



# Gill Raker Gazette

The Newsletter of the Idaho Chapter of the American Fisheries Society

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Editor: Rob Van Kirk

## President's Message - "Strong Identity"

ICAFS Colleagues,

Quite some time ago, I heard someone say: "life is full of mysteries, but your identity should not be one of them." In my opinion, this simple quote also applies to the Idaho Chapter of the American Fisheries Society (ICAFS). I bring this up because one of our members recently asked me who we are and what exactly we do as a Chapter. Of course, my off-the-cuff answer was that we are a collective group of top-shelf, high-powered fisheries rock stars that apply and share our knowledge to sustain Idaho's fisheries for the future, a fairly standard response in my mind. It then occurred to me that although a fair number of us are longstanding ICAFS members, perhaps we all need a quick refresher on who we are as a Chapter and how each of us are part of its mission.



The first thing we should cover is Chapter membership. A voting member of the ICAFS is someone who is in good standing (maintains their annual dues) with the Parent Society AND is an Idaho resident or otherwise specifies a desire to be an ICAFS member. Members of the university-based Subunits are recognized as Chapter members. As a voting member, you should take some time to become familiar with our organization's history and mission. You can find this on our website at <https://www.idahoafsf.org/>. On our website, you will find that our history goes as far back as 1963, when 35 fishery professionals from southwestern Idaho originally founded and titled it the "Treasure Valley Chapter." Today, the ICAFS is a much larger and more diverse organization with hundreds of members scattered across Idaho and surrounding areas.

The mission of the ICAFS is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by 1) advancing fisheries and aquatic science and 2) promoting the development of fisheries professionals. The elected officers, as well as the Chapter's nine diverse committees, are tasked with implementing the Chapter's mission. The nine committees are Anadromous Fish, Aquaculture, Aquatic Habitat, Continuing Education, Fundraising, Membership, Mentoring, Native Fish, and Public Education. (Continued on page 2)

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The meeting is being produced by [Cvent](#) event services through an agreement with the AFS parent society. To make sure you receive all emails from Cvent, **check your spam and junk folders!**



## President's message (continued from page 1)

Specifically, the Chapter accomplishes its mission by:

1. Holding annual meetings for collective sharing of research and strengthening our collegial bonds;
2. Organizing professional development workshops that help to advance our science;
3. Sponsoring student units at Brigham Young University-Idaho, University of Idaho (Palouse Unit) and Idaho State University (Portneuf Unit);
4. Encouraging and supporting the development of students and professionals through student-professional mixers, volunteer opportunities, resume review, and mock interviews;
5. Awarding scholarships and grants to well-deserving students;
6. Carrying out numerous public education efforts;
7. Recognizing those who have made significant contributions in advancing fisheries and aquatic science or promoting the development of fisheries professionals;
8. Producing a widely-distributed and well-crafted newsletter; and
9. Representing ICAFS at Western Division EXCOM meetings.

Additionally, our Chapter committees have made significant contributions to Idaho fisheries, such as the Native Fishes of Idaho Book and Poster, the recent Stream of Dreams educational project, sponsorships of many Hutton scholarships, providing funds for Trout in the Classroom to purchase aquariums, chillers, teaching materials, and field trips to stock fish, and so much more.

It is important that each of us take a moment to realize that we also have a part to play in the success of this Chapter and its mission. The more we say yes to opportunities to present our work, to actively participate in a committee, or to step into voluntary roles, the more we ensure that our Chapter's identity remains strong for future fisheries professionals. In addition, I think you'll find that Chapter involvement has a lot to offer in terms of your own professional development!



I am very proud of being an ICAFS member and to have had the opportunity to serve in several Chapter leadership roles. The Chapter has challenged me and taught me to not only think more critically about the science that supports our valued fisheries, but also to remember we are all passionate, like-minded colleagues. I have come to view the Chapter as an extended family. We truly are a tight-knit group of friends and colleagues, to which membership yields so many benefits. These benefits exist regardless of whether you are a student, a professional, beginning your career, or about to retire. And with that, I urge you not to miss the upcoming virtual meeting. It really is going to be great to see you all again!

—Ryan Hardy

## ICAFS Student Training Opportunity and Project (TOP) Grants

Students: Do you have a training, conference, or elective research project you would like to do?

We accept applications any time of year for the ICAFS TOP grant. This grant can help students attend a professional conference, workshop, or training; or conduct independent research; implement education projects; or participate in other fisheries-related activities. The maximum total grant amount is \$750 per year. Grants are not available for degree-required projects but may be used for elective credit opportunities. Please email [scholarships@idahoafis.org](mailto:scholarships@idahoafis.org) to inquire about eligibility or submit an application.



## Committee and Subunit News

### *Mentoring committee*

#### **Live Job Board!!!**

If professionals have a job vacancy, seasonal or otherwise, and want to discuss it with prospective candidates, please submit the position title, job location, and agency to Joe Thiessen at [ICAFS.Mentorship@gmail.com](mailto:ICAFS.Mentorship@gmail.com). A 5-minute slot will be assigned to one of the student/professional breakout sessions during the 2021 virtual meeting. **Deadline is February 19.**

#### **Call for Resumes**

Students and professionals interested in getting their resume reviewed please submit your resume to Robert Hand at [ICAFS.Mentorship@gmail.com](mailto:ICAFS.Mentorship@gmail.com). Word documents are preferred so comments and edits can be easily made on the document itself, but pdf format will also be accepted. **Deadline is February 19.**

#### **Request for ICAFS Professional Mentors**

Mentorship duties include resume review and occasional communication with a paired student mentee. Contact the Mentoring Committee at [ICAFS.Mentorship@gmail.com](mailto:ICAFS.Mentorship@gmail.com).

### *Public Education Committee*

The Public Education Committee breakout meeting is scheduled for **9:00 a.m. on Thursday March 4**, as part of the 2021 ICAFS virtual meeting. The majority of the breakout session will be devoted to a discussion of proposed changes to the chapter High School, Undergraduate, Graduate, and Susan B. Martin scholarship applications. We appreciate any feedback from students or mentors as we work through changes for next year. If you cannot attend the committee meeting and would like to provide input or review proposed changes please contact Lauri Monnot ([Lauri.Monnot@deq.idaho.gov](mailto:Lauri.Monnot@deq.idaho.gov)) or Jake Hughes ([jhughes@idahopower.com](mailto:jhughes@idahopower.com)).

### *Portneuf Student Subunit*

The Portneuf Student Subunit of the American Fisheries Society is hosting a virtual screening of the films "Hidden Rivers" and "The Lost Fish" on February 16<sup>th</sup> at 6pm MST. Following the viewing of the film, we will host a Zoom Q+A session with the director, Jeremy Munroe.

If you are interested in attending, please fill out the registration form with the appropriate information: <https://forms.gle/hgvvWDFjw8Y95MYM8> Registrations will be accepted until **February 14.**

The corresponding links for the virtual screening and the Zoom Q&A will be disseminated closer to the date. Please stay posted for updates and contact [portneuf.afs@gmail.com](mailto:portneuf.afs@gmail.com) with any questions.



# Your guide to the ICAFS Virtual Meeting!

## Schedule at a Glance

Please contact meeting organizer Tim Copeland at [tim.copeland@idfg.idaho.gov](mailto:tim.copeland@idfg.idaho.gov) if you have questions that cannot be answered by committee chairs, workshop sponsors, or program planners.

Time*	Meeting day										
	Monday, March 1			Tuesday, March 2		Wednesday, March 3		Thursday, March 4		Friday, March 5	
9:00	<b>Fishes without Borders (morning)</b>	<b>Fish Health &amp; Biosecurity (morning)</b>	<b>Habitat Stage 0 (morning)</b>	Habitat Comm Meeting	Aquaculture Comm Mtg	Mentor Comm Mtg	Anadromous Comm Mtg	<b>Native Fish Comm Meeting</b>	<b>Public Ed Comm Meeting</b>	No session	
10:00				Aquaculture Practices	Fish Habitat	Aquaculture Practices	LPO Walleye			Aquaculture Practices	Fishery Management
11:00				Break		<b>Meeting opening. Plenary, Fundraising, Invited Papers Boise Centre livestream session</b>	Sturgeon	Fish Habitat	Break - no session		Outside the Hatchery
12:00	Break		Break		<b>Business Meeting, Boise Centre Livestream</b>		Break				
1:00	<b>Fishes without Borders (afternoon)</b>	<b>Fish Health &amp; Biosecurity (afternoon)</b>	<b>Habitat Stage 0 (afternoon)</b>	Sturgeon	Population Dynamics		Break		<b>Native Trout</b>		
2:00				Break							Break
3:00				Break		Genetics	Population Dynamics	Poster A Q&A	Poster B Q&A	<b>Native Trout &amp; Meeting Closing</b>	
4:00	Break		Break								
5:00	<b>Executive Committee Meeting</b>			<b>Spawning Run</b>				<b>Executive Committee Meeting</b>			
						Student Breakout 1	Student Breakout 5	<b>Executive Committee Meeting</b>			
						Student Breakout 2	Student Breakout 6				
						Student Breakout 3	Student Breakout 7				
						Student Breakout 4	Student Breakout 8				

\*All times are Mountain Standard Time.



## Your guide to the ICAFS Virtual Meeting!

### Registration

Simply go to our [meeting website](#) hosted by [Cvent](#) event services and click on the registration button. You can pay by PayPal, credit card, or check. Registration fees are:

- AFS members: \$75
- Non-AFS members: \$99
- Retirees: \$40
- Students: FREE!
- Add-on fee to access the Montana and Washington/BC chapter virtual meetings: \$40

If you are an AFS member, you will need to enter your national membership number to receive the member registration rate.

### Joining Virtual Sessions

Virtual sessions will be accessible in three different ways.

1. **Workshops** will be hosted by their respective organizers. A link to the workshop session will be available on the Cvent meeting site to those who registered for the specific workshop. You must register to have access to the workshop.
2. **Committee meetings** will be hosted by the respective committee chairs. The week before the meeting, all registrants will receive information about how to join committee meetings. As always, committee meetings are open to any and all meeting attendees, and committee chairs are always looking for more people to become active in the chapter committees.
3. **All other sessions** will be accessible via links posted on Cvent's "Attendee Hub," which will go live on the [meeting website](#) the week before the event. Here are a few details and tips.
  - When you click the link to enter the virtual event, you will be asked to log in, using the email address you used to register. An access code will be sent to your email or cell phone within one minute. Once logged in, you will remain logged in for 24 hours.
  - Information and access to all sessions will appear on the "My Event" page. That page will show live and upcoming sessions and other event details. You can access sessions, exhibitor booths, and other content directly from that page. Concurrent sessions will be listed separately, so you can select the specific one you want to attend. An attendee guide will also be available there.
  - Session pages list all sessions and allow you to customize your meeting schedule by selecting the particular sessions you want to attend.
  - All plenary and presentation sessions, fundraising events, the business meeting, and student/professional breakout sessions will be livestreamed in real time and delivered via Zoom. Most of you are already familiar with, if not already fatigued by, most Zoom meeting features. Most sessions will allow only the host and speakers to appear in the Zoom room and share screens. Attendees will be able to ask questions via the Q&A feature. The session moderators will monitor the Q&A and pass questions along to the presenters. The student/professional breakout sessions will be collaborative and look more like the regular Go-to-Meeting or Zoom meetings we have been attending for the past year. All participants will be able to interact with each other in the Zoom room.



## Your guide to the ICASF Virtual Meeting!

### Workshops

Three great workshops will be available this year. Workshops are included in the registration fee, but you must register for a workshop in order to attend. If you have already registered for the meeting but want to add a workshop, you can log in to the meeting web site using the "already registered" button, and select "modify registration." Registrants will access the workshop from the Cvent Attendee Hub.

#### **Fishes Without Borders**, hosted by the [Anadromous Committee](#)

The goal for this workshop is to expose ICASF members to research being conducted outside of the state of Idaho that is relevant to Idaho's anadromous fishes. These fish travel down the Snake and Columbia rivers to the ocean where most either migrate out to the open ocean or up along the coastline as far north as the Gulf of Alaska. They can spend multiple years in the ocean before returning back to Idaho to spawn. Consequently, a large portion of their complex life histories are subjected to harvest, predation, competition for resources, and environmental conditions outside of Idaho. Understanding these factors is important for managing our Idaho populations.

Our all-day workshop will host an array of talented researchers from various agencies, universities, and non-profits that will explore a wide range of factors influencing anadromous fish survival. Presentations in the morning will include topics on large mainstem river and hydrosystem impacts; tribal and sport harvest; and predation from fish, birds, and pinnipeds. In the afternoon, talks will focus on changing ocean conditions; and marine ecological factors affecting growth, survival, and population dynamics. In short, this workshop aims to shed light into a 'black box' of life stage-specific influences on Idaho's anadromous fishes, while also encouraging information exchange and greater communication between freshwater and downriver or ocean biologists. Please join us in exploring the exciting new research relevant to managing Idaho anadromous fish populations.

#### **Fish and Health and Biosecurity**, hosted by the [Aquaculture Committee](#) and IDFG Eagle Fish Health Lab

This workshop will focus on the philosophy, development, and implementation of biosecurity at aquaculture facilities and its importance to disease control. In addition, the workshop will explore fish health and disease management concepts with a focus on emerging topics in the field including updates to pathogen treatments, INAD/VFD regulations, eDNA use, transport permits, and more. Presentations will include specific content background, practical applications, current case studies and an open panel discussion.

#### **Habitat—Stage 0 Follow-up and Fish Response**, hosted by the [Aquatic Habitat Committee](#), with help from the [Continuing Education Committee](#)

This day-long short course on Stage 0 restoration will expand upon the introductory information presented at the 2020 ICASF meeting. The 2021 course will deliver an abbreviated background on the historical prevalence of these river valleys, how they supported the highly productive landscapes present during early European settlement, and the ecological value of Stage 0 restoration. Design and implementation practitioners from the US Forest Service will present a brief background on the advancements of the restoration practice and share examples of numerous completed projects across various ecotypes. Forest Service practitioners will provide an in-depth look at short-term results from two well-monitored projects, with an emphasis on salmonid suitable habitat and biotic responses. The second half of the course will shift to predicting the effectiveness of habitat improvements for various salmonid life stages in response to Stage 0 restoration. Examples will be shared including valley terrain analysis, numerical hydraulic and habitat modeling, and how those translate to improvements to population level responses. These concepts and analysis will be applied to the Pahsimeroi river to evaluate what restoration might look like in an Idaho river and how we might expect the salmon populations to respond. The course will conclude with a high-level evaluation of habitat conditions in several valleys within the Upper Salmon River and Middle Fork Salmon River salmon strongholds.



## Your guide to the ICAFS Virtual Meeting!

### Plenary Session

In 2020, the American Fisheries Society celebrated the 150th anniversary of its founding as a fish culturists' association. The AFS quickly grew to incorporate many more aspects of fisheries, broadening the scope of its membership. Now, we have the opportunity to acknowledge the roots of AFS and showcase aquaculture's contributions to fisheries science and management. The ICAFS 2021 plenary session, "Aquaculture in Idaho: Putting the Fish in Fisheries," will be an overview of aquaculture in the United States with talks about how aquaculture in Idaho has contributed to commerce, to fisheries, to conservation, and to science. Meeting organizer Tim Copeland will host this session live from the Boise Center and moderate a panel featuring five eminent speakers on the subject.



**Jesse Trushenski** is Chief Science Officer and Vice President for Animal Welfare for Riverence, the largest producer of farmed Rainbow Trout and Steelhead in the Americas with operations based in Washington and Idaho.

**Gary Fornshell** is a retired University of Idaho Extension Aquaculture Educator with 28 years of extension experience, devoted primarily to the production of trout in flow-through aquaculture production systems.

**Jim Fredericks** is Fisheries Bureau Chief at Idaho Department of Fish and Game in Boise and current President of the Fisheries Administration Section of the American Fisheries Society.

**Sue Ireland** is Fish and Wildlife Department Director for the Kootenai Tribe of Idaho, where she has worked since 1996.

**Ken Cain** is a Professor in the Department of Fish and Wildlife Sciences at the University of Idaho and served as the Associate Director of the Aquaculture Research Institute from 2002-2020.

### Committee Meetings

Committee meetings are scheduled in the 9 a.m. time slots on Tuesday, Wednesday and Thursday.

- |  |  |
|--|--|
| • Habitat: Tuesday 9:00-10:30 a.m.     | • Anadromous: Wednesday 9:00-10:00 a.m.      |
| • Aquaculture: Tuesday 9:00-10:30 a.m. | • Native Fish: Thursday 9:00-10:30 a.m.      |
| • Mentoring: Wednesday 9:00-10:00 a.m. | • Public Education: Thursday 9:00-10:30 a.m. |

Committee chairs will arrange the virtual committee meetings, and all meeting registrants will receive information about the committee meetings the week before the meeting. Check your spam and junk folders to make sure you receive any and all emails that originate from Cvent!



## Your guide to the ICAFS Virtual Meeting!

### Spawning Run!

What ICAFS meeting would be complete without the spawning run? Get away from your computer on Tuesday, Wednesday, and/or Thursday after all sessions end at 5 p.m. Go for a run, walk, ski, or bike ride by yourself, in your covid pod, or in a socially distanced group. This is an honor-system event, BUT you will be able to upload a photo of your spawning run activity on the event website. Everyone who uploads a photo will be eligible for a special raffle drawing sponsored by the Fundraising Committee!

### Networking Events

The mentoring committee will be scheduling live job board times to employers who want to advertise vacancies, as well as small breakout sessions to facilitate interactions between students and professionals. These events will be scheduled in the 3:00-5:00 p.m. time slot on Tuesday and in the 4:00-5:00 p.m. slots on Wednesday and Thursday. Contact the mentoring committee at [ICAFS.Mentorship@gmail.com](mailto:ICAFS.Mentorship@gmail.com) for more information.

### Fundraising

And what ICAFS meeting would complete without fundraising, everyone's favorite part of the meeting? Fundraising is a critical part of our annual meeting that directly supports student participation and chapter activities. This year is no different and we need your help!

#### What:

The Fundraising Committee has put together a great collection of amazing artwork, killer fishing trips, outdoor gear and vacation experiences! Don't miss your chance at a Hells Canyon sturgeon trip, steel-heading the Clearwater, or dinner and accommodations at the Redfish Lake Lodge! All items will go on sale as raffles or silent auctions through the secure GiveSmart platform.

#### Bonus:

The first 50 people to register for the meeting AND with GiveSmart will be entered into a drawing for a Ray Troll t-shirt (Empire Strikes Bass or Return of the Sockeye).

#### How:

All our fundraising items are listed on our online auction platform: [2021IDAHOAFS.givesmart.com](https://2021IDAHOAFS.givesmart.com) Register to participate in fundraising by **texting 2021IDAHOAFS to 76278** or registering on the GiveSmart auction page. Preview the raffles, artwork and silent auction items now, and we will continue to add items up until the meeting.

#### When:

Fundraising will open a week ahead of the meeting on **February 22**. Get involved early for a chance to win cash or awesome raffle prizes. General raffle winners will be announced daily during the meeting! Special raffles and Pick-a-Print winners will be announced later in the week.

#### New for 2021:

- 50/50 raffle for cash!
- Sturgeon fishing with Joe Dupont is a raffle!

Questions or Donations? Please contact Martin Koenig at [martin.koenig@idfg.idaho.gov](mailto:martin.koenig@idfg.idaho.gov).



## Your guide to the ICAFS Virtual Meeting!

### Business Meeting and EXCOM Elections

The annual business meeting will be held live at its traditional time, from noon to 2:00 p.m. on Thursday. All regular business will be conducted, including committee and subunit reports, Western Division report, time and place for the 2022 meeting, awards and scholarships, and elections for the EXCOM positions of vice president, secretary/treasurer, and nominations chair. You will, however, need to provide your own lunch this time.

**Instructions for voting for Executive Committee nominees:** Voting for ICAFS Executive Committee nominees will take place electronically using a Google Form survey. AFS members who enter a valid national AFS membership number when they register will receive a link to the elections survey in the confirmation email for registration. **Be sure to check your spam or junk boxes to make sure you receive the voting information.** Voting opens at registration and will remain open through Wednesday, March 3 at 5:00 P.M. We encourage you to vote when you register, but reminders will also be provided during the meeting. Election results will be announced live at the business meeting. For any questions regarding voting, please contact Keats Conley at [keats.conley@usda.gov](mailto:keats.conley@usda.gov).

### Presentation and Poster Judging

As always, oral and poster presentations will be judged, and the best will be acknowledged with the coveted best paper and best poster awards in student and professional categories. **You be the Judge!** It's easy and is a big help. All you need to do is watch the presentation, fill out a form, and submit electronically. If you are willing to volunteer to judge presentations and posters, please email Jim Chandler ([jchandler@idahopower.com](mailto:jchandler@idahopower.com)). Thanks!

### Detailed Schedule of Presentation Sessions

Session schedules, including abbreviated presentation titles, appear here. A full list of presentations, by presenter last name, follows. Sessions and presentations are cross-referenced by session number.

Please contact Nicky Mucciarone at [nicole.mucciarone@idfg.idaho.gov](mailto:nicole.mucciarone@idfg.idaho.gov) if you have questions.

#### Tuesday, March 2

Start Time	Session	Speaker	Abbreviated Title
10:40 a.m.	1. Plenary	Jesse Trushenski	Why aquaculture matters.
		Gary Fornshell	Idaho's Aquaculture Industry: food, jobs and more.
		Jim Fredericks	Fish hatcheries and management in the Idaho Department of Fish and Game.
		Sue Ireland	Using conservation aquaculture to restore native species in the Kootenai R.
		Ken Cain	Research as a critical component to enhancing fish culture and fisheries.
1:00 p.m.	2. Invited Papers	Fundraising	
		Shawn Narum	Monitoring hatchery programs with genetic tools.
		Dan Schill	The WAFWA YY Male Consortium: Extending IDFG's brook trout program.
		Shawn Young	Adaptations of the Kootenai R. native fish conservation aquaculture program.
		John Powell	Conservation of Snake River sockeye salmon via ex situ spawning and rearing.
Eric Pankau	Mitigation Wasn't Built in a Day: Idaho's Aquaculture History <b>[Ignite]</b>		



## Your guide to the ICAFS Virtual Meeting!

**Wednesday, March 3**

Start Time	Session	Speaker	Abbreviated Title
10:00 a.m.	3. Aquaculture Practices	Fundraising	
		Dan Dillon	Evaluation of methods to estimate fish per pound in Idaho hatcheries.
		Steve Stowell	Effects of initial feed timing on survival of Bonneville cutthroat trout.
		Doug Engemann	Well water to control bacterial kidney disease at Pahsimeroi Hatchery.
10:00 a.m.	4. Fish Habitat	Fundraising	
		Lizzie Jossie*	Stream connectivity outcomes for stakeholders and cutthroat trout.
		Katie Salsbury	Post-project monitoring and adaptive management in the Lemhi R.
		Jeffrey Dilucia	Tributary scale fish response to habitat conservation in the Lemhi R.
11:30 a.m.	4. Fish Habitat	Fundraising	
		Eric Berntsen	Characterizing variability in temperature and habitat for restoration.
		Amber Young	Distribution, abundance, and habitat of warrior bass in Alabama.
		Dan Isaak	Juvenile anadromous salmonid habitat density relationships.
11:30 a.m.	5. Sturgeon	Fundraising	
		Phil Bates	White sturgeon repatriation in the middle Snake River.
1:00 p.m.		Riley Brown	White sturgeon conservation aquaculture in the middle Snake R.
		Daniela Ruiz	Niagara Springs white sturgeon hatchery construction completion.
		Fundraising	
		Brian R. Michaels Jr.	Kootenai R. white sturgeon natural substrate and fungal control.
	Mark Elliston	Spontaneous autoploidy testing for Kootenai R. white sturgeon.	
	Brandon Bentz	Submersible pit-tag antenna for post-release sturgeon evaluations.	
1:00 p.m.	6. Population Dynamics	Fundraising	
		Megan Heller*	Population dynamics of Bonneville cutthroat trout in Bear Lake.
		Timothy D'Amico	Salmonid population trends in Idaho's South Fork Boise river.
		Eric Stark	Population dynamics and trends of bull trout in E. Fork Salmon R.
2:30 p.m.	6. Population Dynamics	Fundraising	
		Patrick Kennedy	Demographics of Idaho brook trout populations.
		Christopher Caudill	Factors influencing Chinook Salmon prespawn mortality.
		Brian Kennedy	Life history diversity of a recovering Salmon R. Chinook population.
2:30 p.m.	7. Genetics	Fundraising	
		Benjamin Kline*	DNA-methylation profiles of redband trout in different environments.
		Brandy Smith*	Tools to identify species diversity of catostomids in western U.S.
		Ilana Koch	Candidate markers for Chinook adult migration timing and fitness.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

**Thursday, March 4**

Start Time	Session	Speaker	Abbreviated Title
10:30 a.m.	8. Aqua-culture Practices	Fundraising	
		Thomas Lindenmuth	Using light manipulation to spawn rainbow trout year-round.
		Jared Riemenschneider	Xx all-female rainbow trout - sex reversal.
		Thomas Lindenmuth	How to create a sexually reversed brook trout broodstock.
10:30 a.m.	9. Lake Pend Oreille Walleye	Fundraising	
		Susan Frawley*	Seasonal distribution and food habits of walleyes
		Pete Rust	Seasonal movements and habitat use of walleye 2019-2020.
		Matthew Corsi	Evaluation of a pilot walleye suppression program.
12:15 p.m.	Business Meeting	Ryan Hardy	Call to order, establish quorum, minutes from 2020 meeting
		TBA	National and Western Division AFS reports
		Lauren Andrews	Treasurer's report
		Rob Van Kirk	Vice President's report
		Tim Copeland	President-Elect's report
		Subunit Presidents	Student subunit reports
		Committee Chairs	Committee Reports
		Don Martin	Susan B. Martin Scholarship
		Ryan Hardy	President's Report
		Brett High	EXCOM and Chapter Awards
		Keats Conley	Election results
		Ryan Hardy	Adjourn
		2:15 p.m.	10. Poster A
Jonathan Masingale*	Behavioral plasticity and adaptive capacity in redband trout populations.		
Carlie Sharpes*	Hypoxic and thermal stress as additive or synergistic in redband trout.		
Tyler Breech*	Genetic analysis of native redband trout legacy samples in Idaho.		
Zhongqi Chen	Phenotypic plasticity in redband trout thermal tolerance and performance.		
Brian Small	Innovation in Idaho aquaculture through research, teaching and outreach.		
Katherine Coykendall	Improving estimates of hatchery adult Snake R. spring-summer Chinook.		
2:15 p.m.	11. Poster B	Fundraising	
		James Sage Unsworth	Estimating growth and body condition of MYY brook trout.
		Isaac Fournier	Precision of age estimates from L. Cascade yellow perch hard structures.
		Steve Hughes	Assessment of hard structures used to age smallmouth bass in L. Cascade.
		Rebekah Horn	Monitoring spring/summer Chinook with multi-generation pedigrees.
		Miria Barnes*	Translocation of western pearlshell mussel in Tincup Creek, Idaho.
Mitchell Tree*	Remote-sensing evidence for increasing temperatures in Henrys Lake.		

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Friday, March 5

Start Time	Session	Speaker	Abbreviated Title
10:00 a.m.	12. Aquaculture Practices	Fundraising	
		Luke Oliver*	Control of burbot spawning using photothermal manipulation.
		Riley Jones	Volitional spawning and egg incubation in recovery of Kootenai burbot.
		Moureen Matuha*	Early weaning of burbot larvae onto artificial Artemia and gemma diet.
		Joseph Wannemuehler	Insect based feed to activate immune response in rainbow trout. <b>[Ignite]</b>
10:00 a.m.	13. Fishery Management	Fundraising	
		Hannah Bluth*	Influence of parasitic copepods on rainbow trout angling vulnerability.
		Kamberlee Allison	Floater use of the Big Springs water trail: conflicting public opinions.
		William Lubenau*	Encounter rates and catch-and-release mortality of wild steelhead.
		Taylor Morlan	Lake trout removal in a central Idaho lake. <b>[Ignite]</b>
11:30 a.m.	14. Outside the Hatchery	Fundraising	
		Brycen Lunger	Collecting Kootenai R. adapted, hatchery produced burbot for broodstock.
		Nathan Jensen	Use of Kootenai R. burbot embryos released due to covid shutdown.
		Aaron Black*	Evaluation of natural and hatchery-produced kokanee in Flaming Gorge.
11:30 a.m.	15. Age & Growth	Fundraising	
		Lynsey Harris*	Hard structures used to age Yellowstone cutthroat trout from Henrys Lake.
		Darcy McCarrick*	Factors influencing Yellowstone cutthroat trout growth in Henrys Lake.
		Eli Felts	Estimating age composition of Chinook when bears get the carcasses first.
1:00 p.m.	16. Native Trout	Fundraising	
		Darcy McCarrick*	Movement & habitat use of cutthroat trout and Utah chub in Henrys Lake.
		Travis Seaborn	Assessing adaptive capacity using agent-based models for redband trout.
		Megan Heller*	Characteristics of Bonneville cutthroat trout in three Bear Lake tributaries.
2:30 p.m.		Fundraising	
		Dan Isaak	Factors affecting occurrence of relict headwater bull trout populations.
		Curtis Roth	Factors affecting distribution/abundance of resident salmonids, central ID.
		Dan Isaak	Species and landscape mediate native fish vulnerability to climate change.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Full List of Presentations

Presentations are organized within presentation type by author last name.

#### IGNITE! Presentations

First	Last	Affiliation	Session Title
Taylor	Morlan	IDFG	13 Lake trout removal in a central Idaho lake.
Eric	Pankau	Pocatello H.S.	2 Mitigation wasn't built in a day: Idaho's aquaculture history.
Joseph	Wannemuehler	IDFG	12 Using an all-insect based feed supplement to activate an immune response in rainbow trout.

#### Poster Presentations (Posters will be available for viewing starting on Tuesday.)

First	Last	Affiliation	Session Title
Miria	Barnes*	BYU-Idaho	11 Translocation of western pearlshell mussel in Tincup Creek, Idaho.
Tyler	Breech*	Idaho State U.	10 Genetic analysis of native redband trout legacy samples in Idaho.
Zhongqi	Chen	Univ. of Idaho	10 Phenotypic plasticity in thermal tolerance and performance within and among redband trout populations.
Katharine	Coykendall	IDFG	10 Managing during the fall: improving estimates of hatchery adult Snake River spring-summer Chinook Salmon during record low returns.
Isaac	Fournier	IDFG	11 Evaluating the precision of age estimates from Lake Cascade yellow perch hard structures.
Rebekah	Horn	CRITFC	11 Monitoring hatchery production, broodstock composition, and genetic variation of spring/summer Chinook Salmon in the Snake River basin with multi-generation pedigrees.
Steve	Hughes	IDFG	11 Assessment of hard structures used to estimate age of smallmouth bass in Lake Cascade, Idaho.
Jonathan	Masingale*	Univ. of Idaho	10 Do differences in behavioral plasticity among redband trout ( <i>Oncorhynchus mykiss gairdneri</i> ) populations contribute to adaptive capacity?
Carlie	Sharpes*	Univ. of Idaho	10 Swimming in 'thin air': evaluating the combination of hypoxic and thermal stress as an additive or synergistic effect ( <i>Oncorhynchus mykiss gairdneri</i> ).
Brian	Small	Univ. of Idaho	10 Leading innovation in Idaho aquaculture through research, teaching and outreach.
Mitchell	Tree*	BYU-Idaho	11 Evidence for increasing summer temperatures in Henrys Lake, Idaho using remote sensing.
James Sage	Unsworth	IDFG	11 Estimating growth and body condition of MYY brook trout.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Oral Presentations

First	Last	Affiliation	Session	Title
Kamberlee	Allison	Henry's Fork Fnd.	13	Floater use of the big springs national recreation water trail: assessing conflicting public opinions.
Phil	Bates	Idaho Power	5	White sturgeon repatriation in the middle Snake River.
Brandon	Bentz	Idaho Power	5	Submersible pit-tag antenna - another tool to support post-release evaluations of white sturgeon in the Snake River.
Eric	Berntsen	Kalispel Tribe	4	Characterizing spatiotemporal variability in water temperature and habitat to Inform restoration for cold-water fishes.
Aaron	Black*	Idaho Coop FW Unit	14	Evaluation of natural and hatchery-produced kokanee in Flaming Gorge Reservoir.
Hannah	Bluth*	BYU-Idaho	13	Influence of parasitic copepods on vulnerability to angling and short-term survival of rainbow trout.
Riley	Brown	Idaho Power	5	White sturgeon conservation aquaculture in the middle Snake River: the benefits and challenges of repatriation.
Ken	Cain	Univ. of Idaho	1	Solutions through science: research as a critical component to enhancing fish culture and fisheries.
Christopher	Caudill	Univ. of Idaho	6	Elevated stream temperature, origin, and individual size influence Chinook Salmon prespawn mortality across the Columbia River basin.
Matthew	Corsi	IDFG	9	Evaluation of a pilot walleye suppression program in Lake Pend Oreille, Idaho.
Timothy	D'Amico	IDFG	6	Salmonid population trends in Idaho's South Fork Boise river.
Dan	Dillon	IDFG	3	Evaluation of methods to estimate fish per pound in Idaho hatcheries.
Jeffrey	Diluccia	IDFG	4	Tributary scale fish response following implementation of habitat conservation actions in the Lemhi River sub-basin, Idaho.
Mark	Elliston	Kootenai Tribe of Idaho	5	Spontaneous autopolyploidy testing protocol for three-month-old Kootenai River white sturgeon.
Douglas	Engemann	IDFG	3	Investigation of well water rearing as a means of bacterial kidney disease control at the Pahsimeroi Hatchery.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Oral Presentations (continued)

First	Last	Affiliation	Session	Title
Eli	Felts	IDFG	15	Comparison of methods used to estimate age composition of Chinook Salmon populations when the bears beat you to the carcasses.
Gary	Fornshell	Aquaculture Results	1	Idaho's aquaculture Industry: food, jobs and more.
Susan	Frawley*	Idaho Coop FW Unit	9	Seasonal distribution and food habits of walleyes in Lake Pend Oreille.
Jim	Fredericks	IDFG	1	Fish hatcheries and management in the Idaho Department of Fish and Game: innovation and integration at every station.
Lynsey	Harris*	Univ. of Idaho	15	Comparison of hard structures used to estimate age of Yellowstone cutthroat trout from Henrys Lake, Idaho.
Megan	Heller*	Univ. of Idaho	16	Occurrence, abundance, movement, and habitat associations of Bonneville cutthroat trout in three tributaries to Bear Lake.
Megan	Heller*	Univ. of Idaho	6	Population dynamics of Bonneville cutthroat trout in Bear Lake.
Susan	Ireland	Kootenai Tribe of Idaho	1	Using conservation aquaculture to restore native species: a tale of two fishes from the Kootenai.
Dan	Isaak	US Forest Service	4	Description of juvenile anadromous salmonid habitat density relationships using large interagency databases and spatial stream network (SSN) models.
Dan	Isaak	US Forest Service	16	Factors contributing to present and future occurrence of relict headwater bull trout populations in the northern rocky mountains.
Dan	Isaak	US Forest Service	16	Species traits and landscape resistance mediate native fish distribution shifts and vulnerability to climate change in a rocky mountain riverscape.
Nathan	Jensen	Kootenai Tribe of Idaho	14	Strategic use of Kootenai River burbot embryos released due to covid-19 related forced hatchery shutdown.
Riley	Jones	Kootenai Tribe of Idaho	12	Volitional spawning and egg incubation practices used in the recovery of Kootenai River burbot.
Lizzie	Jossie*	Idaho State Univ.	4	Exploring stream connectivity outcomes for stakeholders and Yellowstone cutthroat trout in the Teton River drainage.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Oral Presentations (continued)

First	Last	Affiliation	Session	Title
Brian	Kennedy	Univ. of Idaho	6	Life history diversity of a recovering Salmon River Chinook Salmon population.
Patrick	Kennedy	IDFG	6	Demographics of Idaho brook trout populations.
Benjamin	Kline*	Idaho State Univ.	7	DNA-methylation profiles of redband trout from desert and montane environments.
Ilana	Koch	CRITFC	7	Validation and association of candidate markers for adult migration timing and fitness in Chinook Salmon.
Thomas	Lindenmuth	IDFG	8	How to create a sexually reversed brook trout broodstock in a hatchery setting.
Thomas	Lindenmuth	IDFG	8	Using light manipulation to spawn rainbow trout year-round.
William	Lubenau*	Univ. of Idaho	13	Encounter rates and catch-and-release mortality of wild steelhead in Idaho.
Brycen	Lunger	Kootenai Tribe of Idaho	14	Collecting Kootenai River adapted, hatchery produced burbot for broodstock at the Kootenai Tribe of Idaho's -Twin Rivers Hatchery.
Moureen	Matuha*	Univ. of Idaho	12	Early weaning of burbot ( <i>Lota lota maculosa</i> ) larvae onto artificial Artemia (EZ artemia) and gemma micro diet.
Darcy	McCarrick*	Univ. of Idaho	15	Factors influencing Yellowstone cutthroat trout growth in Henrys Lake, Idaho.
Darcy	McCarrick*	Univ. of Idaho	16	Movement and habitat use of Yellowstone cutthroat trout and Utah chub in Henrys Lake, Idaho.
Brian R.	Michaels Jr.	Kootenai Tribe of Idaho	5	Kootenai River white sturgeon natural substrate and fungal control during egg incubation experiment.
Shawn	Narum	CRITFC	2	Monitoring hatchery programs with genetic tools.
Luke	Oliver*	Univ. of Idaho	12	Control of burbot ( <i>Lota lota</i> ) spawning independent of natural season using photothermal manipulation.

\*Student presenter



## Your guide to the ICAFS Virtual Meeting!

### Oral Presentations (continued)

First	Last	Affiliation	Session	Title
John	Powell	IDFG	2	Demographic and genetic conservation of Snake River sockeye salmon via ex situ spawning and rearing.
Jared	Riemenschneider	IDFG	8	Xx all-female rainbow trout - sex reversal.
Curtis	Roth	IDFG	16	Factors related to the distribution and abundance of resident salmonids in central Idaho.
Daniela	Ruiz	IDFG	5	Niagara Springs white sturgeon hatchery construction completion.
Pete	Rust	IDFG	9	Seasonal movements and habitat use of walleye in Lake Pend Oreille during 2019 and 2020.
Katie	Salsbury	Intermountain Aquatics	4	Three years of post-project effectiveness monitoring and adaptive management on two projects in the upper Lemhi River watershed.
Dan	Schill	IDFG	2	The WAFWA YY male consortium: extending IDFG's experimental brook trout program to other states and species.
Travis	Seaborn	Univ. of Idaho	16	Developing a framework for assessing adaptive capacity in stream networks using agent-based models for redband trout.
Brandy	Smith*	Idaho State Univ.	7	Genetic and morphometric tools to identify species diversity of catostomid fishes in the intermountain western United States.
Eric	Stark	IDFG	6	Population dynamics and temporal trends of bull trout in the East Fork Salmon River, Idaho.
Steve	Stowell	IDFG	3	Effects of initial feed timing on early survival of Bonneville cutthroat trout.
Jesse	Trushenski	Riverence	1	Why aquaculture matters.
Amber	Young	Auburn University	4	Distribution, abundance, and habitat associations of warrior bass ( <i>Micropterus warriorensis</i> ) in the Black Warrior watershed, Alabama.
Shawn	Young	Kootenai Tribe of Idaho	2	Recent adaptations of the Kootenai River native fish conservation aquaculture program to restore white sturgeon and burbot.

\*Student presenter



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***The EXCOM wants your ideas ...***

***Please do not hesitate to contact any EXCOM Member about questions or ideas***

***This is your Chapter !***

