The Atlantic Salmon Ecosystems Forum

Are we moving the needle?

January 17-18, 2018
Orono, Maine USA
University of Maine, Wells Conference Center

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2018 Atlantic Salmon Ecosystems Forum
Schedule At A Glance

Begin	End	January 17, 2018
7:00	8:00	**REGISTRATION -** *Refreshments provided*

Welcome
Mark Renkawitz, Fisheries Biologist, NOAA-Fisheries Northeast Fisheries Science Center

Session 1: Climate Related Impacts and Resiliency
Carl Wilson, Director, Bureau of Marine Science, Maine DMR, ***Moderator***

8:05	8:25	Atlantic salmon recovery as Ecosystem-Based Fisheries Management - *John Hare, Science and Research Director, NOAA-Fisheries Northeast Fisheries Science Center*
8:25	9:10	Understanding the differences between watershed restoration prioritization methods - *George Pess, Watershed Program Manager, NOAA-Fisheries, Northwest Fisheries Science Center*
9:10	9:25	River flood seasonality in the Northeast United States and trends in annual timing - *Mathias J. Collins*, *NOAA-Fisheries*, *NOAA Restoration Center*
9:25	9:40	Climate related changes in the hydrology of New England - *Robert W. Dudley, United States Geological Survey, New England Water Science Cente*r
9:40	9:55	ICNet Infrastructure and Climate Network - *Charlie Hebson, Environmental Office, Maine Department of Transportation*
9:55	10:10	Reflections on the lack of success of the Connecticut River Atlantic Salmon Restoration Program - *Stephen R. Gephard, Connecticut Department of Energy and Environmental Protection*
10:10	10:50	**BREAK** - *refreshments provided*
10:50	11:20	Climate trends and ecosystem impacts in the Gulf of Maine and Northwest Atlantic - *Andrew Pershing, Chief Scientific Officer, Gulf of Maine Research Institute*
11:20	11:35	Atlantic salmon in a changing climate - *Timothy Sheehan,* NOAA-*Fisheries, Northeast Fisheries Science Center*

Begin	End	
11:35	11:50	Habitat condition changes and biological implications for Atlantic salmon at sea - *Katherine E. Mills, Gulf of Maine Research Institute*
11:50	12:05	Impacts of a changing ecosystem on Atlantic salmon growth - *Felix Massiot-Granier, Gulf of Maine Research Institute*
		In memorium - Jed Wright, United States Fish and Wildlife Service
12:05	13:15	**LUNCH**

Session II: Estuarine and Marine Ecology

Patrick Dockens, Wildlife Biologist, US Fish and Wildlife Service, ***Moderator***

13:20	13:35	Using otolith microchemistry to infer habitat use of American shad prior to dam removal in the Penobscot River, Maine - *Kevin Job, University of Maine, Department of Wildlife, Fisheries and Conservation Biology*
13:35	13:50	Verification of circulus deposition rates in Atlantic salmon (*Salmo salar*) smolts from three Maine rivers - *Erin Peterson, University of Maine, Department of Wildlife, Fisheries and Conservation Biology*
13:50	14:05	Estimating annual consumption rate of Atlantic salmon smolt (*Salmo salar*) by striped bass (*Morone saxatilis*) in the Miramichi Estuary - *Jason Daniels, Atlantic Salmon Federation*
14:05	14:20	The problem may not be where we think it is: A critical review of the critical period hypothesis in salmon - *Marc Trudel, Fisheries and Oceans Canada, St. Andrews Biological Station & University of Victoria, Department*
14:20	14:35	Relating fluctuations in fish abundance to river restoration efforts and environmental conditions in the Penobscot River, Maine - *Gayle B. Zydlewski (for Constantin C. Scherelis), University of Maine, School of Marine Sciences*
14:35	14:50	Partitioning the big blue box: A synthesis of marine and estuary action team science - *John F. Kocik, ASERT Chief, NOAA-Fisheries, Northeast Fisheries Science Center of Biology*
14:50	15:30	**BREAK** - *refreshments provided*

Session III: Habitat Restoration, Conservation and Management

Patrick Dockens, Wildlife Biologist, US Fish and Wildlife Service, ***Moderator***

Begin	End	
15:30	15:45	Status Update: three years of restoration and project development using the NOAA Penobscot habitat focus area grant - *Jeremy Bell, The Nature Conservancy*
15:45	16:00	Prioritizing barriers to aquatic connectivity in the Penobscot River watershed - *Erik H. Martin, The Nature Conservancy*
16:00	16:15	Restoring riverine habitat in the upper Narraguagus watershed - *Joan G. Trial, Project SHARE*
16:15	16:30	PIT-tagged particle study of bed mobility on the Narraguagus River - *Douglas M. Thompson, Connecticut College, Environmental Studies Program*
16:30	16:45	Maine Atlantic Salmon in-lieu fee program for compensatory mitigation - *Ruth M. Ladd, US Army Corps of Engineers*
16:45	17:00	The Maine Atlantic salmon programmatic (MAP) for transportation projects: a success story for consultation process streamlining and ecological benefits - *Eric Ham, Maine Department of Transportation*
17:00	19:00	**Poster Session and Social** - *refreshments provided, beer and wine are available*
19:00		An evening with George Pess, NOAA-Fisheries, Northwest Fisheries Science Center: An informal presentation and slideshow of the Elwha River Restoration Project - *Black Bear Brewing Co.*

Poster Presentations

Watershed-scale connectivity analysis: An applied GIS model towards the strategic management of barriers to Atlantic salmon migration
- *Michael Arsenault, University of New Brunswick, Department of Biology*

Optimizing strategies to hydraulically plant Atlantic salmon eggs based on fry dispersal patterns
- *Ernie Atkinson, Maine Department of Marine Resources*

International Year of the Salmon
- *Kristen Bronger, Integrated Statistics, Woods Hole, MA (Duty Station is GARFO)*

Incorporating geomorphology and applying large wood science and channel design in habitat restoration
- *Michael Burke, Interfluve*

Lipid content of Atlantic salmon (*Salmo salar* L.) sampled at West Greenland
- *Audrey Dean, University of Waterloo, Department of Biology*

Comparative analysis of estuarine fish diets after restoration of Alewife populations in Penobscot River Watershed
- Emma Dennison, University of Southern Maine, Department of Environmental Science and Policy

The effects of post-surgical recovery time and time of day release on the performance and survival of emigrating Atlantic salmon (*Salmo salar* L.) smolts from the Miramichi River
- *Heather J. Dixon (Eric B. Brunsdon presenting), The Atlantic Salmon Federation*

Temporal change and variation in marine growth of North American Atlantic salmon sampled from West Greenland
- *Brandon C. Ellingson, Biologist, Integrated Statistics*

Getting Over the Dam: Overcoming institutional barriers to the recovery of Atlantic salmon by navigating the social-science/policy interface
- *Melissa E. Flye, University of Maine, Department of Ecology and Environmental Science*

Alternative aging methods for Atlantic Sturgeon: Research to improve management of a pre-historic natural resource
- *Tarren Giberti, University of Maine, School of Marine Sciences*

Prey availability and diet of Sturgeon in the Gulf of Maine
- *Rachel Howland, University of Maine, Department of Marine Science*

Effects of alewife predation on zooplankton communities in three Maine lakes
- *Ericka A. Hutchinson, University of Southern Maine, Department of Environmental Science and Policy*

Evaluating morphometric techniques to determine sex of Shortnose Sturgeon in the Penobscot River, Maine
- *Samantha Nadeau, University of Maine, School of Marine Science*

Developing an ecosystem-based fisheries management framework for the Eastern Maine Coastal Current
- *Joshua Stoll, University of Maine and Maine Center for Coastal Fisheries*

Artificial selection on reproductive timing in hatchery salmon drives potential maladaptation to warming waters
- *Michael D. Tillotson, University of Washington School of Aquatic and Fishery Sciences*

Where did all the salmon go? The combined impacts of acid rain and forestry are preventing Atlantic salmon recovery in Downeast Maine
- *Mark C. Whiting, Downeast Salmon Federation*

Reducing Acidification in Endangered Atlantic Salmon (Salmo salar) Habitat
- *Emily Zimmermann, Maine Department of Environmental Protection*

Begin	End	January 18, 2018
7:00	8:00	**REGISTRATION –** *Refreshments provided*
		Session IV: Emerging Partnerships *Joshua Royte, Senior Conservation Scientist, The Nature Conservancy*
8:05	8:15	The importance of effective of partnerships to aquatic restoration efforts - *Benjamin Naumann, U.S. Department of Agriculture - Natural Resources Conservation Service*
8:15	8:30	An update on the species in the spotlight initiative for Atlantic salmon - *Julie Crocker, Acting Assistant Regional Administrator of Protected Species, NOAA-Fisheries, Greater Atlantic Regional Fisheries Office*
8:30	8:45	The Atlantic salmon research joint venture - "Shaping the future of wild Atlantic salmon science and conservation" - *Patricia Edwards, Department of Fisheries and Oceans, Gulf Region Fisheries Centre*
8:45	9:00	International year of the salmon – why it matters for Maine - *Kimberly Damon Randall, Acting Deputy Regional Administrator*, *NOAA-Fisheries, Greater Atlantic Regional Fisheries Office*
9:00	9:15	The World Fish Migration Foundation - *Joshua Royte, The Nature Conservancy*
9:15	9:55	Developing, maintaining, and sustaining lasting partnerships (Discussion) - *Josh Royte, The Nature Conservancy*
9:55	10:35	**BREAK -** *refreshments provided*
		Session V: Tracking and Telemetry **-** *Daniel McCaw, Fisheries Biologist, Penobscot Indian Nation,* ***Moderator***
10:40	10:55	System-wide survival of downstream-migrating Atlantic salmon smolts in the Penobscot River, Maine - *Alejandro Molina-Moctezuma, University of Maine, Department of Wildlife, Fisheries, and Conservation Biology*
10:55	11:10	Behavioral and physical factors influence migratory success of sockeye salmon smolts in a high-risk landscape - *Nathan B. Furey, University of New Hampshire, Department of Biological Sciences*

11:10 11:25 Movement and behavior of acoustic tagged Alewife in the Concord and Merrimack River (*Alosa psuedoharengus*)
- *Michael Bailey, US Fish and Wildlife Service – CNE Fishery Resources Office*

11:25 11:40 Radio-tracking wild and SAS Atlantic salmon in the Northwest Miramichi River
- *Ryan Carrow, University of New Brunswick, Canadian Rivers Institute*

11:40 11:55 Space matters: effects of a conservation translocation program on Atlantic salmon size-at-age
- *Danielle Frechette, Institute National de Recherche Scientifique, Centre Eau Terre Environnement, Québec*

11:55 12:10 Post-spawned Atlantic salmon (*Salmo salar*) overwinter behaviour and spring migration in relation to the large reservoir of the Mactaquac Generation Station, NB, Canada
- *Amanda Babin*, *University of New Brunswick, Canadian Rivers Institute*

12:10 13:30 **LUNCH**

Session VI: Freshwater Ecology
Daniel McCaw, Penobscot Indian Nation, ***Moderator***

13:30 13:45 Monitoring the Atlantic Salmon (Salmo salar) run in the Miramichi River using imaging sonar – first full monitoring season 2017
- *Jani Helminen, University of New Brunswick, Canadian Rivers Institute and Department of Biology*

13:45 14:00 Habitat selection by juvenile Atlantic salmon (Salmo salar) using a functional regression model
- *Jeremie Boudreault, Université du Québec, INRS-ETE*

14:00 14:15 Water temperature in a changing climate: the response of juvenile Atlantic salmon populations across Eastern Canada
- *Sébastien Ouellet-Proulx , Institut de la recherché Scientifique – Centre Eau Terre Environnement, Quebec*

14:15 14:30 Population characteristics of sub-adult Atlantic sturgeon (*Acipenser oxyrhynchus*) in the Penobscot River, Maine
- *Catlin Ames, University of Maine, School of Marine Sciences*

14:30 14:45 An overview of 12 Years (2006 – 2017) of sturgeon research on the Penobscot River
- *Kevin Lachapelle, University of Maine, School of Marine Science*

14:45 15:00 "Closing the Loop": Anadromous sea lamprey carcasses influence larval conspecifics
- *Daniel M. Weaver, University of Maine, Department of Wildlife, Fisheries and Conservation Biology*

15:00 15:35 **BREAK –** *refreshments provided*

Session VII: Long Term Strategy and Monitoring

Daniel McCaw, Fisheries Biologist, Penobscot Indian Nation, ***Moderator***

15:35 15:50 Fish passage at hydropower dams on the Penobscot and Kennebec Rivers: A content analysis of the FERC eLibrary Database
- *Sarah Vogel, University of Maine, Department of Wildlife, Fisheries, and Conservation Biology*

15:50 16:05 Acid rain mitigation and complementary initiatives lead to encouraging signs of Atlantic salmon recovery
- *Edmund A. Halfyard, The Nova Scotia Salmon Association*

16:05 16:20 Atlantic salmon in Maine: Assessment of temporal and spatial genetic diversity, and how genetic data is used for to help inform restoration activities in the hatchery and natural environment
- *Meredith L. Bartron, US Fish and Wildlife Service - Northeast Fishery Center*

16:20 16:35 Applying eDNA tools to salmon ecosystems
- *Michael T. Kinnison, University of Maine - School of Biology and Ecology*

16:35 16:50 A collaborative model for Atlantic salmon recovery in Fundy National Park of Canada
- *Corey Clarke, Parks Canada - Fundy National Park*

16:50 16:55 **Student Awards**
- *Karen Wilson, Associate Research Professor, Department of Environmental Science and Policy,* ***Award Presenter***

Closing Remarks

16:55 17:00 - *Sean Hayes, Protected Species Branch Chief, NOAA-Fisheries Northeast Fisheries Science Center*

ADJOURN