



ONCORHYNCHUS

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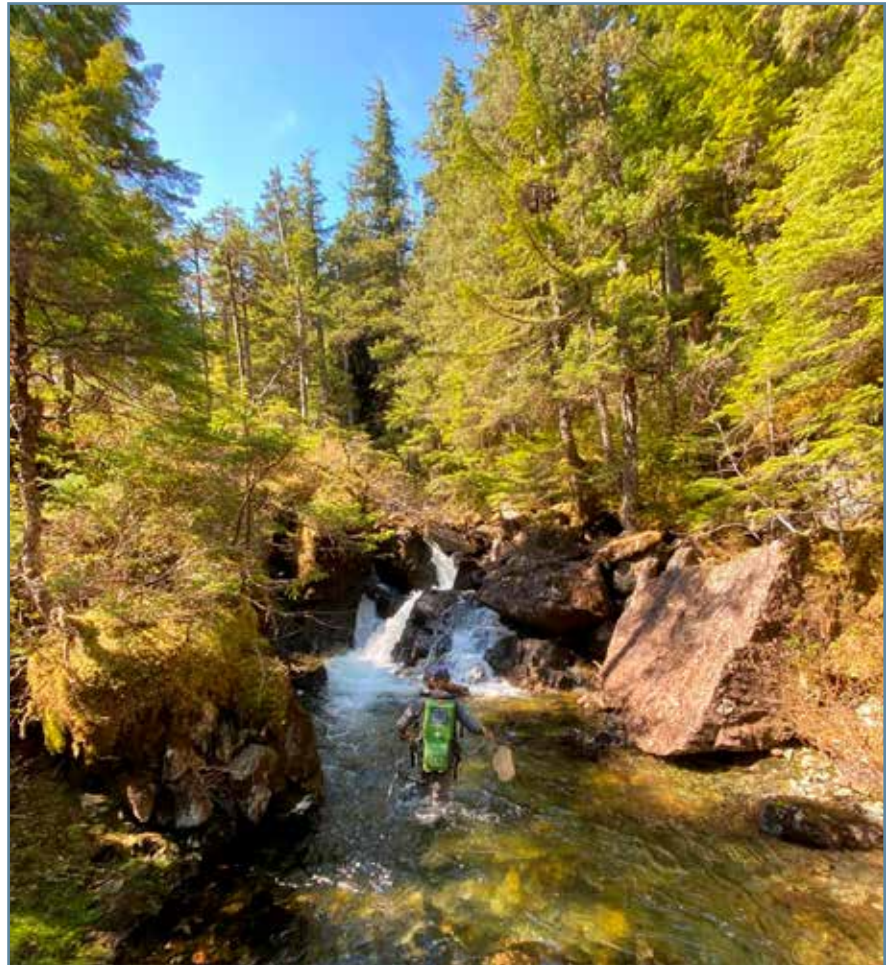
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Duncan Green backpack electrofishing for Cutthroat Trout on a stream flowing into Prince William Sound in late May 2022. Photo by Nate Cathcart, ADF&G.

A Primer of the Alaska Freshwater Fish Inventory

Nate Cathcart and Joe Giefer

In Alaska, the Anadromous Fish Act (Alaska statute 16.05.871) requires that the Alaska Department of Fish and Game (ADF&G) specify the rivers, lakes, and streams that are important to the spawning, rearing, or migration of anadromous fish. These waters are then listed in the Catalog of Waters Important to the Spawning, Rearing, or Migration of Anadromous Fishes, colloquially known as the Anadromous Waters Catalog (AWC). To be listed in the AWC, water bodies require site-specific, direct, unambiguous, defensible observations of at least two individuals of any life-phase of anadromous fish by a qualified observer.

Anadromous fish habitat protection and management is predicated on explicit knowledge of the distribution of species and life stages. The AWC currently lists 20,846 total water bodies (18,772 streams and 2,074 lakes); however, due to the vast size and remoteness of Alaska, the database remains incomplete. A complete inventory of all anadromous water bodies in the state will require repeated surveys of potential habitats over a variety of timeframes to account for all possible species and their various life histories.

Knowing where and when fishes use habitats in Alaska is crucial to respond to natural or manmade disturbances, manage fisheries, mitigate development, and understand regional ecology. Without this knowledge, managers have limited ability to inform development, such as road building that could

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The President's Corner



AFS Alaska Chapter President Erik Schoen

Hello Alaska Chapter,

Wow, it's been a doozy of a winter in Alaska. I've lost track of how many roofs have collapsed from heavy snow in Southcentral, and I hear Southeast has been hammered as well. Here in Fairbanks, we just emerged from our deepest cold snap in a decade, with consecutive weeks of 40 below temps, square tires, and ice fog like I remember from my childhood. At first there was a long line of idling vehicles parked in front of the UAF time-and-temperature sign as scantily clad crowds eagerly awaited their turn to snap a picture and join the "Forty Below Club." After a couple weeks, the novelty passed, and the Interior breathed a collective sigh of relief when the mercury popped back above zero. With warmer temps and daylight returning, my mind is wandering ahead to the season of liquid water, and I'm beginning to carve up my summer calendar into blocks of field work and outdoor adventures. Wherever you are based, I hope you too have some exciting work and play on tap this year.

For my last column as Alaska Chapter President, I'd like to tell you about some important steps we've made this year to (1) update and streamline the Chapter's operations and (2) bring more clarity to some important, perennial questions about the Chapter's

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Freshwater Fish Inventory, continued

fragment instream migration corridors, or respond to potential shifts in species habitat use, such as upstream colonization of watersheds in response to glacial retreat. In 2002, ADF&G began fish surveys with the purpose of filling gaps in AWC data and subsequently the Alaska Freshwater Fish Inventory (AFFI) was born. Since then, the AFFI program has conducted annual landscape level fish surveys to document fish assemblages in waterbodies statewide and submit nominations to the AWC.

The long-term AFFI goal is to complete a statewide baseline inventory of freshwater fish assemblages and associated aquatic and riparian habitats. Upon inception, AFFI systematically ranked and prioritized Alaska's 139 subbasin level hydrologic units. Subbasins were selected because they matched the approximate area that could be sampled by fish survey teams using helicopters. Subbasins were prioritized based on past surveys (or lack thereof), current land management authority (e.g., federal, state), the ratio of current AWC coverage to the total length of all mapped streams within the subbasin, and current or proposed human activity. As of 2023, AFFI has surveyed 95 of the 139 subbasins originally prioritized.

The AFFI crews often use helicopters to access sites, but also use automobiles, hiking, boating, and fixed-wing aircraft. Sites are selected using a Geographic Information System to rank potential sites based on upstream catchment area and potential mileage added to the AWC. Target survey sites are organized into two tiers; wadeable streams (< 50 km² in the upstream watershed) and un-wadeable streams (generally over 200 km² in the upstream watershed). These target locations are used to navigate to a drainage and reconnoiter the water body, with final sampling locations ultimately based on crew leader discretion, conditions, landing sites, access, and sampling gear available. Stream length sampled at sites is standardized by stream width; specifically, total sampled reach is 40 times the channel width in wadeable streams and 120 times the channel width in un-wadeable streams.

Methods that target a broad range of fish species,
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President's Corner, continued

role and representation in the Alaska fisheries profession.

First, the nuts and bolts: In a big team effort, the Chapter has transitioned much of our communication, business operations, recordkeeping, and fundraising to more modern and efficient systems. You're probably aware that we upgraded our listserv to the less expensive and more capable SimpleLists platform with help from Hamachan Hamazaki. Behind the scenes, Treasurer Trent Dodson has migrated our financial records from the hard drive on an old laptop to an efficient and secure cloud-based service and set up a Stripe account to allow us to sell our merchandize cash free and integrate with online services. And I'm happy to announce that we've established an account on a new online fundraising platform called Give Lively that is free for non-profits like us. Now we can accept online donations and sponsorships, text-to-donate, and manage event registration and ticketing at no cost to the Chapter (other than those unavoidable card processing fees). I hope all these efforts will pay off for many years in allowing our all-volunteer Chapter to better serve our members and the fisheries community in Alaska.

On that note, if you would like to make a tax-deductible contribution to the new Meacham Family Student Travel Fund to help build a perpetual endowment supporting graduate and undergraduate student travel to AFS Alaska Chapter annual meetings, please visit <http://tinyurl.com/akafs-student-travel> or text "STUDENTTRAVEL" to 44-321. I just tried it out, and it was so easy.


OK, on the big existential questions: Who is welcome in the AFS Alaska Chapter? Who does the Chapter represent, and who is represented in our leadership and volunteer roles? How do we make decisions about resource policy positions, and who has a say in those decisions?

Through many conversations with our members, the Chapter leadership has decided that we can and should be more transparent about these core questions. At our Executive

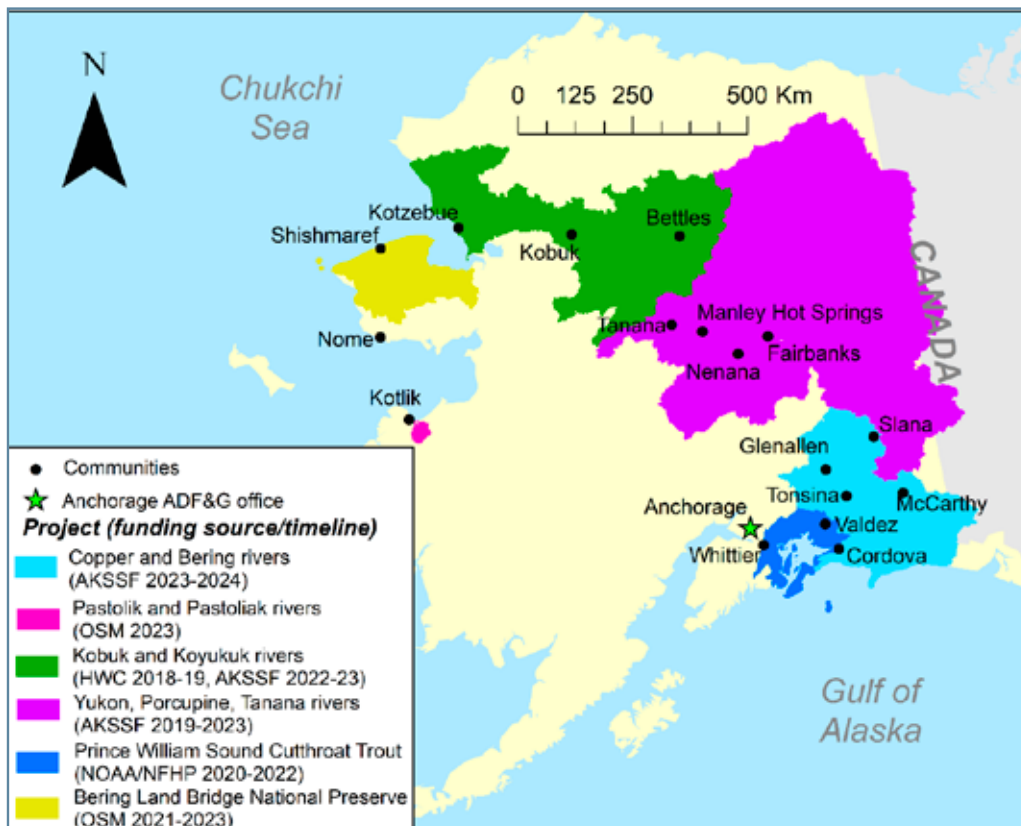
Committee retreat in December, we agreed on these guiding principles as a starting point: The AFS Alaska Chapter welcomes and strives to represent all members of the fisheries profession in Alaska, regardless of their background or employer. This includes people working for Tribes, non-profits, K-12 education, industry, aquaculture, agencies, and academia, as well as students and retirees. All are welcome at our meetings and in our volunteer ranks and leadership. We welcome sponsorships and donations from any individual or organization who supports our efforts to maintain high standards for the fisheries profession and ensure conservation of Alaska's fisheries. The Chapter's acceptance of any sponsorship or donation does not necessarily reflect the policy views of the Chapter or its members. The Alaska Chapter follows deliberative processes for issuing resolutions and policy statements as laid out in our *Bylaws* and *Procedures Manual*. Officers with a conflict of interest will abstain from votes on Chapter policy positions. All members of the Alaska fisheries profession are welcome to influence these processes and the direction of the Chapter by participating as members and stepping up into volunteer and leadership roles.

What do you think? Are we on the right track? Over the next year, during my term as Past President, I plan to lead an effort to solicit feedback from the membership and then to update our bylaws, procedures manual, and website as needed to reflect your input. If you feel strongly about any of this (and I hope you do), then please reach out to me or another officer, and consider getting involved—our Chapter reflects the interests and passions of its members.

I have really enjoyed my term as your Chapter President, and I look forward to passing the torch to Donnie Arthur at this year's 50th Annual Meeting. Take care, and I hope to see you in Seward!

All the best,
Erik 

Freshwater Fish Inventory, continued



Overview of projects during 2018–2023 showing the variety of regions, timeframes, methods, and program partners or funders of AFFI efforts. Graphic by Nate Cathcart, ADF&G.

both anadromous and resident, are useful to identify their supporting habitats. Electrofishing is the principal fish collection method because it is recognized as the most comprehensive and effective way to collect fish in lotic systems. Backpack electrofishing is used at wadeable sites, and boat or raft electrofishing is used at unwadeable streams. Additionally, opportunistic sampling with gillnets, angling, minnow trapping, aerial surveys, and other gears is performed when conditions or crew size allow. Crews also record water chemistry, channel morphology, and riparian habitat parameters at each site.

Personnel in AFFI projects since 2018 have surveyed 515,638 km² of Alaska, an area larger than the state of California. The following represents an overview of recent projects to illustrate the variety of regions, timeframes, methods, and program partners or funders of AFFI efforts. In total, these efforts across 914 sites have documented 34 species, generating 365 nominations to the AWC totaling over 2,000 km of waterways.

2018–2019: Crews surveyed the upper Koyukuk

and Kobuk rivers in 2018 and 2019, funded by the Healthy Waters Consortium, a program administered by the Environmental Protection Agency, with support from the National Park Service (NPS) and the U.S. Fish and Wildlife Service (FWS). The NPS biologists in Gates of the Arctic National Park & Preserve had observed GPS-collared grizzly bears feasting on Chum Salmon in rivers which were not in the AWC. These findings led AFFI staff to the southern edge of the Brooks Range to document upper extents of fish community distributions. Results included 71 nominations to the AWC across 138 sites totaling 898 km. Many of

the 775 km added to the AWC from summer 2018 sampling contained Chum Salmon, Chinook Salmon, and Dolly Varden ([Cathcart 2019](#)). In September 2019, aerial surveys in western Alaska added an additional 123 km to the AWC for spawning Sockeye Salmon, Chum Salmon, and Dolly Varden in streams draining the Cape Krusenstern area, Noatak River, Hotham Inlet area, and parts of the Squirrel River.

During July and August 2019, a major fire season, crews based in Fort Yukon and Coal Creek Camp (Yukon-Charley Rivers National Preserve) surveyed tributaries of the upper Yukon and Porcupine rivers. Funded by the Alaska Sustainable Salmon Fund (AKSSF) and supported by FWS and NPS, crews surveyed 106 sites that generated 31 nominations to the AWC totaling 145 km, primarily for juvenile Chinook Salmon ([Cathcart and Giefer 2020](#)). Collections also included the mysterious Trout-Perch and a swarm of Arctic Lamprey ammocoetes from a tributary to the Porcupine River near the Canadian border.

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Freshwater Fish Inventory, continued



Duncan Green nets a Chum Salmon for a genetic sample as Liz Lee rows the electrofishing raft on the Arctic River in Bering Land Bridge National Preserve in August 2022. Photo by Luke Henslee, ADF&G.

2020–2022: With funding from AKSSF, crews based in Eagle and Tok in 2020 surveyed the Fortymile River area of the Upper Yukon, the upper Tanana River, and some of the uppermost streams in the Copper River basin. While most fieldwork was in July and August 2020, crews also sampled in October 2020 and 2022. Results generated 16 AWC nominations for over 20 stream km among 135 sites.

From 2020 to 2022, the National Fish Habitat Partnership, via a grant from the Western Native Trout Initiative, funded the use of the research vessel *Standard Error* to survey western Prince William Sound in search of coastal Cutthroat Trout. Results included 33 AWC nominations from 51 sites, including several for Cutthroat Trout. Highlights included orcas, Duncan Green getting stung by jellyfish, a grumpy black bear sow and her cub, Duncan Green catching a Sockeye Salmon on a size 16 copper john, and exploring Eshamy Lake in a leaky canoe.

In 2021 and 2022, the federal Office of Subsistence Management (OSM) funded a project for the NPS, ADF&G Division of Commercial Fisheries, and AFFI to investigate fish communities and salmon population genetics in waters within Bering Land Bridge National Preserve (BELA). Between 2021 and 2022, crews sampled 81 sites, generating 52 nominations to the AWC for over 300 stream km.

Beginning in 2021, an AKSSF-funded project in collaboration with the Yukon River Drainage Fisheries Association (YRDLFA) linked local and Traditional Ecological Knowledge with traditional AFFI surveys and the AWC. Interviews with members of the communities of Nenana, Manley Hot Springs, and Tanana in 2021 were led by Catherine Moncrieff, an anthropologist with YRDLFA. In June 2022, AFFI began fieldwork with a 12-day electrofishing boat trip from Fairbanks down the Tanana River to the Yukon River. Although the overladen boat refused to get on step for most of the trip and the mosquitoes were arguably the worst we had ever encountered in interior Alaska, it is hard to beat a river trip with two dogs and electrofishing. Later that summer, crews performed backpack and raft electrofishing surveys from the Tanana, with sampling 99 sites resulting in 38 nominations of 33 km to the AWC.

In 2022, the AKSSF funded a return to the upper Koyukuk and Kobuk rivers to conduct additional fish surveys in waters that were not sampled in 2018. Crews were again based in Bettles and Dahl Creek, but heavy rain impacted the fieldwork. Overcoming the challenges of flooding and high water, the crews visited 67 sites and produced 24 nominations involving 403 km of waters added to the AWC for Humpback Whitefish, Least Cisco, Dolly Varden, and Chum Salmon.

2023: The AFFI program surveyed the Copper River basin. In July and August, 135 site visits produced 56 AWC nominations for species that included Chinook Salmon (spawning, rearing), Sockeye Salmon (spawning, rearing), Coho Salmon (rearing), Steelhead (rearing), and Pacific Lamprey (rearing).

The OSM continued their support with funding for a collaborative effort between ADF&G Subsistence Section biologists and AFFI to survey the Pastolik and Pastoliak rivers near the village of Kotlik. Logistics of transporting staff and gear to Kotlik were compounded by our primary Garmin InReach text communication device being stolen during the first breakfast. The young bandit returned the device that evening, and crews performed raft and backpack electrofishing as well

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Freshwater Fish Inventory, continued

as eDNA sampling at 16 sites, resulting in 6 AWC nominations. The eDNA data are still pending analysis. Findings will be linked with interviews about local and Traditional Ecological Knowledge of fish in the area.

Fieldwork was completed for three projects. Crews finished sampling the middle Yukon River and lower Tanana River, including parts of Denali National Park in July, finding juvenile Chinook and Coho salmon for 5 more AWC nominations among 38 sites. To put the finishing touches on the Kobuk and Koyukuk rivers project, electrofishing and eDNA surveys in August followed by aerial surveys in October in the Kobuk River basin produced 27 AWC nominations from 35 sites. Staff also wrapped up the BELA project with several trips to sample fishes and eDNA on the Seward Peninsula - perhaps the most underrated geography in the entire state. In June and July, lake and stream surveys produced 9 more nominations



Geneticist Liz Lee sorts Coho and Sockeye salmon from a seine haul to collect genetic samples in the freezing South Fork Serpentine River during October 2023. Photo by Nate Cathcart, ADF&G.



At the Land Bridge National Preserve in June 2023, Duncan Green caught several Round Whitefish including some consumed, net and all, by large Burbot (one > 1 m long) that regurgitated the partly digested remains and escaped back to the depths. Photo by Nate Cathcart, ADF&G.

among 13 sites, and in October, crews performed Coho Salmon genetic sampling. We are eagerly awaiting results of genetic and eDNA analyses from 2023.

The AFFI fieldwork involved an impressive supporting cast of folks (including field and administrative staff) from ADF&G Divisions of Sport Fish and Commercial Fisheries, ADF&G Subsistence and Habitat sections, FWS, Ahtna Intertribal Resource Commission, Tanana Chiefs Conference, Tyonek Tribal Conservation District, YRDFA, NPS, and various aviation companies that safely and successfully accomplished our missions

Nate Cathcart, a habitat biologist with the ADF&G Division of Sport Fish in Anchorage, joined the AFFI program in 2018 and became project biologist in 2019. With a Bachelor's degree in Fish Biology from Colorado State University and a Master's degree in Biology from Kansas State University, Mr. Cathcart has a variety of research experiences.

Joe Giefer, a habitat biologist with the ADF&G Division of Sport Fish in Anchorage, has worked with ADF&G since 2001, assisted with multiple AFFI surveys since 2005, was hired into the AFFI program in 2013, and was the AFFI programs project biologist from 2015 to 2019. Joe has a B.S. in Fisheries and Wildlife Biology from Utah State University. Mr. Giefer currently manages the department's Anadromous Water Program.

Don Kramer Passes

Former Marine Advisory Program (MAP) leader for Alaska Sea Grant, Don Kramer, passed away on December 8, 2023. Kramer began work as a MAP marine extension agent in 1980 and served as the program's leader from 1985 to 2003. During 2003–2008, Don focused on teaching Hazard Analysis Critical Control Point (HACCP) plans and other seafood quality control classes. He also authored two of Alaska Sea Grant's best-selling books, *Guide to Northeast Pacific Flatfishes* and *Guide to Northeast Pacific Rockfishes*, among other publications. After nearly thirty years as a MAP seafood specialist, Kramer retired in 2008 and was awarded the status of UAF Professor of Fisheries Emeritus. Don also received the Elizabeth Stier Humanitarian Achievement Award for outreach work in Alaska from the Institute of Food Technologists, and was made an IFT Fellow. 🗨️



Photo from Alaska Sea Grant archives.

AFS Alaska Chapter Meeting

The AFS Alaska Chapter celebrates its 50th annual meeting March 24-29, 2024, in Seward, Alaska. The theme, "Breaking Barriers to Bridge New Connections," signals a Chapter commitment to foster collaboration and innovation within Alaska's fisheries from all perspectives of our diverse state. The changes that have occurred during our 50 years as a Chapter are small compared to the timescale of many local and traditional fisheries. Our meeting theme highlights the importance of overcoming challenges and obstacles by forming meaningful connections that enhance knowledge sharing to improve the sustainability and management of Alaska's fisheries.

Alaska's fisheries have near infinite perspectives from people invested in aquatic resources, ranging from non-residents to individuals with ageless traditional knowledge. While so many perspectives can seem insurmountable, the dynamic mixing and sharing of knowledge can create a fertile and productive environment. From new to First Alaskans, students to retired members, agency to university, and all backgrounds in between, we all have perspectives and knowledge to share that can

propel Alaska's fisheries towards sustainable solutions.

We invite you to submit abstracts for research, outreach, policy work, or initiatives that address these themes of sustainability, innovation, or other topics that bolster our collective understanding of Alaska fisheries. Long talks (10-12 minutes), short talks (4-6 minutes), or a mix of both are welcome in all sessions. Symposia and technical sessions will occur in-person, although workshops can have in-person, virtual, or hybrid options. If you are not sure if your idea fits, it probably does! Please reach out to presidentelect@afs-alaska.org if you have any questions.

Abstracts should be submitted by Friday, March 1, to insure inclusion in the meeting program. Submit abstracts through the meeting website at <https://units.fisheries.org/ak-mtg/>. More information, including a list of symposia, can be found on the form.

Please contact Donnie Arthur at presidentelect@afs-alaska.org if you have any questions, and thanks for being part of our Chapter! 🗨️



Diversity, Equity, and Inclusion Committee

Keenan Sanderson

The Diversity, Equity, and Inclusion Committee (DEIC), in collaboration with the Chugach Regional Resources Commission and Alaska Sea Grant, will be hosting the “Two-Eyed Seeing in Fisheries” Workshop at the annual AFS Alaska Chapter meeting in Seward! This full day workshop will delve into culturally appropriate ways to effectively communicate with the various tribal partners around Alaska. In Alaska, there are 229 sovereign tribal governments that all have an important and unique perspective into fisheries science and management. By bridging the Traditional Ecological Knowledge and western sciences in Alaska, the sustainability of all fisheries has a better outlook for people of all backgrounds. Space is limited for this workshop, so register while you can! To register, contact deic@afs-alaska.org.

Diversity, Equity, and Inclusion Travel Award - The DEIC is proud to announce it is once again providing travel awards to this year’s AFS Alaska Chapter meeting in Seward, Alaska, for those who identify as an underrepresented and/or historically marginalized group. One of the primary objectives of the DEIC is to seek and promote different ways for people of all backgrounds to have opportunities to engage within the fisheries of Alaska. The varying perspectives by all groups in science and traditional ways of knowing, management, marketing, and harvesting lead to equitable solutions for all those who rely on the resources of the waters of Alaska. Resources are limited! To apply for this travel award to the March 24–29 Alaska Chapter meeting, please contact deic@afs-alaska.org.

High School Students Take on the National Meeting - With guidance and support from the

Wilderness First Aid Course

A Wilderness First Aid course will be offered March 24–25 in conjunction with the AFS Alaska Chapter annual meeting in Seward, Alaska. The course introduces participants to basic anatomy and physiology, assessment and treatment of a variety of injuries and illnesses, appropriate short-term to multi-day patient care, and evacuation decision-making as it applies to Alaska’s remote environments. Participants will receive a Wilderness

DEIC, a group of 10 high school students from Ketchikan will be attending this year’s Parent Society meeting of the American Fisheries Society in Honolulu, Hawaii.

Organizers from the community of Ketchikan brought seven high school students to the Alaska Chapter meeting in Fairbanks in 2023 and found it to be an incredible success. These high school students got the full AFS experience by attending the symposium, mentorship sessions, and the many networking opportunities that were made available to them. These networking opportunities resulted in two of these students being offered internship opportunities through the University of Alaska Fairbanks, where these students now attend college. Given the success the DEIC and the group from Ketchikan found with the Alaska Chapter, we hope to find similar success at the Parent Society meeting. We hope that bringing these students to these meetings will: (1) inspire the next generation of fisheries professionals to get a head start in knowledge gathering and connection-making with those from Alaska and beyond, and (2) encourage and promote the next generation to stay engaged with AFS for years to come.

The DEIC was working with the coaches from the National Ocean Science Bowl competition in the state of Alaska to bring students back to the 2024 Alaska Chapter meeting in Seward: however, due to a conflict in scheduling it won’t be a possibility for most teams in Alaska to attend this year. The DEIC will continue to pursue opportunities for students to get involved in AFS in the future.

Are you interested in volunteering with the Diversity, Equity, and Inclusion Committee? If so, please contact us at deic@afs-alaska.org. 🗨️

First Aid certification through Wilderness Medical Associates International that is valid for three years. For more information and to register, go to <https://units.fisheries.org/ak-mtg/2024-workshops/>. 🗨️

Back issues of *Oncorhynchus*
can be found online
<http://www.afs-alaska.org/newsletter>

Mariculture ReCon Meeting

The Mariculture Research and Restoration Consortium (Mariculture ReCon) Team met in Cordova in mid-January 2024. Mariculture ReCon is a partnership among the Alaska Department of Fish and Game, Alaska Fisheries Development Foundation, Alaska Sea Grant, Axiom Data Science, Native Village of Eyak, NOAA Alaska Fisheries Science Center, Prince William Sound Science Center, University of Alaska Fairbanks, and shellfish and seaweed farmers from across southcentral Alaska. The overarching goal of this program is to support restoration, habitat enhancement, and economic development through research and partnerships between scientists

Primary investigators and farmers came together to present their individual work in the context of the larger regional picture. Topics included updates on individual research projects involving sensor arrays, oceanography and plankton, benthic communities, pelagic fish, marine birds, and marine mammals. Farmers provided updates and discussed how the sensors that were added to their farms were working. The meetings concluded with planning and strategy work sessions among farmers and scientists for the upcoming field season, as well as practical trainings using sampling devices in the Cordova harbor.

To learn more about the Mariculture Research and Restoration Consortium's work, visit <https://pwssc.org/mar-recon/>. 🐟

Sea Grant Program to Advances Resilient Coastal Communities

Sea Grant programs across the U.S. are increasing capacity to support additional hands-on, collaboration to improve sustainability of coastal and Great Lakes communities. A total of \$4 million was awarded in fiscal year 2023 for grant-based programs nationwide to continue or expand ongoing projects or address new work for coastal climate adaptation and community resilience.

The \$125,000 per program funding, as provided through congressional support, is also leveraged by additional program funds and at least 50% match contributions. Work through Sea Grant to address coastal community resilience spans the U.S. with funded projects to assess flood risks and explore adaptation solutions including support for: engagement, knowledge sharing, research, technical assistance, decision support, project implementation, and partnership coordination and collaboration. This work also engages with tribal, Indigenous, remote, and economically disadvantaged communities. In Alaska, this work will also expand Alaska Sea Grant capacity to support rural coastal communities faced with erosion caused by thawing permafrost, increased coastal inundation requiring a retreat from the coast, and an increase the culturally relevant environmental literacy of eco-tour guides and tourists. 🐟

Environmental Concerns Updates

The Alaska Salmon Research Task Force (<https://www.fisheries.noaa.gov/alaska/ecosystems/alaska-salmon-research-task-force>) was created by an act of Congress in response to unprecedented declines in Chum and Chinook salmon on the Yukon and Kuskokwim rivers. The purpose of the Alaska Salmon Research Task Force is to compile science and Traditional Knowledge, to identify what is known about salmon in Alaska, data gaps, and needed research. This information will be used to develop a coordinated salmon research strategy for sustainable salmon management in Alaska. Input by Alaska fisheries experts in the development of this strategy are very welcome and encouraged.

If you would like to provide written comments to inform the Task Force discussions and the development of its coordinated research strategy, please provide information via the feedback form found in the link above. The deadline for submitting input is March 15, 2024. Task Force meetings are open to the public. Time has been reserved at the end of each bi-monthly Task Force meeting for public comment. The next meeting is March 27, 2024.

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. 🐟

Student Subunit Happenings



AFS Alaska Chapter Student Representative, Becky Shaftel.

Becky Shaftel, Student Subunit Representatives

The AFS Alaska Chapter is seeking nominations for the next Student Representative. The Student Representative serves for one year as a liaison between the Student Subunit and the Chapter. The next Representative will help plan and coordinate student involvement in the 2025 Annual Meeting, which will be held in Southeast Alaska. The Student Representative also receives travel support to represent the Chapter at the Western Division Annual Meeting. (BTW- the upcoming Parent Society and Western Division meeting is in Honolulu!)

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Summer Graduating Class

**Congratulations to the many graduate students and undergraduates
who completed their degrees this past fall!**

Lia Domke (Ph.D. Fisheries, Advisor: Ginny Eckert) – “The Role of Apex Predators, Habitat, and Seascape Complexity on Nearshore Fish Assemblages in Southeast, Alaska”

Courtney Hart (Ph.D. Fisheries, Advisor: Ginny Eckert) – “Uncovering Patterns and Mechanisms of Paralytic Shellfish Toxicity in Alaska’s Geoduck Clam Fishery”

Lillian Hart (M.S. Fisheries, Advisor: Curry Cunningham) – “Model-Based Estimation of Juvenile Salmon Spatial Ecology in the Eastern Bering Sea, Alaska”

Madeleine McArthur (M.S. Marine Biology, Advisor: Brenda Konar) – “Environmental and Biotic Habitat Attributes Affect Rocky Intertidal Community Variability in Glacially Influenced Estuaries”

Hannah Myers (Ph.D. Marine Biology, Advisor: Brenda Konar) – “Eavesdropping on Killer Whales: Distribution, Calling Rates, and Acoustic Abundance of Fish-Eating and Mammal-Eating Killer Whales in the Gulf of Alaska”

William Samuel (M.S. Fisheries, Advisor: Jeff Falke) – “When Beavers Get Burned, Do Fish Get Fried? The Role of Beavers to Mediate Wildfire Effects on Arctic Grayling in Boreal Alaska”

Tristan Sebens (M.S. Fisheries, Advisor: Curry Cunningham) – “Estimating Relative Indices of Groundfish Abundance from Multiple Fishery-Independent Data Sources: A Comparison of Intercalibrating Model-Based Abundance Estimators”

Alexandria Sletten (M.S. Marine Biology, Advisor: Lara Horstmann) – “Microplastics in Spotted Seal Stomachs from the Bering and Chukchi Seas in 2012 and 2020”

Matthew Smukall (Ph.D. Fisheries, Advisor: Andy Seitz) – “Relative Abundance and Movement Ecology of Tiger Sharks *Galeocerdo cuvier* in the Waters Surrounding Bimini, the Bahamas”

Kathryn Langlois (B.A. Fisheries) Concentration: Fisheries Business and Social Sciences

Logan Niemann (B.A. Fisheries) Concentration: Fisheries Business and Social Sciences

Jennifer Tusten (B.S. Fisheries and Marine Sciences) Concentration: Marine Sciences

Student Subunit Happenings, continued

The Student Subunit met on November 16, 2023. The meeting was a great opportunity to meet other students, hear from our subunit officers, and learn about ways the subunit is supporting student engagement. The meeting ended with fish jeopardy and questions that tripped up every team! Make sure to attend the next meeting, which will be shared through the AFS and CFOS listservs. And don't forget to join or renew your student membership with the American Fisheries Society: <https://fisheries.org/membership/>.

The AFS Student Subunit is soliciting interest in a student retreat tentatively scheduled for Seward prior to the AFS Alaska Chapter 50th meeting on March 24-29, 2024. Retreats provide an opportunity for students living and working across the state to form connections and learn from one another. If you are interested in attending a student retreat, contact our AFS Student Subunit chapter president, Allison Guzman, aguzman11@alaska.edu.

Recent CFOS graduate Madeline Lee shared some background on the past two student retreats. In 2022 and 2023, the American Fisheries Society Student Subunit organized the first ever College of Fisheries and Ocean Sciences student retreats. There has been a clear need for in-person opportunities for mentorship, professional development, and networking. In 2022, we had 13 students from across the state and out of state gather together in Seward for a 3-day weekend, with priority given to students actively involved in the CFOS mentorship program. The inception of the student retreat was derived from the extreme isolation and disconnection from COVID-19 pandemic and the need for face-to-face mentorship through the hardships of higher education.

Many fisheries students in Alaska continued remote learning and the desire for an annual CFOS student retreat after the pandemic remained strong. Therefore, in 2023, we hosted the second student retreat in Fairbanks in tandem with the AFS annual meeting. We invited a UAF faculty member to join us for the day for ice fishing and they provided us with their personal experience of a nontraditional path for higher education. We practiced our AFS presentations together and an AFS officer taught a workshop on the perfect elevator pitch for science communication.

There was also down time for a Chena hot springs field trip and cross-country skiing. The CFOS students received a unique opportunity to learn from their peers that may live and/or conduct research thousands of miles away. The student retreat was a special way for students to build life-long connections and share their research and university experiences with peers. We hope the CFOS student retreat becomes an institutional program along with the CFOS student mentorship program. Together these two programs ensure students have the resources and community support they need to complete their degree successfully. 🐟



Expanding Harmful Algal Bloom Research Around Kodiak

Paralytic shellfish poisoning (PSP), the dominant harmful algal bloom (HAB) concern, has long been a problem around Kodiak, Alaska. Subsistence harvesting is a major food resource and culturally significant among Native villages in the Kodiak Archipelago, and food security is impacted by recurrent blooms of toxic *Alexandrium* species. Because these blooms also impact the developing Kodiak mariculture industry, most early mariculture efforts were abandoned.

A new five-year research partnership among Alaska Sea Grant, Kodiak Area Native Association, SeaTox Research Inc., and the National Centers for Coastal Ocean Science Harmful Algal Blooms Forecasting Branch will expand capacity for HAB monitoring by enhancing efforts of tribal members in the Koniag region through additional rapid toxin tests, new laboratory methods and capacity, and extended training and education. A total of \$1.5 million from the National Oceanic and Atmospheric Administration Monitoring and Event Response

Continued on next page

Meetings and Events

World Fisheries Congress



March 3–7, 2024. The 9th World Fisheries Congress will be held in Seattle, WA. More information is at <https://wfc2024.fisheries.org/>.

American Fisheries Society Alaska Chapter Annual Meeting

March 24-29, 2024. The 50th annual meeting of the AFS Alaska Chapter will be in Seward, AK. More information posted at <https://units.fisheries.org/ak-mtg/>.



Lowell Wakefield Symposium

April 16–18, 2024. This meeting will be held in Sitka, AK. More information is at <https://alaskaseagrant.org/events/wakefield-fisheries-symposium-2024/>.



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

Oncorhynchus is the quarterly newsletter of the Alaska Chapter of the American Fisheries Society. Material in this newsletter may be reprinted from other AFS websites.

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Deadline for materials for the next issue of *Oncorhynchus* is April 15.

Algal Bloom Research , continued

for Harmful Algal Blooms Research Program is supporting this research led by Alaska Sea Grant.

This project to inform both subsistence harvesting and the developing mariculture industry builds on past research and benefits from collaborations with key partners including the Knik Tribe of Alaska, Sitka Tribe of Alaska Environmental Research Lab, and several Tribal organizations in the Kodiak region. For this project, the Kodiak Seafood and Marine Science Center’s HAB laboratory will use a SeaTox enzyme-linked immunosorbent assay test to detect the most potent versions of the PSP toxins. Rapid detection will inform research efforts and direct testing of shellfish intended for consumption.

Data on HAB status will be shared across the Koniag region, including the City of Kodiak, the greater Chiniak Bay area, and some communities off the road system. This project will expand current mapping of *Alexandrium* cyst distributions and identify where future blooms may occur, as well as support efforts to develop and validate an *Alexandrium* forecast model. Community sampling will be supported through expansion of monitoring at local beaches. To learn more, visit the [NOAA Harmful Algal Bloom website](#).

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