

THE LOG FROM KOTZEBUE SOUND: CHASING ANADROMOUS FISHES ALONG THE ARCTIC CIRCLE

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BACKGROUND

Alaska state law mandates the Alaska Department of Fish and Game (ADF&G) to define waterbodies with anadromous fish habitat throughout the state. To be listed, habitats must have direct, unambiguous observations and documentation by a qualified observer. These habitats gain protections regulating land use policies such as those directing stream crossings requiring bridges to allow fish passage or the timing of mining to not coincide with sensitive spawning or juvenile rearing periods. To provide this knowledge of habitats, the ADF&G curates the “Catalog of Waters Important for the Spawning Rearing or Migration of Anadromous Fishes,” known colloquially as the Anadromous Waters Catalog, or AWC. To inform the AWC, ADF&G established the Alaska Freshwater Fish Inventory (AFFI) in 2002. The AFFI program represents the state’s primary annual effort to revise the AWC. Fish community sampling occurs most often in waterbodies that have had limited to no documentation via western science methods. As such, the locations of most of these efforts are in remote areas of Alaska. During these projects, as funding and time allows, we augment our standard electrofishing protocols with opportunistic methods to expand our sampling area as well as targeting species with different gear or observation methods (e.g., Cathcart 2019). The following represents how opportunistic sampling improves fish habitat protections in Alaska through revising the AWC. Each revision to the AWC is called a *nomination* and is specific to a waterbody that represents habitat for the anadromous species and their life stages found there. Nominations to the AWC may add a species or more, a newly documented upstream distribution, a newly documented waterbody (distinct slough, lake, or stream), a newly documented life stage of a species, back-up information to substantiate historical AWC data that lacked evidence (they were based on historical observations), or a combination of these.

STUDY DESIGN AND AREA

In 2019, the AFFI program had money remaining from a grant from the Healthy Waters Consortium, a US Environmental Protection Agency (EPA) affiliated endowment that bankrolls conservation-minded organizations for watershed or landscape-level projects. This grant funded work in the upper Koyukuk and Kobuk rivers in 2018 in a study area that straddles the Arctic circle just south of the Brooks Range. This work was described by AFFI staff in two articles (Cathcart 2019; Cathcart and Giefer 2020). To expand the project’s footprint and expend remaining money, we executed late-season aerial surveys based out of Kotzebue, AK, to investigate anadromous fish presence in tributaries of the lower Kobuk River, lower Noatak River, Hotham Inlet, and the Chukchi Sea (Figure 1).

These streams flow through ancestral and current territories of Inupiaq people; these territories are managed as native, state, and federal lands. Many of these waters drain, or are adjacent to, the following National Park Service units (from east to west): Gates of the Arctic National Park & Preserve, Kobuk Valley National Park, Noatak River National Park & Preserve, and Cape Krusenstern National Monument. Understanding which waterbodies sustain anadromous fishes in this region is important since these streams support regional ecological economies including several subsistence communities, animal communities (e.g., fishes, Brown Bear, birds that exploit the marine subsidies delivered by salmon or other anadromous fishes) and riparian vegetation (Quinn 2018). However, this region is challenged by climate change and regional development, such as road building and mining, that can affect the amount and quality of fish habitat (Cathcart 2019).

Qikiktagruq, the historic name for the city of Kotzebue, sits on the north end of a flattened tied island connected to the base of the Seward Peninsula by a narrow land bridge called a *tombolo*. Kotzebue is named after Otto von Kotzebue, who sought the Northwest Passage for the Russian empire in the early 1800s. This seaside community of about 3,000 people is significant geographically, culturally, and economically. Its location among three major river systems (Noatak, Kobuk, and Selawik rivers) and the sea once provided a hub for trading and travel among other coastal or inland communities. Today, it is still a bustling travel hub that has grown through the addition of large airport. Bisecting the lagoon, the airport runway is one of the only paved parts of town. Boats come and go from a small harbor attached to the lagoon as Boeing 737s and bush planes land and take off from the runway. A hotel is one of the tallest buildings, if not the tallest building, in town, and it overlooks houses with yards

Photos by the author unless otherwise indicated.

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Figure 1. Map of the study area. Numbers correspond to the sites in Table 1.



Figure 2. Male Coho Salmon caught at the mouth of the Pah River, September 2017. (Photo by Mark McKinstry)

occupied by sled dogs and snowmachines eager for winter. Scattered throughout the community are eateries selling similar assortments of food (sushi, pizza, etc.), churches of all (or the most popular) denominations, federal buildings such as the National Park Service (NPS) Western Arctic Parklands visitor center, schools (home of the Huskies), and the clinic. In the middle of town near city hall, the police department, and the liquor store lies the cemetery, ringed by worn bike and foot paths as dead whaling captains are memorialized by arching Bowhead Whale jaws.

THE WORK

I jumped at the chance to execute this mission for a couple reasons. By mid-September in Alaska, desperation to enjoy what's left of the field season builds as sunlight is fast whittled away by each passing day. Fall is our most fleeting season yet is advantageous in some regards. There are no (or fewer) mosquitoes or biting flies as early frosts have killed them, the streams have generally low and clear water levels, and many large-bodied anadromous fishes are still migrating or spawning and are able to be seen before the ice and darkness take over. Another reason I set this adventure up is because of Coho Salmon *Oncorhynchus kisutch*. During a personal rafting trip on the Kobuk River in early September 2017, a friend caught a Coho Salmon at the mouth of the Pah River (Figure 2). Coho Salmon are known for often being the latest spawning salmon; thus, a later-timed survey effort. Winter was coming, the fish were out there, and I was headed north to find them.

SEPTEMBER 18: If there's one thing I learned about this trip as far as logistics go, being upfront with what you're carrying for fish or genetic sample preservatives to the airlines can avoid going through expensive, laborious hazardous material shipping. I packed triple-contained (Nalgene bottle inside a Ziploc bag inside a dry box) ethanol, formalin, and Longmire solution (an eDNA preservative) in my checked luggage. Before I fly, when I'm working with a gate or baggage agent checking my luggage with liquids such as these, I make it clear to identify them as unpressurized, triple-contained preservatives. Otherwise, since my work was aerial surveys, my gear was minimal. I had a bag of clothes, my



Figure 3. Kimber the office dog working hard at Golden Eagle Outfitters' hangar.



Figure 4. The first stream surveyed, the sinuous Situkoyuk Creek on Cape Krusenstern.



Figure 5. Cape Krusenstern beach landing. The Chukchi Sea, part of the Arctic Ocean, is on the left. The water along the right-side horizon is Kotlik Lagoon, where Kilikmak Creek (number 10 in Table 1) drains.

fishing gear, and a medium-sized Action Packer tote with sampling equipment such as a GPS unit, data book, the preservatives, minnow traps for opportunistic sampling of juvenile fishes in the lagoons, waders and boots, and a seven-pack of beer.

Beer is not necessary for science, but if there's one thing I learned about beer before this trip, it's BYOB to Kotzebue. Many remote Alaskan communities are dry, meaning the import or sale of alcohol is prohibited and punishable by steep fines. Kotzebue is not dry but has strict regulations to combat alcohol abuse. In Kotzebue, there is a \$10 daily admission to the liquor store before one can purchase a \$30 six-pack.

I arrived in Kotzebue to a golden sunny day and prepared for flying the next day. I checked-in with the pilot before checking into my hotel room. The pilot was Jared Cummings of Golden Eagle Outfitters, a flight operation that flies hunters, scientists, and locals throughout the region. Like any trustworthy outfit, they always have a dog or two in the office, and unlike most Alaskans, they are comfortable with any sized dogs (Figure 3). Their motto exemplifies the bravado of bush aviation: "Trust us with your life, not your daughter or wife." However, their respected reputation extends multiple generations, with Jared's dad founding the company and operating hangars in Kotzebue and Delta Junction along with Jared's brother. They have been a go-to aviation outfit trusted by ADF&G (and other agency) biologists for decades.

After checking into my hotel, I stopped at the Bayside Inn next door for a sushi dinner in view of the Chukchi Sea. Along with hotel breakfasts while the skies were still dark, this sums up the quotidian parts of my trip: hot breakfast mornings and sushi nights.

SEPTEMBER 19: Though I had worked the past two field seasons in remote parts of Alaska, our protocol had involved helicopter travel. This would be my first experience with aerial surveys performed the traditional way: small fixed-wing aircraft such as the Super Cub and a Cessna 206. We first worked out of a Piper PA-18 Super Cub, a standard of Alaskan bush aviation—especially in the hunting community. However, instead of Dall Sheep or bull Caribou, we were hunting fishes in the coastal streams draining into the Chukchi Sea, starting on Cape Krusenstern (a National Monument on Inupiaq territory). Yellow leaves and red brush still clung to the more coastal landscapes as the smell of exhaust fumes clung to my nose.

The creek surveyed wound itself through tundra, which was radiant in the soft September sunlight (Figure 4). Following the stream from its headwaters toward its mouth, I spotted a bold red fish. Then another. With my goal being Coho Salmon, I wanted to call them that but, as vultures spiral around an animal until its death, we rotated around the fish until I recognized enough of the contrast between the red body and green head: Sockeye Salmon *O. nerka*. Throughout the survey, Sockeye Salmon spawned over redds cleared in the streambed, a lone carcass showing the annual reproductive ritual wasn't over yet. Good signs for things to come.

As we flew to the next stream, a pair of stolid Musk Ox trundled along the tundra, their feet hidden under a wooly sheet. Ice formed on small ponds and the white silhouettes of ptarmigan spooked off ridges by our flightpath, signs of impending winter. Our next survey, on the Kilikmak River, produced more Sockeye Salmon. After running out of creek to survey, we landed along the lagoon it empties into and stretched our legs (Figure 5).



Figure 6. Flying in Super Cub surveying Uvgoon Creek, a tributary to the Noatak River. Moments after this photograph was taken, we spotted spawning Sockeye Salmon in Paluktak Creek. Fish were in a reach with a series of beaver dams, often spawning just downstream of the dams.



Figure 7. Looking upstream South Fork Agashashok River from the back of a Super Cub.

We hatched a plan to work clockwise through the air toward the Noatak River drainage. Black Spruce and taller vegetation populated the tundra as we moved inland. Chum Salmon *O. keta* spawn throughout the Noatak River and its tributaries, attracting hordes of gulls, patient Bald Eagles perched in streamside trees, and Grizzly Bears plodding gravel bars. The western Arctic Caribou herd, Alaska's largest, dotted the landscape. Among the multitudes of Chum Salmon, a handful of ruby red Sockeye Salmon stood out on their redds. In the upper parts of the Eli River, Sockeye Salmon spawned below Beaver dams—an emerging regional phenomenon as Sockeye Salmon and Beaver expand their ranges (Figure 6; Tape et al. 2022).



Figure 8. Female Sockeye Salmon caught from South Fork Agashashok River.



Figure 9. Male Chum Salmon from the South Fork Agashashok River.

We tried to fly north to reach upstream parts of tributaries such as the Kelly River that have spring-fed lakes. However, we aborted this plan for the day as a snowstorm forced us to turn around. Instead, we shifted our sights to a downstream tributary of the Noatak River, the Agashashok River (Figure 7). More Sockeye Salmon were spawning in the clear water. Jared had mentioned hunters that he had flown out to a nearby camp were saying they had caught silvers (meaning Coho Salmon). We took this opportunity to get on the ground and, after deflecting the offer to enjoy the hunters' well-stocked bush bar (it was noon), I was led to the mouth of a creek where I could see Sockeye and Chum salmon staged for spawning. This is why you leave the hunting to hunters and the fish identification to fish biologists. A couple of large dark Dolly Varden *Salvelinus malma* cruised among the salmon. I took my boots off to cross the creek for better fishing angles, hence the given name for one of the nominated streams that previously lacked one (Table 1). I verified aerial observations by catching fish with large flies (Figures 8–11).

Taking off again, Jared pointed the Super Cub eastward toward the largest tributary system of the Kobuk River: the Squirrel River (drainage area 4,226 km²). The village of Kiana sits at the mouth of the Squirrel River, an advantageous spot to intercept Inconnu (AKA sheefish or bush bass) *Stenodus leucichthys*, other whitefishes, and salmon fresh from the sea. Kobuk River tributaries

Table 1. Waterbodies surveyed during September 2019 and nominated to the Catalog of Waters Important for the Spawning Rearing or Migration of Anadromous Fishes (AWC). Georeference provided within the WGS83 coordinate system. Species occurrence types are as follows: P = Presence; S = Spawning. Asterisk indicates species was observed in the waterbody during these surveys but was already in the AWC. Italicized waterbody names indicate stream was unnamed per the United States Geological Survey and was given a name (Paluktak is Inupiaq for beaver).

No.	Waterbody	Drains into	Latitude	Longitude	Sockeye Salmon	Chum Salmon	Dolly Varden
1	Agashashok River ^{2,3,5}	Noatak River	67.35977	-162.39000	S ^{2,3}		
2	South Fork Agashashok ¹	Agashashok River	67.49157	-161.89116	P	P	P
3	<i>Barefoot Creek</i> ¹	South Fork Agashashok River	67.46326	-161.97588	S		
4	Avan River ^{2,3}	Noatak River	67.95556	-162.28239	S	S	
5	Bear Lake ^{3,4}	Kelly River	68.02225	-162.36472		S	
6	Eli River ⁴	Noatak River	67.65687	-162.73163		S	
7	<i>Hotdish Creek</i> ¹	Squirrel River	67.19946	-161.43120	P	P	
8	Kallarichuk River ⁴	Kobuk River	67.17430	-159.80320		P	
9	<i>Kallifornia Creek</i> ¹	Kallarichuk River	67.11270	-159.87248		P	
10	Kilikmak Creek ¹	Kotzebue Sound	67.29836	-163.45378	S	P	P*
11	Kokopuk Creek ⁴	Hotham Inlet	67.04595	-161.90368		P	
12	Omikvorok River ^{2,3}	Arctic Ocean	67.71913	-163.99486	S	P	P*
13	Pick River ¹	Kobuk River	66.71812	-156.91425		P	
14	Singauruk Creek ¹	Hotham Inlet	67.05728	-161.72259		S	
15	Situkoyuk River ¹	Kotzebue Sound	67.12626	-163.18982	S		P
16	Squirrel River ^{2,3,4}	Kobuk River	67.16493	-161.07755	P ²	S ³	
17	Tutak Creek ²	Wulik River	67.87476	-163.38512	S	S	P
18	<i>Paluktak Creek</i> ¹	Eli River	67.81301	-162.32796	S		

¹ added waterbody to Anadromous Waters Catalog (AWC)

² added species to AWC-listed waterbody

³ added life history event (e.g., spawning) for species existing in AWC-listed waterbody

⁴ substantiated inclusion of a waterbody in the AWC that previously lacked documentation

⁵ extended upper reach of existing AWC waterbody

are some of the prettiest waters I've seen. The Squirrel River did not disappoint. We flew over broad spruce-filled valleys carved by clear streams flowing through abundant instream woody debris and over cobble, gravel, and sand. The Chum Salmon were in, but apparently so fresh they were not spawning yet.

Hopping from creek to creek led us over a massive bull Moose bedded down with a rack well over 60 inches along with his harem of 6 cows. Not far away we flew over two large bull Moose skulls locked together by their broad antlers. Love, as in life, has winners and losers, Moose included.

After all that flying, it was no surprise that we needed gas. Turning westward toward Kotzebue, we had enough fuel to survey a couple short systems emptying into Hotham Inlet. More Chum Salmon were spawning and dying, though a bit more difficult to see in the dark tannic water. Seal heads stuck out of the lagoons, drawn to the migrating fish. When we crossed Hotham Inlet, hundreds of Tundra Swans staged for their southward migration in the nearshore waters below us. Fall is a flurry of activity as everyone seems to be trying to beat winter: salmon seek to spawn, wildlife from birds to bears eat as many calories as possible to fuel their migrations and hibernations, and biologists try to survey what they can before the ice comes.

During our pit stop, Jared switched aircraft. We climbed into the Cessna 206, a larger, faster, more comfortable plane than a Super Cub. Though we sacrificed a wider range of potential landing areas—and although we could not fly as low and slow (critical factors when trying to identify fish species from the air)—the 206 would allow us to cover more ground each day. And, after all, we were, for the most part, chasing large, colorful fish in clear water. We headed back east toward the Kobuk River to survey during the remaining daylight.

The trees became more skeletal and the landscape drabber the farther east and inland we flew. Our surveys culminated with finding Chum Salmon swimming in the Pick River's dark waters south of Shungnak and in a clear tributary to the Kallarichuk River at the west end of Kobuk Valley National Park. With surveys finished, our return to Kotzebue included three Black Bears (a sow and a cub, and a separate boar) and once again, the swarm of swans in the sound.

Before leaving the hangar, Jared told me to take beer from the stack (more like a pile) inside. They had flown an owner of an Alaskan brewery, who had donated a lot of beer. A lot. I picked up a six-pack but was told to grab more. Free beer is free beer; so, what the hell.



Figure 10. Male Chum Salmon from the South Fork Agashashok River.



Figure 12. The tannin-stained Pah River (left) empties into the clear Kobuk River (right).



Figure 11. Male Sockeye Salmon from the South Fork Agashashok River.



Figure 13. Cessna 206 gravel bar landing along the Kobuk River upstream of the Pah River. We sampled eDNA samples and cast for sheefish here.

SEPTEMBER 20: The next day we worked with an eye toward the Kobuk River. Our first stop was to collect eDNA samples around the mouth of the Pah River (Figure 12), the site of where I observed a Coho Salmon in 2017 and a hotspot for the spawning migration of sheefish. The Pah River is home to the world record sheefish weighing in at 53 lbs. It's also about 180 miles from Kotzebue. The long flight took us over the Kobuk sand dunes and past the villages of Ambler, Shungnak, and Kobuk. As we flew over the river to land on a gravel bar, a swarm of large shadows in the water darted away from the aircraft.

After landing on the dry gravel bar (Figure 13), we put our waders on as fast as we could but for different tasks. Jared got to head straight to fishing whereas I had to do science first. By the time I had taken three eDNA samples, Jared had caught a few sheefish (Figure 14), with one on the bank. Sheefish have delicious, white, firm, oily meat with large muscle fibers. I interpret it as an oily version of Pacific Halibut *Hippoglossus stenolepis* that you can catch in fresh water. While not everyone agrees, I think it is great baked, grilled, smoked, and fried.

With no time to waste, I spurned my fly rod for a conventional casting rod and my trusty 1-ounce bucktail jig. I waded into the stream a couple yards, the cold water above my ankles, and cast. Ripping the jig across the river like the bassmaster himself, Kevin VanDam, produced heavy strikes. Repeating this process brought in a couple large females and a few small males (Figure 15). Call me the "bush bassmaster," eh? On average, males are smaller, often 35–39 in., whereas females range 40–50 in.. After dispatching two for my limit, fishing was over almost as quick as it began (Figure 16). With eDNA samples and fresh fish packed, we took off westward.

Once refueled in Kotzebue, we were determined to survey the system of spring-fed lakes in the Kelly River drainage, tributary to the Noatak River, that we couldn't reach due to snow yesterday. Our aerial prospecting gave a sense of anticipation as Bear Lake materialized on the tundra (Figure 17). Looping around the lake in several circles, we spied hundreds of fresh-looking Chum Salmon finning over redds pockmarking a submerged beach (Figure 18). Seeing these fish and remembering how the Chum Salmon



Figure 14. Pilot Jared Cummings holds a large sheefish.



Figure 16. Sheefish after science.



Figure 17. Bear Lake, part of the Kelly Lakes in the Kelly River watershed, a tributary to the Noatak River.



Figure 15. Average sheefish from Kobuk River.

from the Agashashok River looked, I was struck at how golden these Chum Salmon were compared to other western Alaskan conspecifics that wore more traditional flanks of crimson and green. Accomplishing our aerial mission, we turned back under blue skies, enjoying scenery while salmon spawned (Figure 19). After landing, I acquired 12 beers.

I pulled on my canvas pack stuffed with minnow traps and hiked dirt streets through town to the lagoon (Figure 20). The ghosts of the year's last big fish migrations lay in piles of dry gill-nets spread along the shore. After setting four minnow traps baited with radioactive-pink-colored cured salmon roe, I hiked back to the hotel (Figure 21). Tomorrow was the survey's finale.

SEPTEMBER 21: On our last day of surveys we flew farther

north along the coast. We first targeted the Omikviorok River, a river with Red Dog Mine in its headwaters. Red Dog Mine is known for its zinc and lead mining. The lead and zinc are trucked to a port on the coast where it is barged away to be processed. The Omikviorok River is now known for supporting Sockeye and Chum salmon.

We also made our way to the Wulik River, home of the world and state record Dolly Varden, a sea-run fish weighing over 20 pounds. The sunshine and Dolly Varden were too good to pass up. We landed on a huge gravel bar to take a few casts, producing many 12–18-inch fish (Figures 22, 23, 24). Though it's truthful that I love all fish, I still play favorites. *Salvelinus* has long been my favorite fish genus because, big or small, the species represent bedazzled icons of plastic iteroparous life histories spanning clear rivers, deep cold lakes, and coastal seas. Their having ravenous appetites and tasty flesh (especially in spring when their oils are in their flesh, not their gaudy spawning attire as in fall) doesn't hurt as I find it easier to appreciate that which I can interact with. Alas, all the Dollies were released, and we surveyed a tributary where we documented Sockeye and Chum salmon spawning among swarms of Dolly Varden.

On our way back we surveyed another Hotham Inlet stream, with more success finding Chum Salmon. We made it back to Kotzebue with plenty of daylight remaining. I gained 18 more beers and a bunch of Golden Eagle Outfitters swag such as hats and hoodies before leaving the hangar.

Though I got skunked in two traps, the other two each had a



Figure 18. Spawning grounds of Chum Salmon in Bear Lake. Fish and their redds were concentrated to the middle right of this photo. Looking closely, one can see a ring made by a splashing fish and the silhouettes of spawning salmon over their redds dug into the gravelly lake bottom.



Figure 20. North end of the Kotzebue Lagoon system. Note the boat in the main channel exiting to Kotzebue Sound (middle upper right of the photograph). The northern edge of town is in the upper left.



Figure 19. View from the office window.

fish. Though I knew their families and had an inkling about what the gadid was, I vouchered both for identification. Upon closer examination, Plain Sculpin *Myoxocephalus jaok* (Figure 25) and Saffron Cod *Eleginus gracilis* (Figure 26) were added to the fish list. Though non-anadromous, documenting these species is useful to understand local fish communities.

On my last night, I ate a couple sushi rolls at the Bayside Inn and took a brief walk along the sea wall before retiring to my hotel room. It was time to pack up.

SEPTEMBER 22: I had arrived with cured salmon roe, seven beers, and visions of Coho Salmon. I left with formalin-pickled fishes, two cases of beer, some swag from Golden Eagle Outfitters, and a lot of nominations for the AWC, though none for Coho Salmon. The Boeing 737 felt detached from the world compared to riding inside a small plane the past few days. Now Anchorage-bound, my destination was an office until next field season.

RESULTS

We added 123 km to the AWC across 18 waterbodies (Table 1). Chum Salmon (14) were the most-nominated species, followed by Sockeye Salmon (11) and Dolly Varden (5). This breakdown can be attributed to several factors including: Dolly Varden have already been documented in more waters throughout western Alaska than other species, potentially emergent Sockeye Salmon populations in the region (or small latent populations that have gone undetected), and some waters listed in the AWC lacked documen-



Figure 21. Setting minnow traps in Kotzebue Lagoon. A discarded boot served as the anchor to two traps. The Ziploc bag holds bait canisters full of cured salmon roe.

tation, thus warranting substantive evidence from these surveys.

EPILOGUE

One of the first things I did after donating the new beer collection to friends and getting the AWC nominations submitted was to investigate the phenomenon of lake-spawning Chum Salmon. Turns out, Bear Lake supports one of five documented lake-spawning Chum Salmon populations in the world and one of two in North America (Arostegui and Quinn 2019). Populations exhibiting this behavior are not only few, but they are also disjunct: three lakes in Russia, Kluane Lake (upper Yukon River in Yukon Territory, Canada), and Bear Lake. In 2021 we may have found another such population, but that story is for another time.

In the winter of 2019–2020, a pandemic started. You may have heard about it. This shut down the federal lab that was to analyze our eDNA samples. The samples we had taken during these surveys, as well as dozens of other samples from throughout Alaska, expired and were disposed down a drain.

We began a new project in the Kobuk River in 2022. Before our August trip, I coordinated travel through Kotzebue in route to the village of Kobuk. I used our state travel service to book a room at the



Figure 22. Female Dolly Varden from the Wulik River.



Figure 23–24. Female (left) and male (right) Dolly Varden from the Wulik River.



Figure 25. Plain Sculpin trapped in Kotzebue Lagoon.



Figure 26. Saffron Cod trapped in Kotzebue Lagoon.

Bayside Inn, figuring I would eat sushi before bush living began. I saw emails from the travel service show up in my inbox, but I knew the drill, it was my itinerary, everything was set. Most sampling and camp gear had already arrived at the Golden Eagle Outfitters han-

gar. I just needed to get to my hotel. Standing with the remaining equipment in front of the airport, a curious taxi driver asked if I needed a ride. I did and we loaded the cargo into her van.

She asked, "Where to?" I said, "The Bayside Inn." She laughed and asked, "Really?"

"Yeah," I replied, now unsure, "Why?"

"Oh, you'll see."

We drove to the Bayside and pulled up out front. What remained of the hotel and restaurant was a lower-level unit in varying degrees of disrepair or construction, not renovation. The Bayside Inn had burned down in November 2020. I ended up staying at the taxi driver's aunt-in-law's bed and breakfast before shipping out to Kobuk. As of January 2023, the State of Alaska's travel service still offers the Bayside Inn as a lodging option in Kotzebue.

This current study has more budget left. We will return in October 2023 to chase Coho Salmon out of Kotzebue, along with a week in late August targeting spawning Chum Salmon from Kiana. This time, we have our own eDNA sampler, long-term storage, and multiple analysis options.

As for the scientific souvenirs, they all found homes. The Plain Sculpin and Saffron Cod now reside in the ichthyology collection of the Museum of the North at the University of Alaska Fairbanks. The collection is curated by Dr. Andres Lopez and serves as the repository for our vouchered specimens. The nominations to the AWC were accepted and are published on our online mapper system, which you can find at: <http://www.adfg.alaska.gov/index.cfm?adfg=ffinventory.interactive>

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