

DRAFT Conference Schedule

Ecological Interactions between Wild and Hatchery Salmon

All events take place at the conference venue, the Hilton Hotel, unless otherwise indicated

TUESDAY, MAY 4

- 5:30-8:00 PM OPENING RECEPTION – *Mark Building of the Portland Art Museum, Sunken Ballroom*
- *With welcoming comments from **Tom Brokaw***
 - **Jack Stanford**, *University of Montana*
- Please sign up upon registering*
- 7:00 – 10:00 PM WILD SALMON CENTER SPRING DINNER – *Mark Building of the Portland Art Museum, Grand Ballroom*
- With special guest Tom Brokaw**
Sold Out
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WEDNESDAY, MAY 5

- 7:00-8:00 AM BREAKFAST BUFFET
- 8:00-8:30 AM OPENING CEREMONY
- Pete Rand**, Opening comments
Welcome, Overview
Welcoming and inspirational comments
- **Don Sampson**, *Confederated Tribes of the Umatilla Indian Reservation*
 - **Spencer Beebe**, *Ecotrust*
 - **Guido Rahr**, *Wild Salmon Center*
- 8:30-10:00 AM KEYNOTE PLENARY
- Chair: **Pete Rand**
Framing the issues
Broad issues framing socio-political, theoretical and management themes—and the gaps between them—will set the stage for the conference
- **Ray Hilborn**, *University of Washington*
Hatchery-wild interactions and the role of adaptive management
 - **Rob Walton**, *NOAA Salmon Recovery Division*
Hatcheries and the Endangered Species Act: policy issues and critical uncertainties
- 10:00-10:30 AM COFFEE BREAK
- 10:30AM-12:00 PM MORNING PLENARY
- Co-Chairs: **Barry Berejikian** and **David Noakes**
1. Ecological interactions across habitats and life histories

Barry Berejikian, *NOAA Northwest Fisheries Science Center*
Introduction

1A. Ecological interactions across habitats and life histories: Part I

Juvenile salmon and smolts in freshwater

- **Jim Winton**, *USGS*
Disease risks posed by hatchery salmon
- **Seth Naman**, *NOAA Southwest Region, Protected Resources*
Predation by juvenile hatchery salmonids on natural produced salmonids in the freshwater environment: A review of studies, two case histories, and implications for management
- **Eric Buhle**, *NOAA Northwest Fisheries Science Center*
Unintended consequences of supplementation: Impact of hatcheries on salmon population dynamics
- **Chris Tatara**, *NOAA Northwest Fisheries Science Center*
Evidence of and factors affecting competition between wild and hatchery anadromous salmonids in freshwater

Questions, Answers, Discussion

12:00-1:30 PM LUNCH

1:30-3:00 PM AFTERNOON PLENARY

Co-Chairs: **Barry Berejikian** and **David Noakes**

1B. Ecological interactions across habitats and life histories: Part II

Post-smolts in the estuarine/coastal shelf environments

- **Dan Bottom**, *NOAA Northwest Fisheries Science Center*
Hatchery influence on the estuarine life histories of juvenile salmon
- **Elizabeth Daly**, *Oregon State University*
Spatial overlap and potential competitive trophic interactions of marked and unmarked Chinook salmon during early marine residence in the California Current

Sub-adults on the high seas

- **Greg Ruggerone**, *Natural Resources Consultants, Inc.*
Evidence for competition between salmon at sea
- **Masahide Kaeriyama**, *Hokkaido University*
Ecological interactions across habitats and life histories of Pacific salmon in the North Pacific

Questions, Answers, Discussion

3:00-3:30 PM COFFEE BREAK

3:30-5:00 PM AFTERNOON PLENARY

Co-Chairs: **Barry Berejikian** and **David Noakes**

1C. Ecological interactions across habitats and life histories: Part III

Adults migrating and spawning from coast to spawning grounds

- **Mark Scheuerell**, *NOAA Northwest Fisheries Science Center*
Evaluating large-scale effects of hatchery supplementation on threatened spring/summer Chinook salmon from the Snake River basin, USA

- **Andrew Dittman**, *NOAA Northwest Fisheries Science Center*
Spatial and temporal overlap of hatchery and wild spring Chinook salmon spawning: effects of hatchery acclimation sites
- **Steve Schroder**, *Washington Department of Fish and Wildlife*
The reproductive behavior and breeding success of hatchery and wild spring Chinook salmon spawning in an artificial stream
- **Rich Brenner**, *Alaska Department of Fish and Game*
Hatchery pink and chum salmon straying into Prince William Sound and southeast Alaska streams

Questions, Answers, Discussion

5:00-7:00 PM MIXER AND POSTER SESSION

7:00-10:00 PM EVENING RECEPTION – *Keen's Great Room*
With welcoming comments from

- **James Curleigh**, *Keen*
- **Jim Humphreys**, *Marine Stewardship Council*

Please sign up upon registering

THURSDAY, MAY 6

7:00-8:00 AM BREAKFAST BUFFET

8:00-10:00 AM MORNING PLENARY

Chair: **Susan Hanna**

2. Human responses to hatcheries: Understanding the social, cultural, legal, and economic dimensions

- **Susan Hanna**, *Oregon State University*
Coevolution of hatcheries, economics, property rights and management
- **Chris Carter**, *Oregon Department of Fish and Wildlife (retired)*
Economic analysis of a Columbia River fish hatchery program
- **Mitsuhiro Nagata**, *Hokkaido Fish Hatchery*
Conservation principles of naturally spawning salmonids in Hokkaido, Japan
- **David Close**, *University of British Columbia*
Fish without a story
- **Vladimir Samarskiy**, *SakhalinRybvod*
Wild and hatchery reproduction of Pacific salmonids in Sakhalin region
- **John Burke**, *Southern Southeast Regional Aquaculture Association*
Alaska salmon enhancement: The economic impact of the Southern Southeast Region Aquaculture Program

Panel Discussion

10:00-10:30 AM COFFEE BREAK

10:30AM-12:00 PM MORNING PLENARY

Chair: **Rich Lincoln**

3. Pacific Rim highlights: Moving from theory to practice

Examples from a diversity of salmon ecoregions around the North Pacific focused on predicting, minimizing, and adaptively managing risks associated with ecological interactions between wild and hatchery salmon

- **Mel Sheng**, *Canada Department of Fisheries and Oceans, Salmon Enhancement Program*
An Overview of Coho and Chinook Hatchery Facilities in the Strait of Georgia (SoG-Salish Sea)
- **Karl English**, LGL
Skeena Independent Science Review Panel -- Overview
- **Alexander Kaev**, *SakhNIRO*
Significance of hatchery pink and chum salmon for the Sakhalin region fishery
- **Eric Volk**, *Alaska Department of Fish and Game*
Balancing benefits and risks of large scale hatchery salmon production in Alaska

Questions, Answers, Discussion

12:00-1:30 PM LUNCH

1:30-3:00 PM CONCURRENT COLUMBIA RIVER AND REGIONAL BREAKOUT SESSIONS

4A. Columbia River: Moving from theory to practice Part I, risk assessment

Co-Chairs: **Todd Pearsons** and **Brian Allee**

Examples from the Columbia River focused on predicting, minimizing, and adaptively managing risk of ecological interactions between wild and hatchery salmon

- **Todd Pearsons**, *Grant County Public Utility District*
Ecological Risk Assessment of multiple hatchery programs in the upper Columbia Watershed using a Delphi approach
- **Craig Busack**, *NOAA Salmon Recovery Division*
PCD Risk 1, a model for assessing and reducing the ecological risk of salmonid hatchery operations in freshwater
- **Kyle Brakensiek**, *independent consultant*
Ecological risks to natural populations of Chinook salmon by hatchery releases of Chinook and coho salmon throughout the greater Puget Sound region, Washington: A PCD Risk 1 assessment
- **Paul Rankin**, *Canada Department of Fisheries and Oceans*
Interactions among hatchery-origin sockeye salmon, wild kokanee, and the invasive species *Mysis relicta* in Skaha Lake, British Columbia: A food web and competition analysis
- **Barry Berejikian**, *NOAA Northwest Fisheries Science Center*
Natural growth regimes for hatchery-reared steelhead to reduce residualism and negative ecological interactions

Questions, Answers, Discussion

1:30-3:00 PM **5A. Regional breakout sessions: Knowledge and management gaps in wild-hatchery salmon interactions**

Meetings of scientists, managers and stakeholders organized prior to the conference; observers are welcome to attend (space permitting)

Alaska and North Coast British Columbia

Facilitator: **Judy Gordon**, *USFWS*

Organizers: **William Smoker**, *University of Alaska Fairbanks (retired)*

Alex Wertheimer, *NOAA Alaska Fisheries Science Center (retired)*

- **William Heard**, *NOAA Fisheries*

- An overview of salmon stock enhancement in Southeast Alaska
- **Steve Moffitt**, *Alaska Department of Fish and Game*
Prince William Sound hatchery pink salmon straying: A preliminary model
- **Matthew Foy**, *Canada Department of Fisheries and Oceans, Salmon Enhancement Program*
A brief summary of salmon enhancement programs in north coastal British Columbia, Canada
- **Karl English**, *LGL*
Skeena Independent Science Review Panel - Assessing tradeoffs between biodiversity and harvest yield using data from the Skeena River

Questions, Answers, Discussion (continuing after coffee break)

Russian Far East/Western Pacific

Facilitator: **Lev Zhivotovsky**, *Moscow Institute of General Genetics*

Organizers: **Masahide Kaeriyama**, *Hokkaido University*

Vladimir Samarskiy, *Sakhalinrybvod*

- **Syuiti Abe**, *Hokkaido University*
Genetic diversity, population structure and phylogeography of Pacific salmon inferred from molecular genetic analyses
- **Yasuyuki Miyakoshi**, *Salmon and Freshwater Fisheries Research Institute*
Current status of wild and hatchery chum salmon in Hokkaido
- **Hirokazu Urabe**, *Salmon and Freshwater Fisheries Research Institute*
Conservation and enhancement of masu salmon in Hokkaido, Japan
- **Lev Zhivotovsky**, *Institute of General Genetics*
Gene flow between hatchery and wild salmon populations
- **Oleg Zaporozhets**, *KamchatNIRO*
Some ecological consequences of hatchery reproduction of Pacific salmon in Kamchatka
- **Victor Markovtsev**, *TINRO*
Hatchery effects on wild salmon
- **Sergei Zolotukhin**, *TINRO*
Wild-hatchery management of Khabarovsk fall chum salmon from 1907-2009

Questions, Answers, Discussion (continuing after coffee break)

West Coast North America Estuarine and Shelf Ecosystems

Facilitator: **Laurie Weitkamp**, *NOAA Northwest Fisheries Science Center*

Guillermo Giannico, *Oregon State University*

Organizers: **Richard Brodeur**, *NOAA Northwest Fisheries Science Center*

Dan Bottom, *NOAA Northwest Fisheries Science Center*

- **Laurie Weitkamp**, *NOAA Northwest Fisheries Science Center*
Potential interactions between juvenile salmon in West Coast shelf and estuarine waters

Questions, Answers, Discussion

3:00-3:30 PM COFFEE BREAK

3:30-5:00 PM **4B. Columbia River: Moving from theory to practice Part II, risk minimization and adaptive management**

Co-Chairs: **Todd Pearsons** and **Brian Allee**

- **Kathryn Kostow**, *Oregon Department of Fish and Wildlife*
Strategies for mitigating ecological effects of hatchery programs: Some case studies from

- the Pacific Northwest
- **Jerri Bartholomew**, *Oregon State University*
Reducing disease risks caused by pathogens associated with Columbia River hatcheries
- **Greg Blair**, *ICF International*
An analysis of potential cumulative ecological interactions of hatchery programs in the lower Columbia River
- **Gabriel Temple**, *Washington Department of Fish and Wildlife*
Risk management of non-target fish taxa in the Yakima River Watershed associated with hatchery salmon supplementation

Questions, Answers, Discussion

- 3:30-5:00 PM **5B. Regional breakout sessions: Knowledge and management gaps in wild-hatchery salmon interactions (AK, NCBC and Western Pacific breakouts continued from before break)**
Meetings of scientists, managers and stakeholders organized prior to the conference; observers are welcome to attend (space permitting)
Salish Sea
Facilitators: **Julie Gardner**, *Dovetail Consulting* and **Michael Schmidt**, *Long Live the Kings*
Organizers: **Barry Berejikian**, *NOAA Northwest Fisheries Science Center*
Cam West, *Pacific Salmon Foundation*
- 6:00-9:00 PM PORTLAND PUB NIGHT – *Meet and greet State of the Salmon staff at Kell’s, one of our cherished local haunts*

FRIDAY, MAY 7

- 7:00-8:00 AM BREAKFAST BUFFET
- 8:00-10:00 AM MORNING PLENARY
Co-Chairs: **Roy Stein** and **Pete Rand**
6A. Rapporteurs’ summary
A summary presented on each of the breakout sessions, including time for audience contribution and discussion
6B. Columbia River panel discussion
A panel discussion to reflect on outcomes of the Columbia River session: filling management gaps and identifying research needs
7A. Insights from the conference, challenges to the panel
Jim Martin, *Pure Fishing*
Salmon restoration in the 21st century: Balancing emerging science with keeping the promises
- 10:00-10:30 AM COFFEE BREAK
- 10:30-12:15 PM PANEL DISCUSSION
7B. Expert panel discussion: A path forward

Facilitator: **Roy Stein**, *Ohio State University*

An opportunity to underscore what needs to be done (in terms of planning and action) to fill key knowledge gaps and more effectively manage interactions between wild and hatchery salmon across their natural range. Key themes to emphasize might include international cooperation, implementing novel adaptive monitoring and management programs, or establishing principles or guidelines for containing or minimizing risk from hatcheries in the future.

- **Sergei Didenko**, *Sakhalin Salmon Initiative*
- **Masahide Kaeriyama**, *Hokkaido University*
- **Sara Laborde**, *Washington Department of Fish and Wildlife*
- **Paul Lumley**, *Columbia Inter-Tribal Fish Commission*
- **Jay Nicholas**, *Wild Salmon Center*
- **David Noakes**, *Oregon State University*
- **Eric Volk**, *Alaska Department of Fish and Game*

12:15 -12:30 PM

Farewell and Thanks

Closing remarks

SATURDAY, MAY 8

8:00 AM-5:00 PM OPTIONAL LOCAL TOUR (capped, sign up upon registration)
Nehalem River Hatchery and Necanicum River Habitat Restoration Project, Oregon Coast