Atlantic Salmon Ecosystems Forum

Québec City, Québec, Canada
Hôtel Château Laurier Québec

Program

March 12-13, 2019

ATLANTIC SALMON RESEARCH JOINT VENTURE | PLAN CONJOINT DE RECHERCHE SUR LE SAUMON ATLANTIQUE

ASEF FESA

INTERNATIONAL YEAR OF THE SALMON | ANNÉE INTERNATIONALE DU SAUMON

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Line-drawing on cover: “Atlantic Salmon #4”
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2019 Atlantic Salmon Ecosystems Forum

International Year of the Salmon: Salmon and People in a Changing World

Hôtel Château Laurier Québec, Québec City, Canada - Des Plaines Ballroom

12-13 March 2019

Schedule-At-A-Glance

Tuesday, March 12

08:00 – 09:00 **REGISTRATION –** *Espace Foyer des Plaines*

09:00 – 09:15 **Welcome –** Doug Bliss, Fisheries & Oceans Canada & Board Chair – Atlantic Salmon Research Joint Venture; ***Line Drouin****, Deputy Minister, Québec Ministry of Forests, Wildlife and Parks*

09:15 – 10:00 **Keynote Speaker:** *David Secor, University of Maryland Center for Environmental Science*
Fish migration and range shifts: A march or a sprint?

Session 1: Salmon in a Changing Environment

Sub-session 1a: Biotic Interactions and Population Estimation & Management

10:00 – 10:15 Interactions between striped bass and Atlantic salmon in Quebec waters
- Michel Legault, Québec Ministry of Forests, Wildlife and Parks

10:15 – 10:30 The truth is out there: searching for invasive Smallmouth Bass (*Micropterus dolomieu*) in a renowned Atlantic Salmon (*Salmo salar*) river
- Antoin O'Sullivan, Canadian Rivers Institute - University of New Brunswick

10:30 – 10:45 **BREAK** – refreshments provided (*Espace Foyer des Plaines)*

10:45 – 11:00 Observations of increasing prevalence and intensity of the ectoparasite *Argulus canadensis* on migrating outer Bay of Fundy Atlantic salmon
- Tyler Lynn, Canadian Rivers Institute - University of New Brunswick

11:00 – 11:15 Spatio-temporal trends and correlates of marine survival in Atlantic salmon from Eastern Canada
- Sebastian Pardo, Dalhousie University

11:15 – 11:30 Improving the estimation of Atlantic salmon (Salmo salar) production potential of Québec rivers
- Normand Bergeron, Institut national de la recherche scientifique (INRS), Centre Eau Terre et Environnement (ETE)

11:30 – 11:45 Evaluating impacts of Atlantic salmon stocking in Québec
- Jérôme Doucet-Caron, Dominique Lapointe, Québec Ministry of Forests, Wildlife and Parks

12:00 – 13:30 **LUNCH** – *provided*

Session 1 (cont): Salmon in a Changing Environment

Sub-session 1b: Temperature Effects

13:30 – 13:45 Regional thermal analysis for estimating key salmon water temperature indices at ungauged sites
- Christian Charron, Institut national de la recherche scientifique (INRS), Centre Eau Terre et Environnement (ETE)

13:45 – 14:00 Effects of natural thermal variation on physiological performance in Atlantic Salmon
- Andrea Morash, Mount Allison University

14:00 – 14:15 Genetic adaptation and rearing environment both affect match between cardiac performance and environmental temperature in Atlantic salmon
- Bryan Neff, University of Western Ontario

14: 15 – 14:30 Fire in the (fishing) hole! Quantifying behavioural thermoregulation of juvenile Atlantic salmon (*Salmo salar*) in a warming river
- Emily Corey, Canadian Rivers Institute - University of New Brunswick

14 :30 – 14 :45 Assessment of the effect of river temperature on the reproductive success of the Atlantic salmon (*Salmo salar*)
- Raphael Bouchard, Laval University

14:45 – 15:00 Necessary ice Conditions Exist (NiCE): A quick and free method to delineate groundwater inputs in running waters
- Antoin O'Sullivan, Canadian Rivers Institute - University of New Brunswick

15:15 – 15:30 **BREAK** – *refreshments provided* (*Espace Foyer des Plaines)*

Sub-session 1c: Dispersal/Migration

15:30 – 15:45 Born to Move: Movement patterns during colonization of novel habitat by Atlantic salmon
- Danielle Frechette, Institut national de la recherche scientifique (INRS), Centre Eau Terre et Environnement (ETE)

15:45 – 16:00 Summer migration and behavior of wild adult Atlantic salmon (*Salmo salar*) in the Northwest Miramichi River, New Brunswick, Canada
- Ryan Carrow, University of New Brunswick

16:00 – 16:15 Atlantic salmon (*Salmo salar*) pre-smolt and smolt movements in the Saint John River and Mactaquac reservoir
- Amanda Babin, Canadian Rivers Institute – University of New Brunswick

16:15 – 16:30 Migration of Atlantic Salmon Post-Smolts and their interactions with Aquaculture in Passamaquoddy Bay, New Brunswick, Canada
- Brent Wilson, Fisheries and Oceans Canada

Session 1 (cont): Salmon in a Changing Environment

Sub-session 1c (cont.): Dispersal/Migration

16:30 – 16:45 Spawning Migration and Survival of Atlantic Salmon in Lake Melville, Labrador
- *Martha Robertson, Fisheries and Oceans Canada*

17:00 – 17:15 Establishment of reference states in anadromous Arctic charr (*Salvelinus alpinus erythrinus*) populations of Nunavik
- *Julien Mainguy, Québec Ministry of Forests, Wildlife and Parks*

17:30 – 19:00 **POSTER SESSION and SOCIAL** (*Espace Foyer des Plaines)*
Hors d'oeuvres provided, cash bar (poster session sponsored by CIRSA-Centre for Interuniversity Research on Atlantic salmon)

Wednesday, March 13

08:00 – 09:00 **REGISTRATION** (*Espace Foyer des Plaines)*

Session 2: Human Dimensions

09:00 – 09:30 **Keynote Speaker:** *Shelley Denny – Director of Research and Stewardship, Unama'ki Institute of Natural Resources*
When knowledge systems collide: Challenges and successes of Atlantic salmon governance in Nova Scotia, Canada

09:30 – 09:45 Looking Back to Move Forward: Using Experience and Reflection to Enhance Collective Action for the Benefit of Wild Atlantic Salmon
- *Charles Cusson, Atlantic Salmon Federation*

09:45 – 10:00 Fundy Salmon Recovery: An Innovative Collaboration Restoring Wild Atlantic Salmon to the Inner Bay of Fundy
- *Kurt Samways, Canadian Rivers Institute - University of New Brunswick*

10:00 – 10:15 Acquiring knowledge on Atlantic salmon (*Salmo salar*) populations of Nunavik
- *Laurie Beaupré, Québec Ministry of Forests, Wildlife and Parks*

10:15 – 10:30 Questions abound for river restoration practitioners in this era of changing climates, rising sea levels, and altered species compositions
- *Nick Nelson, Inter-Fluve Inc.*

Session 2 (cont.): Human Dimensions

10:30 – 11:00 **BREAK** – *refreshments provided* (*Espace Foyer des Plaines)*

11:00 – 11:15 Reconnecting Habitat for Endangered Atlantic Salmon (*Salmo salar*) and Co-Evolved Diadromous Fish Species in the Penobscot River Watershed in the State of Maine
- *John Burrows, Atlantic Salmon Federation*

11:15 – 11:30 Raising Awareness of the Plight of Migratory Fish: Local to Global Action Through World Fish Migration Day
- *Molly Payne Wynne – The Nature Conservancy*

11:30 – 12:05 ***ASEF 2019 Special Presentation***

12:05 – 13:30 **LUNCH** – not provided

Session 3: New Frontiers

13:30 – 13:45 Evaluating the potential of open-ocean acoustic telemetry of Atlantic salmon
- *Ian Jonsen, Macquarie University*

13:45 – 14:00 Using telemetry to map the spatial and temporal distribution of Atlantic salmon in the Ocean
- *Jonathan Carr, Atlantic Salmon Federation*

14:00 – 14:15 Acoustic telemetry and biases that arise from the coelomic implantation of transmitters in Atlantic salmon smolts (*Salmo salar*)
- *Eric Brundson, Atlantic Salmon Federation*

14:15 – 14:30 Quantifying rates of Atlantic salmon (*Salmo salar*) smolt predation using VEMCO predation tags
- *David Hardie, Fisheries and Oceans Canada*

15:00 – 15:30 **BREAK** – refreshments provided (*Espace Foyer des Plaines)*

15:30 – 15:45 Genomic evidence for structural and polygenic within-river local adaptation of Atlantic salmon
- *Kyle Wellband, Canadian Rivers Institute - University of New Brunswick & Laval University*

15:45 – 16:00 Development of environmental DNA (eDNA) as a tool in the management of Atlantic salmon
- *Guillaume Coté, Québec Ministry of Forests, Wildlife and Parks*

Session 3 (cont.): New Frontiers

16:00 – 16:15 Life Beyond the Bay - applying stable isotopes to identify the primary marine feeding grounds highly threatened Inner Bay of Fundy populations of Atlantic salmon
- Brian Hayden, Canadian Rivers Institute - University of New Brunswick

16:15 – 16:30 Identifying stream crossings in forested landscapes using a LiDAR and GIS model
- Michael Arsenault, Canadian Rivers Institute - University of New Brunswick

16:30 – 16:45 Counting Atlantic salmon (*Salmo salar*) using an automatic counter
- Maxime Guérard, Québec Ministry of Forests, Wildlife and Parks

16:45 – 16:55 **Student Awards**

16:55 – 17:00 **Closing Remarks**

Each session represents a research them that has been identified through the International Year of the Salmon. Embedded within these themes are sub-themes from the Areas of Research Priorities developed through the Atlantic Salmon Research Joint Venture.

Poster Presentations

Comparison of Diel Activity and Growth in Three Species of Stream-Dwelling Salmonids subjected to an Experimental Flow Manipulation
- Ben Andrews, Canadian Rivers Institute – University of New Brunswick

La FQSA en action!
- Myriam Bergeron, Fédération québécoise pour le saumon atlantique (FQSA)

An overview of RivTEMP, the water temperature monitoring network of Canadian Atlantic salmon rivers
- Claudine Boyer, Institut national de la recherche scientifique (INRS), Centre Eau Terre et Environnement (ETE)

Buoys of opportunity in the Gulf of St. Lawrence – The acoustic telemetry tracking network from Institut Maurice-Lamontagne, Fisheries and Oceans Canada, Mont-Joli, Québec
- Martin Castonguay, Fisheries and Oceans Canada

Transitioning from a fry release strategy to eyed ova planting with an endangered population of Atlantic salmon
- Paul Christman, Maine Department of Marine Resources

Improving Atlantic salmon smolt abundance estimations using multiple smolt wheels
- Guillaume Dauphin, Fisheries and Oceans Canada

Effects of Invasive Fish Predators on Atlantic Salmon (*Salmo salar*) Smolt Survival
- Shawn Feener

Poster Presentations (cont.)

Gathering Observations of Species Patterns to Enhance MEK: salmon presence in lakes
- *Carole-Anne Gillis, Gespe'gewaq Mi'gwaq Resource Council (GMRC)*

Counting fish with ARIS imaging sonars. How to tell if it is a salmon?
- *Jani Helminen, Canadian Rivers Institute – University of New Brunswick*

Life History Observations Regarding Egg Development and Hatch by the Ectoparasite *Argulus canadensis*, Infecting Migratory Adult Atlantic salmon in the St. John River
- *Tyler Lynn, Canadian Rivers Institute – University of New Brunswick*

Monitoring the impacts of restoring aquatic organism passage at road/stream crossings
- *Benjamin Matthews, The Nature Conservancy*

Little Athletes and the Peter Gray Parr Project: Assessing the Effectiveness of On-River Hatchery-Reared 0+ Fall Parr in the East Machias River, Maine
- *Zach Sheller, Downeast Salmon Federation*

La Société saumon de la rivière Romaine
- Etienne St-Michel, *Fédération québécoise pour le saumon atlantique (FQSA)*

Programme de mise en valeur des habitats du saumon atlantique de la Côte-Nord
- Normand Traversy, *Fédération québécoise pour le saumon atlantique (FQSA)*

Reducing Stream Acidification in Eastern Maine: Baseline Data
- Emily Zimmerman, Maine Department of Environmental Protection (MEDEP)