Alaska: The Last Frontier is our Last Hope

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I have neither given nor received help on this work, nor am I aware of any infraction of the Honor Code.

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In the heart of Anchorage, there is an infamous Alaskan ranger named Samuel Morrison. He is loved by his wife, appreciated by his coworkers, and popular with school children on field trips for his goofy lessons and animal puppets. Sam has twinkling eyes and a contagious smile that is partially masked by his long, handlebar mustache and short beard. His hair is long, deep brown, and pulled back into a ponytail, and his skin has a tanned, leathery appearance. He has worked for the National Park Service (NPS) for 34 years and is currently a ranger within the Alaskan mountain range where he spends most of his time being an educator to students, tour groups, and families alike. From lessons in the visitor center to guided walks through the wilderness and even puppet shows in the amphitheater, Sam is a natural at making guests feel welcome, excited, and intelligent.

Anchorage has been Sam's home since 1962 when he was born, but his family is native to the south central region of the state along the Chitina River of the Wrangell Mountains [refer to Figures 1 and 2]. Sam is a born member of the Ahtna Alaska Native tribe, but he was adopted as a child by an American couple who lived in Anchorage. Despite this adoption, Sam still had an open and active relationship with his birth family. Even from a young age, Sam was able to participate in some of the traditions of his Ahtna tribe, such as subsistence hunting. "It was sort of an adoption, but sort of political. It was just one of those things back then and now I have two families!" In the 1960s, Alaskan Natives did not have as many laws that advocated for their rights and customs, compared to today. Since Sam does not go into detail about his adoption or life as a child, it could be a possibility that his adoption was for the purpose of better socialization (i.e. more educational and job opportunities). But, before this story goes any

further, one must become familiar with a few acts, regulations, and historical cases in Alaska that shaped Samuel Morrison's life.

The abbreviated history goes like this: In 1961, after Alaska gained its title as a U.S. state, the Alakan Natives tribes formed a federation to begin the fight for their land and legal rights. After 10 years, in 1971, the Alaska Native Claims Settlement Act (ANCSA) was created and 40 millions acres of land were promised to Alaskan Natives. While this was a victory, it was small because there are over 425 millions acres in the entire state of Alaska. The Alaskan Native Federation continued their fight with Congress and in 1980 the Alaska National Interest Lands Conservation Act (ANILCA) was born, giving 104 million acres of land and water to Alaskan Native tribes. ANILCA gave birth to 13 national parks, 16 wildlife refuges, 2 national forests, 56 acres of designated wilderness, and much more (National Park Service, 2020). With the regulations set forth by ANCSA, Alaskan Natives could hunt and fish subsistently where they lived, even if it was within the protected public lands determined by ANILCA.

For Samuel Morrison, his perspective of the history goes like this: In May of 1961, prior to his birth in 1962, two Iñupiat hunters shot waterfowl ducks in the presence of a U.S. Fish and Wildlife enforcement officer outside of the designated hunting season and were consequently arrested. In protest of this, over 100 Iñupiat men and women shot ducks and marched them to the courthouse. The case caught the attention of national news outlets and all charges were dropped (Jenson, 2011). Despite not being alive at this time, Sam talks passionately about the Barrow "duck-in" because, "Hunger knows no law. Our people have hunted for thousands of years without knowing regulated hunting seasons." With the help of the precedent set by the Barrow "duck-in" as well as the strong civic agency work from the Alaskan Native Federation, these led to ANCSA and, thus, subsistence hunting within the protected public lands created by ANILCA.

For Sam, hunting has always been an important part of his life and his culture, even if he was raised by Americans in one of the biggest cities in Alaska. Because of the Barrow "duck-in", ANCSA, and ANILCA he is able to hunt on Ahtna lands and follow traditional resource harvesting that has been taught over generations. Subsistence hunting is "the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools or transportation," (Federal Subsistence Board, 2020, p. 3). Subsistence hunting is unique in Alaska because it gives residents of public lands, regardless of state or national protection, the priority to use the wildlife and wilderness for their livelihood. In any other state, hunting is strictly prohibited within the borders of state/national parks, forests, refuges, or defined wilderness lands. Because of the agreements made between the Alaskan Native Federation and U.S. Congress, Alaskan Natives have successfully preserved their pasts for the betterment of their futures.

When Samuel is asked to describe his experiences with subsistence hunting in Alaska, his smile becomes wide and his eyes go to some distant place as if he is thinking of a certain memory.

> As a human and a hunter, I've relied upon the wisdom handed down by my parents, grandparents, aunts and uncles as to how, when, and if I should harvest food. Bears are a food source, but they are also much, much more—they are more importantly a part of the ecosystem and play an intricate role. My most success has been with fish, then caribou, and occasionally I've been fortunate to harvest moose.

But, recently, a serious question has begun to invade Sam's mind about hunting: "Why is there so much politics in hunting?" Since before Alaska even became a state, there were hunting regulations in place to limit when, what, and how much you could hunt—but they weren't often

enforced. Since statehood, these laws have become more strict due to federal management and state enforcement. In general, the reasoning for more restrictions and regulations is to protect, preserve, and increase the wildlife in Alaska. But who were the people who caused enough damage in the first palace that strict regulations were deemed necessary? For example, Alaska saw the worst decline in fish populations in the early 1900s after decades of American and Russian commercial overfishing. The impacts were so detrimental that dozens of fish hatcheries had to be created in order to increase the fish population. Salmon are the keystone species to Alaska's ecosystem and without them every animal and person suffers.

Sam tells a story of when he, his father, and his uncles would catch salmon as large as 50 lbs in the 1960s [refer to Figure 5]. "Now, we only find salmon that are 20-30 pounds, and we can only harvest them if they are so many inches long and within a specific season." While Sam does partake in subsistence hunting and fishing, he does not rely on it to live. Nonetheless, there are rural Alaskan Natives who do rely on a bountiful harvest through subsistence hunting and fishing. If Alaskan Natives and other rural residents are not able to catch enough fish, or if the fish they catch are too small, this means less meals for everyone at the table, especially during the winter [refer to Figures 3 and 4]. At the mention of fish hatcheries, Sam scoffs that they have not helped the problem. He claims that wild salmon have a distinct taste and are meatier than any fish that come from hatchery-stocked rivers. Additionally, Sam believes that fish hatcheries are one of the causes for smaller salmon because of natural competition and warming ocean temperatures. Regardless, Sam does acknowledge the hatcheries' good intentions of replenishing the fish market, which the ecosystem and economy alike flourish on.

Imagine a family or group of rural residents who rely on subsistence hunting for everything. The fish they catch feed themselves and their sled dogs. The bears they hunt provide

meat for the winter, fur clothing to keep them warm, and tools, too. What happens if they do not harvest enough food to last through an entire winter? For example, in the southcentral subsistence unit of Nelchina-Upper Susitna, the government has set a limit of one moose per household and the open season is 30 days long (Federal Subsistence Board, 2020, p. 67). One harvested moose can certainly feed one family, but what if one household in this region comprises two or three families? Or what if the neighboring household was unable to harvest a moose this season and they run low on food during the winter—who will help them? One of the ten universal values for Alaskan Natives is to "share what you have," (Alaska Native Heritage Center). Thus, a kind and trusted neighbor can most likely be counted on for help to get through one winter by sharing resources. The Alaskan government's solution to the problem of food shortages for rural residents and subsistence hunters is a food distribution welfare program.

Welfare programs are meant to help people, so they must be inherently good. But why is the Food Distribution Program on Indian Reservations necessary in the first place? Samuel alludes to this question at the end of a long tangent about over-regulating hunting and fishing practices. Sam says "hunting depends on who you are, what you want, and where you are." The federal subsistence wildlife regulations are updated approximately every two years based on what resource managers believe will enhance or alter an animal population or ecosystem—but what about the people? "If there was one thing driven home by my lessons from elders, it was about fairness in the world we live in." This statement could potentially be Sam's way of asking if it is fair for the American government to limit or take away a basic need only to offer it in a different form as a handout for one to rely on.

Digressing from these ethically controversial thoughts, Sam always has a way of lightening the air—by going outside where it is fresh. After working for the NPS for 34 years,

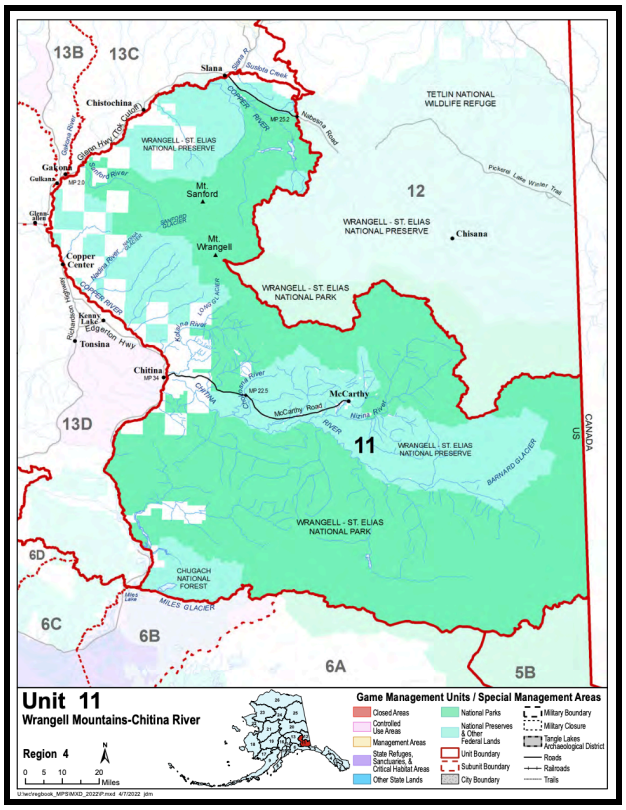
one might think that Sam has had his fill of fresh air and mountain scenery, but this is nowhere near true. Each season, the environment changes and an electricity can almost be felt as spring changes into summer and summer goes into fall. The sky, sun, and moon work on a perfect clock to give grace to the lands and animals from April to September. The bears leave their sacred dens and take their cubs to bountiful rivers with silver fish. The moose and caribou grow their antlers and remember which fields offer the greenest grass. The wildflowers splash their vibrant array of colors across every imaginable surface. And the leaves always know when it is their time to shine in magnificent shades of yellow and orange. These are some of the beautiful moments that Samuel lives for, and he is so grateful that he is paid to watch mother nature work right in front of his very eyes. While Sam is occasionally frustrated with the overwhelming number of ecosystem and wildlife regulations in Alaska, he is ultimately thankful for them because they allow him to continue experiencing the beauty of the Last Frontier.

Sam's spirit for life and education has allowed him to be a ranger at each of the 13 national parks in Alaska during his career. Currently, Sam works within the Denali National Park and he takes his job as an educator very seriously. "I want to encourage youth to understand they have a responsibility to learn as much as possible and then seek ways to mitigate and/or prevent future failures from occurring." It can be easy to separate ourselves from the reality of a situation if we can physically distance ourselves from the issue. For example, it is a known and accepted fact that climate change is real. But, one can choose to ignore its devastating changes when they live in a small suburb in Virginia. For Sam, who has lived in Alaska his entire life, he has never been able to look away from climate change because it affects him in some way everyday. Winters have become harsher, entire glaciers have disappeared, entire lakes and rivers have run out of fish, and the number of wildfires increases every summer [refer to Figure 6]. "These are

the problems that you guys," meaning people of the millennial generation and after, "are going to have to solve because we just haven't figured it out yet. If we do not recognize our failures from the past, we are doomed to fail again." Sam wishes that more people were taught *how* to think critically instead of simply told *what* they should think.

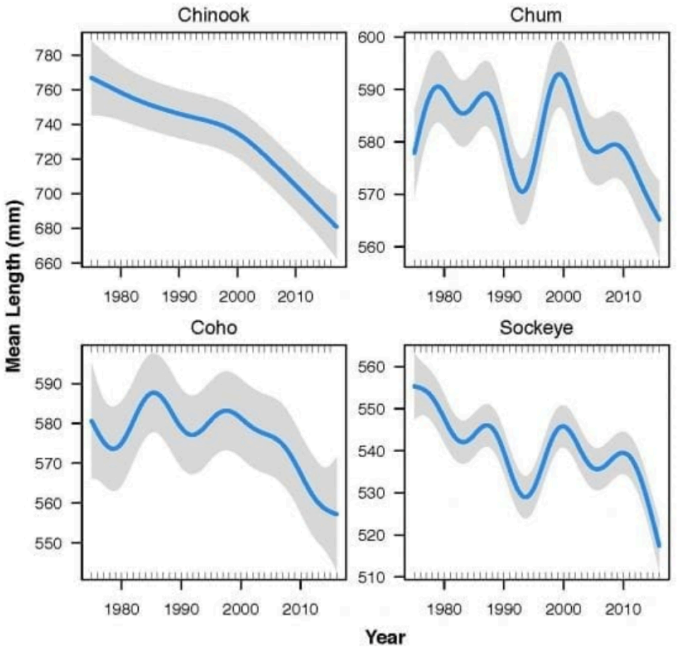
A common saying in Alaska is that people move to this state to run away from one thing in the hopes of running into something else. Whether you want to run away from a smoggy city into the fresh wilderness or away from unlimited cell service to homes lighted and warmed by fireplaces, Alaska is the final destination—the Last Frontier. Could the Last Frontier also be our last hope and inspiration for a better future? Unlike in the continental U.S., the past is not-so-distant in Alaska and the native people, animals, and trees aren't afraid to stand tall, talk loud, and fight back. With the futuring lying in our hands, we must respect the opinions and knowledge of others and join together as civic agents to save, protect, and preserve our Earth. Samuel Morrison makes this clear to every person he interacts with, whether it's through a nature walk with school children or via an email to a nearly complete stranger across the continent.

Figures



1. Map of Alaska's Southcentral subsistence region Unit 11 Wrangell Mountains-Chitina River, (Federal Subsistence Board, 2020). This is the subsistence region for some Ahtna Alaska Natives.

2. View of the Chugach Mountain Range and Matanuska River from AK Rt 1 on the drive to the Wrangell--St.Elias Mountain Range.



Plots were created using over 7.5 million data points of measured fish collected by Alaska Department of Fish & Game and partners such as US. Fish & Wildlife Service, National Park Service, tribal entities, and Fisheries and Oceans Canada. The data represent fish in commercial catch and escapement projects, using a general additive model on size change through time.

3. Graphs demonstrating the overall decline in salmon fish size from 1976-2016, (Palkovacs, Westley, & Morris, 2018).

Table 1. Chinook salmon data sources, mean annual sample size per year, and relative exploitation rates by stock.

River system	Source of data	Gear (stretched mesh size inches)	N*yr^{-1}	Exploitation
Yukon	Commercial Harvest	Gillnet (5.5–8.5)	649	High
Kuskokwim	Commercial Harvest	Gillnet (3–8.5)	146	Medium
Kogrukluk	Escapement	Weir	168	Medium
Kanektok	Commercial Harvest	Gillnet (<6)	187	High
Goodnews	Commercial Harvest	Gillnet (<6)	108	Low
Nushagak	Commercial Harvest	Gillnet (<5.5–unrestricted)	347	Low
Deshka	Escapement	Weir	145	Low
Kenai	Commercial Harvest	Gillnet (<6)	347	Medium
Copper	Commercial Harvest	Gillnet (<6–unrestricted)	421	High
Unuk	Escapement	Snag, dip-net, seine, carcass	225	Low

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4. Table displaying where salmon are fished and by whom, along with a ranking of exploitive overfishing, (Lewis et al., 2015). The highlighted sections on the table point out that the most highly exploited fishing areas are in the Yukon, Kanektok, and Copper Rivers by commercial fishing companies who use trapping nets of the maximum allowed size.

5. Chinook "King" Salmon caught by Les Anderson in 1985 in the Kenai River. The fish weighed 97 lbs. (Barefield, 2017).

6. Northwestern Glacier in Alaska in 1909 versus 2004, (Kaufman, n.d.).

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Source Notes

Samuel Morrison is a fictional character created from interactions with multiple residents of Alaska, but he is mainly based on two National Park Rangers. The two NPS rangers wish to remain anonymous, but gave permission for their statements to be used in this paper. The additional persons that Samuel's character is based on are Alaskan residents Troy, Annie, and John. While most of Sam's background, personal life, and stories are embellished or fictitious, all of the quotes are accurate and real.