



**COASTWIDE SALMONID  
GENETIC CONFERENCE**

**BOISE, IDAHO 27-29 JUNE, 2023**

Hosted By



Sponsored By



## Schedule At a Glance

### Monday (6/26):

6:00 PM – 10:00 PM: Barbeque at Kristin Armstrong Municipal Park (500 S Walnut St, Boise, ID 83712) next to the IDFG Headquarters' office; Food and drink (Beer/wine/non-alcoholic beverages) will be provided

### Tuesday (6/27):

6:30 AM – 8:00 AM: Breakfast at the Grove Hotel (provided)

8:00 AM – 12:00 PM: Meeting/talks at the Grove Hotel

12:00 PM – 1:00 PM: Lunch at the Grove Hotel (provided)

1:00 PM – 5:20 PM: Meeting/talks at the Grove Hotel

*3:00 PM – 6:00 PM: Poster setup for presenters*

6:00 PM – 9:00 PM: Poster session and Trade show (cash/credit bar available, hors d'oeuvres provided)

### Wednesday (6/28):

6:30 AM – 8:00 AM: Breakfast at the Grove Hotel (provided)

8:00 AM – 12:05 PM: Meeting/talks at the Grove Hotel

12:05 PM – 1:00 PM: Lunch at the Grove Hotel (provided)

1:00 PM – 2:15 PM: Breakout sessions (Topics: Development of Bull Trout baseline; Revised Chinook SNP baseline)

2:15 PM – 5:20 PM: Meeting/talks at the Grove Hotel

6:00 PM – 10:00 PM: Social at Meriwether Cider House (224 N 9th St, Boise, ID 83702; Cash/credit bar available, hors d'oeuvres provided)

### Thursday (6/29):

6:30 AM – 8:00 AM: Breakfast at the Grove Hotel (provided)

8:00 AM – 12:00 PM: Meeting/talks at the Grove Hotel

1:00 PM – 6:00 PM: Rafting float trip down the main Payette River

**Registration Desk Open: Tues & Weds 6:30 AM – 5:00 PM; Thurs 6:30 AM – 12:00 PM**

# Detailed Meeting Schedule

## Monday (6/26) Evening

6:00 – 10:00: Barbeque at Kristin Armstrong Municipal Park (500 S Walnut St, Boise, ID 83712) next to the IDFG Headquarters' office; Food and drink (Beer/wine/non-alcoholic beverages) will be provided

## Tuesday (6/27) Morning

6:30 – Breakfast at Grove Hotel (buffet-style; open until 8:00)

8:00 – Introduction to the meeting (Matt Campbell/Shawn Narum)

8:10 – Fred Utter memorial talk (led by Robin Waples)

*Session 1 begins: Mixed stock analyses and parentage-based tagging with genetic markers*

8:30 – Paul Moran: Genetic research, monitoring, and evaluation in US West Coast fishery management and the conservation of protected marine resources

8:50 – John Hargrove: Efficient population representation with more genetic markers increases performance of a genetic stock identification baseline

9:10 – Devon Pearse: Genetic parentage reveals the (un)natural history of central valley hatchery steelhead

9:30 – Jon Hess: Visual and genetic stock identification of a test fishery forecast Columbia River spring Chinook stocks 2 weeks into the future

9:50 – Eric Rondeau: Parentage-based tagging at-scale: Applications in Canadian mixed-stock fisheries and broodstock monitoring

10:10 – Break

10:25 – Ryan Whitmore: Using terminal genetic stock identification (GSI) and upriver mark-recapture to estimate total systemwide escapement of Pacific salmon

10:45 – Yingxin Su: Conservation of the Paiute cutthroat trout: discovering genetic markers to monitor multiple refuge populations and translocations

11:05 – Sam Rosenbaum: Reliability of trans-generational genetic mark-recapture (tGMR) for enumerating Pacific salmon

11:25 – Kyle Shedd: Status and future plans for coastwide genetic baselines used by ADF&G

11:45 – *Sponsor talk* AgriPlex: The Chinook Salmon Grandparentage PlexSeq SNP Panel

## Tuesday (6/27) Afternoon

12:00 – Lunch at Grove Hotel

1:00 – Bobby Hsu: Harnessing the power of regional baselines for broad-scale genetic stock identification: A multistage, integrated, and cost-effective approach

1:20 – Sara Gilk-Baumer: Genotyping at sea informs in-season fisheries management in real-time

1:40 – Emily Schwabe: Frequency and fitness consequences of close-kin inbreeding in wild Sockeye salmon populations

2:00 – Patrick Barry: Spatiotemporal dynamics of Chum salmon bycatch in the Bering Sea

2:20 – Mariah Meek: The Fast and the Fishy: Advancements in genomic run identification for Chinook Salmon Management in the Central Valley

2:40 – Erin E. Collins: Evaluating intraspecific diversity in Central Valley Chinook salmon over the past 20 years

3:00 – Break

### ***Session 2 begins: Phylogenomic studies testing relationships among taxa***

3:15 – Nathan J. C. Backenstose: Historical demography and population genomics of adaptive radiations in Great Lakes salmonids

3:35 – Aja Tengstedt: Genomic insights into the demographic history and conservation status of Danish whitefish (*coregonus* spp.) populations

3:55 – Zachary Robinson: Efficient species identification for large-scale Pacific salmon genetic monitoring programs

4:15 – Remi Murdoch: Back to the future: 2,000 years of Skagit River Salmonidae species and life-history diversity

4:35 – Daniel Bingham: High genetic differentiation in three Salmonid species from the Skagit River hydroelectric project area, Washington, USA

4:55 – *Sponsor talk* GTseek

5:10 – *Sponsor talk* Standard BioTools: Molecular Testing in Aquaculture: solve common and complex issues with the X9™ system

## Tuesday (6/27) Evening

6:00 – 9:00: Poster session and Trade show (cash/credit bar available, hors d'oeuvres provided)

Meggan Alston: Understanding Yellowstone cutthroat trout hybridization and connectivity within the Teton river system, a combined genomics and modeling approach (poster #1)

Gavin Bandy: Using a foreign DNA tracer to calibrate natural environmental DNA signals of coho salmon (*Oncorhynchus kisutch*) in small streams (poster #2)

Scott Blankenship: The importance of place; Fish diversity observed using DNA metabarcoding (poster #3)

Jacqueline Bridegum: Comparing eDNA and juvenile salmon trap passage estimates on the Sacramento River (poster #4)

Matthew C. Hale: Characterization of the significance and distribution of a large chromosomal inversion in native populations of rainbow trout (poster #5)

Nick F. Hoffman: Genome-wide association study for precocious maturation of two-year-old male spring Chinook Salmon (*Oncorhynchus tshawytscha*) (poster #6)

Rebekah L. Horn: Utility of parentage-based tagging for monitoring Coho salmon (*Oncorhynchus kisutch*) in the interior Columbia River basin (poster #7)

Dylan Keel: Effects of depth, distance to shore, and water velocity on organismal and extra-organismal environmental DNA concentrations in a large river (poster #8)

Janet L. Loxterman: Evolutionary diversification of rainbow trout from Western North America (poster #9)

Angela Phung: DNA sampling of smolts improves early estimates of adult sockeye returns for fisheries management (poster #10)

Jeff J Stephenson: Reproductive success of reconditioned kelt steelhead in the Yakima River Basin (poster #11)

Craig Wells: Assessing population structure and hatchery introgression within Skagit River Basin *Oncorhynchus mykiss* (poster #12)

Stuart Willis: Analysis of iteroparous spawning phenology in steelhead trout (*Oncorhynchus mykiss*) using low-coverage whole genomic resequencing (poster #13)

### Wednesday (6/28) Morning

6:30 – Breakfast at Grove Hotel (buffet-style; open until 8:00)

#### ***Session 3 begins: Identification and validation of adaptive variation from whole genome/genome-wide approaches***

8:00 – Audrey Harris: Temporal shifts in adaptive haplotypes associated with age-at-maturity in Dworshak National Fish Hatchery steelhead

8:20 – Garrett McKinney: Y-chromosome haplotype diversity and male age at maturity in Chinook salmon

8:40 – Catherine Clare: Comparative genomics of rainbow trout (*Oncorhynchus mykiss*): Is the genetic architecture of migratory behavior conserved among populations?

9:00 – Michael Phelps: Applying genome editing technology to advance salmon functional genomics and conservation

9:20 – Morgan Sparks: A large, recently evolved supergene facilitates rapid adaptation of an introduced fish

9:40 – Wes Larson: Is structural variation necessary to create islands of divergence in moderate gene flow species? A case study in sockeye salmon

10:00 – Break

10:15 – Samuel May: Genetic variation underlying dispersal in Sockeye salmon

10:35 – R. Paul Evans: A cutthroat trout chromosome-level genome assembly, transcriptomes, and low-coverage whole genome sequencing

10:55 – Christopher Setzke: Haplotype association analyses for fine-mapping of QTLs for IHNV resistance in two commercial lines of rainbow trout

11:15 – Alexandra Fraik: The genomics of an isolated lake bull trout population in Idaho

11:35 – Sara Hugentobler: Understanding Chinook salmon life history variation in the Yuba River, California

11:55 – *Sponsor talk* Illumina: Trends in Applications with Illumina Sequencing

### Wednesday (6/28) Afternoon

12:05 – Lunch at Grove Hotel

1:00 – Break out sessions: Development of Bull Trout baseline (Ivy room); Revised Chinook SNP baseline (Evergreen room)

2:15 – Shawn Narum: Genetic variation associated with migration timing in lineages of Chinook salmon and steelhead in the Columbia River Basin

2:45 – Rebekah Horn: Whole genome re-sequencing of Chinook salmon to estimate standing variation across populations

3:05 – Tasha Thompson: A range-wide catalog of whole genomes reveals broad importance and complexity of GREB1L

3:25 – Break

3:40 – Stuart Willis: Contrasting patterns of sequence variation in steelhead populations reflect distinct evolutionary processes

4:00 – Krista Nichols: The genomics of the re-establishing summer and winter steelhead in the Elwha River following large scale dam removal

***Session 4 begins: Genetic effects of fish management***

4:20 – Megan McPhee: Experimental integrated sockeye salmon enhancement reveals demographic benefits but phenotypic costs

4:40 – Kathleen O'Malley: A single generation in the wild increases fitness for descendants of hatchery Chinook salmon (*Oncorhynchus tshawytscha*)

5:00 – *Sponsor talk* Pac-Bio

5:10 – *Sponsor talk* Twist BioScience

**Wednesday (6/28) Evening**

6:00 – 10:00: Social at Meriwether Cider House (224 N 9th St, Boise, ID 83702; Cash/credit bar available, hors d'oeuvres provided)



### **Thursday (6/29) Morning**

6:30 – Breakfast at Grove Hotel (buffet-style; open until 8:00)

8:00 – Hayley Nuetzel: The progression of naturalization: Using parentage-based tagging to monitor the reintroduction of spring Chinook salmon to Lookingglass Creek, OR

8:20 – Natasha Howe: Genomic evidence for domestication selection in three hatchery populations of Chinook salmon, *Oncorhynchus tshawytscha*

8:40 – Ilana Koch: A current review of epigenetic effects associated with salmonid supplementation and domestication

9:00 – Scott Blankenship: Observed effects of habitat restoration on juvenile Chinook Salmon recruitment rates using parentage methods

9:20 – Travis Seaborn: Comparative riverscape genetics of Elwha River salmonid species and life-history forms following dam removal

9:40 – William Rosenthal: Hybridization decreases native Cutthroat Trout reproductive fitness

10:00 – Break

10:15 – Rebecca Smith: Southern Appalachian Brook Trout Reintroductions: Does Genetics matter?

10:35 – Steven Mussmann: Genetic evaluation of trojan YY brook trout treatments in New Mexico during 2019-2022

#### ***Session 5 begins: Applications of eDNA and metabarcoding***

10:55 – Andrew P Kinziger: Using environmental DNA in water samples to monitor the distribution and abundance of salmonids

11:05 – Diana Baetscher: Dispersal of salmon eDNA from net pens in nearshore Southeast Alaska

11:25 – Gregory Schumer: Calibrating eDNA sampling strategies for monitoring endemic salmonids in Western US drought-stricken ecosystems

11:45 – Closing remarks

### **Thursday (6/29) Afternoon**

1:00 PM – 6:00 PM: Rafting float trip down the main Payette River (meet at Grove Hotel for roundtrip transportation)

2nd Floor Map

