



ONCORHYNCHUS

Newsletter of the Alaska Chapter, American Fisheries Society

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Burbot captured with setline near the Dalton Highway. Photo from Lisa Stuby, ADF&G.

Yukon River Burbot – From the Bottom Up

Lisa Stuby

Burbot are the only freshwater member of the Gadidae (cod) family and are distributed throughout the Holarctic region. In North America, Burbot range from Alaska's Seward Peninsula east to New Brunswick on the Atlantic coast, occurring in both rivers and lakes. Burbot are elongated, laterally compressed with a somewhat flattened head, and have a single barbel at the tip of the chin. The barbel is a sensory organ used to find food in murky water. Because of their long cylindrical shape, Burbot were considered to have low swimming endurance and therefore incapable of maintaining themselves for long in strong currents (McPhail and Paragamian 2000). Burbot differ from most Alaskan fish species by being less active during the warm summer months and very active during the dead of winter, even spawning from late January to early February.

Burbot are found throughout the Yukon River, the 3rd longest river in North America and the largest river in Alaska, flowing approximately 1,970 km from the Canadian Border to the Bering Sea. These fish are an important source of food for people living along the Yukon River and its tributaries in both Alaska and Canada and are harvested primarily during fall and winter, notably providing a source of fresh fish during the winter months. Burbot are usually captured with set gillnets or setlines baited with whitefish or blackfish and fished overnight. In some villages in the lower Yukon River such as near Pilot Station, entire communities will fish for Burbot with a large, square trap, and the catch will be distributed throughout the community.

To learn more about Burbot life-history in the Yukon River, a 2-year study on seasonal distributions

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AFS Alaska Chapter Meeting Recap

Over 130 people convened in Seward for the 50th Annual Meeting of the American Fisheries Society Alaska Chapter. Meeting attendees shared 60 oral presentations and 22 poster presentations, surpassing all expectations! Following the meeting there is a lot to digest and reflect on, but also celebrate, from the week in Seward. Here are a few take homes from the Annual Meeting.

Plenary Speaker Sonia Ibarra gave a moving and thought-provoking start to the meeting. Her work quality and the respect she has in the fisheries field and in her community was very apparent in her presentation! Thank you so much Sonia for your impactful plenary, but also for your kindness and mentorship to the Chapter. We also appreciate Danny and Lorenzo for cheering on Sonia and being a part of our Alaska Chapter family!

A film shown at the Annual Meeting sparked strong reactions from many attendees. We apologize for presenting this challenging material without adequate context and for failing to provide a supportive environment for reflection and discussion following the showing. The Alaska Chapter strives to facilitate discussions of important topics in Alaska fisheries, including historic and persisting inequities in science and management, while also fostering a professional community where everyone feels welcome, respected, and supported. Our efforts fell

short of these goals, and we are dedicated to learning from this experience and charting a path forward with your feedback. We plan to hold conversations with meeting attendees and our membership over the coming year to improve our processes for future meetings. We are grateful to our DEI Committee, the Tamamta team, members of Tribal organizations, and others who have offered to help facilitate these important discussions. To contribute to these conversations or stay updated, please contact the Chapter’s DEI Committee at deic@afs-alaska.org, or any Chapter officer.

The students are the heart and soul of the Chapter, and this especially shows true during annual meetings. This year’s student presentations were some of the highest caliber talks and posters we have seen! It is good to know the future of Alaska’s fisheries is in good hands! Thanks to a generous donation from a long-time AFS member, we were able to present the largest monetary rewards for Student Presentation Awards in Alaska Chapter history, totaling \$7,000. Make sure you take a chance to congratulate the 2024 Student Presentation Award winners!

The Genetics in Alaska 101 workshop had 62 participants, of which 27 were in-person. For access to the recording and powerpoints, contact

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Award Type	Winner #1	Winner #2
Best PhD Presentation	Austin Flanigan	
Runner-Up PhD Presentation	Lindsay McCulloch	
Best MS Long Presentation	Benjamin Rich	
Best MS Short Presentation	Elena Eberhardt	
Runner-Up MS Long Presentation	Cameron Jardell	Benjamin Wilkins
Runner-Up MS Short Presentation	Maris Goodwin	Emily Mailman
Best Graduate Poster	Maggie Harings	
Runner-Up Graduate Poster	Sydney Almgren	Genoa Sullaway
Best Bachelors Presentation	Isabelle Nicolier	
Best Bachelors Poster	Emma Rudy Srebnik	
Runner-Up Bachelor Poster	Lillian Nelson	

AFS Alaska Chapter Meeting Recap, continued

Professional Development Committee co-chair Sara Miller (sara.miller@alaska.gov).

Wilderness First Aid was a huge success with 11 participants leaving the meeting with a potentially life-saving certification. The Alaska Chapter supported participation for 6 attendees, of which 5 were students and 1 Seward Chamber of Commerce employee (for all their help with meeting planning). We hope to host more of these types of training courses at future meetings and throughout the year!

The DEI committee and Chugach Regional Resource Commission (CRRC) hosted the Two-Eyed Seeing Workshop. Tribal elders and youth from the region participated in storytelling and the sharing of traditional foods and crafts to promote cross-cultural team building. Workshop outcomes were shared with participants, and also at the Poster Session. Thank you for the effort by groups and participants, and to the Tribal panel for sharing their culture with the Chapter.

The Silent Auction at the SeaLife Center Banquet raised \$2,610 to support travel for our amazing student membership to future annual meetings! Thank you to all of our kind donors and the competitive bidding!

Finally, a huge shout-out to the Seward Chamber of Commerce, the Mermaid Grotto, Midnight Sun Brewing, the Porthole, and Stoney Creek Brewing for helping put together the

Chamber After 5 PM event. There is still buzz about the event! The community of Seward appreciated hearing about all the quality research conducted by our members. **We had a positive impact on this small coastal town!** Thank you to those that gave presentations!

Thank you to the Chugach Regional Resource Commission (CRRC) and Alutiiq Pride Marine Institute for their three land acknowledgements and providing free hatchery tours to meeting attendees. We want to continue to grow connections and partnerships with Tribal organizations as our Annual Meetings rotate among areas, and this connection was near and dear to our hearts.

We also want to give many thanks to our planning committee and student volunteers that helped make this Annual Meeting a success. Many of us were planning this meeting hundreds of miles from Seward, and regardless, we all made it happen! We cannot thank any of you enough! The 2024 planning committee members were (alphabetical order): Nate Cathcart, Maggie Chan, Taylor Cubbage, Johnna Elkins, Nick Ellickson, Leah Ellis, Teresa Fish, Kyle Gatt, Sara Gilk-Baumer, Sierra Greene, Maddy Lee, Sara Miller, Will Samuel, Becky Shaftel, Kate Wedemeyer, and Katelyn Zonneville. This was an amazing team!

See you next year in Ketchikan! 🐟

25-Year Members

The Alaska Chapter recognizes Michael Carey, Jeffrey Olson, and Chris Zimmerman for being AFS member for 25 years, having joined in 1978. Thank You, Michael, Jeffrey, and Chris for your decades of membership and service to AFS and professionalism in the aquatic field! 🐟



Yukon River Burbot, continued

was conducted during 2017–2019 throughout the Alaska portion of the Yukon River using radiotelemetry techniques (Stuby et al. 2022). Two hundred ninety-three mature Burbot (530–1,050 mm total length) were captured with baited hoop traps and radio-tagged in the lower to upper Yukon River near Pilot Station, Russian Mission, Galena, Dalton Highway, and Circle. The radio transmitters were surgically implanted near their stomachs, and movements were tracked with aerial flights and stationary tracking stations during winter spawning, spring, summer, and fall. The main goals of this radiotelemetry study were to describe Burbot seasonal movements and timing, particularly with respect to winter spawning areas.

The radio-tagged Burbot were tracked from the Canadian border to the Yukon River Delta using a fixed-wing aircraft with antennas on each wing connected to a radio receiver which incorporated GPS. Also, five stationary tracking stations were set up on the shores of the Yukon River and each tracking station contained a radio receiver with a power source and antennas that recorded the time and date whenever a radio-tagged Burbot swam by.

Burbot spawning behavior is unique in the freshwater fish world and not just because they spawn during the coldest, darkest time of year. As fall encroaches, hungry Burbot become more active and rapidly put on weight, storing fat in their livers which become enlarged. These fatty livers are considered a delicacy by subsistence fishers. Female fish use this fat to form thousands of eggs for winter spawning. During the early 1990s, Burbot fecundities were estimated for gravid females in the Tanana River, which is the largest Yukon River tributary (Roach and Evenson 1993). As expected, larger individuals produced



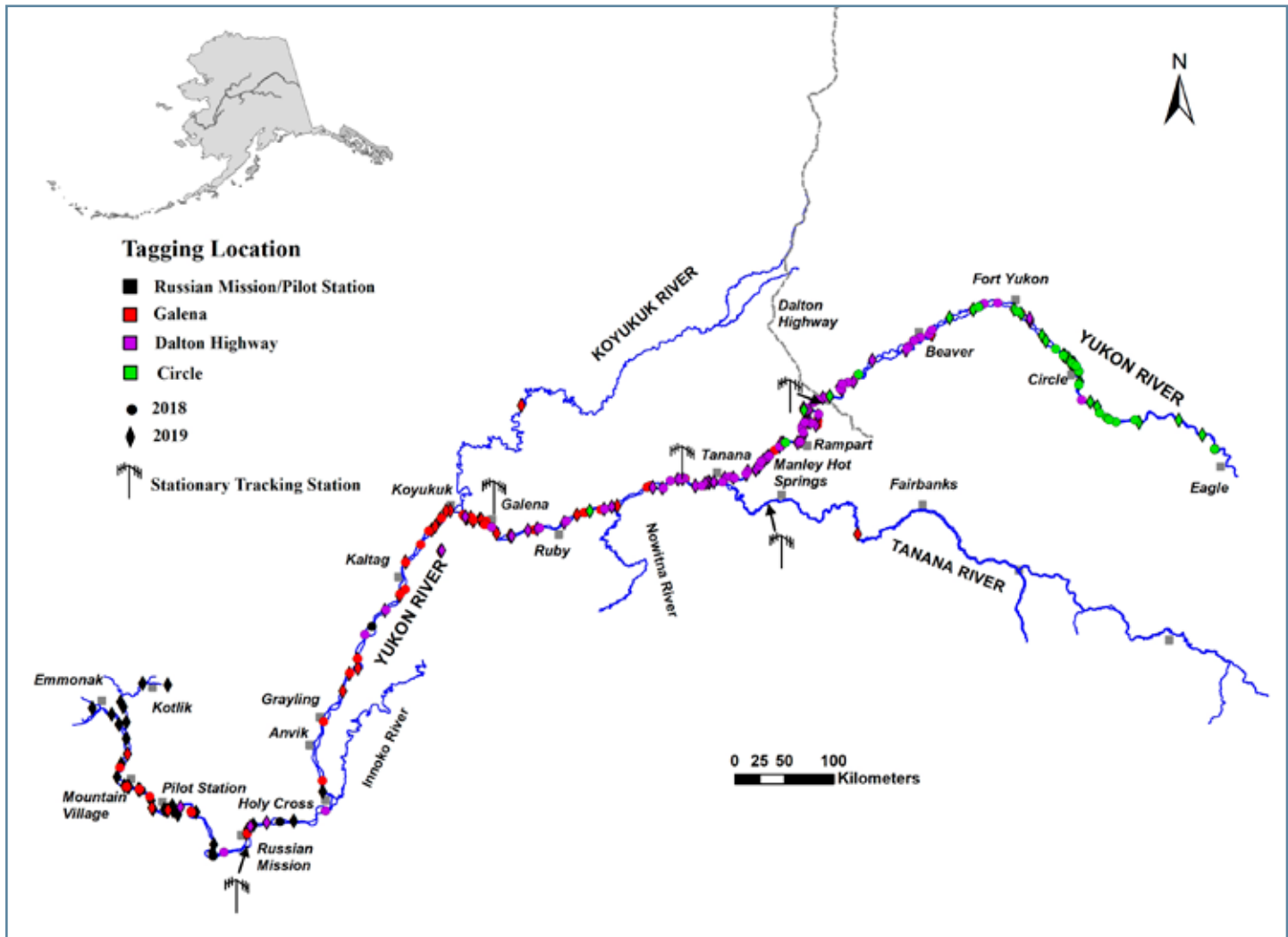
Radio-tagged burbot ready to be released back into the Yukon River. Photo from Lisa Stuby, ADF&G.

more eggs than smaller ones, with female Burbot between 450 mm and 1,075 mm total length having egg contents ranging from 271,000 to 2,517,000, respectively.

Pre-spawning migrations occurred during October–December, which provides enough time for the fish to arrive at spawning locations. Because spawning events tend to be relatively short, approximately 1–3 weeks, it would be okay to show up early, but spawning fish do not want to be late! Also, the further a Burbot had to travel to reach its spawning destination, the earlier it started migrating. In general, most of the radio-tagged Burbot arrived at their spawning destinations well-before late January; however, some appeared to arrive at the nick of time! In addition to having a good sense of smell to locate food in murky water, a good sense of hearing allows Burbot to locate each other during the mating cycle through the grunting/clicking noises made with their swim bladders. Burbot are broadcast spawners and during the relatively short time of spawning, they congregate in large groups where they swim in writhing masses and “broadcast” the eggs and milt into the water column and over differentially sized gravel and sand, into which the fertilized eggs will settle. Lipid globules initially make Burbot eggs neutrally buoyant which, with the movements of spawning

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Yukon River Burbot, continued



Yukon River study area for burbot study showing stationary tracking stations locations for spawning and non-spawning radio-tagged fish during January to February in 2018 and 2019. Figure from Lisa Stuby, ADF&G.

adults, suspends the eggs for a short while until they gradually sink and drift along the bottom until lodging in the interstices of the sand and gravel.

This study showed that Burbot spawned throughout most of the drainage, which was not surprising because a 1990's study on the Tanana River found similar results (Evenson 2000). Most of the fish that were captured and radio-tagged in the lower Yukon River travelled further downriver and into the Yukon River Delta. Because the Yukon River Delta is muddy and tidally influenced by marine water, this was not considered a spawning area; however, this a great place for Burbot to feast on juvenile Pacific salmon and other fish species. During the last year of this study, prior to the radio transmitters losing power, some of these fish were noted to travel upriver of Pilot Station

(and tidal influence) during the time of spawning. Spawning locations stretched from just above Pilot Station to the Canadian border. Spawning hotspots were primarily in the middle and upper Yukon River, especially between Tanana and the Dalton Highway. Burbot that were radio-tagged near Galena and the Dalton Highway had the greatest propensity for travelling longer distances and were seen throughout the Yukon River during the radiotracking flights. Burbot are not noted for spawning every year, although some did.

Assessing whether a Burbot was in a spawning area from aerial tracking flights and stationary tracking stations was subjective. Visiting every potential spawning location to certify pre- and post-spawning characteristics for captured

Continued on next page

Yukon River Burbot, continued

fish was not feasible given the size of the drainage. Therefore, criteria used to determine if a spawning area had been located included if a tracked Burbot: (1) was located during the likely time of spawning in late January to early February; (2) was located in habitat consistent with spawning areas described by previous research; (3) was located in close proximity to other radio-tagged Burbot, especially those fish radio-tagged from multiple areas; and, (4) had exhibited a directed migration based on the stationary tracking stations and/or aerial tracking data prior to being located during the January to early February aerial tracking flights.

We visited one spawning location during the first week of February 2019, captured and examined 24 Burbot, and took water quality measurements. Of the 24 fish captured with baited setlines that were fished overnight, half had recently spawned, and the other half had not. The liver weights of fish that had spawned were visibly shrunk and weighed approximately 25% less. Burbot spawning activity is energetically expensive and liver fat is used to produce thousands of eggs. The water temperature was 0.1°C, just above freezing, pH was 7.4, typical for freshwater, and dissolved oxygen was 8.2 mg/L, which means that the fish were getting sufficient oxygen within the icy and snow-capped Yukon River. The conductivity was 333 $\mu\text{s}/\text{cm}$, typical for winter conditions and in contrast to summer with precipitation and glacial influences when conductivity is approximately 15% lower. The river depths ranged from 1.5 to 4.5 m, so spawning locations were fairly shallow. Also, and important for broadcast spawners, the river velocity, which we did not directly measure, was relatively low.

Post-spawning behavior varied with Burbot



Aerial tracking flight over the frozen upper Yukon River. Photo from Lisa Stuby, ADF&G.

either remaining at their spawning locations, migrating back to where they originated, or travelling to new locations. The majority of radio-tagged fish that spawned during one year did not exhibit much movement during the following year and vice versa. However, a small proportion were noted to spawn both years, with some showing fidelity to particular spawning locations and others not. After spawning, the radio-tagged Burbot usually did not migrate for a few months, with most movement occurring during April–June. Similar to spawning locations, some Burbot either showed fidelity to overwintering locations at or near their spawning locations, or moved someplace totally different. Predictability was not a characteristic of this long-lived, slow growing species! The stationary tracking stations noted movement during the summer months, but not to the degree recorded in the fall, winter, and spring. During the summer aerial tracking flights, radio-tagged Burbot were located in deep pools that had cooler water.

When I started working with these fish that were described in the literature as having low swimming endurance because of their physiology (McPhail
Continued on next page

Yukon River Burbot, continued

and Paragamian 2000), I thought they would not travel far from where they were radio-tagged and, therefore, not be too exciting to track. However, I was in for a surprise! Although most Burbot did not travel far from their tagging locations, with a median net travel distance of 140 km, approximately 17% of tagged fish travelled over half of the Yukon River drainage. A few notables were a Burbot radio-tagged near Galena that travelled downriver to Russian Mission, then upriver above the Dalton Highway, and then back down to the Nowitna River—a total distance of 925 km. Another Burbot that was radio-tagged near the Dalton Highway travelled upriver above Circle and then downriver near Russian Mission—a total distance of 1,299 km. The longest distance traveler was a Burbot captured and radio-tagged near Circle and later located near Kotlik on the Yukon River Delta—a total distance of 1,700 km! Overall, larger fish had a propensity to travel longer distances. It can be assumed that these and other radio-tagged Burbot did not swim continuously to reach their destinations, but would stop at a back eddy or tributary mouth to rest and feed. Because these fish were recorded migrating past stationary tracking stations that operated year-round, I was able to calculate approximate daily swimming speeds between stations. As expected, swimming speeds were faster for Burbot travelling downriver with the current than upriver against the current. The fastest upriver swimming speed was 21 km/day for a Burbot that travelled 250 km. The fastest downriver speed recorded was 69 km/day for a fish that travelled 467 km. So much for “low swimming endurance!”

This study improved our understanding of Burbot in the Yukon River. During this 2-year study, migration behaviors were documented, including that some of the larger Burbot travelled extensively throughout the drainage to spawn and feed, whereas others occupied more localized ranges. The long-distance migrations contrasted with what had been understood about them. Also, their behaviors are fairly unpredictable, except for the brief spawning window during late January to early February. For me personally, Burbot went from being a cool fish that is delicious deep-fried in beer batter to a very underestimated and fascinating species.

Citations:

- Evenson, M.J. 2000.** Reproductive traits of burbot in the Tanana River, Alaska. Pages 61-70 in Paragamian, V.L., and D. W. Willis (eds). *Burbot Biology, Ecology, and Management*. American Fisheries Society, Fisheries Management Section, Publication 1, Bethesda, Maryland.
- McPhail, J.D., and V.L. Paragamian. 2000.** Burbot biology and life history. Pages 11-23 in V.L. Paragamian, and D.W. Willis (eds). *Burbot Biology, Ecology, and Management*. American Fisheries Society, Fisheries Management Section, Publication 1, Bethesda, Maryland.
- Roach, S.M., and M.J. Evenson. 1993.** A geometric approach for estimating and predicting fecundity of Tanana River burbot. Alaska Department of Fish and Game, Fishery Data Series No. 93-38, Anchorage.
- Stuby, L., A. Trainor, J. Park, H. Cold, and D. Koster. 2022.** Characterization of seasonal habits, migratory timing, and spawning aggregations of mainstem Yukon River burbot and their subsistence use in the communities of Pilot Station, Galena, and Fort Yukon, Alaska. Alaska Department of Fish and Game, Special Publication No. 22-09, Anchorage.

Lisa Stuby has worked for the Alaska Department of Fish and Game since 1995 and has also examined life history strategies of Chinook and Coho salmon, Sheefish, and Arctic Grayling using radiotelemetry techniques. She is currently the Area Management Biologist for the Yukon River drainage (excluding the Tanana River) for the Division of Sport Fish.



Lisa Stuby with a burbot. Photo from Lisa Stuby, ADF&G.

Remembering Charles H. Meacham

Charles Harding Meacham (Chuck), a founding member of the AFS Alaska Chapter, passed away March 2, 2024, at the age of 98. He was predeceased by his wife of 74 years, June L. Meacham (Yunker). Chuck was born September 21, 1925, in Newman, CA, and raised in the Sierra Nevada Mountains at 7,600 feet elevation where his father hand-built a hunting and fishing lodge near Mammoth mountains. Upon the outbreak of WW II, Chuck enlisted in the Marine Corps at age 17 and fought with the elite Marine Raiders Special Forces in the South Pacific including campaigns at Bougainville/Puruata, Emirau, Guam, and Okinawa. His Marine Raider experiences helped shape the rest of his life. After the war he returned to finish high school and then married June L. Yunker on June 22, 1946. They honeymooned by pack mule in the Ansel Adams Wilderness Area in the Sierra Nevada mountains at elevations from 9,000 to 10,000 feet.

Chuck used the GI Bill to attend Utah State College, and upon graduating worked as a biologist with the California Department of

Fish and Game. He moved to the Territory of Alaska in 1956, working as a biologist and ultimately serving in the Governor's office as Director of International Fisheries and External Affairs where he was heavily involved in creation of Law of the Sea. Thereafter, Chuck moved to Washington D.C, where he worked for the National Park Service and also served as Deputy Assistant Secretary of the Fish and Wildlife Service. Chuck was one of 21 members who attended the first organizational meeting of the AFS Alaska Chapter in Juneau during May 1974. Chuck subsequently entered private consulting and moved to Sequim, WA, before retiring in Gig Harbor, WA.

Chuck is survived by sons Charles P. Meacham and wife Charlene Meacham, and Bruce H. Meacham and wife Kathy Meacham, four grandchildren, and three great grandchildren.

Chuck requested those who choose to honor his life donate to the Alaska Chapter American Fisheries Society, Meacham Family Student Travel Fund, described below. 🙏

Meacham Family AFS Student Travel Fund

The Meacham Family AFS Student Travel Fund is an endowment of the AFS Alaska Chapter established to prioritize the growth and professional development of student Chapter members by supporting student travel and networking opportunities. This fund allows donors to contribute to student development with confidence that their donations will do exactly what they intended.

The fund was established in 2023 with a pledge of \$30,000 by Charles H. Meacham and Charles P. Meacham, retired fisheries scientists who dedicated most of their decorated careers to Alaska fisheries. With your help, their gift will grow into a reliable source of funding to support students and strengthen the future of our profession.

Building on this founding donation, the Chapter is seeking an initial goal of \$85,000 in

base principle, which will be held in perpetuity. After reaching this initial goal, student travel endowment awards will be disbursed annually, using up to 2% of the market value of the fund. After the fund principal reaches an ultimate goal of \$125,000, the amount available for awards will rise to 4%, providing a stable and permanent source of support for student travel. The fund's guiding principles state that awards will be made to graduate and undergraduate students intending a career in a fisheries-related field, with priority given to students attending Alaska campuses or conducting Alaska-specific research.

To donate, go to tinyurl.com/akafs-studenttravel, text "STUDENTTRAVEL" to 44-321, or send a check to: AFS Student Travel, 1614 Tanaga Avenue, Kenai, AK 99611. 🙏

Student Subunit Happenings

Amber Perk, Student Subunit Representatives

New Student Representative

My name is Amber Perk and I am the new AFS Alaska Chapter Student Representative. I'd like to start with a thank you to Becky Shaftel for everything she did during her term as Student Representative. She helped organize another great annual meeting and ensured many students were able to receive travel funds to attend the meeting in Seward. We appreciate all your efforts, Becky!

I am a master's student at the University of Alaska Fairbanks in Trent Sutton's lab studying the reproductive condition and bioenergetic cost of the life history strategies of two ecotypes of lamprey in Alaska. During my undergraduate studies, I was involved with oyster research focused on spatiotemporal spat settlement in Pamlico Sound and subsequent placement of restoration efforts. Prior to this dive back into academia, I spent five years working with Pacific salmon at various hatcheries in Alaska, two years working as a fisheries observer on the east coast, and a few years working in outdoor/science education. Outside of my studies and work, I like to see fish in their natural habitat while SCUBA diving and spend time with my dog, Denali. My favorite fish is the Atlantic tarpon but if you ask again tomorrow, the answer will probably be different.

I am looking forward to working with all the fish-loving folks with the Executive Committee and the Student Subunit this year as we gear up for another exciting meeting! Our next AFS Alaska Chapter Meeting is tentatively scheduled for March 2025 in Ketchikan, Alaska. If you have any ideas or questions about student involvement, feel free to get in touch at student@afs-alaska.org.

Student Symposium

The 27th Annual AFS Student Symposium, held on March 8, 2024, was a success! We had 19 students from Fairbanks, Juneau, and remote sites that presented their research and received feedback from judges and general viewers in preparation for the conference season. A shout out to Anna Medina, Linnaea Doerner, Cameron Jardell, and Sierra Greene for their efforts in putting this event together. With the exciting research being presented and tasty snacks provided, we had a



AFS Alaska Chapter Student Representative Amber Perk and her dog, Denali. Photo from Amber Perk.

great turnout this year of over 80 attendees. The prizes awarded for best long and short talks, as determined by the judges, went to Austin Flanigan and Lindsay McCulloch, respectively, who both received \$50 cash and a hand-knitted fish beanie! The People's Choice Award went to Dakota Keller, who received \$50 cash! Thank you to the AK AFS Student Subunit and Nina Doerner for donating presentation prizes and to CFOS for their support in the symposium. Also, thank you to everyone who participated, attended, and supported student research!

Student Retreat

The AFS Student Subunit organized a fantastic retreat for students prior to the AFS Alaska Chapter 50th Meeting. It allowed undergraduate and graduate students from across the state (and from Texas!) to meet in person, create friendships, and build a stronger community. Students participated in a tour of the shellfish hatchery operated by Alutiiq Pride Marine Institute and a boat tour of Resurrection Bay, spent time spotting wildlife from the beach-front cabins, went cross-country skiing, and relaxed together while playing games, cooking meals, and taking a dip in the ocean! The students extend a thank you to the people that made this retreat possible: CFOS Fisheries Department Chair

Continued on next page

Student Subunit Happenings, continued

Franz Meuter for helping secure funding, the DEI Committee for helping with funding and the rental van, faculty advisor Peter Westley, Miller's Landing lodging in Seward, and the AFS student officers for planning and preparing for the retreat. We're excited to start planning another retreat for next year and hope to get even more students involved! If you're a student in fisheries or a fisheries adjacent field and want to connect with other students, keep your eyes peeled for upcoming Student Subunit meetings and events! It's a great way to get involved with AFS! You can contact me at student@afs-alaska.org if you want more information.

Chapter Meeting

This year was the 50th Annual Meeting of the Alaska Chapter of AFS! Fisheries fans, from students to retirees, came together to share another year of fisheries science in Alaska. Student volunteers made a huge effort in putting on this event with their involvement before and during the meeting! The first two days of the meeting, students helped



Students tour the Alutiiq Pride Marine Institute Shellfish Hatchery during the Student Retreat at the 2024 AFS Alaska Chapter meeting in Seward. Photo by Isaac Nyameke.

with set-up, running workshops, and checking people in at the registration desk. Volunteer efforts continued throughout the week, planning and assisting with the poster session, symposia, and contributed talks, Fish Trivia, the Chamber After 5 Public Event, the Spawning 5K Fun Run/Walk, and so much more. Students also worked together to collect silent auction items from local businesses. Some items resulted in heated bidding-wars, but all proceeds will support future student travel to Alaska AFS meetings. Thank you to all the students that volunteered their time and energy. Your contributions were greatly appreciated.



Students on a boat tour of Resurrection Bay during the Student Retreat at the 2024 AFS Alaska Chapter meeting in Seward.. Photo from Amber Perk.

In addition to volunteering, many students also presented their research at the poster session or during the talks. Recognition and awards are described elsewhere in this newsletter, but we would like to acknowledge the endowment from Doug Molyneux that allowed student prizes to increase substantially, incentivizing more students to bring their best to future Alaska Chapter meetings! Thank
Continued on next page

Student Subunit Happenings, continued

you and congratulations to all the students who presented their research this year.

AFS Annual Meeting

The 154th National AFS Meeting is planned for September 15-19, 2024, in Honolulu. Hawai'i! With over 100 symposia, contributed talks, and a poster session, the theme of "Conserving Fishes and Fishing Traditions through Knowledge Co-Production" will

bring together a whole host of fisheries students and professionals from across the world, sparking important discussions and spurring networking opportunities. There will be the classic Spawning 5K and Trivia Night along with continuing education opportunities and unique-to-Hawai'i events that will all be worth attending! Check out the website at <http://www.afsannualmeeting.fisheries.org>! 🗨️

Spring Graduating Class

Congratulations to the many graduate students and undergraduates who completed their degrees this spring!

Kevin McNeel (M.S. Fisheries, Advisor: Gordon Kruse) – Improving Species Identification, Age, and Life History Information for Shortraker Rockfish (*Sebastes borealis*) in Prince William Sound, Alaska, using Sagittal Otolith Analyses.

Rich, Benjamin (M.S. Fisheries, Advisor: Peter Westley) – Synergistic Effects of Climate and Invasions: A Case Study of Juvenile Pacific Salmon and their Introduced Freshwater Predator (*Esox lucius*) in a Changing Alaska River.

Weems, Jared (Ph.D. Fisheries, Advisor: Ginny Eckert) – Early Life Biology and Ecology of King and Tanner Crabs in the Bering and Chukchi Seas.

Maliguine, Anastasia (M.S. Marine Biology, Advisor: Tuula Hollmen) – Changes in Benthic Prey Availability and Quality Suggest Less Favorable Foraging Conditions for Threatened Steller Eiders (*Polysticta stelleri*) Molting at Izembek Lagoon, Alaska.

Stidham, Emily (M.S. Oceanography, Advisor: Russ Hopcroft) – Climate Influences Emerge Within Two Decades of Observations for Pelagic Tunicates and Pelagic Snails in the Northern Gulf of Alaska.

Allen, Samantha (B.S. Fisheries and Marine Sciences) Concentration: Marine Sciences

Heimke, Rachel (B.S. Fisheries and Marine Sciences) Concentration: Marine Sciences

Hynes, Lauren (BS in Fisheries and Marine Sciences) Concentration: Fisheries Science

Environmental Concerns Corner

Joel Markis

The Tongass National Forest is undergoing a revision to its Forest Plan. The current Plan for the Tongass National Forest is over 25 years old and new rules mandate that plans need to be updated at least every 15 years. The revised Plan will cover: environmental and ecosystem health; air, water, and soil quality; system drivers including disturbance processes, natural succession, and climate change; social, cultural and economic factors; infrastructure in terms of recreational facilities, recreational settings, and transportation corridors; and existing and potentially designated areas including wilderness and wild and scenic rivers. This Forest Plan will shape how the Tongass National Forest is managed for over the next decade. There are

ongoing opportunities for public engagement throughout this process (<https://www.fs.usda.gov/detail/tongass/home/?cid=fseprd1164050>) and we encourage members to share their expertise and voice the importance in using scientific research to enlighten management of fisheries resources and promote their optimum use and enjoyment by the public.

Please consider joining our new environmental concerns listserv. Send an email to ecc@afs-alaska.org with "Join ECC Listserv" in the subject line. We will get you signed up. This listserv will be a space for learning and discussion and hopefully improve our capacity for commenting as a Chapter on projects or permits where our fisheries expertise will be valuable. 🗨️

Fish of the Week!

Join us every Monday for our Fish of the Week podcast! We get to know all the fish — how they live in Alaska, what habitats they use, what they eat, and where they go and why. Everything you need to know to appreciate and conserve these fish and be a successful angler.

[We've got lots of fish stories.](#)



Meetings and Events

American Fisheries Society Parent Society Annual Meeting

September 15–19, 2024. The 154th annual meeting will be held in Honolulu, HI. For more information go to <https://afsannualmeeting.fisheries.org/>.



The Alaska Chapter of the American Fisheries Society is a 501 (c)(3) tax exempt organization EIN 23-7368960.

AFS Code of Conduct

The Ethics and Professional Conduct Committee (EPCC) of the American Fisheries Society has developed a code of conduct for our meetings and AFS-sponsored functions, whether virtual or in person. This brief document is available at <https://fisheries.org/about/governance/afs-meetings-code-of-conduct/>. Please read through this document to ensure that we are collectively working to build awareness of this policy to ensure that all AFS-related gatherings are a respectful and inclusive experience for everyone. If you have questions, reach out directly to the EPCC Chair Brian Missildine for support at brian.missildine@dfw.wa.gov.

ONCORHYNCHUS

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Deadline for materials for the next issue of *Oncorhynchus* is July 31.

Marine Weather Dashboards and a New Mobile App

The Alaska Ocean Observing System (AOOS) data portal displays maritime conditions for easy user access in real-time. Data are derived from multiple sources, such as the National Weather Service and the Marine Exchange of Alaska, and include tide predictions, temperature, barometric pressure, water level, wind speed and gusts, and wave height and direction. Marine Weather Dashboards currently display real-time data and forecasts for five regions: Bering Sea, Prince William Sound, Southeast Alaska, Cook Inlet, and Kodiak. While initially developed for desktop computers, AOOS is developing mobile-friendly versions of the Marine Weather Dashboards with the Marine Weather App currently available for Prince William Sound and accessed with a [QR code](#).

Oncorhynchus back issues at <https://www.afs-alaska.org/newsletter>

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