



# ONCORHYNCHUS

Newsletter of the Alaska Chapter, American Fisheries Society  
Vol. XXXVIII Winter 2018 No. 1

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*Avery Hoffman assists a subsistence fisherman in collecting Chinook Salmon age-sex-length data. Photo by Janessa Esquible.*



## Kuskokwim Youth as Future Fisheries Leaders

*Janessa Esquible and Dan Gillikin*

A fundamental need for tribal organizations in rural Alaska is to build “capacity” to sustain a natural resources program that addresses the needs of stakeholders, engages stakeholders in resource management, and bridges gaps among western science and traditional and local knowledge. Capacity building is much more than just having administrative policies in place, or the needed infrastructure; building capacity also means investing in people. Only through development of a skilled, motivated work force that believes in, and has a full comprehension of, their duties at task, in addition to community support and credibility with local stakeholders, can any local program reach sustainability. While several levels of local engagement exist, we focus here on engaging youth in Kuskokwim River fisheries science.

The Partners for Fisheries Resource Monitoring Program began in 2003. The Partners Program

(<https://www.doi.gov/subsistence/frmp/partners>) is a competitive grant directed at funding biologist/social scientist/educator positions in Alaska Native and rural organizations with the intent of increasing the ability of these organizations to participate in Federal subsistence management. The program also supports opportunities for local, rural students to connect with subsistence resource monitoring and management through science camps and paid internships (U.S. Department of Interior). Partners Biologist Janessa Esquible, representing Orutsararmiut Native Council (ONC) in Bethel, Alaska, and Partners Biologist Dan Gillikin, representing the Native Village of Napaimute (NVN) in Aniak, Alaska, lead their affiliated tribal fisheries programs. Both programs manage different Kuskokwim fisheries projects in coordination with the Alaska Department of Fish & Game (ADF&G). Each program also places a large

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## The President's Corner



Aaron Martin,  
AFS Alaska Chapter President.

Greetings everyone. I hope the holiday season treated you all well and included time to recreate and rest with family and friends. My wife, two kids, and I headed south to recharge our energy banks and vitamin D levels in Hawaii. The trip was amazing and restorative, but each day was tainted by the amount of trash being washed ashore. The trash was in levels I have never seen and consisted mostly of plastics (a lot), netting, and rope. We are not immune to this problem in Alaska, and I am sure there are regions of the state that see higher levels of ocean trash than others. The Alaska Chapter of the American Fisheries Society (Chapter) is committed to reduce our footprint on the planet as we plan for future annual meetings and other operations. As Chapter members, I ask that you evaluate what you purchase, if it can be reused (metal water bottles versus plastic), and where it ends up (recycled or composted). Freshwater and marine fisheries in Alaska are experiencing the impacts of an ocean out of sync. Let our membership be the local voices and examples of how to minimize some of those impacts.

In other news, the Chapter Executive Committee (Ex. Comm.) met in November to discuss the status and direction of the Chapter and how we (the Ex. Comm. and membership) can continue to meet the goals and objectives of the Society, Western Division, and Chapter. The current objective

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## Kuskokwim Youth, continued

emphasis on youth involvement in fisheries science.

In the summer of 2017, ONC initiated a Youth Representative Program in the hopes of recruiting two local high school students to gain exposure to Kuskokwim River salmon management. This program was created in response to the near absence of youth at summer Kuskokwim River salmon management meetings, coupled with the need for increased local youth involvement in Kuskokwim fisheries projects. Local youth who expressed interest in natural resource management, with a focus on the Yukon-Kuskokwim Delta Region, applied for these positions. These positions are intended to expose youth to Kuskokwim River fisheries management through attendance of weekly Kuskokwim River Salmon Management Working Group (KRSMWG) meetings and federal in-season management meetings. The program also allowed these students to gain a variety of skills by spending time on Kuskokwim River fisheries projects led by ADF&G, the U.S. Fish & Wildlife Service (USFWS), ONC, and NVN.

Students selected to serve as summer youth representatives were Avery Hoffman (12th grade) and Elijah Lindley (11th grade). Both students attend Bethel Regional High School and were raised in Bethel. As summer youth representatives, they participated in several days of preseason training offered by ADF&G and USFWS to learn aspects of interview protocols, data needs, data uses,

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Dan Gillikin shows use of a level to make accurate measurements of the stream bottom along a transect line during the 2017 George River Science Internship. Photo by Dave Cannon.

## President's Corner, continued

of the Chapter is to “promote scientific research and enlightened management of aquatic resources of Alaska for optimum use and enjoyment by the public, and to encourage comprehensive and continuing education for fisheries scientists.” The question the Ex. Comm. wanted to consider most at the retreat was, are we (the Chapter) achieving this objective and if not what can be done differently. Some of the key action items that the Ex. Comm. identified and are working on include the following:

1) The Alaska Chapter is comprised of over 350 members and is considered one of the largest chapters in the Western Division. Thanks to our strong membership, donations, successful annual meetings, and scholarship endowments, our chapter is doing well financially. In the coming weeks, the Ex. Comm. will be sending out a poll to Chapter membership seeking input into how members would like to see the Chapter spend some of our discretionary funds to better invest in the Chapter and clarify what the financial vision of our chapter is.

2) One of the specific places the Ex. Comm. would like to make greater investments in is to our commitment to assisting students. Over the coming months, the Ex. Comm. will be establishing a student travel endowment to set aside specified funds to support student member travel. Currently, there is high student interest in traveling to annual meetings, however there is no mechanism to directly plan for or address that need. This makes it very challenging for the Ex. Comm. when budgeting for annual meetings or meeting requests by student members/subunits throughout the year. The tentative goal of this endowment will be to prioritize growth and professional development of student members by supporting travel and networking opportunities. The endowment will be a long term means of support that would be supplemented by funds generated from the auctions/raffle/student merchandise, which are currently being used to pay for student travel after the fact, until the endowment is self-sustaining at a level that can support the average student travel requests. The Ex. Comm. is seeking Chapter members that are willing to be a part of a small standing committee that will finalize the vision and financial plan for

this endowment. Please contact Aaron Martin at [afs.alaska.president@gmail.com](mailto:afs.alaska.president@gmail.com) by February 9 if you are willing to be a part of this.

3) The Ex. Comm. would like the Chapter to establish a standing Fundraising Committee. Currently, each year the President-Elect asks for assistance to form a new “committee” to seek sponsorship and donations for the annual meetings. The Ex. Comm. would like to have consistency in the people seeking sponsorships to allow the Chapter to develop a stronger relationship with our past and potential future financial sponsors. Once established, the new standing committee will work with the President-Elect and the Chapter members pursuing auction/raffles. Please contact Aaron Martin at [afs.alaska.president@gmail.com](mailto:afs.alaska.president@gmail.com) by February 9 if you are willing to be a part of this.

4) Providing support to the Alaska Pacific University to develop a formal Student Subunit. We are excited to have the motivated student body at APU join our Chapter and very much appreciate their willingness to help with fundraising and seeking auction/raffle items for our 2018 annual meeting. The Subunit can be reached at [afs.apu.students@gmail.com](mailto:afs.apu.students@gmail.com).

5) Lastly, the Ex. Comm. would like to make the process for nominating officers more transparent, accessible, and objective. This year, we will be nominating and approving a new Chapter Vice President and Student Representative and a call for nominations. After compiling the nomination information, we will send out a call for votes with a short biography of each candidate. The winner will be announced prior to our annual meeting where the new officers will take their role in the Ex. Comm.

There is much more that I'd like to share with you all, but I'll save it for our next newsletter. Thank you all for making our Chapter a vibrant one. Aside from the internal challenges we experience trying to strengthen our Chapter, we have some significant external challenges ahead of us too. It will take a motivated and united voice to minimize the impacts of those challenges.

Please feel to send me an email if you have any questions about what is happening with the Chapter, Western Division, or in the Society.

I wish you all the best. 🐟

**Kuskokwim Youth**, continued

and procedures for collection of age-sex-length (ASL) data.

The program gave Elijah, “some new insight on the subsistence needs up and down the river,” “how people viewed restrictions,” and “how the data we collected was represented on tables.” More specifically, harvest and effort data collected at the Bethel boat harbor and Bethel area fish camps were used by USFWS to develop inseason salmon harvest estimates. These data, along with other harvest and effort data collected in lower Kuskokwim River villages, informed management decisions for Chinook Salmon subsistence opportunities throughout the month of June. During the surveys, respondents also provided concerns or comments

that were relayed to managers at KRSMWG meetings. Elijah also had the opportunity to identify, weigh, measure length, and tag Chinook Salmon smolt at the Kwethluk River weir, operated by the USFWS Kenai Fish and Wildlife Conservation Office. “By far, working at the weir was the most enjoyable part of working with ONC,” claims Elijah. While at the weir, Elijah developed a better understanding of the importance of weirs, how the data collected in a tributary allow biologists to estimate smolt abundance, spawning abundance, and how the relationship from smolt outmigration to adult returns defines ocean survival. As a youth representative, Elijah became “more involved in the community” due to his time spent at fish camps interviewing fishing families and delivering fish to elders, the disabled, and widows within and around Bethel.

Avery Hoffman, the second ONC youth representative, initially thought fish camp surveys “would be a piece of cake,” until he realized some of the challenges in conducting surveys in the field. By the end of the season, Avery had “gained confidence” and was quite comfortable conducting harvest and effort surveys at fish camps, while also frequently encountering family members and friends in the process. When Avery was surveying fish camps, he also worked to recruit



*Janessa Esquible assisting a student from Aniak with juvenile salmon identification on the Aniak and Salmon River Math and Science Expedition (MSE). Photo by Dave Cannon.*

subistence users to participate in the Chinook Salmon ASL sampling program. This involved Avery, a trained ASL sampler, bringing sampling kits out to fish camps and teaching local harvesters in the collection of ASL data. When not in the field, Avery assisted with the ONC program to collect fish captured in ADF&G sampling programs and distribute those fish to Bethel area residents. Avery noted that, “Bringing the fish to elders gave me so much joy, and their joy for having their first taste of salmon of the year.” Avery also participated in an intern exchange program with NVN where he spent some time with the Aniak Test Fishery crew, learning about key differences between the test fisheries operated at Aniak and at Bethel. A highlight was learning to mend nets. During the exchange program, Avery also helped install the Salmon River weir. Ultimately, his planned one-month experience at ONC extended to nearly three-months based on ONC project needs and Avery’s desire to continue working with us through the summer. Both Avery and Elijah are continuing their education and are well on their way to undergraduate degrees and likely careers working in Kuskokwim resource aspects.

The NVN, in partnership with the Kuspuk School

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**Kuskokwim Youth**, continued

District (KSD), ADF&G, and USFWS, hosted its second annual internship opportunity on the George River for 11 students from the Kuskokwim Region. The paid George River Science Internship (GRI) is modeled after the Aniak River Math and Science Expedition (MSE) conducted by the KSD to teach youth leadership and foster interests in the natural sciences. However, the GRI is directed at advanced students who have successfully completed the MSE and expressed specific interest in fisheries conservation and riverine ecology. Our overarching goal for the internship is to build local capacity for conducting fisheries assessments, and to identify promising students for future employment opportunities at various fisheries monitoring projects throughout the Kuskokwim Region.

The ONC and NVN have collaborated for several years with the Alaska Native Science and Engineer Program (ANSEP), with support through the USFWS Fisheries Resource Monitoring Program, in efforts to recruit students from Western Alaska to work as summer interns in our fisheries programs. For two consecutive summers, ONC has had the pleasure to work with Danielle Lowrey, from Bethel and currently an undergraduate at the University of Alaska Southeast. Danielle has a desire to continue her education in a fisheries graduate program after obtaining her B.S. Her long-term goal is to return to Bethel and work as a fisheries biologist. In partnership with Bristol Bay Native Association (BBNA), Danielle also participated in an intern exchange program where she had the opportunity to assist University of Washington ecologist Daniel Schindler and his crew conducting stream surveys and juvenile salmon sampling in southwestern Alaska. Through this exchange program, Danielle developed new skills by assisting with a variety of field biology projects and networking with fisheries scientists from within and outside of Alaska.

In 2017, ANSEP student Janelle Carl from the coastal village of Kipnuk, Alaska, worked for NVN in Aniak, a very different part of the



*ANSEP intern, Danielle Lowrey, conducting Chinook Salmon otolith sampling. Photo from Bristol Bay Native Association.*

Kuskokwim Region compared to her home village. Janelle assisted NVN with numerous fisheries projects: the Aniak Test Fishery, the Salmon River Weir, in-season harvest surveys, water quality monitoring, and the GRI. The GRI was the most challenging, and the most rewarding. Janelle was responsible for instructing interns about benthic macro-invertebrate collection techniques, and identification and discussion on how species richness can be used as an index of water quality. Janelle had no prior experience with macro-invertebrates and didn't think the students would be interested in the subject. But she studied protocols, identification, and ecology to quickly become proficient on the "subject matter." As she learned more, her interest, enthusiasm, and confidence grew, which spread to the interns, making the macro-invertebrate component of the internship one of the most favored by the students. Janelle hopes to return to UAA this winter to continue her studies in the biological sciences.

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## Kuskokwim Youth, continued

*Janessa Esquible, ONC Partners Biologist, lives in Bethel, where she leads the Kuskokwim Salmon Inseason Harvest Monitoring project and co-directs the Lower Kuskokwim Chinook Salmon Age-Sex-Length Sampling Program and Kuskokwim Area Salmon Post Season Subsistence Harvest Surveys. She serves as a biologist on the Aniak and Salmon River MSE, facilitates youth natural science programs (e.g., ONC science and culture camp and the summer youth representative program) and works with local schools to apply Kuskokwim area fisheries data to science fair projects and other outreach activities.*

*Dan Gillikin is the Environmental Director for NVN. As the Indian General Assistance Program Coordinator, he facilitates outreach on environmental issues, landfill oversight, coordination of backhaul activities, and water quality monitoring. As a Partners Biologist, Dan leads outreach on fisheries management and conservation concerns while also providing oversight of Fisheries Resource Information Technicians, the Aniak Test Fishery, the Salmon River weir, the GRI, and inseason harvest monitoring.*

## Training Opportunities for Acoustic Tag and Hydroacoustic Assessments

*Using Hydroacoustics and Acoustic Telemetry Techniques for Fisheries Assessment* will be presented March 14–16, 2018 at the University of Washington, Seattle, WA. Hydroacoustics is used extensively throughout the world with both mobile and fixed-location survey techniques to address fisheries questions and stock management. Acoustic tagging is applied in fisheries studies to understand fish behavior and distribution, including tracking fish

movement in 3D with sub-meter resolution. This 3-day course will address a broad range of topics on both hydroacoustics and acoustic telemetry. Participants may attend on-site or online with tuition discounts up to 50% for university students and staff, nonprofit, and tribal organizations. To reserve a seat or ask a question, go to <http://www.HTIsonar.com>.

## Western Division Meeting of the American Fisheries Society

The 2018 Western Division American Fisheries Society annual meeting will be hosted by the Alaska Chapter American Fisheries Society and will take place May 21-25, 2018 at the Egan Center in Anchorage, Alaska. The meeting theme is *Change, Challenge, and Opportunity in Fisheries: Fishing for Solutions*. Oral and poster presentation abstract submissions are now open and are due by March 5, 2018. Abstracts for oral and poster presentations are limited to 300 words or less. Detailed guidelines, recommendations, and the link to submit an abstract can be found at <http://wdmtg.fisheries.org/1344-2/>. Abstracts for both oral and poster presentations must not exceed 300 words. Abstracts submitted for oral presentations will be directed to a list of symposia. Please look through and select if you think your oral presentation fits into one of the symposia themes. Oral presentations submitted as Contributed Papers may be assigned to a symposium at the discretion of the Program Committee and Symposia Chairs. If you have any questions about contributed papers and posters for the upcoming WDAFS meeting, please contact Lisa Stuby at [lisa.stuby@alaska.gov](mailto:lisa.stuby@alaska.gov).

Planning for the 2018 AFS Western Division Annual Meeting continues in full swing. This is going to be a huge meeting, and it's up to our Chapter to ensure that it's a great one! We are now soliciting volunteers to help with the meeting arrangements. There are ample opportunities to help out – the best being serving on one of our excellent committees! If you're interested in serving on one (or several!) of the planning committees, please contact AK Chapter President-Elect and meeting Program Chair Jeff Falke via email at [afs.alaska.presidentelect@gmail.com](mailto:afs.alaska.presidentelect@gmail.com) or by phone at 474-6044. Thanks and we look forward to hearing from you!



## Scholarship and Grant Funding Opportunities

### **NPRB Graduate Student Awards**

The North Pacific Research Board announced graduate student awards to support 2018 scientific and scholarly research that informs effective management and sustainable use of marine resources in North Pacific waters. Awards will be \$25,000 each, with at least six students to be selected in May 2018. Funds may be used for graduate student stipends and standard benefits, tuitions or required university fees, research-related travel, supplies, and laboratory analyses. Students must be enrolled in a graduate degree program at an accredited university or college at the time of submission in order to be eligible. Proposals will be accepted from now through February 9, 2018. For more details visit <http://www.nprb.org/graduate-research-award-program/about-the-program/>.

### **NOAA Coastal Management Fellowship**

This National Oceanographic and Atmospheric Administration fellowship provides on-the-job education and training opportunities in coastal resource management and policy for postgraduate students, and provides project assistance to state coastal zone management agencies and other key NOAA partners. Fellowship positions are available at a variety of coastal locations, including Alaska. Eligibility requirements, descriptions of the projects, and application guidance can be found at <https://coast.noaa.gov/fellowship/>. Application deadline is January 19, 2018, for fellowships that begin in August 2018.

### **Steven Berkeley Marine Conservation Student Fellowship**

This fellowship was created by AFS in 2007 to honor the memory of Steven Berkeley, a dedicated fisheries scientist with a passionate interest in integrating the fields of marine ecology, conservation biology, and fisheries science to improve fisheries management. Berkeley was a long-time AFS member and on the first Board of Directors for the Fisheries Conservation Foundation. The fellowship comprises a competitively-based \$10,000 award to a graduate student actively engaged in thesis research relevant to marine conservation. Research topics may address any aspect of conservation; a focus on fisheries issues is not required. Electronic applications and recommendations must be received by February 1, 2018. For more information see [http://mfs.fisheries.org/?page\\_id=155](http://mfs.fisheries.org/?page_id=155).

### **AFS Western Division Travel Funding**

The Western Division of AFS is offering travel grants for the Western Division meeting in Anchorage, Alaska during May 21–24, 2018. These travel grants are for Students, Early Career Professionals (graduated after May 2013), Professionals, and International attendees. Grants will range from (US dollars) \$350 to \$750. For more information, go to <https://wdafs.org/travel-grants/>.

### **Alaska Sea Grant State Policy Fellowship**

The state fellowship program provides professional opportunities and on-the-job experience for recently or nearly finished graduate students interested in Alaska's marine resources and policy decision-making. The paid 12-month fellowships are matched with host state or federal agencies in Alaska. The application deadline is February 21, 2018, for fellowships that begin in July 2018 or later contingent on position. More information is found at <https://seagrant.uaf.edu/research/fellowships.html>.

### **John A. Knauss Marine Policy Fellowship**

This fellowship is designed for graduate students with an interest in ocean, coastal, or Great Lakes resources and in national policy decisions affecting those resources. Eligible graduate students from any discipline receive a year of paid experience in Washington, DC, working on ocean issues with U.S. Congressional offices or with an executive branch, such as the National Oceanic and Atmospheric Administration or National Science Foundation. The application deadline is February 23, 2018, for fellowships that begin in February 2019. For more information visit <https://seagrant.uaf.edu/research/knauss.html>.

### **Eugene Maughan Graduate Student Scholarship**

The AFS Western Division is offering up to \$5,000 annually in scholarships to masters or doctoral students in the general area of fisheries science with one to three awards to individual students. Beginning in 2002, the Sustainable Fisheries Foundation established the William Trachtenberg Memorial Scholarship Fund, which augments the Western Division scholarship program by providing up to \$600 annually to a

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## Scholarship and Grant Funding Opportunities, Continued

graduate-level student conducting studies on fisheries sustainability. Applications for the Western Division scholarship program are automatically considered for the Sustainable Fisheries Foundation scholarship program. The application deadline is April 1, 2018. For more information, contact Bob Gresswell at [bgresswell@usgs.gov](mailto:bgresswell@usgs.gov).

### Hutton Junior Fisheries Biology Program

The Hutton Junior Fisheries Biology Program is a paid summer internship and mentoring program for high school juniors and seniors interested in pursuing the disciplines of fisheries science, marine biology, and STEM related fields. The principal goal is of the Hutton Program to stimulate interest in careers in fisheries science and management among groups underrepresented in the fisheries professions, including minorities and women.

Selected students known as “Hutton Scholars,” are matched and mentored by a fisheries professional to enjoy an 8-week hands-on fisheries science summer experience in a marine and/or freshwater setting. Scholars receive a \$4,000 scholarship award. Mentors and their organizations not only have the opportunity to impart a positive effect on the life of a high school student, but also receive assistance with important summer projects and may even discover a potential future employee! The American Fisheries Society (AFS) simplifies the mentor’s involvement by providing guidance and administrative support. For more information on how students apply for an internship, or information on serving as a mentor, please visit <http://hutton.fisheries.org>. The application deadline for this summer scholarship or to serve as a mentor is February 28, 2018. 🗨️

## Backpack Electrofishing Course

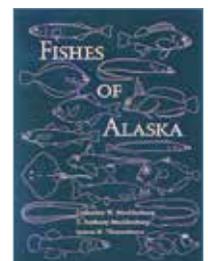
The Northwest Environmental Training Center (NWETC), a Washington-State-based, non-profit organization dedicated to environmental education, is offering the course *Backpack Electrofishing: Principles and Practices* in Anchorage, Alaska, May 19-21, 2018, in conjunction with the annual meetings of the AFS Western Division and AFS Alaska Chapter. The course consists of classroom work on the first



and third days and field exercises on the second day. A certificate awarded upon course completion documents formal training. Visit <https://www.nwetc.org/course-catalog/bio-407-may-19-21-2018>. Administrative questions, such as tuition details, should be directed to Ralph Fontaine at [rfontaine@nwetc.org](mailto:rfontaine@nwetc.org). Technical questions about the course should be directed to Instructor Jim Reynolds at [jbreyolds@alaska.edu](mailto:jbreyolds@alaska.edu). 🗨️

## Fishes of Alaska

A limited number of issues of the seminal publication *Fishes of Alaska* are still available. This book remains the only comprehensive guide to the marine and freshwater fishes of Alaska, with coverage to the 200-mile limit and down to the abyssal plains of the Arctic Ocean, Bering Sea, Gulf of Alaska, and North Pacific Ocean. The accounts of 601 species in 108 families and 36 orders covers not only the more familiar inshore targets of commercial and sport fisheries, but also rare and poorly known species. Identification keys and family and species accounts are presented in the framework of a modern classification, providing morphological features, geographic ranges in Alaska depicted on maps, an illustration of each species, photographs of many species, and detailed notes and documentation of all information presented. This catalog of species is an essential reference for marine biologists, ichthyologists, natural resource managers, students, naturalists, or anybody catching fish or otherwise interested in the fishes occurring in the aquatic ecosystems of Alaska and the adjacent waters of Canada and Russia. To purchase this iconic document for your collection or someone you know, go to <https://fisheries.org/product-category/afs-unit-publications/>. This publication was a significant effort for the AFS Alaska Chapter, and some proceeds from sales are directed back to the AFS Alaska Chapter. 🗨️



## Assumptions: Scientific Leaps of Faith

Jim Reynolds

Critical thinking requires that we break down our own reasoning and conclusions about the events and people we observe. Two aspects of critical thinking involve inferences and assumptions. An assumption is a belief based on one's knowledge, experience, and point of view; it may be founded or unfounded, but it is what we think is true. An inference is a conclusion arising from one's observation and the assumption that supports the conclusion. We all make inferences based on our assumptions every day. Scientific study requires leaps of faith when we make inferences about what we observe; we call them assumptions. Often, we do not question our assumptions; sometimes, we don't even think about them. But our scientific assumptions are important because they are the underpinnings of our inferences. Good assumptions lead to good conclusions; poor ones will lead us down error's path. Use of catch-per-unit effort (CPUE) is a common example in fisheries:

**Observation:** Calculate CPUE by dividing effort into catch.

**Inference:** CPUE provides an index of abundance.

**Assumptions:** 1. Catch has a linear dependence on effort; 2. CPUE increases with abundance.

We fisheries folk may use CPUE without much thought to the assumptions underlying our inference with CPUE. But have we tested the catch-effort assumption by plotting catch as a function of the units of associated effort? Do we know, through independent means, that changes in CPUE actually reflect changes in abundance?

Our inferences based on CPUE are no better than the validity of our assumptions.

A fascinating example of inference occurred when Randy Brown (U.S. Fish and Wildlife Service-Fairbanks [Brown, R.J. 2007. Freshwater mollusks survive fish gut passage. Arctic 60(2): 124-128]) found that freshwater mollusks survived gut passage in Humpback and Broad Whitefish. When one performs a food habits study, we infer that eaten prey is dead prey. That assumption is a safe bet – usually. Imagine Randy's satisfaction when he confirmed living clams and snails in the guts of whitefish; he concluded that the survival might indicate a means of dispersal for the mollusks. Critical thinking might lead us to question our assumption about prey; when eaten, do they only provide food?

**Observation:** After preservation, examine prey in fish guts.

**Inference:** Analyze prey items as food content.

**Assumption:** All prey items die and serve only as food.

Once we think carefully – critically – about our observations, we can reflect on our assumptions and the inferences that arise from them. Take nothing for granted. Nature is a large bag of tricks! (I relied on information from *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life* by R. Paul and L. Elder, 3rd Edition, 2012, Prentice Hall, Upper Saddle River, NJ, for part of this article).

Jim Reynolds was AFS Alaska Chapter President during 1981–1982. 🐟

## Alaska Chapter Awards

There is no recognition like peer recognition. Awards by the Alaska Chapter to its members and other champions of their aquatic resources have been critical to maintaining the high standards of the American Fisheries Society. The Alaska Chapter is currently soliciting nominations for the Meritorious Service Award (MSA), the Chapter Service Award (CSA), the Almost Darwin Award, and the Wally Noerenberg Award for Fishery Excellence. We encourage you to consider deserving individuals and to submit nominations for these awards. Awards will be presented at

the Annual Meeting. For more information, go to <https://www.afs-alaska.org/awards-scholarships>. NOMINATIONS ARE DUE FEBRUARY 15. 🐟

### 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 March 10.

## Student Subunit Happenings

*Tessa Minicucci, Student Subunit Representative*

The Student Subunit of the AFS Alaska Chapter would like to recognize the following University of Alaska students for defending their theses and dissertations during the 2017 fall semester: Maggie Chan (Ph.D., UAF) – “Using fisheries local knowledge to explore spatial fishing patterns and perceptions of regulations in Alaska;” Dean Courtney (Ph.D., UAF) – “Pacific Sleeper Sharks in the Northeast Pacific Ocean: relative abundance, plausible incidental exploitation rates, trophic ecology, and habitat use;” Elizabeth Figus (Ph.D., UAF) – “Eyes on the sea: demonstrating the usefulness of local knowledge to inform commercial fisheries management in Poland and Alaska;” Kelly Walker (M.S., UAF) – “Estimating sizes of fish in ice seal diets using otolith length - fish length relationships;” and Jordan Watson (Ph.D., UAF) – “Quantifying fisher responses to environmental and regulatory dynamics in marine systems.”

The 2017 AFS Western Division Student Colloquium, hosted by the Palouse student subunit, was held November 14–17 in McCall, Idaho. The AFS Alaska student subunit representative Tessa Minicucci and former student subunit representative Cheryl Barnes attended the event on behalf of the Alaska Chapter. Students from throughout the AFS Western Division attended the colloquium, with representation from Montana, Wyoming, Idaho, Oregon, Colorado, and Alaska. While attending the colloquium, students had the opportunity to present their research and receive valuable feedback from fellow students, and to take place in a stock assessment class in R taught by Dr. Derek Ogle of Northland College.

Juneau UAF students had a busy semester participating in several outreach events within the community. In October, the 4th Annual Spooktacular Dive and Underwater Pumpkin Carving Competition took place in Lena Cove, co-hosted by the UAF-CFOS Juneau Dive Program and The Scuba Tank in Juneau. Community members and divers competed in carving the best pumpkin while underwater. Juneau students also teamed up with community members to help host the Girl Scouts’ Women of Science event on October



*Tessa Minicucci, AFS Alaska Chapter Student Subunit Representative.*

14. Seven CFOS students developed two hands-on workshops for Juneau K–12 girls, kicking off with a discussion about what women in ocean science do and including some fun activities designed to pique girl’s interest in science.

In Fairbanks, students participated in a workshop led by Curry Cunningham on the benefits of reproducible research using GitHub for both version control and code-sharing. The Fairbanks AFS student group also hosted a professional workshop with a discussion titled “Where to next? A panel discussing options after graduation and how to get there.” Students had the opportunity to talk with fisheries professionals, including USFWS biologist Randy Brown, ADF&G biologist Parker Bradley, ADF&G anthropologist Caroline Brown, and UAF fisheries professor Andy Seitz.

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**Student Subunit Happenings**, continued

The 22nd annual AFS Alaska Student Symposium will be held on Friday, April 6, 2018. Remote connections will be available in Fairbanks, Juneau, Sitka, and Kodiak, with other locations added upon

request. Additional information about abstract submissions and contributed talks will be provided at a later date. For questions or comments, contact Tessa Minicucci ([afs.alaska.studentsubunit@gmail.com](mailto:afs.alaska.studentsubunit@gmail.com)).



Juneau students and advisors at the 4th Annual Spooktacular Dive and Underwater Pumpkin Carving Competition. Photo by Jared Weems.

**Amazon Smile**

Most of you have heard about Amazon Smile, the program in which the AmazonSmile Foundation donates 0.5% of the purchase price of eligible purchases to a charitable organization selected by the customer. The AFS Alaska Chapter is enrolled as a charitable organization. There is no additional expense to the customer, no price add-on, and no cost to the Alaska Chapter. So anyone who shops online at Amazon and is interested in AFS and Alaska’s fisheries can now support the AFS Alaska Chapter financially, at no additional cost! Simply shop through AmazonSmile (<https://smile.amazon.com/>); the shopping experience is identical to Amazon.com with the added benefit that the AmazonSmile Foundation donates to the AFS Alaska Chapter. You might ask what the contribution represents to the Alaska Chapter. Well, it is not large, but has increased from the initial donation in 2016 and represents a supplemental income that can be used to support Chapter projects.

Year	Quarter	Amazon Smile Foundation Donation*	Comments
2017	3rd	\$11.09	
2017	2nd	\$25.31	Highest quarterly donation received to date
2017	1st	\$13.85	
2016	4th	\$14.37	
2016	3rd	\$10.73	
2016	2nd	\$10.67	Initial donation received
	<b>TOTAL</b>	<b>\$74.93</b>	

\* Deposit made to Chapter account ~45 days after each quarter ends.

## 2018 NPRB Photo Contest

The North Pacific Research Board is conducting its 12th annual photo contest featuring images of sea life, seascapes, coastal scenes, and marine research within the waters of the North Pacific Ocean including the Gulf of Alaska, Prince William Sound, Bering Sea/Aleutian Islands, Bering Strait, or Chukchi/Beaufort Seas. Professionals,

amateurs, adults, and youth are encouraged to apply for awards up to \$3,300 in cash prizes to the top finalists in adult and youth categories. The application deadline is March 2, 2018. For official rules and additional information, visit <http://www.nprb.org/nprb/annual-photo-contest/photo-contest-entry>.

## Meetings and Events

### Alaska Marine Science Symposium



January 22–26, 2018: This symposium will be held in Anchorage, AK; abstract submission deadline is October 5, 2017. For more information, go to <https://www.alaskamarinescience.org/>.

### Pacific Fisheries Technologist Conference

February 12–16, 2018: This 69th annual conference will be held in Girdwood. For more information, see <http://www.pftfish.net/>.



### Alaska Forum on the Environment



February 5–7, 2018: This meeting will be held in Anchorage. For more information, visit <http://www.akforum.com>.

### ComFish Alaska 2018

March 22–24, 2018: This meeting will be held in Kodiak. For more information, see <http://kodiakchamber.org/comfish>.



### Tenth International Conference on Climate Change: Impacts & Responses



April 20–21, 2018: This conference will be held in Berkeley, CA. For more information, go to <http://on-climate.com/2018-conference>.

### Western Division Meeting of the American Fisheries Society



May 21–25, 2018: This meeting will be held in Anchorage, AK, hosted by the AFS Alaska Chapter. For more information, see <https://wdafs.org/meetings/annual-meeting/>.

### 147th Annual Meeting of the American Fisheries Society 2018

August 19–23, 2018: This meeting will be held in Atlantic City, NJ. For more information, go to <http://afsannualmeeting.fisheries.org>.



## Alaska Chapter Officers

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Feel free to contact the Executive Committee members.