



The Tributary

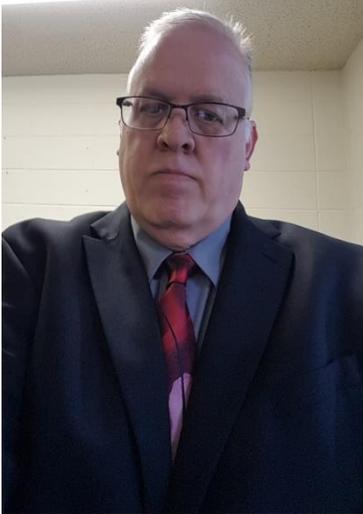
The Newsletter of the Western Division of the American Fisheries Association

Fall 2017

Volume 41, Issue 3

President's Hook

By Brian Missildine, WDAFS President



Hello from the wheelhouse.

I hope everyone is having a great summer. I am sure some of you are struggling with the fires. It seems the whole west is on fire with little relief in sight over the next couple weeks. I hear that the Montana

fires may burn until the first snow fall which is over a month or so away. I am excited to take over the helm of our great division. I have several key ideas for the chapter with one of them being improving communication between the division and the student units. Our past student rep Zach Kline conducted a survey directed at students and early career professionals. It was pretty obvious that students wanted more communications from the division. So one of my plans is to have a monthly or every other month call in with the student reps...similar to our Excomm calls. I also want to explore creating an early career committee that would develop guidance, support, and/or mentorship for those that have just started their career.

I also plan to explore a Diversity and Inclusion committee similar to what is being developed at the Society by incoming president Steve McMillian. I

foresee this as somewhat challenging but rewarding at the same time. Finally, I want to establish a financial sustainability committee. I think we are very cognizant of how we budget our funds but I would like to be sure we maintain financial security through a downturn in the economy. So with the potential of three new committees, I will be reaching out for volunteers to staff these committees. This is a good way to get your foot in the door and learn about the interworking of the Western Division.

The Society meeting in Tampa went well. Last I heard there were over 1,600 in attendance and probably about 1,000 talks. I attended a symposium on Diversity and Inclusion which was well done and well attended and fits in with my president's plan for the year. Also, as one of my Western Division duties, I am on the Society Governing board. One item that came out of the Governing Board meeting at Tampa was a dues increase to \$95.00. We haven't raised dues in quite some time and even this increase does not keep up with inflation. I know due increases are never popular but there is a terrific benefit coming out of this. As of January 2018, Wiley will be our new journal publisher and you will have FREE on-line access to all of the AFS journals Wiley publishes. That is a great savings which I hope you all take advantage. The next Society meeting is in Atlantic City and our next Western Division meeting is in Anchorage. I hope to see many of you there.

Until next time: Fair winds and following seas
Brian

WDAFS members recognized by Society

By Tracy Wendt, Tributary Editor

Several Western Division members were honored with awards at the 147th Annual AFS Meeting in Tampa, FL last month. Awards were presented by AFS President Joe Margraf during the meeting's plenary session. Please join me in congratulating these Western Division members and thanking them for their service to AFS:

Dr. Richard J. Beamish

Award of Excellence in Public Outreach

Presented to an AFS member who goes the extra mile in sharing the value of fisheries science/research with the general public through the popular media and other communication channels

Dr. Lisa Eby

University of Montana

Excellence in Fisheries Education

Presented to an individual to recognize excellence in organized teaching and advising in some aspect of fisheries education

Oregon Chapter

Outstanding AFS Large Chapter

Recognizes outstanding professionalism, active resource protection, and enhancement programs, as well as a strong commitment to the mission of the Society

Dr. James B. Reynolds

William E. Ricker Resource Conservation Award

Presented to any entity for accomplishment or activity that advances aquatic resource conservation that is significant at a national or international level.

Samantha Wilson

University of British Columbia

J. Frances Allen Scholarship

This scholarship fund was established with the intent of encouraging women to become fisheries professionals. The qualified applicant must be a female Ph.D. student conducting aquatic research in line with AFS objectives and be an AFS member.

Dr. Carol Ann Woody

President's Fishery Conservation Award

Presented for singular accomplishments or long-term contributions that advance aquatic resource conservation at a regional or local level

The Western Division has new officers

With the AFS Annual Meeting comes the turn-over in WDAFS leadership. The new Western Division officers are:

Brian Missildine – President

Jackie Watson – President-Elect

Dan Dauwalter – Vice President

Cleve Steward – Past President

Tracy Wendt – Secretary-Treasurer

Britta Baechler – Student Representative

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Meet the new WDAFS Student Representative: Britta Baechler

Britta Baechler grew up in the small coastal fishing town of Homer, Alaska, where she enjoyed a great deal of time outdoors in and around the water. She began her career in fisheries management as a



junior in high school as an American Fisheries Society Hutton Junior Fisheries Biology Program scholar, as she was instantly hooked!

As an undergraduate pursuing a B.A. in Biology at Lewis & Clark College in Portland, Oregon, Britta

spent her summers working for the Alaska Department of Fish and Game, the National Oceanic and Atmospheric Administration, and Oregon Department of Fish and Wildlife. Since obtaining her undergraduate degree, Britta has worked as a shellfish fishery biologist and fishery manager in the remote Bering Sea and Aleutian Islands region of Alaska, as well as Coral Reef Management and Fellow and Marine Protected Area Coordinator in the tropical U.S. territory of the Commonwealth of the Northern Mariana Islands.

Currently, Britta is pursuing a Master of Science degree in Environmental Science and Management at Portland State University. Her work in the Granek lab aims to determine concentrations of microplastics in Oregon's Pacific razor clams and Pacific oysters from along the Oregon coast.

ASPIRING OUTDOOR WRITERS AND PHOTOGRAPHERS WANTED

The Northwest Outdoors Writers Association (NOWA) initiated a "student" membership category beginning in 2017. Students must be at least 18 years of age, be enrolled in a university program, and have active interest in the craft of outdoor journalism, which broadly includes writing, blogging, websites, photography, and video. The annual membership cost of \$20 includes a free NOWA t-shirt.

Please contact Dr. Dennis Dauble at DennisDauble@charter.net or [509-375-4903](tel:509-375-4903) (home) if you have questions. Also see <http://northwest-outdoor-writers-association.org/> for information on NOWA activities, benefits and the annual conference.

STUDENT HIGHLIGHT



Thank you, Hayley Glassic for submitting this photo of electrofishing on Fish Haven Creek, a tributary to Bear Lake, UT/ID. Hayley Glassic (MS student USU, shocking) and Shaley Valentine (MS student USU, netting) pictured. Picture credit: Hunter Lucas.

Chapter update

Washington-British Columbia Chapter

By Brittany Jenewein

The Washington-British Columbia Chapter of the AFS recently transitioned half the Executive Committee to new officers, so while everything settles we wanted to highlight our recent award winners! The 2017 Annual General Meeting was held in Spokane, Washington, on April 10-13. We were pleased to present several awards this year:

Volunteer Organization of the Year



WA-BC Chapter President Alix Blake presenting the Volunteer Organization of the Year Award to Paul Spence, accepting on behalf of the Lake Roosevelt Volunteer Net Pen Program

Lake Roosevelt Volunteer Net Pen Program (LVRNPP). The LRVNPP is an integral component of the Lake Roosevelt artificial production program, which is a collaborative fish production and stocking effort that includes the Spokane Tribal Hatchery and Washington Department of Fish and Wildlife Sherman Creek Hatchery. Each year, the LRVNPP raises up to 500,000 triploid Rainbow Trout in approximately 45 net pens distributed throughout the 151 mile long reservoir. The vast majority of maintenance, feeding, and cleaning is carried out by the approximately 40 volunteers of the organization. In 2016, the Lake Roosevelt angler creel survey estimated that nearly 40,000 hatchery Rainbow Trout were caught by anglers, thanks in large part to the efforts of the LRVNPP. It would likely be impossible for the artificial production program to sustain the hatchery Rainbow Trout fishery without the remarkable hard work and dedication of the LRVNPP.

C. Jeff Cederholm Scholarship

Jeff Cederholm dedicated his career to conservation of salmon and aquatic species and their habitats. Jeff passed away in 2006 leaving a legacy of education, pioneering contributions to scientific literature and periodicals and instilling of passion for wild salmon conservation in many people for decades. After a successful American Fisheries Society Meeting hosted by the WA-BC Chapter in Seattle 2011, the Chapter resolved in 2013 to apply raised funds and subsequent contributions to the endowment to create a permanent source of financial support for educational expenses. The Scholarship is administered by the WA-BC Chapter Endowment Committee.

The recipients of the 2017 scholarships impressed the Endowment Committee and the Chapter ExCom with their influential research projects, past awards, and extensive public service activities. The Chapter was pleased to award \$1,000 each to:



Sierra Sullivan (M.Sc. candidate), University of British Columbia; **Naomi Pleizier** (Ph.D. candidate), University of British Columbia (*at left with Past President*

Mark laRiviere, photo by Brittany Jenewein); and **William Atlas** (Ph.D. candidate), Simon Fraser University

Application forms for the 2018 awards will be available late 2017/early 2018.

The Chapter also presented Past President Mark LaRiviere with a Certificate of Appreciation for all his hard work and dedication to the chapter over the last four years. [**WA-BC Continued on Page 6**]

Small grant update

Students receive training in Mexico

By Lynn Waterhouse, Scripps Institution of Oceanography

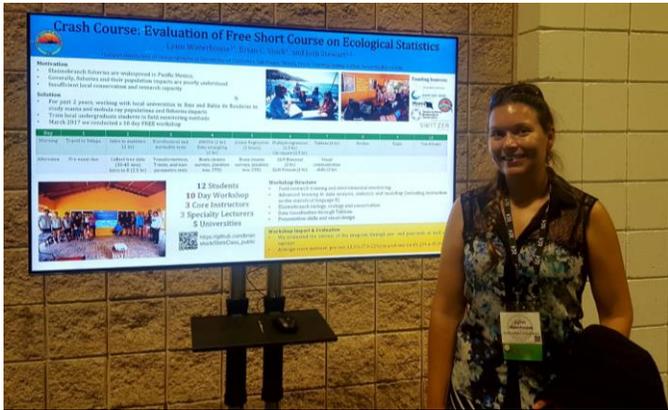


Photo: Lynn Waterhouse presenting an electronic poster on short course at AFS 2017 in Tampa.

This March, using funds from the WDAFS small grants fund, a collective of instructors hosted an intensive ten day Ecological Data Analysis Workshop for twelve students from three universities in Mexico (Instituto Tecnológico de Bahía de Banderas; Universidad Autónoma de Baja California Sur; and Universidad de Melaque). The workshop was funded by Save Our Seas Foundation, Gulf of California Marine Program, the Center for Marine Biodiversity and Conservation, and The Manta Trust, along with the WDAFS small grants fund. The course was provided to the students free of charge.

Over ten days, instructors from Scripps Institution of Oceanography, The Manta Trust, and the Communiqué Visual Communications Studio trained students in the R statistical programming language. The students practiced analyses ranging from t-tests to generalized linear models and received advice on analyzing their own data from research projects at their home institutions. Lectures provided background on sampling design and selecting appropriate statistical tests, classroom sessions provided hands-on training in R, in-class exercises provided students with practice implementing analyses, and homework assignments reinforced skills learned during classes. An exam administered before the

workshop began, and then as a final exam demonstrated a mean 588% (min 350% / max 930%) improvement in analytical abilities and statistical knowledge.

Students also received training in the use of Tableau data visualization software (<https://www.tableau.com>), and demonstrated proficiency in creating interactive graphics and maps. The students learned basic tools for increasing the quality of their visual communications and presentations, such as layout, color schemes, typography and compelling ways to visually present different data types. Several boat days provided training opportunities on field methods, including: using CTDs to collect vertical water profiles; collecting mid-water zooplankton communities using oblique zooplankton tows; observing behavior using animal-mounted cameras; and transect surveys estimating manta abundance. Finally, to prepare students for future involvement in fisheries research in Mexico, they received training in artisanal fisheries monitoring methods, mobulid identification, and global legislation protecting elasmobranchs.

For the last two years, Proyecto Manta, an initiative of the Gulf of California Marine Program in collaboration with The Manta Trust, has been partnering with local universities in Pacific Mexico to study the ecology and conservation of mobulid rays. In addition to data collection, Proyecto Manta focuses on capacity building by involving local students in field research activities. Each year, over 25 students participate in weekly research excursions, learning how to collect transect survey data, photo IDs of manta rays, zooplankton samples, and other relevant environmental data. In many cases, these weekly excursions also provide opportunities for students to conduct their own [SMALL GRANT Continued on Page 6]

[SMALL GRANT *Continued from Page 5*]

research projects for undergraduate honors theses.

Immediately after Proyecto Manta began, it became clear that there was an unaddressed need to increase the preparedness of students for graduate studies and careers in marine science and conservation. The objectives of the workshop were to expand the pool of students currently participating in Proyecto Manta capacity building activities, provide a highly applied, targeted crash course in ecological statistics and data analysis, train students in the basics of data visualization and science communication, and expose participants to more advanced field data collection methods and technology. All materials from the workshop are publicly available on a GitHub repository: https://github.com/brianstock/StatsClass_public.



Joshua Stewart (holding whiteboard) instructs students on transect methodology.

Instructors:

1. *Joshua Stewart : The Manta Trust ; Scripps Institution of Oceanography
2. *Lynn Waterhouse : Scripps Institution of Oceanography
3. Brian Stock : Scripps Institution of Oceanography
4. Jose Alfredo Giron Nava: Scripps Institution of Oceanography
5. Madeline Wukusick, Creative Director, Communique Science Communication Studio
6. Daniel Fernando, Co-Founder, Blue Resources

**indicates recipients of the WDAFS small grant*

[WA-BC *Continued from Page 4*]

And, of course, the Chapter had to officially award the Spawning Run male and female participants with the fastest times. This year's winners were Alex Kain and Erin Rechisky. They were presented with the awesome fishy Christmas ornament.



Alex Kain (left) and Erin Rechisky (right), Spawning Run winners! photo: Brittany Jenewein

The Chapter would also like to congratulate Sam Wilson (SFU) and Naomi Pleizier (UBC) for winning the Best Student Paper and Poster Awards! Their stellar presentations wowed the judges and earned each of them \$100.

Finally, the Chapter was very pleased to be able to provide over \$1,300 in Student Travel Awards to help 7 students from Washington and B.C. attend the AGM.

Save the Date for the Washington-BC Chapter's next AGM, which will be held in Kelowna, B.C., Canada March 19-22, 2018 and marks the chapter's 40th Anniversary!

TRIBUTARY EDITOR NEEDED

The Tributary is the quarterly newsletter of the Western Division of the American Fisheries Society. The current editor, Tracy Wendt, is moving to serve WDAFS in new ways and therefore we are looking for a replacement.

If you are interested in serving as the Tributary's editor, please send a letter of interest to westerndivnewsletter@gmail.com. If you have questions about editor responsibilities, contact Tracy at tracywendt@gmail.com.

Fish-friendly roads

By Katrina Liebich, US Fish & Wildlife Service



U.S. Fish & Wildlife Service hydrologist Franklin Dekker surveys a DOT access road crossing a salmon stream in Anchorage, Alaska. The information will be used to design a crossing that doesn't hinder salmon movement.

*Photo: USFWS
Katrina Liebich*

Fish-friendly roads? Yes, that's a thing.

Have you ever noticed those big metal pipes funneling water under roads? They're culverts. And they are pretty unremarkable to the untrained eye—invisible from the road, their presence only betrayed by the occasional frost heave, detour, or drowned trees upstream. To get a wholly different perspective, step into any river or creek and take a closer look where it intersects our transportation network.

Many culverts cause big problems for fish. When fish can't get where they need to go it hits us in our pocket books, decreases our food security, and threatens millions of Americans' recreational pursuits, traditions, and ways of living. Across the United States, migratory fish—like salmon, steelhead, and river herring—are particularly hard hit by barriers across streams and rivers.

THE PROBLEM

Rivers and streams are powerful and ever-changing. They carry rocks and logs. They flood. They carve out canyons. And when they encounter a culvert not custom-built to their unique range of behaviors, they have no problem going over or through the road.

The problem with the majority of culverts underneath our residential streets, highways, and railways is that they're not typically mindful of fish, floods, or the dynamism of rivers.

They're almost always too small. Each time a stream encounters a road there's a good chance it'll be pinched like an hourglass by a too-small culvert. It's not uncommon for a 10 foot wide stream to be forced into a two foot diameter culvert. These choke points concentrate flows and make passage difficult or impossible for fish.

It's kind of like being locked out of your house. Or finding the grocery store closed. For us, it's an inconvenience. For fish, it's potentially life-threatening. Their survival and success hinges on being able to move freely to find food and good places to spawn; or to seek shelter from predators, high temperatures, or extreme flows.

Some species and life stages are particularly vulnerable. For example, adult salmon are strong swimmers. Baby salmon are not. Barriers at roads created by too-small culverts can block them from getting to winter nursery habitats and reaching [ROADS Continued on Page 8]

[ROADS *Continued from Page 7*]

adulthood. One barrier culvert may not seem like a big deal, but each one chips away at the options available to fish. If fish have to put “all their eggs in one basket” so to speak, they’re at risk — and so are the fisheries we depend upon.

Natural variation in flows from year to year, especially during storms, can overwhelm too-small culverts.

Too-small pipes also snag wood and debris moving downriver, much like a tub drain snags hair (gross). We all know what happens then: a clog. Roads with clogged culverts turn into dams until they’re breached, or the clog is removed. In the meantime, trees upstream drown.

They’re usually placed at or above the stream bed. A stream’s bed can include boulders, cobble, gravel, sand, or even finer stuff. It moves. It creates roughness that breaks up the flow. Water moves much slower here than just a few inches higher in the stream’s main flow. Fish tend to pick the route of least resistance through these diverse particles: a large fish might rest behind a boulder, or hang out by a log, before making a short sprint through a riffle while a small fish moves from rock to rock along the bottom of the stream.



A total barrier to fish during any flow. Note its size relative to the man standing on the road above. This is a tributary to the Little Susitna River in Alaska’s Mat-Su Valley. The salmon habitat effectively ends where this private road crosses the stream. Photos: USFWS/Katrina Liebich

When a culvert pipe is set atop the stream’s bottom there’s only one option: a long stretch of smooth pipe at worst, corrugated pipe at best. The matter is further complicated when there’s a height difference between the outlet or inlet of a culvert and the stream-bed. These “perched” culverts are extremely common. They tend to become more perched over time as high velocities through the pipe carve out a plunge pool below.

THE SOLUTION

Where roads and railways are concerned, what’s good for fish is good for us. Stream crossings designed to pass the weakest swimmers at all flows minimize the problems described above. Preventing barriers in the first place is the most cost-effective option long term.

A natural bottom. What’s under our roads should ideally mimic what’s upstream and downstream. This helps ensure a seamless transition for fish passing underneath.

Wide enough to accommodate natural stream behavior and flows. A stream’s width and depth varies day-to-day with how much water it’s carrying. So how wide is wide enough? To answer that, we must understand the stream’s range of flows. A *stream gauge* that tracks water level and documents flood events over time can help. But these are present on only a fraction of waterbodies — especially in Alaska. We can also measure the stream’s width where the water just starts to spill over onto the floodplain. This “bankfull” measurement is what we want. We need to construct a channel inside a culvert that matches the bankfull width of the stream. Ideally, banks can also be constructed inside the culvert to provide resting places for fish swimming upstream and dry ground for wildlife to cross through the culvert too. If we don’t want floods to overwhelm our roads, we need to give the rivers and streams they cross room to be their dynamic self — from their different flows down to their moving beds.

[ROADS *Continued on Page 9*]

[ROADS Continued from Page 8]

Perform well in floods. Crossings that are sized to accommodate the expected range of flows naturally perform better when they encounter those flows. A case in point is the nearly 100 fish-friendly culverts installed in Alaska's Mat-Su Valley; these culverts remained stable during a 100-year flood event in 2012. Their traditional round culvert counterparts required costly maintenance.

How do we get there? To build quality transportation infrastructure that lasts we need to focus not only on water, but also fish—if they can move freely through road crossings to their preferred habitats we'll know we're on the right track. This means transportation planners and engineers engaging fish passage engineers, hydrologists, and fisheries biologists.

Be a part of the solution

- **Share this message.** We can all benefit from safer, more resilient transportation networks that also keep our waters and fish in good shape.
- **Become a conservation partner.** Our Fish Passage Program invests federal dollars and staff time into voluntary partnerships that improve fish passage where roads cross streams. Some projects are just too large and complex for any one person or entity to undertake alone. Get to know your local players.
- **Attend a fish passage workshop.** In Alaska, the U.S. Fish & Wildlife Service and the Alaska Department of Fish & Game offer multi-day workshops for planners, engineers, construction firms, and other practitioners interested in learning about fish-friendly crossings.
- Support efforts to document flows over time with stream gauges. We need more of this long term information everywhere, especially in Alaska.
- **Join and support your local fish habitat partnership.** Alaska has several (www.

fishhabitat.org) and fish passage is a shared priority.

- **Find out if your local or state governments have fish-friendly road policies.** Support efforts to prevent new barriers and remove existing ones. In Alaska, for example, several communities have adopted fish passage design standards (Anchorage in 2007; Kenai Peninsula in 2008; Mat-Su in 2013).

Katrina Liebich is based in Anchorage, Alaska and has served in her current position as Fisheries Outreach Coordinator in Alaska for the U.S. Fish & Wildlife Service since 2010. Questions? Contact her: Katrina_Liebich@fws.gov or (907) 786-3637 For more on Alaska's fish and their habitats follow us on facebook and subscribe to our newsletter!

AZ/NM Meat Eater

AZ/NM Chapter Member appeared on "Meat Eater Podcast with Steve Rinella" to talk about conservation funding and the value of native aquatic species

AZ/NM Chapter member Michael Ruhl, Native Fish Program Manager from New Mexico Department of Game and Fish, was guest on the hugely popular hunting and fishing show "Meat Eater Podcast with Steve Rinella" Episode 079: From Taxes to Trout. He covers some of the nuts and bolts of conservation funding for state agencies, but then gets into the philosophical and ethical aspects of the work we do to conserve ecosystems, sustainable fisheries, and imperiled and nongame aquatic species. This podcast is typically targeted toward the hunter and angler, but I would urge anyone interested in the subjects of conservation funding and the practical and ethical reasons for native species conservation to give this podcast a listen.



**MEAT
EATER**

Podcast with Steven Rinella
HUNT. FISH. LISTEN.

Coldwater Creek Steelhead

By Kerwin Russell, Riverside-Corona Resource Conservation District



Coldwater Creek, in the Santa Ana Mountains of Southern California, and part of the Santa Ana River watershed, has one of two remaining native coastal rainbow trout populations that are of coastal steelhead descent in the southernmost part of the state. The creek is in a narrow, steep canyon that drains the eastern side of the Santa Ana Mountains, with Santiago peak the highest point at over 5,600 feet. While not as high as surrounding mountain ranges, rainfall can be over 60" per year and provides the watershed with approximately three miles of perennial flow. The upper portion of Coldwater Creek is located within the Cleveland National Forest, with the lower portion owned by the Riverside-Corona Resource Conservation District (RCRCD). In-stream restoration efforts and high resolution population genetics help to increase reproduction and gain knowledge about genetic diversity. An initial genetic analysis of 20 samples was completed in 2014 in an FRGP funded large-scale trout population genetics study in Southern California (Jacobson et al 2014). This study indicated that the Coldwater population is of native steelhead descent and has one of the lowest genomic diversity scores of all California trout populations surveyed, (Jacobson et al 2014, Abadia-Cardoso 2015, submitted). The brilliant colors and unique phenotype of the trout are particularly

interesting. Adult fish are very colorful, heavily speckled and have pronounced parr marks in all size classes.

The districts aquatic program for the site has improved streamside habitat through non-native vegetation control, removal of debris barriers and extensive population surveys to estimate the number, age class and health of the population. These actions help safeguard the population against drought and improve its prospects for long term survival. This work can also benefit other aquatic species that occur here, and lay the foundation for increased geospatial distribution of native trout metapopulations. The Santa Ana watershed has incredible geographic diversity for harboring refuge native trout populations, provided that sufficient numbers can be preserved in Coldwater Creek. One conservation activity that may result from successful management of Coldwater Creek is the use of this population as a source for future reintroduction of native *O. mykiss* into historically occupied streams from which they've been extirpated. In a broader sense, data collected from this project will not only promote recovery of endangered Southern California steelhead, but will help shape our understanding of steelhead behavior in more northern populations and their response to changes in stream hydrology.



Your Story

By Pam Sponholtz

This summer I am in the Portland area for 2 months as part of a leadership program through work. Since I'm here without my family, I have a lot "alone" time to aimlessly wander around and explore the area. This weekend I headed to the Oregon coast and visited Astoria. The landscape here is beautiful beyond what I can capture in words and I have lots of new memories of some of the incredible things I've seen here. As I was wandering through downtown, I stumbled across a large antique store. It was filled with clawfoot tubs, an amazing assortment of brass door knobs and those old armoires that people used to use to store clothes. There was also a large box of old photos that were for sale for \$1.50 each.



As I sat on a very old creaky chair that I hoped wouldn't break, I started to look through them. There was the expected black and white portrait type ones of women with their hair "all done" and dressed in high collared dresses, yellowed kodachrome photos of birthday parties and lots of

family around the Christmas tree. What was unexpected was the number of photos of people fishing and holding their prize with a big grin for the camera. Perhaps I shouldn't have been too surprised given where I was in the heart of salmon country but nonetheless, it got my attention. Looking through those photos, I wanted to know more. Where were they fishing? Was it their first time? What species were they trying to catch? Did they release it or did they take it home and eat it? As I turned over each photo to learn more about their story, I would often find a faded date and if lucky, a quickly scribbled note in the perfect cursive of the day that said "Uncle George and Cousin Tom". What was their story?

I started to wonder if in 50 years would someone be sitting in a similar chair in a similar place, thumbing through photos that captured a moment in time and wondering what their story was at that moment. Would the bin of photos instead be replaced with old CD's, jump drives and whatever technology is next to store our electronic media? Would this have the same appeal and pull as looking at these photos as I was now?

I can't remember the last time I have either used film or printed off any sort of photo stored on either of my laptops or phone. And even if someone was to buy one of the many CD's that I may have in some out of the way antique store in the year 2067, there is no quickly scribbled note to accompany those photos. They are out of context and out of time. It is likely that there are dozens of online applications designed to categorize and preserve our online records, however it is also unlikely that I will be dedicating a weekend in the near future to pursue these avenues. I know myself pretty well and shoot there are so many other things to do on a weekend. But it does make [STORY Continued on Page 12]

[STORY Continued from Page 11]

me think about my legacy and the story I want to tell. How can I best capture what I've done, my experiences and what role I've played in my short tenure on earth? I admit I like the idea of someone sitting and paging through old photos someday and coming across one of mine and wondering about my life and what my story was in that photo. Maybe it will be one of me and of my many photos with fish or near water. But I have to wonder how will they know what a central theme fish and water have been ever since I was little?

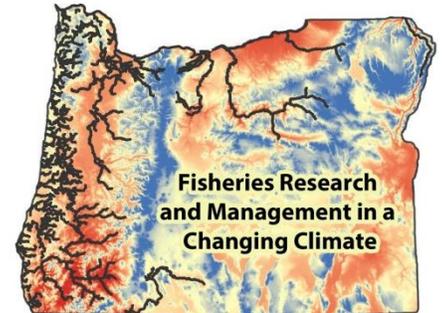
What is my story and how do I want it told?



ORAFS in Eugene: You're invited!

Hello members of the Western Division AFS:

In 2017 the Oregon Chapter hosted an exciting and well-attended meeting in Bend, OR focusing on a theme of



inclusion and diversity. Because of targeted efforts to reach out to a broader constituency, this became the largest meeting in the history of our chapter; we were excited to welcome new attendees from over 110 organizations. As we gear up for our next annual meeting, we look to build on the successes of last year and continue pursuing better representation of the whole fisheries community. We hope you can be a part of it! Mark your calendars for Oregon AFS in Eugene, March 13–16, 2018.

The Theme of our meeting is “Fisheries Research and Management in Changing Climate.” We typically think about climate change in a scientific context. However, socio-economic and political climates are also changing and these can have profound effects on fisheries research and management. At our 2018 Annual Meeting, we will explore these concepts through technical workshops, targeted sessions, and of course, our legendary networking opportunities. Check out ORAFS.org for updates on calls for abstracts, registration, and meeting details. We look forward to seeing you in Oregon!

Sincerely,
Oregon AFS Ex-Com



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Idaho's Economy
In a Changing Climate**

Nov 16 -17
2017

Our Water, Our Land, Our Health, Our Future

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This Summit is designed to address tangible risks to Idaho businesses and communities and to showcase success stories.

Learn more and reserve your spot now:

www.idahoclimatesummit.com

Save the date

September 26 - 28, 2017

Wild Trout Symposium XII
West Yellowstone, MT
www.wildtroutsymposium.com

September 26 - 28, 2017

Salvelinus Confluentus Curiosity Society Meeting
Clackamas River Basin, OR
<https://sites.google.com/site/sccs2017clackamas/>

October 18 - 20, 2017

Mexico Chapter Meeting
La Paz, Mexico
<https://www.facebook.com/events/828770153938610/>

November 14 - 17, 2017

WDAFS Student Colloquium
McCall, Idaho
<http://palouse.fisheries.org/2017-wdafs-student-colloquium-4>

November 16 - 17, 2017

Idaho Climate Summit
Multiple venues, see page 12
www.idahoclimatesummit.com

January 29 - 31, 2018

Montana Chapter Annual Meeting
Butte, MT
Website under maintenance

February 27 - March 1, 2018

CO/WY Chapter Annual Meeting
Laramie, WY
www.cowyafs.org

February 28 - March 2, 2018

Idaho Chapter Annual Meeting
Idaho Falls, ID
www.idahoafs.org/2018

February 28 - March 2, 2018

Cal-Neva Chapter Annual Meeting
San Luis Obispo, CA
www.afs-calneva.org

March 13 - 16, 2018

Oregon Chapter Annual Meeting
Eugene, OR
www.orafs.org

March 19 - 22, 2018

WA/BC Chapter 40th Anniversary Annual Meeting
Kelowna, BC
Wabc-afs.org

April 26 - 28, 2018

Instream Flow Council FLOW 2018
Fort Collins, CO
www.instreamflowcouncil.org

May 21 - 24, 2018

WDAFS Annual Meeting
Anchorage, Alaska
www.afs-alaska.org

August 19 - 23, 2018

AFS Annual Meeting
Atlantic City, NJ
<https://lafsannualmeeting.fisheries.org>

**Does your chapter, committee, or group have an event
to share with the Division?**

Please email the dates, event name, location, and website to
WesternDivNewsletter@gmail.com



2017 Western Division of the American Fisheries Society Student Colloquium



November 14 – 17, 2017

Hosted by the Palouse Student Subunit of the American Fisheries Society in McCall, Idaho



The 2017 Student Colloquium is a great opportunity to:

- Interact with a diverse array of students from all over the West
- Present current research in a friendly, constructive environment
- Receive feedback on your research
- Attend an R workshop presented by Dr. Derek Ogle

The meeting is free and the planning committee is committed to providing travel assistance to attendees!

Meeting schedule:

11/14 – Travel and Welcome Social

11/15 – Fisheries Stock Assessment in R workshop presented by Dr. Ogle

11/16 – Student presentations with feedback

11/17 – Travel home or explore central Idaho (cross country skiing, late-season fishing)

Please RSVP by September 29th

Presentation abstracts due October 13th (further details soon)

Please visit the Palouse Unit of the American Fisheries Society website for important updates and information

<http://palouse.fisheries.org/2017-wdafs-student-colloquium-4/>

Contact information:

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