet—and wider than the Hoover Dam, would be needed to contain tailings and contaminated water. Water treatment costing an estimated $25 million a year would be needed for at least 200 years after the mine closes down, meaning someone is going to have to pay at least $5 billion for treatment, zero structural failures can occur, no significant natural catastrophes can happen and no human error can occur in order to keep the Unuk River from becoming polluted.

   The KSM mine, with its gargantuan scale and likely potential for disaster, has much of southeast Alaska horrified. The *Juneau Empire* editorial board wrote on KSM: "Leaving Alaskans with all risk, zero benefit" on April 27, 2014; "It's what happens once the mine closes down that garners the greatest concern. In short, it doesn't make good business sense for Seabridge, or whomever is deemed responsible for the defunct mine, to continue to pay the estimated $25 million each year (that's assuming no maintenance is needed) to maintain full functionality of the water treatment facility."

2. **Galore Creek Mine:** This open pit mine, and its network of roads and pipelines in the Stikine/Iskut watershed, would fragment and degrade a huge swath of fish and wildlife habitat. According to NovaGold Resources Inc., which owns the mine with Teck Resources LTD, the mine would produce 6.2 billion pounds of copper, 4 million ounces of gold and 65.8 million ounces of silver over an approximate 18-year mine life. It's one of the world's largest undeveloped copper-gold-silver deposits. It would be the largest copper mine in Canada. It would generate around 650 million tons of potentially acid-generating waste rock. Rivers Without Borders wrote in a 2012 statement, "The proposed mine would impact Galore, Scud, Scotsimpson, Sphaler, Porcupine, More and Iskut drainages, all of which flow into the Stikine River, an important transboundary system that supports 19 fish species, including all five species of Pacific Salmon...A mine or tailings impoundment failure in a region prone to avalanches and moderately high seismic activity could be catastrophic." The Stikine River is generally considered the second most productive salmon river in southeast Alaska.

3. **Tulsequah Chief Mine:** Located on the Tulsequah River, flowing from the Juneau Icefield and a tributary of the Taku River, this mine was closed down in 1957 when its owner declared bankruptcy. It's been leaking acid into the Taku ever since. Different mining companies have been ordered by the Canadian government to clean the mine up, but it's yet to happen. B.C.'s current plan is to redevelop and expand the existing Tulsequah Chief and Big Bull mines. The mine is expected to produce three million tons of tailings over its eight- to ten-year life cycle.

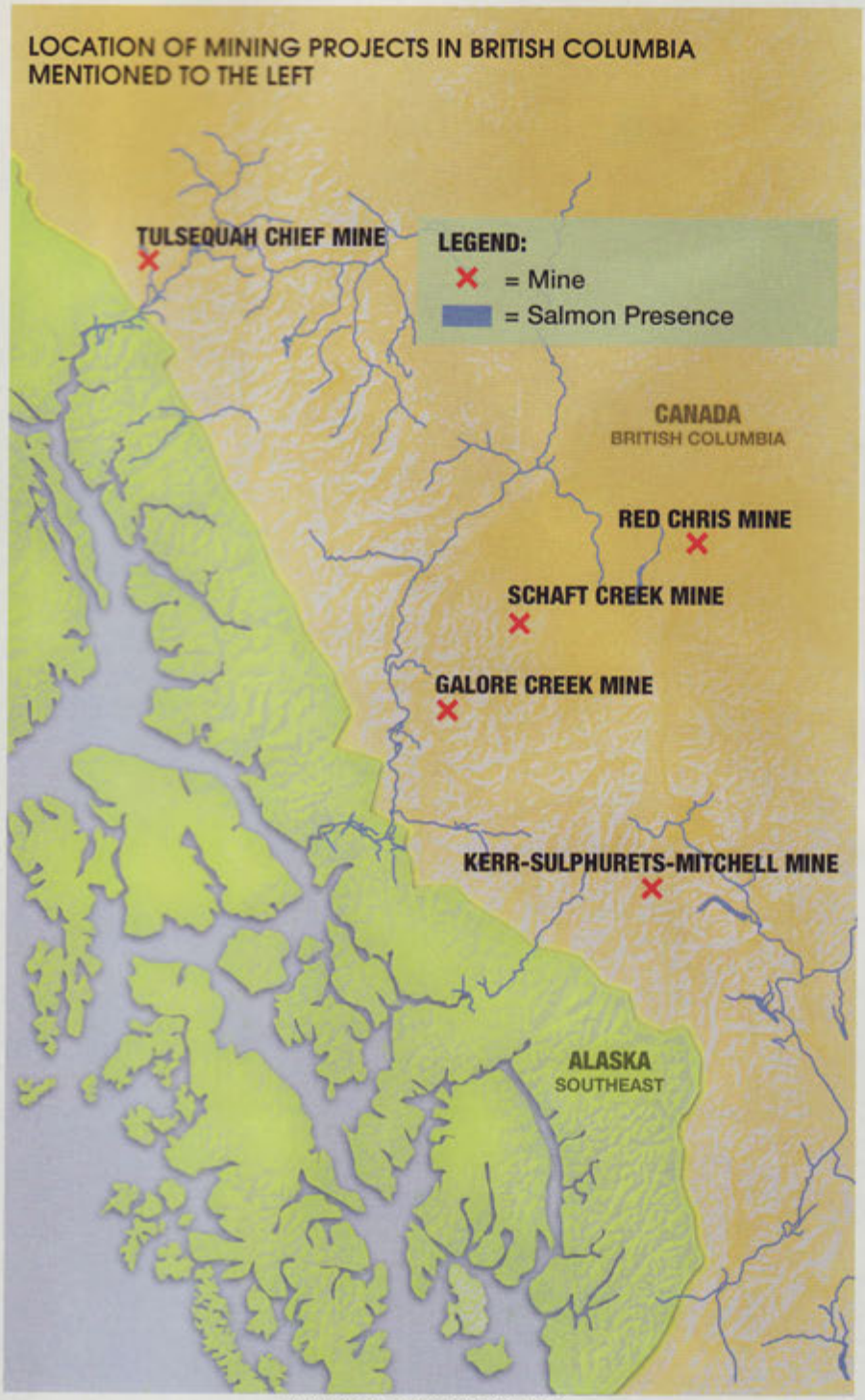
   The Taku River is considered to have the biggest salmon run of any river in Southeast. It supports a large fleet of gillnetters and contributes to the catch of trollers, seiners, sport- and subsistence fishermen in Alaska. On the Canadian side, numerous fishermen setnet both commercially and for subsistence. The Taku River Tlingit First Nation, who heavily depend on the salmon for subsistence, filed a suit in the B.C. Supreme Court to stop further development of the mine.

4. **Schaft Creek Mine:** Located off Schaft Creek in the Stikine/Iskut watershed, the proposed open pit mine would be built by Copper Fox Metals and Teck Resources LTD. According to the Canadian Environmental Assessment Agency, the mine would have a proposed ore production of up to 150,000 tonnes per day over a minimal 15-year operating life. A tonne equals 2,200.6 pounds.

   According to Rivers Without Borders, "The proposed mine will generate over 1 billion tonnes of waste rock, the majority of the waste material being placed right along the east side of Schaft Creek (which drains into the Stikine watershed). Preliminary studies of the waste rock suggests that 100 million tonnes is assumed to be acid generating...If the mine is developed as planned, the mine, road access and infrastructure required by it will destroy and contaminate wildlife and fish habitat in a very wild, remote part of the transboundary region that is currently without industrial intrusions of any kind."

5. **Red Chris Mine:** This open pit mine, owned by Imperial Metals, would be near the Stikine, Nass and Skeena rivers—three major salmon rivers in the Tahltan's "sacred headwaters" region. It's projected to produce 300 million tons of tailings over its 28-year life. There are serious questions over the feasibility of dams and water treatment programs that would keep the tailings from polluting watersheds. Tailings would need to be submerged in water and treated in perpetuity. The Red Chris mine was at the center of MiningWatch Canada's case against the Canadian government. The Supreme Court of Canada ruled against the Canadian government, stating that "the federal government cannot split projects into artificially small parts to avoid rigorous assessments."

   The Tahltan and Imperial Minerals appear to be coming closer to an agreement, but there's still an overwhelming amount of concern across the border over how salmon will be affected and whether or not Imperial Metals will honor its word to maintain the tailings impoundments in perpetuity.




**WANT TO GET INVOLVED?**

You can write or email Senator Lisa Murkowski, Senator Mark Begich and House Representative Don Young, urging them and the U.S. Department of State to engage with Canadian officials and take an active role in the development of the southeast Alaska/British Columbia transboundary region and to protect southeast Alaska's wild salmon. Visit www.salmonbeyondborders.org for more information and to sign a statement of concern to Secretary of State John Kerry.

Numerous Canadian and American biologists, fishermen and concerned citizens have sent letters to both Canadian and U.S. governments stating their concern and asking for assistance to assure both countries' fisheries, economies and cultures are not damaged in the mining boom. As of writing this, our state and federal branches of government have failed to get involved and stand up for Southeast's interests. Kyle Moselle, large-project coordinator for the Alaska Department of Natural Resources, in a 2014 *Juneau Empire* article essentially defended the plan to construct the KSM mine. Seabridge Gold (the company currently behind the KSM project) or the unknown company that will buy the mine, has offered no believable guarantees it would pay $5 billion to assure the water is treated and doesn't pollute the Unuk River for the 200 or however many years necessary after the mine closes. Trying to brush off the concern for the environment and a sustainable economy, Moselle said, "B.C. has water guidelines; they also have mining regulations. They have an environmental review process." He went on to state Canada's guidelines and regulations are similar to those in the U.S. Why Moselle and other state officials appear to support large foreign industries with no investment in southeast Alaska's fisheries and tourism jobs leaves me baffled.

I'm not sure what the future has in store for wild salmon, Alaska's cultures and economy. It won't be good if we don't stand up, like Mary Dennis, the Tahltan elder who's been fighting for years to protect her home. At 71, she hunts her own moose, sheep and caribou. She catches her own fish, tans her own moose hides and wants to see her young people doing the same thing.

"As long as I'm standing, I'll be protecting our sacred headwaters," Dennis said during the meeting of Tahltan, Tlingit and Haida leaders in Juneau. Also at the meeting was Wade Davis, an acclaimed author, National Geographic Explorer in Residence and part-time resident of northwest B.C., who spoke of "our haunting capacity to forget" to what's happened to fish and wildlife populations around the world. He referenced how a number of species, like the passenger pigeon that once darkened the sky and the American bison that once stretched in the millions across the Great Plains, were exterminated in just a few short years. It seems unfathomable that southeast Alaska and northern B.C.'s wild salmon could disappear, but people thought similarly about recently depleted or extinct animal species. It's up to us, those who know the blessing of southeast Alaska's 12,000-year-old legacy of salmon and people, to ensure that it's not our generation that is the last to catch and eat a wild Taku, Stikine or Unuk river salmon.

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