

**RISING FROM THE ASHES**

**AFS  
ANNUAL  
MEETING  
2022**

**OREGON CHAPTER**



*Lauren Zabkos*

# ORAFS 2022 VIRTUAL CONFERENCE - SCHEDULE AT A GLANCE

## Tuesday March 1, 2022

4:00-5:00 Near Peer Student Mixer

## Wednesday March 2, 2022

### Fire and Fish

8:00	DIY Coffee
8:30	Introductory remarks
8:40	<b>Keynote #1: Bob Greswell -Yes, Virginia, there is (aquatic) life after wildfire</b>
9:30	Break
9:40-11:00	<b>5 Concurrent sessions</b>
11:00	Discussion Rooms
11:20-12:40	<b>5 Concurrent sessions</b>
12:40-1:00	Discussion rooms
1:00-1:40	Lunch break, vendor booths, discussion rooms
1:40-2:40	<b>5 Concurrent sessions</b>
2:40	Discussion Rooms
3:00-4:30	Student-Mentor networking event
4:30-5:00	Committee Meetings (Climate Adaptation)
5:00-6:00	<b>Social hour/Affinity groups</b>

## Thursday, March 3, 2022

### Ocean Changes

8:00-8:30	Committee Meetings (Freshwater Habitat & Natural Production – combined)
8:30	Introductory remarks
8:40	<b>Keynote #2: Ana Spalding -Aiming policy at an invisible target: ocean acidification and the shellfish industry</b>
9:30	Break
9:40-11:00	<b>4 Concurrent sessions</b>
11:00	Discussion Rooms
11:20-12:20	<b>5 Concurrent Sessions</b>
12:20-2:20	Discussion rooms
12:40-2:40	Business Lunch and Chapter Awards
2:40-3:40	<b>4 Concurrent Sessions</b>
3:40	Discussion Rooms
4:00-5:00	<b>Poster Session / Vendor Booths</b>
5:00-6:00	<b>Social hour/affinity groups</b>

## Friday, March 4, 2022

### At Sea and On Land

8:00-8:30	Committee Meetings (Human Dimensions)
8:30	Introductory remarks
8:40	<b>Keynote #3: Aimee Fullerton - We must <i>turn and face the strange</i>, as fish encounter serial disturbances and global <i>ch-ch-ch-changes</i></b>
9:30	Break
9:40-11:00	<b>5 Concurrent sessions</b>
11:00	Discussion Rooms
11:20-12:40	<b>5 Concurrent sessions</b>
12:40	Discussion Rooms / Final Auction bidding (closes at 1pm)
1:00-1:40	Best Student Presentation/Poster, Spawning Run Results, and Auction Winners
1:40	Adjourned! See you in Eugene in 2023!

# 2022–2023 ORAFS LEADERSHIP

## COMMITTEE CHAIRS

### INTERNAL COMMITTEES

#### AFS/TWS LIAISON

Laura Tesler (ODFW)

#### AWARDS

Brian Bangs (USFWS)

#### RESOLUTIONS & BYLAWS

Victoria Quenessen (OSU)

#### HISTORIAN

Mike Gauvin (ODFW)

#### FINANCIAL SUSTAINABILITY

Tony Siniscal (NOAA)

Troy Brandt (RDG)

#### NEWSLETTER EDITOR

Stacy Strickland (ODFW)

#### SCHOLARSHIPS

Gwen Bury (OSU)

#### WEBMASTER

Emma Garner (ODFW)

### EXTERNAL COMMITTEES

#### CLIMATE ADAPTATION

Kara Anlauf-Dunn (ODFW)

#### DIVERSITY, EQUITY, & INCLUSION

Gabe Sheoships (FTC/PSU)

#### EDUCATION & OUTREACH

Ryan Battleson (ODFW)

#### FISH CULTURE

Ryan Couture (ODFW)

#### FRESHWATER HABITAT

Cory Sipher (BLM)

#### LEGISLATIVE

Troy Brandt (RDG)

#### MARINE HABITAT & ECOLOGY

Michael Harte (OSU)

Kelly Lawrence (ODFW)

#### NATIVE FISH

Jim Capurso (USFS)

#### NATURAL PRODUCTION

Ian Tattam (ODFW)

#### SOCIAL MEDIA

Demian Ebert (PC)

#### HUMAN DIMENSIONS

Ben Clemens (ODFW/OSU)

Jason Dunham (USGS)

Hannah Gosnell (OSU)

## Chapter Officers



**Scott Heppell**  
(OSU)  
President



**Chris Hirsch**  
(USFS)  
President-Elect



**Peter Stevens**  
(ODFW)  
Past President



**Victoria Quenessen**  
(OSU)  
Vice President



**Andrea Carpenter**  
(ODFW)  
Secretary



**Adrienne Averett**  
(ODFW)  
Treasurer



**Ryan Branstetter**  
(CRITFC)  
External Director



**Peggy Cavanagh**  
(ODFW)  
Internal Director

The **President** of the Chapter presides at all Chapter meetings, chairs the ExCom, is Chapter Representative to the Western Division and to the parent society, makes appointments and performs other duties and functions as authorized and necessary for overall Chapter effectiveness, crafts a one-year work plan and budget, arranges sponsorships, and writes columns for the newsletter.

The **President-Elect** chairs the Program Committee, assumes the duties of the President in the event of the President's absence or inability to act, plans the Annual Meeting theme, program, and presentations.

The **Past President** chairs the Nominating Committee and also chairs the ExCom if neither the President nor President-Elect is available, imparts historical wisdom, manages the Trade Show, and prepares for retirement.

The **Vice President** chairs the Resolutions and Bylaws Committee, assumes the duties of the President-Elect in the event that office is vacated prior to completion of the term, and manages Student Activities and Raffle & Auction committees.

The **Secretary** keeps the official records of the Chapter.

The **Treasurer** collects and banks any funds allotted to the Chapter, disburses funds as authorized by the Executive Committee, serves on the Financial Sustainability Committee, and disseminates information regarding the performance of the ORAFS investment portfolio.

The **External Director** supervises and motivates all External Committees. Ensures that committees respond to ExCom (and vice-versa) and participate in the Annual Meeting.

The **Internal Director** appoints the Historian and chairs of the Awards, Scholarships, and the Arrangements committees. Manages facility, food breaks, and A/V needs and costs for the Annual Meeting.



**Annika Carlson**  
OSU



**Elena Eberhardt**  
OSU



**Gina Maag**  
MHCC

The **Student Subunit Representatives** serve as liaisons between the Chapter and the approved student subunit(s) of the Chapter. Assist Vice President with student planning for the Annual Meeting.

# 2022–2023 ORAFS LEADERSHIP

## Student Officers



### OSU Fisheries and Wildlife Club Leadership Team

Names listed left to right,  
Standing individuals:

**Daniel Gillies:** Board member  
(TWS liaison),  
**Mayah Baker:** Vice President,  
**Marie Heuberger:** President,  
**Elena Eberhardt:** Secondary ORAFS  
Student Subunit Liaison

Kneeling Individuals:

**Jared Hedges:** Secretary  
**Abby Vukanovich:** Treasurer  
**Annika Carlson:** Primary ORAFS  
Student Subunit Liaison

Not pictured:

**Christian Serrano:** Officer-At-Large  
**Richard Riepe:** TWS Student Subunit  
Representative



### MHCC Fisheries Club Leadership Team

Names listed left to right:

**Bridget Manning:** Secretary  
**Gina Maag:** President  
**Jake Mildenberger:** Vice-President  
**Evan Cox:** Treasurer



# 2022 ANNUAL PLANNING COMMITTEE

## **Program Chair:**

Chris Hirsch (USFS)

## **Program Committee:**

Adrienne Averett (ODFW), Brian Bangs (USFWS),  
Ryan Branstetter (CRITFC), Gwen Bury (OSU/USFS), Brent  
Cardenas (OSU), Scott Heppell (OSU),  
Peggy Kavanagh (ODFW), Tere O'Rourke,  
Victoria Quennessen (OSU), Claire Rosemond (OSU)  
Christian Serrano (OSU), Peter Stevens (ODFW),  
Michele Weaver (ODFW), and Meagan White (OSU)

## **Annual Business Meeting:**

Scott Heppell (OSU)

## **Budget:**

Adrienne Averett (ODFW)

## **Poster Committee:**

Stephanie Gunkel (ODFW)  
Victoria Quennessen (OSU)

## **Raffle & Auction:**

Adrienne Averett (ODFW), Chelsea Briggs,  
Ryan Branstetter (CRITFC), Annika Carlson (OSU),  
Elena (OSU), Bruce Hansen, Gina Maag (MHCC), Victoria  
Quennessen (OSU), and Claire Rosemond (OSU)

## **Registration, Cvent planners, and everything else that actually made this meeting work**

Adrienne Averett (ODFW), Andrea Carpenter (ODFW), and  
Peggy Kavanagh (ODFW)

## **Vendors & Sponsors:**

Scott Heppell (OSU) and Peter Stevens (ODFW)

## **Social & Affinity Groups:**

Tere O'Rourke

## **Technical Program:**

Chris Hirsch (USFS),  
Design by Dan Orgill

## **Student Coordination & Activities:**

Christian Serrano (OSU) and Victoria Quennessen (OSU)

## **Student paper judging:**

Ivan Arismendi (OSU) and Stephanie Gunkel (ODFW)

## **Spawning Run/Carcass Crawl:**

Michele Weaver (ODFW)

## **Website:**

Andrea Carpenter (ODFW), Emma Garner (ODFW),  
and Peggy Kavanagh (ODFW)

## **Volunteer Coordinators:**

Brent Cardenas (OSU) and Meagan White (OSU)

## **Artwork & Graphic Design:**

Lauren Zatkos

## **Advertising:**

Demian Ebert (PC), Holly Huchko (ODFW),  
and Christina Linkem (OSU)

## **Moderators**

Pete Baki (ODFW), Lauren Burns (CRITFC),  
Ben Clemens (ODFW), Jim Capurso (USFS),  
Marc Johnson (ODFW), Chrissy Murphy (UofM),  
Brooke Penaluna (USFS), Amy Puls (USGS),  
Gordie Reeves (OSU), Dave Roon (OSU),  
Phil Simpson (ODFW), Kathryn Sutton (WDFW),  
Kevin Weitemier (OSU), and Margi Whitmore (VDWR)

# WELCOME



Greetings and welcome to the 58th Annual meeting of the Oregon Chapter of the American Fisheries Society and the continuation of the Pandemic Virtual Meeting Series! Our fabulous moderators have pulled together an outstanding science program for you. The virtual nature of the meeting allows us to bring in science from outside of Oregon and take national views on many subjects.

Thank you for joining us this year, especially our first-time ORAFS conference attendees! We hope you will like what you see and join the American Fisheries Society!

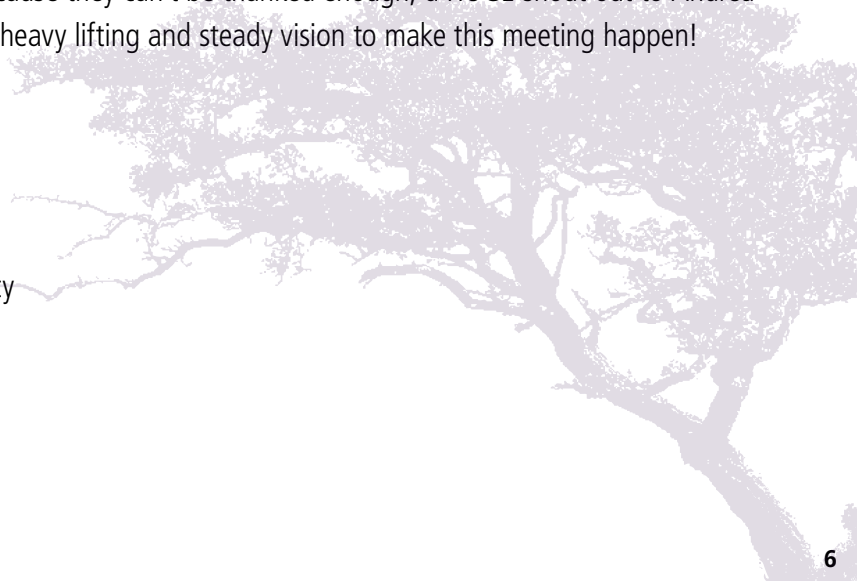
New this year, we are offering a few affinity groups during evening social hours in addition to our general hosted social rooms. Also new this year, we are going to approximate the in-person tradition of follow up live discussion with the speakers during the breaks using CVENT "Discussion Rooms." These are smaller rooms and we are asking our speakers to go to the Discussion Rooms in the break after their presentation to be available for interaction. No masks needed! Find them under the "Community" tab.

Personally, one of my favorite parts of AFS meetings is the opportunity to reconnect with the cast of characters from my past. It can be hard to run into folks in a virtual environment, but we have an easy way to find your friends. You can search the list under "Attendees," also under the "Community" tab, which will show a list of everyone who is registered. From there, send your friend or future friend a message to say hello and possibly find a time to catch up. Don't want people finding you?? You can opt out of having your name listed if you prefer. Make sure to glance at your chat symbol on the upper right of your home screen for a red dot indicating you have a new message.

While you are here, be sure to visit our auction, buy a few raffle tickets, and say Hi to our Exhibitor and give a shout out to our sponsors. This picture of me was taken on a fishing trip from a past ORAFS auction.

This meeting has been a group effort to pull off. Thank you, thank you, thank you to our planning committee and to Lauren Zatkos for the sensational meeting logo this year. And because they can't be thanked enough, a HUGE shout out to Andrea Carpenter, Peggy Kavanagh, and Adrienne Averett for the heavy lifting and steady vision to make this meeting happen!

Christine Hirsch  
President-elect, Oregon Chapter, American Fisheries Society



# LETTER FROM THE PRESIDENT



On behalf of the Oregon AFS Executive Committee and the ORAFS2022 Planning Committee, welcome to the 58th Annual Meeting of the Oregon Chapter of the American Fisheries Society, now in its second iteration as a Virtual Annual Meeting! Thanks to all of you, our 2021 virtual meeting was a success and we've got a great one planned this year as well. It will be hosted directly from wherever it is you find yourself this week, and it will be free! That's right, free! Thanks to the sustained efforts of our ORAFS financial planners and the generous sponsorship of many ORAFS partners, we are in the fortunate position of being able to provide this opportunity to all who wish to attend. The Program Committee has worked hard to create a virtual space that provides opportunities for professional development, sharing your work, learning about all the great work your colleagues have been doing in these strange times, and to network with friends old and new. So please enjoy, develop, and grow, and help others enjoy, develop, and grow with you.

Our theme this year is "Rising from the Ashes: The Role of Disturbance in Fisheries". What an apt theme for a year like we've had. There have been plenty of disturbances professionally, personally, socially, and ecologically over the last few years, and this theme will help us reflect on those disturbances and how we can move forward. From landscapes on fire to an overheated ocean, we've seen literal and figurative ashes scatter across our landscapes. Where do we go from the fire? That's what we'll talk about this week!

We hope that providing free conference registration removes one potential barrier to attendance at events such as this, and that it provides more opportunities to more people for professional growth. This is one small part of how we're hoping ORAFS continues to improve the fisheries profession with a bold eye on enhancing equity and improving inclusion. As mentioned in the winter Piscatorial Press, we are proud to announce the Albert G Lassuy Diversity, Equity, and Inclusion endowment to push this and other DEI initiatives forward. There is an ongoing capital fundraising campaign associated with that endowment. I hope you join me in supporting this endowment so that we continue to build the diverse chorus of voices that will help sustain aquatic resources in our home state and beyond.

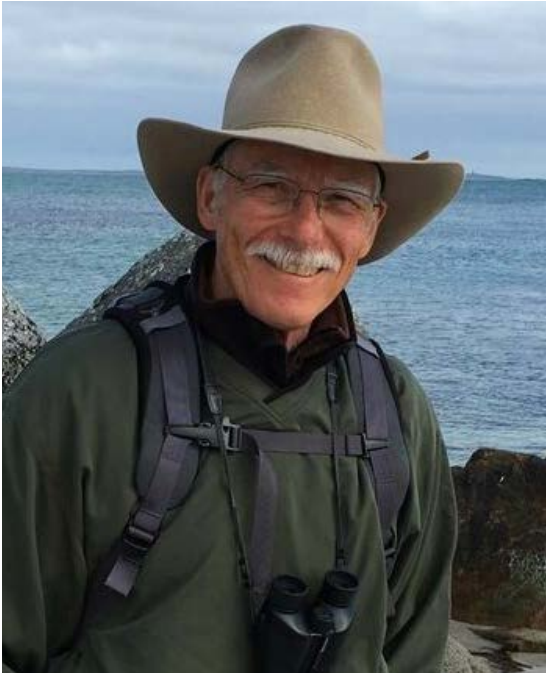
There are many people to thank for making this year's annual meeting a reality, but I'd like to call out a specific few. First, Chris Hirsch, President-Elect, developed the vision for this meeting and has spent countless hours moving us from vision to event. Andrea Carpenter, Secretary, continues to lend her incredibly capable skills to making sure the meeting happens. It is not hyperbole to say: "this meeting literally wouldn't happen without her". Peggy Cavanaugh, Internal Director, played many roles, the most important being that she ensured we didn't get stuck with a massive bill when we moved from our planned in-person venue to the virtual environment. In addition to Chris Hirsch, Christine Moffitt, Olivia Boisen, Janelle Layton, and Zowie DeLeon have been working on an initiative to engage high school students (another DEI effort) in ORAFS. Others on this amazing team include Peter Stevens (Past-President), Ivan Arismendi, Adrienne Averett, Ryan Branstetter, Gwen Bury, Brent Cardenas, Stephanie Gunkel, Victoria Quenessen, Claire Rosemond, Christian Serrano, Michele Weaver, Meagan White, the MHCC and OSU student subunits, our symposium organizers and session moderators, and our valued sponsors and vendors, all of whom have played essential roles in bringing you this meeting. Be sure to thank them when you get the chance.

I hope you embrace this chance for all of us to (virtually, again) gather together as we think towards the future and rise to meet the challenges and opportunities we face ahead. Attend the technical sessions, join the business meeting, laud the award and scholarship winners, and please take the opportunity to welcome the many first-time ORAFS attendees we'll have this year!

Sincerely,

Scott Heppell  
President, Oregon Chapter AFS

## PLENARY SPEAKERS



### **Bob Gresswell**

Fish and Fire:

## Yes Virginia, there is (Aquatic) life after wildfire

Bob Gresswell is an emeritus research biologist with the U.S. Geological Survey's Northern Rocky Mountain Science Center in Bozeman, Montana and affiliate assistant professor in the Department of Ecology at Montana State University. For over 47 years, he has been studying the factors that influence fish abundance, distribution, and life history within, and among watersheds, and how these relationships change through time. Interest in the role of disturbance in shaping the aquatic systems has led to research on the interactions among landscape-scale environmental variables, instream habitat characteristics, and cutthroat trout abundance and distribution. Current investigations are focused on the effects of fire, timber harvest, invasive species, and climate change on persistence of native trout in the western USA.



## Ana Spalding

Ocean Changes:

# Aiming policy at an invisible target: ocean acidification and the shellfish industry

Ana Spalding is an Associate Professor of Marine and Coastal Policy in the School of Public Policy at Oregon State University and a Nippon Foundation Ocean Nexus Principal Investigator, EarthLab, University of Washington. Her research encompasses the human dimension of the marine environment. Current work includes policy analysis and science-to-policy pathways in the context of climate change (e.g., ocean acidification) adaptation strategies by resource-dependent communities along the U.S. West Coast. Internationally, she studies governance for the Anthropocene ocean, with a focus on marine protected areas, equity in the Blue Economy, and the role of the ocean in achieving climate and societal goals. Dr. Spalding also has an extensive research network in Panama, where she co-leads a team studying the human dimension of plastic waste.



## Aimee Fullerton

At Sea and On Land:

*We must turn and face the strange, as fish encounter serial disturbances and global ch-ch-ch-changes*

Aimee Fullerton is a Research Fisheries Scientist at the NOAA Northwest Fisheries Science Center in Seattle. Her past work has included aquatic nongame and endangered wildlife issues, conservation of freshwater thermal habitats for Pacific salmon, and interactions between nonindigenous fish and the invaded ecosystem. Aimee's current research interests include thermal diversity in streams and the effect of climate change on Pacific salmon and aquatic systems; the spatial structure of aquatic populations, especially those living in stream networks; the relationship between spatiotemporal scale and ecological patterns and processes; the influence of nonindigenous species on native aquatic fauna; and ways that science can contribute to improved decision-making.

# ORAFS 2022 VIRTUAL CONFERENCE SCHEDULE - FRAMEWORK

## Tuesday, March 1st

4:00	Near Peer Student Mixer
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## Wednesday, March 2nd

8:00	DIY Coffee				
8:30	Introductory remarks				
8:40	<b>Plenary: Fire and Fish</b>				
9:30	BREAK				
	<b>Fire, Fish, and Aquatic Systems -1</b>	<b>Harney Basin: Collaborative Conservation</b>	<b>Native Fishes -1</b>	<b>Fish Passage -1</b>	<b>Fish and Forestry: Where Are We Headed? -1</b>
9:40	<b>Falke, Jeff:</b> Wildfire in changing boreal stream ecosystems: a friend or foe for fishes?	<b>Smith, Brenda:</b> History of the Collaborative Approach in Harney Basin	<b>Jennings, Jeremy:</b> Effects of stage 0 restoration on aquatic macroinvertebrate production	<b>Brumo, Abel:</b> Adult Pacific Lamprey Passage at Road Crossings: Guidelines for Evaluating and Providing Passage	<b>Bisson, Pete:</b> Fish and Forestry in an Age of Disturbance
10:00	<b>Reilly, Matthew:</b> Historical and Contemporary Patterns of Fire Severity along the North Fork of the Santiam River in the western Cascades of Oregon	<b>Smith, Cassandra:</b> Malheur Lake Water Quality: Past, Present, and Future	<b>Weaver, Michele:</b> Freshwater mussel considerations in fisheries science, conservation, and management activities	<b>Zambory, Courtney:</b> Early Predication Method for Native Migratory Fish Presence at Small Culverts	<b>Danehy, Robert:</b> Observations of fish food supply and rare species dynamics in forested headwater streams west of the Cascades
10:20	<b>Carpenter, Kurt:</b> Post-fire hyperspectral surveys for benthic algae (periphyton) in Cascade Range rivers used for municipal water supply	<b>Bair, Lucas:</b> Economic Value of Surface Water in Eastern Oregon's Harney Basin	<b>Antonelli, Kelsi:</b> Hunting tiny vampires: modeling the occurrence of a salmonid ectoparasite in Willamette Valley Reservoirs	<b>Breshears, Logan:</b> Using acoustic telemetry to quantify adult migration behavior of John Day River summer steelhead throughout the Columbia River basin	<b>Penaluna, Brooke:</b> The intersection of forests and fish
10:40	<b>Warren, Dana:</b> Cold-water fish persist in a stream system with elevated summer temperatures after a severe wildfire	<b>Svejcar, Tony:</b> Incorporating Local Knowledge into Wet Meadow Science and Conservation Planning	<b>Weedop, Daison:</b> Are Mountain Whitefish sentinels of change?	<b>Jilek, Christian:</b> Whiskey Creek Culvert Replacement	<b>Benda, Lee:</b> A Natural History Context for Timber Harvest-Related Landslides in Western Oregon
11:00	<b>DISCUSSION ROOMS</b>				
	<b>Fire, Fish, and Aquatic Systems -1</b>	<b>Harney Basin: Collaborative Conservation</b>	<b>Native Fishes -1</b>	<b>Fish Passage -1</b>	<b>Fish and Forestry: Where Are We Headed? -1</b>
11:20	<b>Swartz, Allison:</b> Aquatic ecosystem and vertebrate responses to the Holiday Farm Fire	<b>Dunham, Jason:</b> Fishes of the Harney Basin: past, present, future	<b>Ortega, Jordan:</b> What can juvenile redband trout tell us about future patterns of anadromous salmonid rearing in the Upper Klamath Basin?	<b>Tai, Leah:</b> Lessons from Reuniting an Old Growth Drainage: North Creek Aquatic Passage Project	<b>Moore, Michael:</b> Same Streams in a Different Forest? A Long-term Dataset Reveals Relationships Between Fish Habitat, Landscape Geomorphology, Climate, and Management Legacy in a Temperate Rainforest
11:40	<b>Hinkle, Elizabeth:</b> Stream habitat and community assemblage response to wildfire in interior Alaska boreal streams	<b>Benjamin, Joe:</b> Spatial variability in vulnerability of growth of redband trout in the northern Great Basin	<b>Roes, Mark:</b> A Bayesian state-space approach on the effects of hatchery propagation, predation, and habitat conditions on winter steelhead recruitment in a mid-Columbia River subbasin	<b>Zwissler, Sarah:</b> Salmon SuperHwy – Reconnecting Fish Habitat and Communities at a Landscape Scale	<b>Sloat, Matthew:</b> Sensitivity of salmon spawning habitat to instream wood loss and flood disturbance in southeast Alaska
12:00	<b>Malison, Rachel:</b> Responses of linked stream-riparian foodwebs to wildfire in Idaho's Salmon River basin	<b>Panel - Groundwater discussion</b>	<b>Nuetzel, Hayley:</b> The Progression of Naturalization: Using Parentage-Based Tagging to monitor the reintroduction of spring Chinook salmon to Lookingglass Creek, OR	<b>Hoenke, Kathleen:</b> Expanding the Southeast Aquatic Barrier Prioritization Tool: Assessing Aquatic Fragmentation in the Western United States	<b>O'Rourke, Tere:</b> Riparian Conservation through Habitat Conservation Planning
12:20	<b>Caldwell, Colleen:</b> Pre- and Post-fire Wildfire Effects in Montane Stream Communities in North-central New Mexico	<b>Panel -Harney Basin discussion</b>	<b>Wondzell, Steve:</b> The Leverage Effect: How small variations in spawn timing can generate large variations in emergence timing of Pacific salmon		<b>Johnson, K. Norman:</b> Federal Forestry and Salmon in Western Oregon: A Historical Perspective
1:00	LUNCH BREAK, DISCUSSION ROOMS, VENDOR BOOTHS				

Longer sessions are broken into multiple blocks designated by number (-1,-2,-3,-4).

# ORAFS 2022 VIRTUAL CONFERENCE SCHEDULE - FRAMEWORK

## Wednesday, March 2nd (continued)

	<b>Fire, Fish, and Aquatic Systems -2</b>	<b>Lampreys: A Lot Has Changed -1</b>	<b>Native Fishes -2</b>	<b>Fish Passage -2</b>	<b>Fish and Forestry: Where Are We Headed? -2</b>
1:40	<b>Reale, Justin:</b> Differential effects of a catastrophic wildfire on downstream fish assemblages in an aridland river	<b>Clemens, Benjamin:</b> Lampreys: A lot has changed	<b>Neely, Kathleen:</b> Documenting early development in Surf Smelt ( <i>Hypomesus pretiosus</i> ) for future studies on ocean acidification and cardiotoxicity	<b>Heaston, Emily:</b> Stream road crossings in the Pacific Northwest – what’s missing and how to find it	<b>Burnett, Kelly:</b> A timber executive, a conservationist, and a Governor walk into a bar...
2:00	<b>Rust, Ashley:</b> Wildfire Impacts on Water Quality and Aquatic Ecosystems and the Recovery that Follows	<b>Miehls, Andrea:</b> Great Lakes Sea Lampreys: Communicating the Crisis, Control, and Challenges	<b>Griswold, Kitty:</b> Documented occurrence and status assessment of Coastal Cutthroat Trout in Oregon watersheds	<b>Apke, Greg:</b> State of Oregon Fish Passage Design Rules --- Revision Update ---	<b>Beck, Colin:</b> A Tribal Approach to Riparian Forest Management
2:20	<b>Dunham, Jason:</b> Fire and fish: what’s old, what’s new?	<b>Wang, Christina:</b> Lamprey Conservation and Control Programs: Better together	<b>Rizza, Samuel:</b> Genetic life history expression of Coastal Cutthroat Trout and hybridization with steelhead at the southern end of their range	<b>Panel - Fish Passage discussion</b>	<b>Brunoe, Robert:</b> Caring for Salmon on our Reservation--A Foundation of Tribal Wellbeing
2:40	<b>DISCUSSION ROOMS</b>				
3:00	<b>Student-Mentor Mixer</b>				
4:30	<b>Climate Adaptation Committee</b>				
5:00	<b>Social Hour / Affinity Groups</b>				

Longer sessions are broken into multiple blocks designated by number (-1,-2,-3,-4).

# ORAFS 2022 VIRTUAL CONFERENCE SCHEDULE - FRAMEWORK

## Thursday, March 3rd

8:00	Committee meetings				
8:15	Freshwater Habitat and Natural Production Committee   Fish Culture Committee   Marine Ecology and Habitat Committee				
8:30	Introductory remarks				
8:40	<b>Plenary: Ocean Changes</b>				
9:30	BREAK				
	<b>Fire, Fish, and Aquatic Systems -3</b>	<b>Lampreys: A Lot Has Changed -2</b>	<b>Human Dimensions</b>	<b>Native Fishes -3</b>	
9:40	<b>Bladon, Kevin:</b> Wildfire and post-fire management effects on water quantity, water quality, and aquatic ecology	<b>Marrs, Alicia:</b> The Road to Lamprey Summit V: Leveraging Lamprey Conservation with the Pacific Lamprey Conservation Initiative	<b>Dunham, Jason:</b> Human dimensions: old myths and new opportunities	<b>Manning, Michael:</b> Assessing hybridization risk between native Bull trout ( <i>Salvelinus confluentus</i> ) and introduced Brook trout ( <i>S. fontinalis</i> ) using habitat modeling	
10:00	<b>Robinne, Francois-Nicolas:</b> Multi-criteria evaluation of wildfire risks to downstream water supply	<b>Edwards, Patrick:</b> The Lost Lamprey Project: A Community Science Project to Assess Lamprey Distribution and Raise Awareness	<b>Robison, Vaughn:</b> New Fish to Fry: Fishing Community Perceptions of Connected Social-Ecological Disturbances Created by Oregon's Marine Reserves	<b>Sidlauskas, Brian:</b> Genomic approaches reveal a healthy population and an unexpected origin for Foskett Spring Specked Dace	
10:20	<b>Sanders, Ashley:</b> Fire and smoke effects on headwater stream temperature, air temperature, dissolved oxygen, and light during the Holiday Farm Fire	<b>Bingham, Dan:</b> Environmental DNA experiments help to refine the distribution of Pacific Lamprey in the Deschutes River basin	<b>McAlpine, Kristen:</b> What does the public think about Oregon's marine reserves? Changes over time in resident knowledge, attitudes, and intentions	<b>Harrison, Alexis:</b> The genetics of a novel population of Umpqua Chub in the North Umpqua River	
10:40	<b>Asarian, Eli:</b> Wildfire smoke cools Klamath Basin stream temperatures, especially in large waterbodies during August		<b>Fox, Haley:</b> Oregon Recreational Fishers: Knowledge, attitudes and behaviors related to marine reserves	<b>Tesler, Laura:</b> The Importance of High-Quality Underwater Pictures of Native Fishes In Situ	
11:00	<b>DISCUSSION ROOMS</b>				
	<b>Fire, Fish, and Aquatic Systems -3</b>	<b>Lampreys: A Lot Has Changed -2</b>	<b>Human Dimensions</b>	<b>Lessons from the East -1</b>	<b>eDNA - Rapid Evolution of Ideas and Knowledge -1</b>
11:20	<b>Fischer, Chris:</b> Response of a Rainbow Trout Population to Wildfire in Omak Creek, Washington	<b>Beals, Tyler:</b> Reduction of Larval Lamprey Entrainment in Bachelor-Hatton Canal, Ahtanum Creek Yakama Nation Fisheries Pacific Lamprey Project (YNF PLP)	<b>Erickson, Brian:</b> Why do stakeholders trust and distrust each other in relation to Oregon marine reserves?	<b>Bury, Gwen:</b> Forest-Associated Fishes of the Conterminous United States	<b>Penaluna, Brooke:</b> eDNA metabarcoding uncovers hidden aquatic biodiversity in streams
11:40	<b>Tinniswood, William:</b> Observations of Fish Survival and Emergency Habitat Remediation in the Bootleg Fire in Southeast Oregon	<b>Paradis, Rebecca:</b> Pacific Lamprey Recolonization following Dam Removals	<b>Justiniano, Isabel:</b> Cultural Beliefs and Outdoor Recreation Habits of Willamette Valley Latin@ Residents	<b>Zydlowski, Joseph:</b> What have we lost? American shad's impounded history.	<b>Weitemier, Kevin:</b> Estimating the genetic diversity of Pacific salmon and trout using multigene eDNA metabarcoding
12:00		<b>Hess, Jon:</b> Translocated in the wake of the ashes: A Snake River success story for Pacific Lamprey	<b>Jossie, Lizzie:</b> Exploring stream connectivity outcomes for stakeholders and Yellowstone cutthroat trout in the Teton River drainage, Idaho	<b>Whitmore, Margaret:</b> Adapting Blue Catfish management to shifting biological and sociological dynamics in Virginia's Chesapeake Bay	<b>Americus, Benjamin:</b> Genomic insight into salmon parasites
12:20	<b>DISCUSSION ROOMS</b>				
12:30	BUSINESS LUNCH AND CHAPTER AWARDS				
	<b>Fire, Fish, and Aquatic Systems -4</b>	<b>Lampreys: A Lot Has Changed -3</b>	<b>Lessons from the East -2</b>	<b>eDNA - Rapid Evolution of Ideas and Knowledge -2</b>	
2:40	<b>McEnroe, Jeff:</b> Is it Better to be Lucky or Good? How the BLM and its partners implemented a large-scale stream restoration project one year after the Archie Creek fire	<b>Maine, Alexa:</b> Initial research to artificially propagate, release, and assess larval Pacific Lamprey in the Tucannon River, WA	<b>Kaylor, Matthew:</b> Riverscape patterns of Chinook Salmon emergence timing and implications for size and growth	<b>Dziedzic, Emily:</b> Transitioning from environmental genetics to genomics using mitogenome reference databases	
3:00	<b>Roon, David:</b> Modeling the effects of wildfire on aquatic ecosystems in the Pacific Northwest	<b>Blanchard, Monica:</b> Patterns in distribution and abundance of larval lampreys in the mainstem Columbia River	<b>Damiano, Matthew:</b> Spatiotemporal population dynamics of common dolphinfish ( <i>Coryphaena hippurus</i> ) in the Western Central Atlantic	<b>Flitcroft, Rebecca:</b> Using eDNA as an early detection, rapid response tool for aquatic invasive species in big water environments	
3:20	<b>Panel - Fire discussion</b>	<b>Burns, Paul:</b> Initial assessment of the development of larval lamprey habitats following the Stage 0 Fivemile Bell Restoration Project	<b>Massie, Jordan:</b> Going with the Flow: Examining the Role of Hydrologic Variation in the Seasonal Migrations and Disturbance-Driven Movements of Common Snook in the Florida Everglades	<b>Olivos, J. Andres:</b> Prioritizing eDNA monitoring sites for nonnative Atlantic salmon via habitat modeling in streams of Patagonia and Washington State	
3:40	<b>DISCUSSION ROOMS</b>				
4:00	<b>Poster Session / Vendor Booths</b>				
5:00	<b>Social Hour / Affinity Groups</b>				

Longer sessions are broken into multiple blocks designated by number (-1,-2,-3,-4).

# ORAFS 2022 VIRTUAL CONFERENCE SCHEDULE - FRAMEWORK

## Friday, March 4th

8:00	Committee meetings				
8:15	Human Dimensions Committee   Education and Outreach Committee				
8:30	Introductory remarks				
8:40	<b>Plenary: At Sea and On Land</b>				
9:30	BREAK				
	<b>Lampreys: A Lot Has Changed -4</b>	<b>Sturgeon Spotlight</b>	<b>Adapting Hatchery Management to Meet Challenges Old and New</b>	<b>"Undammed: Renewal of the Elwha River"</b>	<b>Fisheries Science from the Sky</b>
9:40	<b>Skalicky, Joe:</b> Large Scale Lamprey Salvage during Habitat Restoration at Steigerwald Lake National Wildlife Refuge, with Documentation of Western River Lamprey	<b>Beamesderfer, Ray:</b> Those who do not learn from history are doomed to repeat it - The story of Columbia River Sturgeon	<b>Patterson, Scott:</b> Turning up the heat on Oregon's fisheries managers	<b>Warrick, Jonathan:</b> Geomorphic evolution of the Elwha River and its delta following dam removal	<b>Mejia, Francine:</b> Longitudinal, lateral, vertical and temporal thermal heterogeneity in a large impounded river: implications for cold-water refuges
10:00	<b>Silver, Greg:</b> Distribution and Identification of Pacific, Western Brook, and Western River lampreys in Southwest Washington Tributaries of the Columbia River	<b>Parker, Blaine:</b> Tribal Fishers Contribution to Research and Management Efforts of Columbia River White Sturgeon – 25 Years Later	<b>Reed, Aimee:</b> Diagnosing and Diverting Diseases Developing Due to Disturbances in Fishes	<b>Duda, Jeffrey:</b> Spatial patterns of fish returning to the Elwha River following dam removal	<b>Arismendi, Ivan:</b> Revealing wildlife interactions with large wood in rivers
10:20	<b>Carim, Kellie:</b> Varying genetic structure of Entosphenus tridentatus and Lampetra species from subbasin to continental scales	<b>Zydlowski, Gayle:</b> Rising from the ashes: An example of dam removal and sturgeon from the east	<b>Ray, Isabelle:</b> When does fin damage first occur in hatchery Steelhead Trout?	<b>Fraik, Alexandra:</b> The Impacts of Dam Construction and Removal on the Genetics of Recovering Steelhead (Oncorhynchus mykiss) Populations across the Elwha River Watershed	<b>Ross, Kai:</b> Large Woody Debris from the Bird's-Eye View: Considerations for Feature Extraction
10:40	<b>Miller, Jessica:</b> Unlocking the secrets of Pacific Lamprey (Entosphenus tridentatus): A multidimensional approach	<b>Tattam, Shelley:</b> Are Pinnipeds 'sealing' the fate of White Sturgeon in the Columbia River?	<b>Herron, Crystal:</b> Density and Structure: Do they affect how Hatchery Chinook Respond to Stress?	<b>Connor, Heidi:</b> Fish Tales in the Upper Elwha: Updates Since Dam Removal	<b>Ackerman, Mike:</b> Drone Assisted Stream Habitat (DASH) Protocol: Increasing the Accuracy & Efficiency of Data Collection for Large Spatial Scales
11:00	<b>DISCUSSION ROOMS</b>				
	<b>Lampreys: A Lot Has Changed -4</b>	<b>Sturgeon Spotlight</b>	<b>Adapting Hatchery Management to Meet Challenges Old and New</b>	<b>Undammed: Renewal of the Elwha River</b>	<b>Fisheries Science from the Sky</b>
11:20	<b>Evans, Thomas:</b> All is not what it seems: Larval lamprey isotopes are sensitive to lipids	<b>Fox, Adam:</b> Changes to Gulf Sturgeon Recruitment, Mortality, and Behavior following Hurricane Michael in the Apalachicola River, Florida	<b>Brandt, Ethan:</b> One fish, two fish, how many fish? Sample size estimation for measuring and weighing juvenile hatchery salmon	<b>Denton, Keith:</b> Using SONAR to Monitor Adult Chinook, Steelhead, and Coho Populations in the Elwha River Before, During and After Dam Removal	<b>Dixon, Raymond:</b> Identifying competencies for entry-level Fisheries Technician and integrating UAV technology in Fisheries curriculum for Nez Perce students
11:40	<b>Spanos, Mary:</b> Evaluating the viability of the use of two tag types on adult Arctic Lamprey	<b>Simpson, Philip:</b> Is the Fire Too Hot For Columbia River White Sturgeon Recruitment to Rise From the Ashes?"	<b>Smith, Jordan:</b> Reflections: Two Decades of Hatchery Residual Steelhead Monitoring Strategies in the Wallowa River	<b>Peters, Roger:</b> Estimating Proportion of Hatchery Origin Steelhead in the Elwha River: Influence of Spatial and Temporal Differences	<b>Burnett, Jonathan:</b> Synergistic Application of Remote Sensing and Machine Learning for Modeling the Upstream Extent of Fish in Western Oregon Streams
12:00	<b>Litts, Richard:</b> Capturing and Tracking Adult Pacific Lamprey in an Oregon Coastal Lake System	<b>Breece, Matthew:</b> A satellite-based mobile warning system to reduce interactions with an endangered species	<b>Leonetti, Evan:</b> A Nose For Better Fishing	<b>Anderson, Joe:</b> The role of hatchery production for Chinook salmon in the Elwha River: past, present and questions for the future	<b>Bond, Morgan:</b> Adding satellite imagery to our stream habitat analysis toolbox: Deep Learning analysis automates the extraction of river attributes from high-resolution multiband imagery
12:20	<b>Panel - Lampreys discussion</b>	<b>Fox, Dewayne:</b> A Tale of Two Rivers: Conservation of Atlantic Sturgeon in the Delaware and Hudson	<b>Lawson, Craig:</b> Assessment of Angler Caught Broodstock (ACB) Methods at ODFW Hatcheries	<b>Pess, George:</b> Ecosystem response to the removal of Elwha River dams, Washington State, USA	<b>Romey, Bern:</b> Landscape-Level Extent of Resident Fish Occupancy in the Alexander Archipelago
12:40	<b>DISCUSSION ROOMS</b>				
1:00	<b>Student Awards / Auction Results</b>				
2:00	<b>Adjourned! See you in Eugene in 2023</b>				

Longer sessions are broken into multiple blocks designated by number (-1,-2,-3,-4).

# ANNUAL BUSINESS MEETING - AGENDA

Oregon Chapter of the American Fisheries Society  
March 3, 2022 | Cyberspace, Oregon

**12:40 PM Call to Order (Scott Heppell)**

- Identify Parliamentarian
- Determination of quorum (50 voting members)
- Recognitions:
  - Executive Committee, External and Internal Committees
  - Annual Meeting Planning Team, Sponsors, Vendors

**12:45 PM Treasurer's report (Adrienne Averett)**

- Summarize Financial Statement, FY 2020-2021
- Investment Account
- Disbursement-funded projects

**12:50 PM President's Report (Scott Heppell)**

- Strategic Plan Goals and Accomplishments
- New Business

**1:00 PM Student Subunit Report**

- OSU (Annika Carlson)
- MHCC (Gina Magg)

**1:10 PM External Director's Report (Ryan Branstetter)**

- Legislative Committee
- Other Committee Actions

**1:20 PM WDAFS Update (Kat Dale - WDAFS President)**

- WDAFS and AFS Updates and Activities
- 2022 WDAFS Meeting

**1:25 PM AFS Update  
(April Croxton - AFS President - Elect)**

- AFS Updates and Activities
- 2021 AFS Meeting - Baltimore, Maryland,  
November 6 - 10, 2021

**1:30 PM Election of New Officers (Peter Stevens)**

*Candidates*

President-Elect: Gary Vonderohe (ODFW)

Vice President: Claire Rosemond (OSU)

Secretary: Sarah Sapienza (ODFW)

Internal Director: Joe Lemanski (ODFW)

External Director: Alex Harrison (ODFW)

**1:40 PM Presentation of Past President Award  
(Scott Heppell)**

**1:45 PM Adjourn Business Meeting, Begin Chapter Awards Presentation**

## Chapter Awards Presentation (Brian Bangs)

**1:45** Award of Merit

**1:50** Fishery Worker of the Year

**1:55** Fishery Team of the Year

**2:00** Bill Wingfield Memorial Award

**2:05** Lifetime Achievement Award

**2:20** Student Scholarship Awards

**2:30** Broken Oar Award

**2:40** Break

# BANK ACCOUNTS SUMMARY

## Oregon Chapter of the American Fisheries Society For Budget Goal Code | From 1 May 2020 to 30 April 2021

<b>EXPENSES</b>	
Core Costs	
Total	\$1,308.45
<b>Goal 1</b> - Develop programs that advance understanding of fishery science and responsible stewardship of fishery resources	
Total	\$1,695.00
<b>Goal 2</b> - Advocate policies and laws that benefit the conservation and sustainability of Oregon Fishery resources	
Total	\$-
<b>Goal 3</b> - Increase public awareness, understanding, and appreciation of fishery resources	
Total	\$3,000.00
<b>Goal 4</b> - Promote development of fishery and aquatic science professionals	
Total	\$8,000.00
<b>Goal 5</b> - Support and encourage development of professional members	
Total	\$2,678.00
<b>Goal 6</b> - Maintain an active and diverse membership	
Total	\$-
<b>Goal 7</b> - Fiscal responsibility and investments	
Total	\$-
Other Expenses	
Total	\$-
<b>Designated/Restricted Funds</b>	
Diversity Scholarship	\$2,000.00
External Committee Award	\$-
Total	\$2,000.00
<b>OPERATING COSTS SUBTOTAL</b>	<b>\$18,681.45</b>
Annual Meeting Expenses	
Total	\$16,211.57
<b>TOTAL EXPENSES</b>	<b>\$34,893.02</b>
<b>INCOME</b>	
Annual Meeting	
Total	\$55,328.84
Dues	
Total	\$4,886.80
Other Income	
Total	\$272.71
Investments	
Investments income	\$147,733.90
Total	\$147,733.90
<b>TOTAL INCOME</b>	<b>\$208,222.25</b>
<b>NET INCOME/DEFICIT</b>	<b>\$173,329.23</b>
<b>ASSETS</b>	
Checking Account	\$95,414.30
Bouck Memorial Investment	\$29,235.00
ORAFS Investments Account	\$634,923.58
<b>TOTAL ASSETS END OF FISCAL YEAR 2021</b>	<b>\$759,572.88</b>

# Raffle and Auction

**ORAFS raises funds for student scholarships, teacher grants, and other important activities through the annual meeting Raffle and Auction. This year the raffle and auction will, just like our meeting, be virtual. Raffle and auction start Wednesday, March 2nd and last through 1pm on Friday, March 4th. You do not need to be registered for the meeting to bid on and win any of these amazing items!**

Be sure to [Register at the Auction website](#) so you'll be eligible to bid, then visit the [Auction](#) page to bid on auction items and the [Raffle](#) page to buy your 50:50 Raffle tickets.

### 50/50 Raffle

This year's annual meeting raffle is a 50/50 raffle: the winner will get half the money raised from raffle ticket sales while the other half will go to support the mission of the chapter. Raffle tickets can be purchased any time through Friday, March 4th at 1pm when the winner (one winner) will be drawn. Please consider supporting the chapter by purchasing your raffle tickets today!

### Silent Auction

Bidding on silent auction items begins Wednesday, March 2nd, so visit the auction catalog to see what you can win! Prizes include fishing trips, fishy artwork and cards, gift cards, lamprey keychains, distillery and winery tours and tastings, stays, tickets to see the Mariners, and to the Oregon Coast Aquarium and other cultural centers, a cruise on the Willamette, and as always, the popular Fish Naked hat!



# Spawning Run/Carcass Crawl

Socially distanced spawning doesn't work, but you can do a socially distanced spawning run! Like last year, we won't be in person, but runners (and walkers) can measure out a 3.1 mile/5km course anywhere to participate. During the ORAFS meeting week do the run/walk, track your route with any GPS tracker or app, take a picture or two, submit and post your results and pictures for bragging rights and a little camaraderie. And to make this event even more exciting, there will be prizes! Picture submissions will be judged, and prizes will be awarded according to four categories.

### To play:

During the week of the meeting including the weekend prior (February 25 - March 3), use a tracker gadget that will track your run/walk. Use this form (<https://forms.gle/SWGM8QBcTpc5wPqb7>) to submit your results. Participants are highly encouraged to show your comradery (and bragging rights) by posting your pictures and tagging us on either the official ORAFS Facebook, Instagram (@oregon\_afs), or Twitter (@OregonAFS) accounts, and using the following 2022 ORAFS spawning run/carcass crawl hash tag (#SpawnRunORAFS). **All submissions must be received by 6pm on Thursday, March 3rd.**

The entries will be compiled into a judging form that will be sent out to all meeting registrants through an email as well as posted to social media. This year everybody gets to vote for the winners. **Voting will occur from the time we post the options Thursday evening, through Friday at noon.** All the winners will be announced Friday afternoon during the awards ceremony.

### Category Prizes:

1. Best meeting themed route shape (log your run/walk with your GPS tracker or app and create a meeting themed shape).
2. Best ORAFS representation (have some ORAFS swag of the past to show off, dress up like a fish, or wear a costume to fit in with the meeting theme).
3. Best 4-legged fitness partner picture (this one may be hard to judge).
4. Best neighborhood selfie or finish line photo (will be judged on creativity and/or excitement level).

The winning participants (one per category) will have their choice of an ORAFS logo tee shirt or an ORAFS 2022 buff. You can compete in as many categories as you want but will only be eligible to win one prize.

# 2022 WEBINAR CONTENT AVAILABLE TO MEMBERS OF THE AMERICAN FISHERIES SOCIETY



Did you know that the American Fisheries Society hosts a monthly webinar series for members of AFS? The webinars focus on an area of specific interest, rotating on a monthly basis to provide valuable information to fisheries professionals in all fields.

In addition to being able to watch and participate in the webinars live, AFS members have access to all previous webinar recordings via their AFS login.

**Want to check out the webinars for yourself? The following three webinars have been made available to everyone – no login required!**

- Verbal Judo! A Method to Improve Your Ability to Talk to Those Hostile to Conservation
- River Connectivity and Biological Complexity
- The Stock Assessment Process: Counting Fish

Like what you see? Become a member of AFS today (<https://fisheries.org/membership/join/>) and get access to all of the other webinars listed below. New content added monthly!

**Webinars available to AFS members (<https://fisheries.org/category/webinars/>):**

## **Fisheries Techniques**

- Chemistry to Conservation: Using Otoliths to Advance Fisheries Management
- How Many Candles on the Birthday Cake? The Vital Role of Age Estimates in Stock Assessments
- Fish Bioenergetics 4.0
- The 100-Watt Method: A Protocol for Backpack Electrofishing in Small Streams
- The Stock Assessment Process: Counting Fish
- Intro to eDNA: Applications, Advantages, and Implications
- Using Bayesian Clustering Algorithms to Discover Population Genetic Structure

## **Human Dimensions of Fisheries**

- Climate Change and the Columbia River Tribes
- Understanding the People Part of Fisheries: An Introduction to Conservation Social Science

## **Fisheries Scientists: Advance Yourself**

- Verbal Judo! A Method to Improve Your Ability to Talk to Those Hostile to Conservation
- Connecting the Dots: Diversity and Inclusion, and Collaborative Networks in Fisheries
- Getting Hired – What Students Need to Know
- Surviving Peer Review
- Navigating a Changing Fisheries Workplace
- Structured Decision Making as a Tool for All Occasions
- Resources and Strategies for AFS Student Subunits

# 2022 WEBINAR CONTENT AVAILABLE TO MEMBERS OF THE AMERICAN FISHERIES SOCIETY (continued)



## **Fisheries Conservation**

- Coloring in the Lines – Mapping Surface Water Presence in a Rapidly Changing Climate
- Creating a Movement to Save Migratory Fish from Local to Global
- The Omega Principle: Seafood and the Quest for Long Life and a Healthier Planet
- What Can a Long-term Chinook Salmon Redd Survey Tell Us about Habitat Quality and Climate Change in a Dynamic Mountain Wilderness Landscape?
- Stream Simulation Design Methodology: Design Methodology for Adapting Road Crossing Infrastructure, Bridges and Culverts to Climate Change
- River Connectivity and Biological Complexity
- Multispecies and Watershed Approaches to Freshwater Fish Conservation
- A Clean Air Act Success Story: Evidence of Chemical and Biological Recovery in an Acidified River

## **All Things Aquaculture**

- Hatchery Design in Aquaculture
- Establishing Aquaculture Opportunity Areas and How to Get Involved
- Mythbusting Marine Aquaculture

## **Fisheries Science: Species Specific Focus**

- More than a River Monster: Conservation and Management of Alligator Gar
- Fleet Heterogeneity and Economic Performance in American Lobster
- Trout and Char of the World

## **AFS Spotlight**

- AFS Virtual Spring Conference Talks – Spring 2020
- AFS Annual Meeting Highlights: Using Electronic Tagging Data to Inform the Assessment and Management of Fisheries Resources
- 2019 AFS Annual Meeting Best Student Paper and Poster Presentations
- AFS Annual Meeting Highlights: American Eel Population Assessment, Restoration, and Monitoring

## **Policy**

- Recovering America's Wildlife Act Update
- Waters of the United States (WOTUS): What You Need to Know About the Rule and How to Take Action
- Supporting of the Recovering America's Wildlife Act: A Guide to Grassroots Advocacy

SAVE THE DATE - ORAFS ANNUAL CONFERENCE 2023

EUGENE, OREGON | FEBRUARY 27 – MARCH 3, 2023



*Graduate*  
**EUGENE**

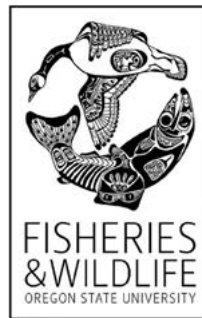
# 2022 ORAFS VIRTUAL CONFERENCE - SPONSORS & VENDOR

Thank you to these businesses and organizations for their generous contributions!

## PLATINUM



## SILVER



## BRONZE



Please welcome our 2022 vendor!

