

# **COLORADO/WYOMING CHAPTER**

of the

## **AMERICAN FISHERIES SOCIETY**



**2018 Annual Meeting**

**Laramie, Wyoming  
February 27 - March 1, 2018**

**PROGRAM**

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# Colorado/Wyoming Chapter of the American Fisheries Society

## Officers 2017-2018



Kevin Gelwicks, President



Eric Fetherman, Vice-President



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Rick Henderson, Past-President



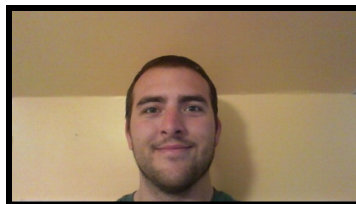
Timothy D'Amico, CSU Subunit President



Kara Wise, UW Subunit President (fall semester)



Jake Ruthven, UW Subunit President (spring semester)



Jacob Eggers, CMU Subunit President

### Standing Committees

#### Arrangements

Beth Bear and Kevin Gelwicks

#### Chapter Archivist

Lori Martin

#### Continuing Education

Diana Miller and Dan Kowalski

#### Environmental Policy

Eric Fetherman (chair), Jim White, Laura Burckhardt

#### Membership

Boyd Wright and Tom Fresques

#### Newsletter

Adam Hansen and Anna Senecal

#### Nominating

Rick Henderson

#### Program

Christina Barrineau and Laura Burckhardt

### Special Committees

#### Aquaculture

Lars Alsager

#### Audio-Visual

Nick Hogberg

#### Awards

Travis Neebling

#### Endowment Funding

Eric Gardunio

#### Fundraising

Paul Gerrity and Matt Kondratieff

#### Gifts

Erin Sobel

#### Mentoring

Steve Gale

#### Paper/Poster Judging

Mandi Brandt

#### Raffle

Eric Gardunio, Stephen Siddons, and Zack Underwood

#### Registration

Jason Burckhardt

#### Student Liaison

Eriek Hanson

#### Website

Joe Skorupski

## Schedule at a Glance

| <u>Time</u>                   | <u>Event</u>  | <u>Location</u>                    |
|-------------------------------|---|------------------------------------|
| <b>Tuesday, February 27</b>   |   |                                    |
| 8:30 AM - 12:00 PM            | Continuing Education - Phase I: Introduction to R and Data Wrangling                          | UW Agriculture Building - Room 316 |
| 12:00 PM - 1:00 PM            | Lunch - on your own   |                                    |
| 1:00 PM - 5:00 PM             | Continuing Education - Phase II: Data Modeling and Visualization in R                         | UW Agriculture Building - Room 316 |
| 1:00 PM - 5:00 PM             | Continuing Education - Pesky Parasites: A Brief Look at Some Prominent Wyoming Fish Parasites | Salon C                            |
| 5:00 PM - 7:00 PM             | Registration  | Lobby                              |
| 6:00 PM - 10:00 PM            | Welcome Social  | UW Legacy Hall                     |
| <b>Wednesday, February 28</b> |   |                                    |
| 7:00 AM - 5:00 PM             | Registration  | Lobby                              |
| 7:00 AM - 5:00 PM             | Presentation Download   | Lobby - AV Table                   |
| 8:00 AM - 8:20 AM             | Welcome, Presidential Message and Introduction to the Plenary by Kevin Gelwicks               | Salon DE                           |
| 8:20 AM - 9:40 AM             | Plenary   | Salon DE                           |
| 10:00 AM - 12:00 PM           | Contributed Papers  | Salon DE                           |
| 12:00 PM - 1:30 PM            | Lunch - on your own   |                                    |
| 1:30 PM - 3:30 PM             | Contributed Papers  | Salon DE                           |
| 3:50 PM - 5:00 PM             | Poster Session  | Lobby                              |
| 6:00 PM - 7:30 PM             | Student Mentoring Presentation and Job Fair   | Laramie Train Depot                |
| 6:20 PM - 10:00 PM            | Student-Hosted Social   | Laramie Train Depot                |
| <b>Thursday, March 1</b>      |   |                                    |
| 7:00 AM - 5:00 PM             | Registration  | Lobby                              |
| 7:00 AM - 5:00 PM             | Presentation Download   | Lobby - AV Table                   |
| 8:00 AM - 11:20 AM            | Contributed Papers - Concurrent Sessions  | Salons D and E                     |
| 11:30 AM - 1:00 PM            | Business Meeting Luncheon   | Salon D                            |
| 1:00 PM - 4:40 PM             | Contributed Papers - Concurrent Sessions  | Salons D and E                     |
| 6:00 PM - 10:00 PM            | Awards Banquet and Raffle   | Salon ABC                          |



# Socials

**Welcome Social** - Come kick off the annual meeting from 6PM - 10PM on Tuesday, February 27 at the UW Legacy Hall located in the Marian H. Rochelle Gateway Center (across S. 22nd Street from the Hilton Hotel). Free beer and a light meal will be provided.

## Student-Hosted Social - Hosted by the University of Wyoming Student Subunit

**When: Wednesday, February 28**

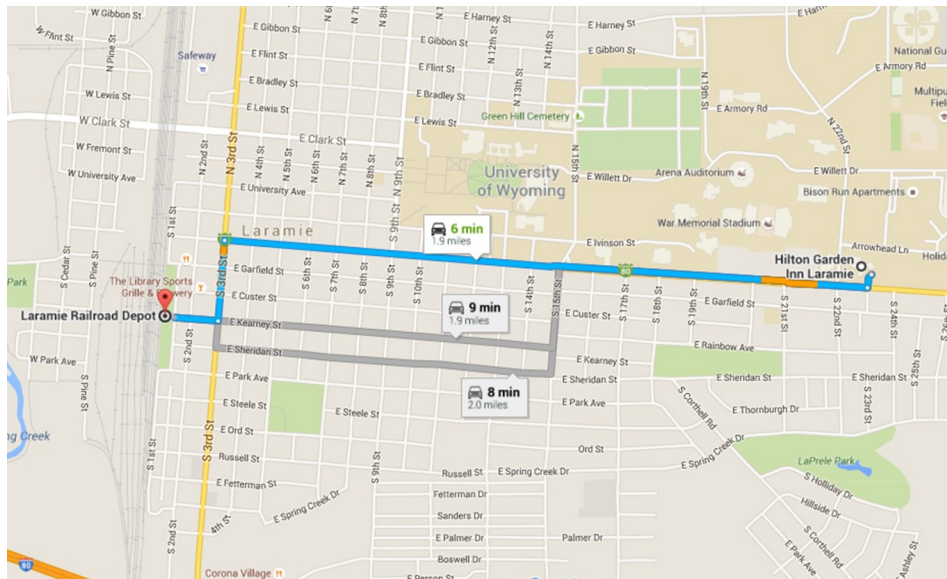
Location: Laramie Train Depot (see map below)

Transportation: Shuttle will run from the Hilton to the Train Depot and back from 5:30 PM to 10:00 PM

6:00 PM - 6:20 PM: Student Mentoring Presentation

7:00 PM - 7:30 PM: Job Fair

6:20 PM - 10:00 PM: BBQ Buffet and Free Beer



**Banquet** - The Banquet will be held on Thursday from 6:00 PM to 10:00 PM in Salon ABC. Free beer and wine will be provided and a cash bar will also be available. Everyone is invited to the social, auction, and raffle. A banquet ticket is required for the dinner. Dinner will be served at 6:30 PM.

**Raffle** - Be sure to check out the great auction and raffle items on display in Salon G. Raffle tickets will be on sale throughout the meeting. Cash and credit cards will be accepted.

# AGENDA

**Wednesday, February 28**

8:00 - 8:20     **Kevin Gelwicks** Welcome, Presidential Message, and Introduction to the Plenary

**Plenary: “Engaging the public in what we do: exploring the use of citizen scientists and volunteers in fisheries management and research”**

*See Page 10 for biographies of plenary speakers*

**Room: Salon DE**

**Moderator: Kevin Gelwicks**

|              |  |
|--------------|--|
| 8:20 - 8:40  | <b>Dr. Brett Johnson</b> Opportunities to work with volunteers as citizen scientists           |
| 8:40 - 9:00  | <b>Robb Keith</b> What we do is cool!  |
| 9:00 - 9:20  | <b>Fletcher Jacobs</b> Colorado Parks and Wildlife's use of volunteers in resource stewardship |
| 9:20 - 9:40  | <b>Dr. Brian Barber</b> The rewards and challenges of citizen science                          |
| 9:40 - 10:00 | BREAK  |

## Session 1: Where Do We Swim From Here?

**Room: Salon DE**

**Moderator: Rick Henderson**

|               |   |
|---------------|---|
| 10:00 - 10:20 | <b>Paul Gerrity</b> Status of the Wind River drainage, Wyoming Sauger population  |
| 10:20 - 10:40 | <b>Daniel Cammack</b> Assessing the impacts of incubation temperature on a native, predatory percid of Wyoming ( <i>Sander canadensis</i> ) |
| 10:40 - 11:00 | <b>John Walrath</b> The then and now of Lake Trout in Flaming Gorge Reservoir   |
| 11:00 - 11:20 | <b>Dan Brauch</b> Riding a salmon “high”: factors contributing to a rebound of Colorado's premier Kokanee Salmon fishery                    |
| 11:20 - 11:40 | <b>Brad Tribby</b> Applying BLM's AIM strategy to assess stream health in the Rawlins Field Office  |
| 11:40 - 12:00 | <b>Bill Bradshaw</b> Wyoming's Powder River Sturgeon Chub ( <i>Macrhybopsis gelida</i> ): here, gone, and back again                        |
| 12:00 - 1:30  | LUNCH - on your own   |

## Session 2: Nonnative Fishes - Causes, Effects, and Solutions

**Room: Salon DE**

**Moderator: Greg Mayton**

|             |  |
|-------------|--|
| 1:30 - 1:50 | <b>Frank Rahel</b> Pathways of unauthorized fish introductions and types of management responses   |
| 1:50 - 2:10 | <b>Tucker Brauer</b> Population characteristics of Burbot in Fontenelle and Flaming Gorge Reservoirs, Wyoming  |
| 2:10 - 2:30 | <b>Daniel Kaus</b> Feasibility of suppressing a non-native Walleye population in Buffalo Bill Reservoir, Wyoming   |
| 2:30 - 2:50 | <b>Katrina Cook</b> Comparing the food web of Yellowstone Lake before and after two decades of Lake Trout ( <i>Salvelinus namaycush</i> ) removal                |
| 2:50 - 3:10 | <b>Michael Young</b> A paradigm no more: reinterpreting the outcome of introgressive hybridization between cutthroat trout and rainbow trout in the western U.S. |
| 3:10 - 3:30 | <b>Elizabeth Mandeville</b> Variable hybridization in Yellowstone Cutthroat x Rainbow Trout: genomic consequences and ecological correlates of hybridization     |

### Wednesday, February 28 - Continued

|              |   |
|--------------|---|
| 3:30 - 3:50  | BREAK   |
| 3:50 - 5:00  | Poster Session - Lobby  |
| 6:00 - 7:00  | Student Mentoring Presentation and Job Fair - Laramie Train Depot |
| 6:20 - 10:00 | Student-Hosted Social - Laramie Train Depot                       |

### POSTERS

**Samantha Alford** "Evaluating factors influencing movement rates of Mottled Sculpin and Mountain Sucker in the Wyoming Range"

**Evan Booher** "A landscape model for distribution and habitat suitability of Finescale Dace in the Belle Fourche - Cheyenne and Niobrara Drainages (student) "

**Tucker Brauer** "Efficacy of using angler-caught burbot to estimate population rate functions"

**Crosby Hedden** "Age-specific responses of Sonora Sucker (*Catostomus insignis*) to wildfire disturbances"

**Diana Miller** "A tale of two lakes"

**Michael Miller** "Identifying limiting factors impacting Northern Pike growth in a small Colorado impoundment: a bioenergetics assessment"

**Darrel Snyder** "Larvae and early juveniles of Rio Grande Chub and Rio Grand Sucker"

### Thursday, March 1

|              | <b>Session 3A: Evolving Methods</b><br><b>Room: Salon D</b><br><b>Moderator: Steve Gale</b>  | <b>Session 3B: Colorado River Fishes</b><br><b>Room: Salon E</b><br><b>Moderator: Wayne Hubert</b>  |
|--------------|--|---|
| 8:00 - 8:20  | <b>Julia Polasik</b> Optimizing the timing of nocturnal auditory surveys to detect Spadefoots ( <i>Spea</i> ) in Wyoming   | <b>Nick Hogberg and Matt Joki</b> An overview of Three Species salvage and holding in southwest Wyoming   |
| 8:20 - 8:40  | <b>Travis Neebling</b> An evaluation of trawling to sample Wyoming's non-wadeable rivers   | <b>Catherine de Vlaming</b> Effectiveness of light traps for detecting Razorback Sucker larvae  |
| 8:40 - 9:00  | <b>Lindsay Ciepiela</b> Quantifying <sup>87</sup> Sr/ <sup>86</sup> Sr temporal stability and spatial heterogeneity for use in tracking fish movement                    | <b>Kevin Thompson</b> The cost of spawning: weight loss in Bluehead and Flannelmouth suckers  |
| 9:00 - 9:20  | <b>Oliver Wilmo</b> Using eDNA to investigate native mussel distribution in eastern Wyoming  | <b>Edward Kluender</b> Vermillion Creek: A habitat of unanticipated importance for Colorado Pikeminnow in the Green River                         |
| 9:20 - 9:40  | <b>Matthew Fairchild</b> Jeep in a creek: evaluating riparian OHV roads, effects to aquatic fauna, and restoration efficacy in a Central Rocky Mountain headwater stream | <b>Koreen Zelasko</b> Challenges in estimating demographic parameters of a large-river endangered fish, Razorback Sucker <i>Xyrauchen texanus</i> |
| 9:40 - 10:00 | BREAK  |   |

**Thursday, March 1 - Continued**

|               |   |  |
|---------------|---|--|
|               | <b>Session 4A: River Connectivity</b><br><b>Room: Salon D</b><br><b>Moderator: John Hawkins</b>   | <b>Session 4B: Surviving the Wild Blue Yonder</b><br><b>Room: Salon E</b><br><b>Moderator: Lindsay Ciepiela</b>  |
| 10:00 - 10:20 | <b>Brent Mefford</b> Reintroduction of South Platte Greenback Cutthroat Trout to Rock Creek, project challenges and barrier design  | <b>Brittany Nordberg</b> Historical stocking: looking back to understand current native Yellowstone Cutthroat Trout <i>Oncorhynchus clarkii bouvieri</i> populations |
| 10:20 - 10:40 | <i>No presentation scheduled</i>  | <b>Brian Avila</b> Factors affecting survival of Hatchery-reared Rainbow Trout fry in the wild   |
| 10:40 - 11:00 | <b>Timothy D'Amico</b> Habitat selection and movement of Stonecat in St. Vrain Creek  | <b>Alex Townsend</b> The effect of maternally-transferred selenium on the survival, hatch success and performance of Brown Trout fry                                 |
| 11:00 - 11:20 | <b>James Roberts</b> The influence of nonnative species, connectivity, and a changing climate on Cutthroat Trout in the Southern Rocky Mountains: Implications for conservation | <b>Alex LeChaminant</b> Movement dynamics and survival of hatchery-reared Colorado River cutthroat trout post-stocking   |
| 11:30 - 1:00  | Business Meeting Luncheon - Salon D   |  |
|               | <b>Session 5A: Making Habitat Great Again</b><br><b>Room: Salon D</b><br><b>Moderator: Bill Bradshaw</b>  | <b>Session 5B: The Water Front</b><br><b>Room: Salon E</b><br><b>Moderator: Cameron Walford</b>  |
| 1:00 - 1:20   | <b>Ron Koth</b> Stakeholder driven design considerations and project success  | <i>No Presentation Scheduled</i>   |
| 1:20 - 1:40   | <b>Ashley Ficke</b> Stream restoration for native, nonsalmonid fishes   | <b>Jacob Ruthven</b> In transition: downstream proliferation of Brown Trout in the transition zone of the South Platte Basin, Colorado                               |
| 1:40 - 2:00   | <b>Laura Burckhardt</b> Stream restoration on Medicine Lodge Creek, Wyoming   | <b>Bryan Maitland</b> Stream food web expansion in response to changing environmental conditions   |
| 2:00 - 2:20   | <b>Betsy Morgan</b> Beaver dam analogues, a Wyoming perspective   | <b>Jordan Anderson</b> Evaluating wastewater effluent exposure in wild fishes using insights from laboratory and wild populations                                    |
| 2:20 - 2:40   | <b>Chance Kirkeeng</b> Effects of large-scale habitat enhancement project on Largemouth Bass feeding and growth in Grand Lake, Texas  | <b>Mark Kirk</b> Predicted changes to stream fish assemblages with climate change along the Rocky Mountain-Great Plains ecotone of the North Platte River            |
| 2:40 - 3:00   | BREAK   |  |



**Thursday, March 1 - Continued**

|              | <b>Session 6A: Understanding Habitat Use</b><br><b>Room: Salon D</b><br><b>Moderator: Diana Miller</b>   | <b>Session 6B: Native Aquatic Organisms</b><br><b>Room: Salon E</b><br><b>Moderator: Darren Rhea</b>                            |
|--------------|--|---|
| 3:00 - 3:20  | <b>Estevan Vigil</b> Influence of habitat type on gill lice infection rates between two trout species  | <b>Catherine Wagner</b> Population genetic structure in clupeids from Lake Tanganyika and implications for fisheries management |
| 3:20 - 3:40  | <b>Gabe Barrile</b> Habitat use and body temperature influence Boreal Toad disease risk in western Wyoming   | <b>Kate Olsen</b> Kendall Warm Springs Dace: an introduction  |
| 3:40 - 4:00  | <b>Luke Schultz</b> Spatial and temporal variability in the effects of wildfire and drought on thermal habitat for Lahontan Cutthroat  | <b>Timothy D'Amico</b> PIT tag expulsion in a small-bodied native catfish   |
| 4:00 - 4:20  | <b>Dan Gibson-Reinemer</b> Response to climate change varies by river morphology and fish zonation   | <b>Brian Hickerson</b> Effects of non-native predatory fish on Hornyhead Chub in the Laramie River                              |
| 4:20 - 4:40  | <b>Melanie Murphy</b> Spatial and temporal environmental variability drives species diversity: assessing the influence of wetland permanence and stochasticity on amphibian richness and abundance | <b>Lusha Tronstad</b> Aquatic invertebrate assemblages living in three alpine stream types in the Teton Range, Wyoming          |
| 6:00 - 10:00 | Awards Banquet and Raffle  |   |



# Plenary

## ***Engaging the public in what we do: exploring the use of citizen scientists and volunteers in fisheries management and research***

### **Dr. Brett Johnson, Colorado State University**

#### **Professor, Department of Fish, Wildlife and Conservation Biology**

Dr. Brett Johnson got a BS from the University of Wisconsin in 1983, an MS in 1986 from The Ohio State University, and a PhD from the University of Wisconsin in 1993. He is currently a Professor of Fisheries and Aquatic Sciences, in the Department of Fish, Wildlife and Conservation Biology at Colorado State University. Before coming to CSU in 1992, he was a fisheries manager for Wisconsin Department of Natural Resources. He teaches fish biodiversity and fishery science at CSU, and is the faculty advisor to the CSU Fly Fishing Club. He's been involved with a citizen science collaboration since 2010.

### **Robb Keith, Wyoming Game and Fish Department**

#### **Fisheries Management Supervisor, Green River**

Robb Keith grew up in southwest Pennsylvania, just outside of Pittsburgh. Robb earned his BS in Fisheries Biology from Colorado State University in 1986 and went on to earn an MS in Fisheries Resources from the University of Idaho in 1991. In 1996, he settled down in Green River, Wyoming with his beautiful wife and began working as a Fisheries Biologist on the Green River Regional Fisheries Management Crew of the Wyoming Game and Fish Department. Robb was promoted to Green River Regional Fisheries Supervisor in 2003, a position that he still holds with the Department. Robb is an avid angler, hunter, and gardener and especially enjoys watching his red Labrador retrievers work all manner of birds.

### **Fletcher Jacobs, Colorado Parks and Wildlife**

#### **Statewide Volunteer Coordinator**

Fletcher Jacobs is the Statewide Volunteer Coordinator for Colorado Parks and Wildlife and has led crews of volunteers since 2004. Prior to that position, he worked for Boulder County Parks and Open Space and for Volunteers for Outdoor Colorado where he managed volunteer projects, led training courses across the state through the Outdoor Stewardship Institute, and started their Cairn Youth Program for high school students. Before living in Colorado, he worked for the Seattle-based conservation corps Earthcorps in Washington state for two years. Fletcher graduated from Kansas State University with a degree in Geography and Natural Resources/Environmental Sciences.

### **Dr. Brian Barber, University of Wyoming**

#### **Director of Science Programs, Biodiversity Institute**

Dr. Brian Barber earned a BS from the University of Kansas in 2001 and a PhD from the University of Minnesota in 2007. Brian is currently the Director of Science Programs at the University of Wyoming's Biodiversity Institute. Brian's research is rooted in evolutionary biology but he has recently become interested in how outreach efforts, such as citizen science, can increase scientific literacy in K-12 students and in the general public.