

2021 ICAFS Presentation Schedule

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Tuesday, March 2

Plenary Session: "Aquaculture in Idaho: Putting the Fish in Fisheries"

10:30 am – 10:40 am	<i>Opening & Welcome</i>
10:40 am – 11:10 am	WHY AQUACULTURE MATTERS Jesse Trushenski – Riverence Holdings LLC
11:10 am – 11:35 am	IDAHO'S AQUACULTURE INDUSTRY: FOOD, JOBS AND MORE Gary Fornshell – Aquaculture Results LLC
11:35 am – 12:00 pm	FISH HATCHERIS AND MANAGEMENT IN THE IDAHO DEPARTMENT OF FISH AND GAME: INNOVATION AND INTEGRATION AT EVERY STATION Jim Fredericks – Idaho Department of Fish and Game
12:00 pm – 12:20 pm	USING CONSERVATION AQUACULTURE TO RESTORE NATIVE SPECIES: A TALE OF TWO FISHES FROM THE KOOTENAI Sue Ireland – Kootenai Tribe of Idaho
12:20 pm – 12:45 pm	SOLUTIONS THROUGH SCIENCE: RESEARCH AS A CRITICAL COMPONENT TO ENHANCING FISH CULTURE AND FISHERIES Ken Cain – University of Idaho

Invited Presentations

1:15 pm – 1:35 pm	MONITORING HATCHERY PROGRAMS WITH GENETIC TOOLS Shawn Narum - Columbia River Inter-Tribal Fish Commission
1:35 pm – 1:55 pm	THE WAFWA YY MALE CONSORTIUM: EXTENDING IDFG'S EXPERIMENTAL BROOK TROUT PROGRAM TO OTHER STATES AND SPECIES Dan Schill – Idaho Department of Fish and Game
1:55 pm – 2: 15 pm	RECENT ADAPTATIONS OF THE KOOTENAI RIVER NATVIE FISH CONSERVATION AQUACULTURE PROGRAM TO RESTORE WHITE STURGEON AND BURBOT Shawn Young - Kootenai Tribe of Idaho
2:15 pm – 2:35 pm	DEMOGRAPHIC AND GENETIC CONSERVATION OF SNAKE RIVER SOCKEYE SALMON VIA EX SITU SPAWNING AND REARING John Powell – Idaho Department of Fish and Game
2:35 pm – 2:40 pm	IGNITE: MITIGATION WASN'T BUILT IN A DAY: IDAHO'S AQUACULTURE HISTORY Eric Pankau – Pocatello High School

3:00 pm- 5:00 pm

Student Breakout – Virtual Job Board

Wednesday, March 3

Contributed Presentations (concurrent)

	<u>Aquaculture Practices</u>	<u>Fish Habitat</u>
10:15 am – 10:35 am	EVALUATION OF METHODS TO ESTIMATE FISH PER POUND IN IDAHO HATCHERIES Dan Dillon – IDFG	EXPLORING STREAM CONNECTIVITY OUTCOMES FOR STAKEHOLDERS AND YELLOWSTONE CUTTHROAT TROUT IN THE TETON RIVER DRAINAGE Lizzie Jossie – ISU
10:35 am – 10:55 am	EFFECTS OF INITIAL FEEDING TIMING ON EARLY SURVIVAL OF BONNEVILLE CUTTHROAT TROUT Steve Stowell – IDFG	THREE YEARS OF POST-PROJECT EFFECTIVENESS MONITORING AND ADAPTIVE MANAGEMENT ON TWO PROJECTS IN THE UPPER LEMHI RIVER WATERSHED Katie Salsbury – Intermountain Aquatics
10:55 am – 11:15 am	INVESTIGATION OF WELL WATER REARING AS A MEANS OF BACTERIAL KIDNEY DISEASE CONTROL AT THE PAHSIMEROI HATCHERY Douglas Engemann – IDFG	TRIBUTARY SCALE FISH RESPONSE FOLLOWING IMPLEMENTATION OF HABITAT CONSERVATION ACTIONS IN THE LEMHI RIVER SUB-BASIN, IDAHO Jeffrey Diluccia - IDFG
	<u>Sturgeon</u>	<u>Fish Habitat</u>
11:45 am – 12:05 pm	WHITE STURGEON REPATRIATION IN THE MIDDLE SNAKE RIVER Phil Bates – Idaho Power	CHARACTERIZING SPATIOTEMPORAL VARIABILITY IN WATER TEMPERATURE AND HABITAT TO INFORM RESTORATION FOR COLD-WATER FISHES Eric Berntsen – Kalispel Tribe
12:05 pm – 12:25 pm	WHITE STURGEON CONSERVATION AQUACULTURE IN THE MIDDLE SNAKE RIVER; THE BENEFITS AND CHALLENGES OF REPATRIATION Riley Brown – Idaho Power	DISTRIBUTION, ABUNDANCE, AND HABITAT ASSOCIATIONS OF WARRIOR BASS (MICROPTERUS WARRIORENSIS) IN THE BLACK WARRIOR WATERSHED, ALABAMA Amber Young – Auburn U
12:25 pm – 12:45 pm	NIAGRA SPRINGS WHITE STURGEON HATCHERY CONSTRUCTION COMPLETE Daniela Ruiz - IDFG	DESCRIPTION OF JUVENILE ANADROMOUS SALMONID HABITAT DENSITY RELATIONSHIPS USING LARGE INTERAGENCY DATABASES AND SPATIAL STREAM NETWORK (SSN) MODELS Dan Isaak – USFS

Wednesday, March 3 (cont.)

Contributed Presentations (concurrent)

	<u>Sturgeon</u>	<u>Population Dynamics</u>
1:15 pm – 1:35 pm	KOOTENAI RIVER WHITE STURGEON NATURAL SUBSTRATE AND FUNGAL CONTROL DURING EGG INCUBATION EXPERIMENT Brian R. Michaels Jr. - KTOI	POPULATION DYNAMICS OF BONNEVILLE CUTTHROAT TROUT IN BEAR LAKE Megan Heller – U of Idaho
1:35 pm – 1:55 pm	SPONTANEOUS AUTOPOLYPLOIDY TESTING PROTOCOL FOR THREE-MONTH-OLD KOOTENAI RIVER WHITE STURGEON Mark Elliston - KTOI	SALMONID POPULATION TRENDS IN IDAHO'S SOUTH FOR BOISE RIVER Timothy D'Amico - IDFG
1:55 pm – 2:15 pm	SUBMERSIBLE PIT-TAG ANTENNA – ANOTHER TOOL TO SUPPORT POST-RELEASE EVALUATIONS OF WHITE STURGEON IN THE SNAKE RIVER Brandon Bentz - Idaho Power	POPULATION DYNAMICS AND TEMPORAL TRENDS OF BULL TROUT IN THE EAST FORK SALMON RIVER, IDAHO Eric Stark - IDFG
	<u>Genetics</u>	<u>Population Dynamics</u>
2:45 pm – 3:05 pm	DNA-METHYLATION PROFILES OF REDBAND TROUT FROM DESERT AND MONTANE ENVIRONMENTS Benjamin Kline - ISU	DEMOGRAPHICS OF IDAHO BROOK TROUT POPULATIONS Patrick Kennedy - IDFG
3:05 pm – 3:25 pm	GENETIC AND MORPHOMETRIC TOOLS TO IDENTIFY SPECIES DIVERSITY OF CATOSTOMID FISHES IN THE INTERMOUNTAIN WESTERN UNITED STATES Brandy Smith - ISU	ELEVATED STREAM TEMPERATURE, ORIGIN, AND INDIVIDUAL SIZE INFLUENCE CHINOOK SALMON PRESPAWN MORTALITY ACROSS THE COLUMBIA RIVER BASIN Christopher Caudill – U of Idaho
3:25 pm – 3:45 pm	VALIDATION AND ASSOCIATION OF CANDIDATE MARKERS FOR ADULT MIGRATION TIMING AND FITNESS IN CHINOOK SALMON Iana Koch - CRITFC	LIFE HISTORY DIVERSITY OF A RECOVERING SALMON RIVER CHINOOK SALMON POPULATION Brian Kennedy – U of Idaho
4:00 pm- 5:00 pm	Student Breakout – Habitat & Water Quality Student Breakout – Aquaculture Student Breakout – Communication & Marketing Student Breakout – Enforcement	

Thursday, March 4

Contributed Presentations (concurrent)

	<u>Aquaculture Practices</u>	<u>LPO Walleye</u>
10:45 am – 11:05 am	HOW TO CREATE A SEXUALLY REVERSED BROOK TROUT BROODSTOCK IN A HATCHERY SETTING Thomas Lindenmuth – IDFG	SEASONAL DISTRIBUTION AND FOOD HABITS OF WALLEYES IN LAKE PEND OREILLE Susan Frawley – U of Idaho

11:05 am – 11:25 am	XX ALL-FEMALE RAINBOW TROUT – SEX REVERSAL Jared Riemenschneider – IDFG	SEASONAL MOVEMENTS AND HABITAT USE OF WALLEYE IN LAKE PEND OREILLE DURING 2019 AND 2020 Pete Rust – IDFG
11:25 am – 11:45 am	USING LIGHT MANIPULATION TO SPAWN RAINBOW TROUT YEAR-ROUND Thomas Lindenmuth – IDFG	EVALUATION OF A PILOT WALLEYE SUPPRESSION PROGRAM IN LAKE PEND OREILLE, IDAHO Matthew Corsi - IDFG

ICAFS Business Meeting

12:00 pm – 2:00 pm

Thursday, March 4 (cont.)

Poster Q&A Sessions (concurrent)

2:30 pm – 3:30 pm	DO DIFFERENCE IN BEHAVIORAL PLASTICITY AMONG REDBAND TROUT (<i>ONCORHYNCHUS MYKISS GAIRDNERI</i>) POPULATIONS CONTRIBUTE TO ADAPTIVE CAPACITY? Jonathan Masingale – U of Idaho	MONITORING HATCHERY PRODUCTION, BROODSTOCK COMPOSITION, AND GENETIC VARIATION OF SPRING/SUMMER CHINOOK SALMON IN THE SNAKE RIVER BASIN WITH MULTI-GENERATION PEDIGREES Rebekah Horn -CRITFC
	SWIMMING IN 'THIN AIR': EVALUATING THE COMBINATION OF HYPOXIC AND THERMAL STRESS AN ADDITIVE OR SYNERGISTIC	TRANSLOCATION OF WESTERN PEARLSHELL MUSSELS IN TINCUP CREEK, IDAHO Miria Barnes – BYU-Idaho

EFFECT (ONCORHYNCHUS MYKISS GAIRDNERI)

Carlie Sharpes – U of Idaho

GENETIC ANALYSIS OF NATIVE REDBAND TROUT LEGACY SAMPLES IN IDAHO

Tyler Breech - ISU

PHENOTYPIC PLASTICITY IN THERMAL TOLERANCE AND PERFORMANCE WITHIN AND AMONG REDBAND TROUT POPULATIONS

Zhongqi Chen – U of Idaho

LEADING INNOVATION IN IDAHO AQUACULTURE THROUGH RESEARCH, TEACHING AND OUTREACH

Brian Small – U of Idaho

MANAGING DURING THE FALL: IMPROVING ESTIMATES OF HATCHERY ADULT SNAKE RIVER SPING-SUMMER CHINOOK SALMON DURING RECORD LOW RETURNS

Katharine Coykendall - IDFG

EVIDENCE FOR INCREASING SUMMER TEMPERATURES IN HENRYS LAKE, IDAHO USING REMOTE SENSING

Mitchell Tree - BYU-Idaho

ESTIMATING GROWTH AND BODY CONDITION OF MYY BROOK TROUT

James Sage Unsworth - IDFG

EVALUATING THE PRECISION OF AGE ESTIMATES FROM LAKE CASCADE YELLOW PERCH HARD STRUCTURES

Isaac Fournier – IDFG

ASSESSMENT OF HARD STRUCTURES USED TO ESTIMATE AGE OF SMALLMOUTH BASS IN LAKE CASCADE, IDAHO

Steve Hughes – IDFG

4:00 pm- 5:00 pm

Student Breakout – Federal Fisheries Biologists
Student Breakout – Fisheries Research & Academia
Student Breakout – NGOs & Utilities
Student Breakout – State Fisheries Biologists

Friday, March 5

Contributed Presentations (concurrent)

Aquaculture Practices

Fishery Management

10:15 am – 10:35 am

CONTROL OF BURBOT (LOTA LOTA) SPAWNING INDEPENDENT OF NATURAL SEASON USING PHOTOTHERMAL MANIPULATION

Luke Oliver – U of Idaho

INFLUENCE OF PARASITIC COPEPODS ON VULNERABILITY TO ANGLING AND SHOT-TERM SURVIVAL OF RAINBOW TROUT

Hannah Bluth – BYU-Idaho

10:35 am – 10:55 am

VOLITIONAL SPAWNIGN AND EGG INCUBATION PRACTICES USED IN THE RECOVERY OF KOOTENAI RIVER BURBOT

Riley Jones – KTOI

FLOATER USE OF THE BIG SPRINGS NATIONAL RECREATION WATER TRAIL: ASSESSING CONFLICTING PUBLIC OPINIONS

Kamberlee Allison – HFF

10:55 am – 11:15 am

EARLY WEANING OF BURBOT (LOTA LOTA MACULOSA) LARVAE ONTO ARTIFICIAL ARTEMIA (EZ ARTEMIA) AND GEMMA MICRO DIET

Moureen Matuha – U of Idaho

ENCOUNTER RATES AND CATCH-AND-RELEASE MORTALITY OF WILD STEELHEAD IN IDAHO

William Lubenau – U of Idaho

11:15 am – 11:20 am	<p><i>IGNITE!</i> USING AN ALL-INSECT BASED FEED SUPPLEMENT TO ACTIVATE AN IMMUNE RESPONSE IN RAINBOW TROUT</p> <p>Joseph Wannemuehler – IDFG</p>	<p><i>IGNITE!</i> LAKE TROUT REMOVAL IN A CENTRAL IDAHO LAKE</p> <p>Taylor Morlan - IDFG</p>
	<u>Outside the Hatchery</u>	<u>Age & Growth</u>
11:45 am – 12:05 pm	<p>COLLECTING KOOTENAI RIVER ADAPTED, HATCHERY PRODUCED BURBOT FOR BROODSTOCK AT THE KOOTENAI TRIBE OF IDAHO'S - TWIN RIVERS HATCHERY</p> <p>Brycen Lunger - KTOI</p>	<p>COMPARISON OF HARD STRUCTURES USED TO ESTIMATE AGE OF YELLOWSTONE CUTTHROAT TROUT FROM HENRYS LAKE, IDAHO</p> <p>Lynsey Harris – U of Idaho</p>
12:05 pm – 12:25 pm	<p>EVALUATION OF NATURAL AND HATCHERY-PRODUCED KOKANEE IN FLAMING GORGE RESERVOIR</p> <p>Aaron Black – U of Idaho</p>	<p>FACTORS INFLUENCING YELLOWSTONE CUTTHROAT TROUT GROWTH IN HENRYS LAKE, IDAHO</p> <p>Darcy McCarrick – U of Idaho</p>
12:25 pm – 12:45 pm	<p>STRATEGIC USE OF KOOTENAI RIVER BURBOT EMBRYOS RELEASED DUE TO COVID-19 RELATED FORCED HATCHERY SHUTDOWN</p> <p>Nathan Jensen - KTOI</p>	<p>COMPARISON OF METHODS USED TO ESTIMATE AGE COMPOSITION OF CHINOOK SALMON POPULATIONS WHEN THE BEARS BEAT YOU TO THE CARCASSES</p> <p>Eli Felts – IDFG</p>

Friday, March 5 (cont.)

Contributed Presentations

Native Trout

1:15 pm – 1:35 pm	<p>MOVEMENT AND HABITAT USE OF YELLOWSTONE CUTTHROAT TROUT AND UTAH CHUB IN HENRYS LAKE, IDAHO</p> <p>Darcy McCarrick – U of Idaho</p>
1:35 pm – 1:55 pm	<p>DEVELOPING A FRAMEWORK FOR ASSESSING ADAPTIVE CAPACITY IN STREAM NETWORKS USING AGENT-BASED MODELS FOR REDBAND TROUT</p> <p>Travis Seaborn – U of Idaho</p>
1:55 pm – 2:15 pm	<p>OCCURRENCE, ABUNDANCE, MOVEMENT, AND HABITAT ASSOCIATIONS OF BONNEVILLE CUTTHROAT TROUT IN THREE TRIBUTARIES TO BEAR LAKE</p> <p>Megan Heller – U of Idaho</p>

Native Trout

2:45 pm – 3:05 pm	<p>FACTORS CONTRIBUTING TO THE PRESENT AND FUTURE OCCURRENCE OF RELICT HEADWATER BULL TROUT POPULATIONS IN THE NORTHERN ROCKY MOUNTAINS</p> <p>Dan Isaak – USFS</p>
3:05 pm – 3:25 pm	<p>FACTORS RELATED TO THE DISTRIBUTION AND ABUNDANCE OF RESIDENT SALMONIDS IN CENTRAL IDAHO</p> <p>Curtis Roth – IDFG</p>

3:25 pm – 3:45pm

SPECIES TRAITS AND LANDSCAPE RESISTANCE MEDIATE NATIVE FISH
DISTRIBUTION SHIFTS AND VULNERABILITY TO CLIMATE CHANGE IN A
ROCKY MOUNTAIN RIVERSCAPE
Dan Isaak – USFS

Meeting Closing & Awards