In this issue: President’s Hook, WDAFS Award Recipients, WDAFS Annual Meeting Highlights, Small Project Grants, and more...

President: Todd Pearsons  President-Elect: Dan Brauch
Vice President: Laurie Earley  Past-President: Dan Dauwalter  Sec.-Treasurer: Travis Rehm
Student Representative: Emily Chen  Tributary Editor: Tim D'Amico
Wow! What a great and historic annual meeting of the Western Division of the American Fisheries Society (WDAFS) that we had from May 10-14, 2021. This was the first virtual annual meeting of WDAFS that we have ever implemented and it showed that we could make dramatic changes to our meetings and still produce great results. We demonstrated passionate resiliency in the face of a worldwide pandemic and managed to advance our noble mission. It certainly wasn’t easy making such big changes. We had to research, select, and learn new meeting platforms and rely upon the uncertainty of the internet to make the meeting work. Thankfully, it worked! Please take the time to thank the many individuals within the WDAFS and Utah chapter who made the hard decisions, put in the time, and executed a great event.

Our meeting theme, amplifying science in a changing world, was addressed in three days of incredible plenaries, many symposia, talks and posters, and an aquatic film and photo festival. In concert with our mission, we also hosted numerous and diverse networking events, including events in a virtual platform that mimicked a real meeting experience. We strived to be welcoming to all throughout our meeting and provided continuing education workshops, mentoring, and resources to further our goal of being a diverse, productive, and inclusive organization.

Not only did we advance our meeting theme, but with the generous help of our sponsors, we also had a profitable meeting. The profits of the meeting will contribute to benefits to WDAFS members throughout the year, such as travel grants, committee support, small project grants, scholarships, and awards.

One of the benefits of a virtual meeting is the opportunity to see multiple concurrent talks that would have been missed in a normal meeting because of schedule conflicts. Our meeting was recorded and all registrants have 90 days from the meeting to view content that they missed or to revisit content that was exceptionally pertinent.

I encourage all that participated in the meeting to leverage the hard work that went into the meeting into something with long-lasting impact. Please consider writing up the information in your talks and submitting it for publication. Consider following up with colleagues to establish new partnerships. Write new funding proposals to generate policy relevant science. Make new images to help communicate science. Read papers about the science advocacy debate and refine your ability to identify science and values. Look for ways to tell interesting stories about science and aquatic ecosystems by using charismatic creatures or phenomenon. In short – amplify science and partnerships to have a lasting impact on our changing world.

Sure, we would have all liked to have met in person in Ogden, Utah, but we made significant strides in our meeting capabilities for future meetings. Without the pandemic, we wouldn’t have made such an investment in virtual meeting capabilities. This new-found expertise, capacity, and confidence in hosting virtual meetings will allow us to diversify future meetings and tailor our meeting format to our objectives. The virtual experiences that we had were seeds of opportunity for improvement of future meetings.

I sincerely thank all of those in the WDAFS and Utah Chapter who made the voluntary sacrifices to pull off a great meeting. I hope that all those who helped will get the opportunity for some well-deserved rest.

Best fishes,

Todd Pearsons, WDAFS President
On May 12, 2021, I moderated a plenary session about the role of scientists and scientific organizations in amplifying policy advocacy and credibility during the annual meeting of the Western Division of the American Fisheries Society. Perspectives about the topic were presented by seasoned practitioners Leanne Roulson and George Wilhere. Following their talks, an expert panel that included Leanne Roulson, George Wilhere, Michael Scott, and Bob Hughes addressed three prepared questions from me and additional questions from the audience. The session generated significant interest and a summary of the session, some of my thoughts, as well as some future steps are presented below.

There were a number of concepts that the panel agreed upon. They all agreed that science should be aggressively communicated so that it has the potential to influence important policy decisions. In addition, publishing findings in scientific journals was an insufficient method to accomplish scientific communication to influence policy. Some also thought that it should be done in such a way that the science would be communicated to all relevant groups (e.g., user groups such as the Cattleman's Association) and not just conservation-oriented groups. In addition, most environmental laws already contain requirements to use science in decision making, so some thought that the battle over using science to inform policy had already been won. There was also agreement that scientists should advocate for science funding, research programs, and science education.

Despite important agreements by the panelists, there were important disagreements too. Panel members disagreed about whether scientists and scientific organizations should advocate for policies such as dam removal, emissions reductions, and habitat preservation. Some thought that policy advocacy degrades scientific credibility because of perceived bias and also reduces the clarity of what the truth is on a topic. More specifically, there were concerns by some that transparency, unconscious bias, competence, and trust were negatively affected by advocacy. Others thought that policy advocacy should occur by AFS, particularly because of our expertise and the importance of the issues.

There were disagreements about interpretations of guiding documents of the American Fisheries Society (AFS): some thought that the AFS standards of professional conduct prohibited value-based advocacy and cited specific codes to support the claim. In contrast, others indicated that AFS has been involved in policy advocacy since its inception and therefore is an indication that AFS supports policy advocacy. Finally, some communicated that the benefits of current environmental protections were the result of previous engagement and if fisheries scientists don't advocate, then who will? Some responded that there was a legion of highly competent organizations whose role is to advocate environmental issues and that science organizations should stick to their role of communicating science.

It is clear that there are a variety of perspectives on AFS’s participation in policy advocacy and that this is not an easy issue to resolve. Although, there have been past attempts to clarify the issue such as writing advocacy guidelines and standards of professional conduct, the written guidance can be interpreted differently by different people. Even the AFS mission statement can be interpreted to support or exclude policy advocacy.

Because of the wide variety of advocacy perspectives held by AFS members, continuing ambiguity in guiding documents may be the only way to strike agreement about the topic. As such, AFS may be inconsistent in its application of advocacy and treat issues to advocate for or against on a case-by-case basis. It is likely that temporal variation in advocacy will be dependent on multiple factors such as, the perspectives of AFS who are in power, societal priorities, and types of environmental concerns.

In my opinion, a starting place for improving clarity about AFS’s role in advocacy would be to periodically reexamine AFS guiding documents such as the mission statement, advocacy guidelines, and AFS standards of professional conduct. Are our guiding documents clear and do they represent who we are and
who we want to be? Also, a library of relevant papers on the topic could be provided on the website so that members can be exposed to different ideas on the topic. Identifying science communication from advocacy is also challenging; values are often inadvertently embedded in “science communication.” Workshops could be hosted by AFS to distinguish differences between science communication and value-based advocacy. Also, education about using if-then statements such as, “if society desires to maintain aquatic biodiversity, then the science indicates that action xyz (fill in the blank) will be necessary” may help those that want to stick to the science while making policy relevant statements. Finally, evaluating how AFS best fits within the ecosystem of organizations that advocate for or against conservation and sustainability of fisheries and aquatic ecosystems would help to position AFS to accomplish its mission most effectively. All of these suggestions would help to sharpen our perspective on advocacy whether for or against.

The role of scientists and scientific organizations in policy advocacy has been debated for a long time and fisheries scientists and AFS are no exception. Healthy organizations are able to wrestle with difficult topics and become better for it. We need to become better because the stakes are high. The way we engage policy as scientists or scientists/advocates will help determine the future of our planet, biodiversity, ecosystem services, and our own species. Let’s be patient with one another and strive together to get it right.

**WDAFS MISSION/VISION STATEMENTS**

**WDAFS MISSION:** The mission of the Western Division of the American Fisheries Society is to: 1) improve the conservation and sustainability of unique fishery resources and aquatic ecosystems in western North America by advancing fisheries and aquatic science and promoting the development of fisheries professionals, and 2) serving as an effective bridge between the Society and Chapters within the Western Division, promoting communication among and support of the Chapters and membership, and being the American Fisheries Society’s representative to the public in western North America.

**WDAFS VISION:** The Western Division of the American Fisheries Society seeks to be recognized as the pre-eminent organization providing fisheries information to decision makers in all arenas of western North America. While fulfilling our vision, we will recruit and develop new fisheries professionals by offering learning and training opportunities crucial to maintaining a well-trained profession, support programs and efforts to increase diversity and inclusion, and enhance the value of American Fisheries Society professional certification.

**WDAFS SLOGAN** (for use on letterhead): Advancing fisheries and aquatic science and professionals in western North America.

**WDAFS CHALLENGE:** Ignorance of fisheries and aquatic ecosystems is our arch enemy. We will fight against ignorance by communicating science to other scientists, decision makers, influencers, and the Public, and we will advocate for conducting and using science to achieve sound management and policy decisions. We will expose suppression and misuse of science and enhance scientific credibility by attempting to maintain purity of the scientific enterprise. It is our hope that elevating science will help influencers and decision makers to achieve what is best for current and future generations.
2021 WDAFS VIRTUAL MEETING SPONSORS

Gold Level Sponsor

[Utah DNR logo]
Silver Level Sponsors
Bronze Level Sponsors

Steel Level Sponsors

Contributors
**2021 AWARD OF SPECIAL RECOGNITION**

**Deborah Hart (SE Alaska Fish Habitat Partnership)**

Debbie has been instrumental in organizing film festivals at several Division and Society meetings the past five years.

---

**2021 ROBERT BOROVICKA CONSERVATION ACHIEVEMENT AWARD**

**Mike Partlow (Utah Division of Wildlife Resources)**

Mike is recognized for work as part of the Upper Colorado River Endangered Fish Recovery Program, and in particular for his efforts on the Razorback Sucker and Lake Stewart wetland project.
2021 RIPARIAN CHALLENGE AWARD

Big Hole Watershed Committee—
French Creek Stream Restoration Project

4,000 feet of new channel constructed to reduce fine sediment delivery, restore natural stream morphology, improve native fish habitat and reconnect 7 acres of floodplain.

Benefits native fish species including Arctic grayling and Westslope Cutthroat trout.

June 9, 2020

Cedar City Field Office—
Birch Creek Riparian Enhancement Project

1 mile of stream habitat and 72 acres of riparian habitat improvement, including conifer encroachment removal, 66 restoration structures installed and livestock exclosures.

Benefits Bonneville cutthroat trout and greater sage grouse.
WDAFS AWARDS

Eugene Maughan Scholarship Recipients

Excellent scholarship as evidenced by grades in rigorous course work during the last 60 hours as an undergraduate and during graduate studies.

Potential for future contributions to the fisheries profession through management, research, or teaching.

Significant progress toward attaining a graduate degree in fisheries science with a defined thesis or dissertation project.

Graduate studies on fisheries sustainability

https://wdafs.org/students/scholarship-travel-award-information/dr-gene-maughan/

Lucia Combrick (MS, University of Wyoming)

Christina Linkem (MS, Oregon State University)

Hayley Glassic (Ph.D., Montana State University)
WDAFS AWARDS, cont.

WDAFS Outstanding Chapter Awards

Outstanding Small Chapter: Colorado—Wyoming AFS

Outstanding Large Chapter: Oregon AFS

Outstanding Student Subunit: Santa Cruz—Monterey Bay
We would like to congratulate this year’s Diversity and Inclusion award recipients Cheryl Barnes (Diversity and Inclusion Service Award) and Taylor Preul (Diversity and Inclusion Mentorship Award). Thank you both for the amazing work you do supporting diversity and inclusion in fisheries. For more information about these awardees, please see their profiles on our awards website.

It was great to learn about research and methods for sharing information from the many presenters at this year’s Western Division Annual Meeting. It was also wonderful to see the many ways in which diversity and inclusion was supported. Thank you Cheryl Barnes for providing a diversity and inclusion lens during the meeting planning process and creating opportunities to participate in affinity group events. Thank you Laurie Earley for your contributions to the meeting planning process too, including ensuring closed captioning was available throughout the meeting. Thank you Laurie for also coordinating two sessions of a continuing education workshop on Implicit Bias. We appreciate the sponsorship provided by Trout Unlimited that allowed participants to attend this training, provided by Dave Barak, for free. Thank you Natasha Wingerter for organizing the symposium “Diversity, inclusion, and equity: informing and adapting”. It was wonderful to learn from Christine Moffitt, Gabriella Moreno, and Katherine Osborn and get inspired about sharing science through social media and podcasts.

For this issue, we are excited to highlight achievements of the Alaska Chapter Diversity, Equity, and Inclusion Committee. This is the first chapter in Western Division AFS to develop a committee focused on increasing participation from underrepresented groups in fisheries, having formed in 1992 with an endowment to fund meeting travel. Other chapters, including Oregon, Colorado-Wyoming, and California-Nevada have developed similar committees over the past decade. Alaska’s Diversity, Equity, and Inclusion Committee is currently composed of seven members (with an additional representative from the AK-AFS Executive Committee) and has focused on making annual meetings more inclusive (e.g., promoting the use of pronoun stickers, designating all-gender restrooms, offering free registration for high school students and discounts to attendees traveling with dependents), hosting workshops (e.g., “Picture a Scientist” screenings and discussions), and offering affinity group meetings to foster community and bolster a sense of belonging among those with historically marginalized identities. Upcoming initiatives include a DEI-focused review of the AK-AFS procedural manual and bylaws, developing partnerships with other professional societies, state agencies, and tribal groups to enhance DEI in Alaska, and expanding a mentorship program focused on pairing participants with shared personal identities. The AK Chapter received a great deal of interest in the pilot mentorship program (led by Jesse Gordon), which paired mentors and mentees according to race, ethnicity, gender identity, sexual orientation, and career stage. The AK Chapter DEI Committee is looking forward to facilitating additional mentorship pairings this fall. Click here if you are interested in participating in the AK-AFS mentorship program and/or contact deic@afs-alaska.org for more information.
WDAFS COMMITTEE UPDATES, cont.

Diversity & Inclusion Committee Awards

Cheryl Barnes (she | her)
https://cheryl-barnes.github.io/
Postdoctoral scholar, University of Washington and NOAA Fisheries member, Western Division AFS Diversity & Inclusion Committee chair, Alaska Chapter AFS Diversity, Equity, and Inclusion Committee

Taylor Preul (she | her)
LinkedIn
M.S Candidate, Montana State University
President of MSU student subunit

Resource Policy & Environmental Concerns Committee

Bob Hughes (WDAFS Resource Policy & Environmental Concerns Committee)
The Resource Policy & Environmental Concerns Committee (RPECC) organized a session, Effects of Agriculture on Streams, for the WDAFS virtual annual meeting. Eleven speakers from 5 states and 3 nations presented. That session and a literature review were used to develop and submit a manuscript to Water. In addition, a Special Committee of scientists, repre-
senting Idaho, Montana, Oregon & Washington, is currently reviewing the pros and cons of breaching the four Lower Snake River dams. A draft report is undergoing revision by that Committee. A final re-
port will be provided to the WDAFS ExCom by July.

Western Native Fishes Committee

Timothy D’Amico & Luke Schultz (WDAFS Western Native Fishes Committee)
The Western Native Fishes Committee (WNFC) once again hosted our native fishes symposium and subsequent discussion at the recent virtual WDAFS annual meeting. We had nine speakers representing five states and a variety of ecosystems and the native fishes who inhabit them. Additionally, we are cur-
rently on the home stretch in revising the native fishes database, and we are always looking for help if folks are interested. For those who are not familiar with our database improvements, we are basically inserting relevant citations and updating the spatial distributions for each taxa. Lastly, we recently includ-
ed the Salvelinus confluentus Curiosity Society (ScCS) under our WNFC umbrella. WNFC will be providing a virtual space for the upcoming ScCS virtual meeting later this summer which will provide an opportunity to learn, interact and figuratively “shoot the bull” with other Bull Trout aficionados.
Early Career Professional Committee

Alexander Tasoff (WDAFS Early Career Professional Committee)

A couple months ago we hosted our first webinar for WDAFS early career professionals (ECPs). Our co-host, Kat Gillies-Rector of IDFG, explained how to find meaningful experiences upon starting a fisheries science career. She covered subjects like using social media for self-promotion and networking, turning volunteer opportunities into work, and avoiding the pitfalls of resume building. A special thank you to Kat and Lauren Maza of AFS for helping to arrange the webinar.

Later, at the WDAFS meeting, we hosted our second webinar for WDAFS ECPs. I presented a lecture about career pivoting during the time of COVID. My goal was to teach ECPs that taking different career paths can help them adapt to economic downturns; learn various professional skills to become leaders in science; and gain broader knowledge about fisheries science. I emphasized optimism, self-motivation, and entry level skills. A special thank you to Dan Brauch of WDAFS or helping us arrange the webinar.

Both presentations are available for viewing. Please email me (a.tasoff.wdafs@gmail.com) if you would like to read the webinat PDFs and PowerPoints.

Early Career Professional Committee Awards

We offered meeting registration scholarships to four early career professionals in WDAFS. We congratulate the following awardees, honorable mentions, and meeting presenters:

Nicole Kwan

Nicole has been active in AFS since 2016. She has served as the vice president of the Sac-Davis unit, secretary of the Cal-Neva chapter, and member of the WDAFS planning meeting. UC Davis. At the meeting, Nicole obtained a broader perspective on studies being done on Chinook salmon, and hopes to apply those principles to her own studies on native fishes in floodplains.

Crystal Nichols

Crystal has been active in AFS since 2014. She is currently a member of the ORAOF Legislative Committee. Furthermore, Crystal helped organize the recent ORAOF chapter annual meeting. As the science communication intern at UMCES, Crystal uses social media and videos to convey complex scientific topics to broader audiences.

Katherine Osborn

Katherine has been active in AFS since 2015. She has an enthusiasm to educate others about science. In fact, Katherine hosts the podcast Fisherwomen, which introduces ichthyology and fishery science to
**Early Career Professional Committee Awards, cont.**

lay audiences. In the upcoming months, Katherine would like to volunteer at AFS to work on its diversity and inclusion agendas.

**Chrissy Webb**

Chrissy is a Fisheries Tech with MFWP. Her interest in science started when she learned about King salmon in a field course in Idaho. Chrissy attended the recent meeting to learn more about fishery science and present her poster. As a former environmental educator, Chrissy would like to become involved with education agendas at AFS.

**SPECIES SPOTLIGHT**

**California grunion (Leuresthes tenuis)**

Alexander Tasoff (WDAFS Early Career Professional Comimittee)

California grunion are baitfish endemic to the California Current. They are found in nearshore ecosystems from Monterey Bay to Ensenada, though can appear in San Francisco Bay (Johnson et al., 2009). Grunion experience continual genetic exchange between their populations, and the species itself might be one population overall (Johnson et al., 2009).

Grunion are renowned for their spawning aggregations on beaches. These events, humorously known as “grunion runs”, typically occur in spring at full and new moons. Females surf onto shore and deposit their eggs just below the sand. Meanwhile, males surround females to fertilize the newly released eggs. Once spawning is complete, the fish ride the retreating wave back into water. The eggs incubate for about 14-days, then hatch on cue during the next highest tide.

Grunion demonstrate some tolerance to ocean acidification (Tasoff and Johnson, 2018). Many genetic lineages have similar and or high larval survival and growth rates across pH gradients. Also, quantitative genetic analyses suggest that low pH tolerance at the larval stage has a substantial genetic basis within grunion. The degree of that tolerance appears heritable between generations. Therefore grunion, and possibly other nearshore fishes, may adapt quickly to long-term changes in ocean pH.

**References:**


WDAFS OFFICER ELECTIONS

Eric Fetherman—Incoming Vice President
CO/WY President (2019)
CO Parks and Wildlife (since 2011)
PhD Colorado State U. (2013)

Laura Burckhardt—Incoming Secretary/Treasurer
CO/WY Chapter
Program Committee (10yr)
Environmental Policy Committee
WDAFS
Program Committee
Poster Chair
Wyoming Game and Fish Dept (Cody)
M.S. University of Arizona

Katherine Dale—Incoming Student Representative
Santa Cruz - Monterey Bay subunit
President (currently 2nd term)
4x winner of WD outstanding subunit!
PhD student, UC Santa Cruz (5th yr)
Marine ecology
WDAFS SMALL PROJECT GRANT RECIPIENTS

WDAFS provides funding opportunities through their small project grants. These grants are intended as seed money for projects that further the AFS and WDAFS mission. In 2021, the WDAFS Small Projects Grants program received six proposals, of which three grants totaling $2,500 were awarded ranging from $500 to $1000. Below are the grant recipients and a short description of each small project.

**Katherine Osborne**: Fisherwomen Podcast Season 2. The aim of the Fisherwomen podcast is to increase appreciation of fisheries and broaden peoples’ understanding of fisheries professionals and enthusiasts. Launched in September 2020, the ongoing first season is a broad introduction to fisheries, as told through the voices of women, people of color, and representatives of native fisheries organizations. Season 2 will build from Season 1. ([https://fisherwomenpod.podomatic.com/](https://fisherwomenpod.podomatic.com/)).

**Eric J. Wagner**: Utah Mollusk Identification Guide. The grant is for financial support to the University of Utah Press, a non-profit publisher, for the publication of the book Utah Mollusk Identification Guide, written by Eric Wagner. The book was submitted for publication in July 2020, favorably accepted by the editors, and is currently in peer review. The estimated publishing date is summer 2021.

**Jessica Diallo**: Invasive Fish Removal in Ash Creek, Arizona. This research project will quantify ecological recovery across a spectrum of invasive green sunfish removal frequencies in Ash Creek, Arizona. The specific questions are: (1) What removal strategies are most effective in reducing invasive fish abundance and distribution? (2) How do native fish populations respond to invasive removal? (3) Does food web structure recover to pre-invasion state after invasive removal?
Meet Your WDAFS Officers

President
Todd Pearsons
Hometown: Woodland Hills, CA
(via Boston, MA)
Education: PhD, Oregon State University
Employer: Grant County Public Utility District (Science), Ephrata, WA
Interests: Underwater photography, Biblical archaeology, Krav Maga, human powered transportation, water sports, drums, blues harmonica

Past-President
Dan Dauwalter
Hometown: Carver, MN
Education: PhD, Oklahoma State University
Employer: Trout Unlimited (Science), Boise, ID
Interests: My interests center on outdoor recreation: mountain biking, rafting, fishing, hiking. I also play hockey, and I traveled Spain, Wales, and Switzerland for two months in 2019. It was the trip of a lifetime (photo from Spain)!

President-Elect
Dan Brauch
Hometown: Meeker, CO
Education: B.S, Colorado State University
Employer: Colorado Parks and Wildlife, Gunnison, CO
Interests: With two high school kids, I enjoy participating in their activities (4-H, science-o, drama, etc) but also find time for hiking, hunting, fishing, and motorsports. My wife, kids and I look forward to expanded travel opportunities.

Vice President
Laurie Earley
Hometown: Colchester, VT
Education: BS, University of Rhode Island and MS, Auburn University
Employer: U.S. Fish and Wildlife Service, Red Bluff, CA
Interests: I love outdoor recreation activities in the sun, snow, and water with my husband and two dogs. I also love to travel and when at home I like to spend time gardening, cooking, listening to music, and reading.

Secretary-Treasurer –
Travis Rehm
Hometown: Dillon, MT
Education: MS, South Dakota State University
Employer: Spokane Tribal Fisheries
Interests: I enjoy spending my leisure time outdoors. The majority of that time is spent chasing anything that swims with a fly rod or hunting western big game.

Student Representative – Emily Chen
Hometown: Oak Creek, WI
Education: MS, Humboldt State University
Current PhD Student in Carlson Lab at UC Berkeley
Interests: I enjoy leisurely outdoor activities such as camping, hanging by the river, crabbing. When indoors I like to paint, strength train, read statistics, and ponder the future of salmon in California