American Fisheries Society
Ontario Chapter

ANNUAL GENERAL MEETING & CONFERENCE

30 January – 1 February 2026

Cartier Place Suite Hotel, Ottawa, ON

Hot Topics: Navigating Change in Contentious Environmental and Policy Landscapes

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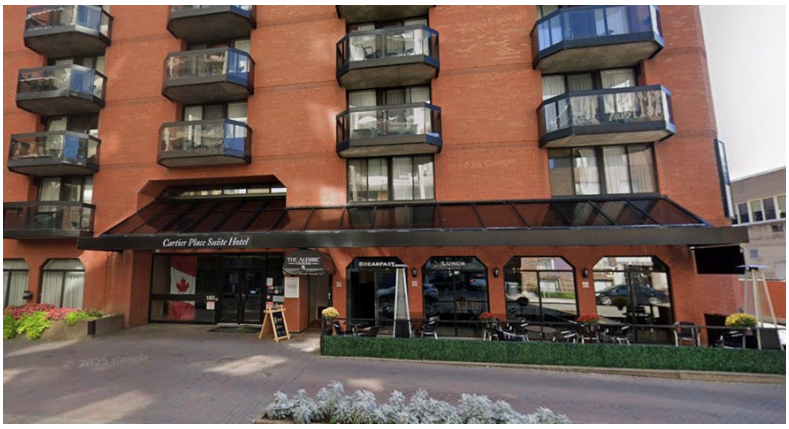

Visit the AFS-OC website: https://www.afs-oc.org/

Friday, 30 January 2026

14:00 Canadian Museum of Nature: Collections Tour
1740 Chemin Pink / Pink Road, Gatineau, QC J9J 3N7
Arrival Time: 13:30 – 14:00
Tour Time: 14:00 – 17:00

*** Registration Required ***
Please register through our online store prior to 28 January so that your contact information can be submitted to our security team, ensuring a quick and easy sign-in process.

Arrival Instructions: Upon arrival at the front gate, use the intercom to state your name and that you are arriving for the Ichthyology collection tour with Sarah Steele. At the stop sign, turn left towards the two available parking lots. The first parking lot on the left will be closer to the main entrance, but if full, continue to the second parking lot. Use the public entrance noted in the images below. Press the intercom and state your name, enter, and proceed straight to the security desk. At the security desk you will sign in with a piece of identification and any bags you wish to carry into the collections will be quickly checked. No food or drinks are allowed in the research and collections spaces; a locked room will be provided for any personal belongings/coats/boots etc. to be stored during the tour (feel free to bring some closed-toed indoor shoes). Photography is allowed! For any questions, please contact Sarah Steele (ssteele@nature.ca).

AFS-OC is grateful to the Canadian Museum of Nature for its support in offering this unique tour as part of our annual conference.

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Friday, 30 January 2026 (continued)

19:00 REGISTRATION & WELCOME RECEPTION
Cartier Place Suite Hotel, 180 Cooper St., Ottawa, ON
Penthouse Suite, 8th floor

Saturday, 31 January 2026

8:00 BREAKFAST & REGISTRATION
Alembic Stillhouse (venue restaurant)

9:00 Opening & Greetings with Gary Pritchard (4 Directions)
Brittany Salon

9:45 Keynote Talk: Gary Whelan
Habitat rehabilitation musing and thoughts from 40 years of observations and experiences – lessons learned and follies experienced

10:30 COFFEE BREAK

SESSION 1

10:40 Bradley Howell (Student Talk)
Linking metabolic rate, growth, and diet to behaviour in warmwater fishes

11:00 Ryan Hodgson (Student Talk)
Energetic cost of catch and release angling in Brook Trout (Salvelinus fontinalis) at two temperatures

11:20 Myra Thapar (Student Talk)
Investigating cold shock-specific molecular signals in Yellow Perch (Perca flavescens)

11:40 Nicholas Edmunds
Advancing fish identification in industrial settings: A molecular approach informed by eDNA innovation

12:00 LUNCH
Alembic Stillhouse (venue restaurant)

SESSION 2

13:00 Mitchell Shorgan
The effects of surgical implantation of electronic tags in fishes: A review and meta-analysis

13:20 Tanya Lemieux (Student Talk)
Spatiotemporal use of created wetlands by freshwater fishes in urban areas

13:40 Katie Watkins (Student Talk)
Spatial behaviour and habitat use of Bowfin (Amia calva) in Lake Ontario

14:00 Raegan Davis (Student Talk)
Evaluating fish stranding downstream of two hydropeaking dams in northern Ontario

14:20 Leah Howitt (Student Talk)
Effects of artificial light at night on the behaviour of wild fishes: A whole-lake experiment

14:40 Emily Silk
Post-assisted log structures: A case study of low-tech restoration in Lynde Creek, Ontario

15:00 Tanya Lemieux (Student Talk)
A perspective on using habitat quality indicators to evaluate the success of freshwater habitat improvements

15:20 COFFEE BREAK

SESSION 3

15:40 Jessica Wright
The changing landscape of species at risk in Ontario

16:00 Sarah Lavallée
Urban shore angling offers diverse benefits to diverse communities: Insights from key informants around the lower Great Lakes

16:20 Matt Windle
Building baselines, bridging jurisdictions, and restoring fish habitat in the Upper St. Lawrence River

16:40 Alyssa Goodenough
When feminism meets fisheries: Rethinking knowledge production in recreational angling research

17:00 POSTER SESSION, NETWORKING, & SILENT AUCTION
Brittany Salon

18:00 DINNER
Alembic Stillhouse (venue restaurant)

19:30 MENTORSHIP EVENT, OUTSTANDING MENTOR AWARD PRESENTATION, & SILENT AUCTION
Brittany Salon

Sunday, 1 February 2026

8:00 BREAKFAST & ANNUAL GENERAL MEETING
Brittany Salon

9:00 Keynote Talk: Dr. Kristi Leora Gansworth
Unassimilated: Anishinabe knowledge and the nation of fishes

9:45 Mary Ann Perron and Abraham Francis
The tale of the Eel: A new dawn

10:05 COFFEE BREAK

10:15 PANEL EVENT: The future of fish and fisheries in Ontario

11:30 Student Award Presentations & Conference Wrap-Up

12:00 Lunch
Alembic Stillhouse (venue restaurant)

13:00 CAREERS WORKSHOP

Oral Presentation Abstracts

***** Denotes presenting author(s)

Saturday, 31 January – 09:45

Keynote: **Gary Whelan[1*]**

Habitat rehabilitation musings and thoughts from 40 years of observation and experiences – Lessons learned and follies experienced

In observing and working on habitat rehabilitation over the last 40 years across the U.S., there are some key tenets that have emerged to me and several issues that have been highlighted when ignored. This presentation will discuss eleven key tenets along with what happens when they are overlooked. The eleven tenets I will highlight are: communicating the real expectations and meaning of the habitat work as we rarely restore anything; coordinating efforts to maximize results; protecting intact systems is a bargain when compared to fixing degraded systems; prioritize rehabilitation work on systems with less impairments; focus on correcting functions or process not symptoms; focus on actionable processes and functions that you can actually address; understand the underlying geology and environmental history of a system; be sure the work is informed by evidence; fully consider the long-term maintenance needs of the work; and actually evaluate the work conducted to allow learning and improvement. I will highlight each along with provide some examples of what goes right and what goes wrong with each using U.S. National Fish Habitat Partnership program and my work around the U.S. as source materials.

[1]Michigan Department of Natural Resources, Fisheries Division (Retired) and American Fisheries Society President

Saturday, 31 January – 10:40

Bradley E. Howell[1*], Mitchell B. Shorgan[1], Christian J. Bihun[1], Leah C. Howitt[1], Luc LaRochelle[2], William K. Grant[1], Aaron T. Fisk[3], Steven J. Cooke[2], & Graham D. Raby[1]

Linking metabolic rate, growth, and diet to behaviour in warmwater fishes

The pace-of-life hypothesis predicts that intrinsic traits such as rates of metabolism and growth influence behaviour, with high-metabolism individuals expected to be bolder, more aggressive, and more exploratory. These behavioural tendencies may increase predation risk by driving individuals to forage in riskier habitats. We tested this hypothesis in a freshwater fish community by integrating metabolic assays, growth analysis, stable isotope analysis, and acoustic telemetry. Using lakeside intermittent flow respirometry, we

measured routine metabolic rate (RMR) as a proxy for baseline energy expenditure. Using biopsy, we back-calculated individual rates of growth and quantified stable isotope ratios (δ13C and δ15N) to infer diet composition and trophic position. Fish were then implanted with predation-sensing acoustic transmitters to track movement, habitat use, and predation events in a whole-lake acoustic positioning system (Ontario, Canada). The lake was divided into habitat zones (e.g., open water, vegetated shallows, nearshore areas) to assess how individuals used risky versus safe habitats. We studied prey species (Bluegill *Lepomis macrochirus*, Pumpkinseed *Lepomis gibbosus*) and a predator (Largemouth Bass, *Micropterus salmoides*) to characterize metabolic-behavioural syndromes and their links to diet, growth, movement, and survival. This research rigorously tests the pace-of-life hypothesis and may inform conservation efforts by identifying traits that increase vulnerability to predation and environmental change.

[1]Integrative Fish Ecology Laboratory, Department of Biology, Trent University, Peterborough, Ontario, Canada
[2]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[3]Great Lakes Institute for Environmental Research, University of Windsor, Windsor, Ontario, Canada

Saturday, 31 January – 11:00

Ryan Hodgson[1*], Steven J. Cooke[1], & Jake W. Brownscombe[2]

Energetic cost of catch and release angling in Brook Trout (Salvelinus fontinalis) at two temperatures

Catch and release (C&R) angling is a common practice in recreational fisheries and represents an acute stressor for fish leading to physiological and behavioural impairments. Following a C&R event, energy is expended to fuel recovery while a cessation in feeding limits energy intake. This study aimed to characterize the energetic impacts of C&R stressors on Brook Trout (*Salvelinus fontinalis*) — a cold-water salmonid sensitive to temperature perturbations and air exposure. Adult Brook Trout were subjected to simulated angling events (30s chase and 10s air exposure vs 30s chase only) at 10 ºC and 15 ºC and their recovery was measured over 24hrs. A respirometry experiment measured their energy expenditure through excess post exercise oxygen consumption (EPOC), and a feeding experiment determined time to return to feeding. Combined both changes in energetic expenditure and reductions in energy consumption were incorporated into a bioenergetics model to predict growth outcomes following captures (1, 5, 10) over 120 days. We find that smaller fish at colder temperatures incur longer cessations in feeding. From our bioenergetics model, when compared to natural growth rates, larger fish incur the highest

relative reductions in growth. Additionally, we find no effect of our C&R treatments on EPOC or time to return to feeding compared to controls. Ultimately, our bioenergetics modelling, demonstrates minimal reductions in growth from low stress C&R practices at 10 ºC and 15 ºC.

[1]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[2]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada

Saturday, 31 January – 11:20

Myra Thapar[1*], William Willmore[1,2], & Steven J. Cooke[1,3]

Investigating cold shock-specific molecular signals in Yellow Perch (Perca flavescens)

Mass fish mortality is a common occurrence with “cold shock” which occurs when water temperatures rapidly decline from ambient conditions. These events may result from both natural (upwelling, cold events, altered thermocline, seiches, etc.) and anthropogenic (thermal effluent, production industry, power plants, etc.) causes. Cold shock events can impair fish as they rely on water temperature for thermoregulation. Water temperature is essential for physiological and behavioural functions including immune function, growth, foraging, metabolism, predator-prey interactions, and the stress response. This study aimed to identify a cold shock-specific molecular signal. This investigation examined gill and liver tissues from Yellow Perch (*Perca flavescens*) to explore expression changes in a broad range of genes involved in physiological processes such as, the stress response, growth and metabolism, and immune function. Treatment groups included varying degrees of cold shock, as well as commonly experienced stressors (heat shock and air/handling) for comparison. A Bayesian approach to gene expression analysis showed differences among treatments for numerous genes in one or both of these tissues. Although changes in gene expression were observed, principal component analysis did not clearly attribute these changes to specific treatment effects. The study suggests that gene expression responses are both tissue and treatment specific. These findings contribute to addressing the knowledge gap in the literature on cold shock in fish and provide a comparative study of multiple proposed markers tested simultaneously for isolating a cold-specific signal.

[1]Department of Biology, Carleton University, Ottawa, Ontario, Canada
[2]Institute of Biochemistry, Carleton University, Ottawa, Ontario, Canada
[3]Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada

Saturday, 31 January – 11:40

Nicholas Edmunds[1*], Heather Veilleux[1], Joseph Tetreault[1], Jason Dietrich[1], & Elizabeth Haack[1]

Advancing fish identification in industrial settings: A molecular approach informed by eDNA innovation

Accurate species identification of impinged and entrained fish remains a challenge at industrial facilities, particularly when specimens are damaged or at early life stages. This project explores the application of DNA-based tools—using tissue swabs, eggs, and larval specimens—to improve identification protocols under facility constraints. While currently focused on DNA, this research relies on and propels forward the use of foundational eDNA principles and technologies, including simplified extraction kits and portable PCR instruments. The initial phase will compare morphological identifications with DNA barcoding results to identify commonly misidentified taxa and inform the development of species-specific assays. Future phases aim to test on-site extraction and detection workflows using mobile thermocyclers, with the goal of empowering facility staff to confirm species in-house. This research represents a practical and incremental step toward integrating molecular tools—including potential future use of eDNA—into routine monitoring programs.

[1]Ecometrix, Mississauga, Ontario, Canada

Saturday, 31 January – 13:00

Mitchell Shorgan[1*], Graham Raby[1], Amber Fedus[1], Bradley Howell[1], Laura Haniford[1], Leah Howitt[1], Natalie Klinard[2], Jordan Matley[3], Jake W. Brownscombe[4], Steven J. Cooke[5], & Aaron Fisk[6]

The effects of surgical implantation of electronic tags in fishes: A review and meta-analysis

Electronic tags have been used to track fishes for decades and continue to gain popularity. Tags are often implanted in the coelom of fishes, with a substantial body of experimental evidence now assessing the effects of those tags. We revisit a review of tagging effects (Cooke et al. 2011) to provide the most comprehensive synthesis and meta-analysis of intracoelomic tagging effects in fishes to date. We reviewed 295 studies, yielding 226 laboratory trials reporting survival and 215 reporting tag retention. Mean survival in tagged fishes was 88.26% and tag retention was 87.05%. Both metrics were negatively related to tag: body mass ratios (i.e., tag burden), remaining above 90% on average with tag burdens below ~ 3%. Substantial heterogeneity existed among studies, with a modest portion of the variability in survival and tag retention explained by family, tag

burden, or trial duration. Across the tagging effects literature, 42% of papers documented negative effects of tagging on growth, and 34% found reduced critical swimming speeds relative to controls. Progress has been made in addressing some knowledge gaps, but biases in the tagging effects literature remain and only a small fraction of species used in electronic tagging studies are represented. Interest in understanding sublethal endpoints is growing, however, the importance of factors such as sex, reproductive status, sterility, and tag coatings remain poorly understood. Tag burdens of ~ 3% appear to balance tag size and unwanted tagging effects. More research is needed to better understand sublethal tagging effects and improve the inferences made from electronic tagging studies.

[1]Integrative Fish Ecology Laboratory, Department of Biology, Trent University, Peterborough, Ontario, Canada
[2]Integrated Fisheries Laboratory, Department of Biology, Dalhousie University, Halifax, Nova Scotia, Canada
[3]College of Science and Engineering, Flinders University, Adelaide, Australia
[4]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada
[5]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[6]School of the Environment, University of Windsor, Windsor, Ontario, Canada

Saturday, 31 January – 13:20

Tanya Lemieux[1*], Sean J. Landsman[2], Jon D. Midwood[3], & Steven J. Cooke[1]

Spatiotemporal use of created wetlands by freshwater fishes in urban areas

Due to excessive habitat degradation and destruction globally, environmental managers have been turning to habitat creation to enhance degraded ecosystems. Given the numerous benefits wetlands provide, it is common for regulators to choose wetlands for these habitat creation projects. Such created habitats are often connected to natural waterbodies, however, little to no monitoring is performed to determine whether they provide high quality habitat, and little is known about seasonal patterns of fish use in such systems. Considering these knowledge gaps, this study is evaluating the seasonal movements of Walleye (*Sander vitreus*), White Sucker (*Catostomus commersonii*), Northern Pike (*Esox lucius*), and Muskellunge (*Esox masquinongy*) and how these movements relate to various habitat variables. This research is being conducted within two urban wetlands located along the Jock River in Ottawa, ON that were developed to compensate for the destruction of fish habitat lost due to development in the area. The information gained from this seasonal (including winter) multi-year acoustic telemetry study will inform the conservation of fish habitat by improving the understanding of

seasonal habitat requirements. This study can also inform decision makers considering proposals for compensation plans.

[1]Department of Biology, Carleton University, Ottawa, Ontario, Canada
[2]Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[3]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada

Saturday, 31 January – 13:40

Katie Watkins[1*], Steven J. Cooke[1], Silviya V. Ivanova[2], Raegan Davis[1], & Jonathan D. Midwood[3]

Spatial behaviour and habitat use of Bowfin (Amia calva) in Lake Ontario

Bowfin (*Amia* spp.) represent a historically underappreciated non-game fish species native to eastern North America. Little is known about the spatial ecology and habitat usage of Bowfin, which limits effective conservation efforts. Targeted management may not only aid this species but other tightly coupled game and non-game species alike to provide benefits to whole ecosystems. Between 2013 and 2021, 12 Bowfin were tracked across Lake Ontario, using acoustic telemetry. Coupled with environmental data, species distributions modelling was used to generate predicted seasonal distributions models and partial dependency curves to predict Bowfin movement and habitat use. Bowfin habitat preferences were found to be heavily influenced by depth demonstrating limited deep-water use. They also showed a higher affinity for environments with low relative exposure, sheltered from wind waves and open water fetch with mud, silt and sand substrates. Further, spatial predications revealed high probability of Bowfin presence in littoral ecosystems clustered in Hamilton Harbour and the adjacent Cootes paradise, Toronto Harbour, and the Bay of Quinte. The result of this study provides insight into Bowfin spatial-temporal ecology and preferred habitat usage to help direct future Bowfin conservation efforts.

[1]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[2]School of the Environment, University of Windsor, Windsor, Ontario, Canada
[3]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada

Saturday, 31 January – 14:00

Raegan A. Davis[1*], Steven J. Cooke[1], & Karen E. Smokorowski[2]

Evaluating fish stranding downstream of two hydropeaking dams in northern Ontario

Globally, there has been an increase in the development and use of hydropower to produce energy. Hydropeaking is an operating regime that is used to meet real-time energy demands; however, daily fluctuations in flows may result in fish becoming stranded. Understanding physical and operational factors that contribute to fish stranding will aid in the creation of mitigation strategies to prevent fish stranding occurrences. Here we investigated factors that drive fish stranding. To do so, we deployed cameras downstream of two hydropeaking generating stations in northern Ontario, Canada, from June to October in 2023 and 2024, to remotely capture occurrences of fish stranding. We observed significantly higher fish stranding densities (fish·m^{-2}) on the Michipicoten River compared to the Magpie River. Stranded fish were difficult to identify to species (from the camera images) but in general, fish were small-bodied, likely representing early life stages (e.g., juveniles). The probability of fish stranding was highest in the early spring and increased with both finer substrate types and slower horizontal ramping rates (cm·h^{-1}). The observed differences in fish stranding densities between the two rivers is likely due to physical features such as absence of morphological microstructures, larger substrate types, and the presence of a plunge pool (at one site). The plunge pool likely dampened the change in discharge from the dam, which subsequently decreased the vertical ramping rate (cm·h^{-1}) downstream. The model we generated will allow for comparison with other hydropeaking systems globally to better understand if factors driving fish stranding are common among rivers to help identify potential mitigation strategies to minimize stranding.

[1]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[2]Ecosystem Sciences Division, Fisheries and Oceans Canada, Sault Sainte Marie, Ontario, Canada

Saturday, 31 January – 14:20

Leah C. Howitt[1*], Bradley E. Howell[1], Steven J. Cooke[2], Aaron T. Fisk[3], & Graham D. Raby[1]

Effects of artificial light at night on the behaviour of wild fishes: A whole-lake experiment

As the human population continues to grow, artificial light at night (ALAN) is steadily increasing in both urban and rural areas. ALAN disrupts the natural day-night cycles that wildlife depends on to regulate their daily and seasonal activities like feeding, growth, and reproduction. While there is growing research on how ALAN affects terrestrial species,

much less is known about its impact on fishes, particularly in the wild. This study investigated how Northern pike (Esox lucius), Largemouth bass (Micropterus nigricans), Pumpkinseed (Lepomis gibbosus), and Bluegill (Lepomis macrochirus) responded to ALAN by monitoring their behaviour in a small, private lake equipped with a whole-lake fish positioning system (acoustic telemetry). Large LED lights were installed around the lake on a one-night-on, two-nights-off schedule and positioning of tagged fish was used to assess changes in activity levels and habitat use under ALAN. The results will reveal how fish behaviour varies across lit and unlit areas of the lake and species-specific responses to light pollution, while highlighting patterns in activity and space use on nights with the lights on compared to those where the lights were off. These patterns will provide insight into potential behavioural responses to ALAN and factors influencing how different species may adjust to artificial lighting.

[1]Integrative Fish Ecology Laboratory, Department of Biology, Trent University, Peterborough, Ontario, Canada
[2]Fish Ecology and Conservation Physiology Laboratory, Department of Biology and Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[3]School of the Environment, University of Windsor, Windsor, Ontario, Canada

Saturday, 31 January – 14:40

Emily Silk[1*] & Michael Grieve[1]

Post-assisted log structures: A case study of low-tech restoration in Lynde Creek, Ontario

Habitat degradation in streams threatens aquatic species at risk through sedimentation, bank erosion, and loss of lateral habitat complexity. Stream restoration is widely used to help mitigate these effects; however, commonly used techniques can be costly and leave anthropogenic footprints behind (e.g. T-bars, aircraft cable). A recently emerging restoration technique, Post-Assisted Log Structures (PALS) has shown to be a practical and cost-effective approach to stream restoration. This presentation explores the value of low-tech, process-based restoration while using PALS constructed in Lynde Creek, Ontario, as a case study. These structures, as described in the Low-Tech Process-Based Restoration of Riverscapes Design Manual from researchers at Utah State University, require minimal equipment, use only natural materials, and can be implemented by small crews with limited budgets. In 2023, PALS were installed in a section of Lynde Creek that lacked complexity. Wooden posts were used to secure recycled Christmas trees within the stream channel to mimic natural wood recruitment processes. This approach narrowed the channel, using flow energy to expose gravel substrate, and created eddies behind the structures where sediment from the water column was able to settle. Since their creation

in 2023 and improvements in 2024, these structures have enhanced habitat complexity, improved sediment retention, supported native seedbank growth, and created favourable spawning and nursery habitat for fish. By leveraging natural processes, low-tech restoration strategies like PALS should be considered an emerging technique for streams that lack complexity and floodplain connectivity.

[1]Central Lake Ontario Conservation Authority, Oshawa, Ontario, Canada

Saturday, 31 January – 15:00

Tanya Lemieux[1*], Sean J. Landsman[2], Jonathan D. Midwood[3], Karen E. Smokorowski[4], Christina M. Davy[1], Jake W. Brownscombe[3], Ken M. Jeffries[5], & Steven J. Cooke[1]

A perspective on using habitat quality indicators to evaluate the success of freshwater habitat improvements

Freshwater ecosystems are critically important for a healthy planet, but they continue to be subject to extensive degradation. To mitigate this degradation, many attempts to improve freshwater habitats have been undertaken using various techniques such as those related to restoration and rehabilitation. It is imperative to know whether habitat improvement efforts are successful so that new initiatives can be implemented in the most effective way possible. This is especially true for freshwater animals whose populations have severely declined. However, funding, timeline limitations, and lack of standardized evaluation methods hinder the ability to evaluate success resulting in a need to define relevant monitoring methods for these initiatives. High quality habitat is essential for population persistence making evaluations of habitat quality an important indicator of the success of freshwater habitat improvements. Additionally, habitat quality indicators are more relatable to the habitat itself and thus more indicative of long-term success than metrics currently being used. Herein we therefore describe key indicators of habitat quality and illustrate why such measures are useful assessment tools for evaluating the success of freshwater habitat improvements. Based on our synthesis, we outline methods that can be used to describe habitat quality for animals such as metrics of behaviour, bioenergetics, 'omics', food webs, and biotic indices. We also outline challenges associated with assessing habitat quality and make suggestions to help overcome them. We then share considerations for evaluating the success of habitat improvement initiatives using habitat quality indicators including how to define success, select appropriate spatial and temporal scales, and consider the tiers of evidence provided by the different habitat quality indicators. Finally, to conclude we discuss case studies to further illustrate the components of our perspective.

[1]Department of Biology, Carleton University, Ottawa, Ontario, Canada

[2]Institute of Environmental and Interdisciplinary Science, Carleton University, Ottawa, Ontario, Canada
[3]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada
[4]Environmental Sciences Division, Ontario and Prairie Region, Fisheries and Oceans Canada, Sault Ste. Marie, Ontario, Canada
[5]Department of Biological Sciences, University of Manitoba, Winnipeg, Manitoba, Canada

Saturday, 31 January – 15:40

Jessica Wright[1*], Amber Sabourin[1], & Heather Melcher[1]

The changing landscape of species at risk in Ontario

The passing of Bill 5, Protect Ontario by Unleashing our Economy Act, 2025 implemented significant changes to how species at risk (SAR) are protected. The bill includes interim amendments to the Endangered Species Act, 2007 (ESA) and introduces the Species Conservation Act, 2025 (SCA), which will ultimately replace the ESA. This presentation will provide an overview of key changes to the ESA and highlights of the new SCA. The session will also explore from an environmental consultant's perspective how these legislative changes may affect technical studies, as well as project planning and permitting for current and future projects.

[1]Environmental Planning and Permitting Practice, Consor Canada, Toronto, Ontario, Canada

Saturday, 31 January – 16:00

Sarah Lavallée[1*], Emma D. Rice[2], Claire Crowley-Aksamit[3], Mahatub Khan Badhon[2], Jeanne Coffin-Schmitt[4], Elizabeth Nyober[2], & Vivian Nguyen[5]

Urban shore angling offers diverse benefits to diverse communities: Insights from key informants around the lower Great Lakes

Recent research has highlighted the diverse benefits of recreational and subsistence fisheries in North America, particularly within urban contexts. Western fisheries science and management have historically focused on the sport and leisure benefits of fishing. However, researchers and managers in this field are increasingly emphasizing the need to better understand the benefits of fishing beyond recreation (e.g. social cohesion, food sovereignty). As urbanisation and climate change continue to intensify across North America, urban fisheries face unique challenges as they serve increasingly diverse populations and are experiencing rapid ecological changes. Using Nguyen et al. (2025)'s six overlapping dimensions of provisioning fisheries, this research

aims to understand the population that engages in urban shore angling and the values and motivations that drive urban shore angling, with a focus on the barriers and opportunities provided by this fishery. Furthermore, we aim to understand how urban shore fisheries can become more resilient in the face of rapid ecological, social, and economic changes. This research summarises and analyses insights from key informant interviews (n= 52) conducted between 2023-2025 across 10 urban centres in the lower Great Lakes region. Key informants included fisheries managers, creel surveyors, conservation officers, and bait and tackle shop owners or staff. Interview transcripts were analysed using thematic analysis. Our results highlight diversity as a key feature of urban shore anglers in terms of demographics, skill levels, harvest preferences, and motivations. However, urban anglers face several barriers and risks, particularly within their access (physical and legal) to fishing and fish consumption habits. Our results highlight the dynamic nature of urban fisheries, with key informants observing demographic changes and an increased reliance on fishing for food in recent years. Our findings emphasise the need for recreational fisheries management that addresses uncertainty, changing social contexts, and the diverse values and needs of urban anglers.

[1]Department of Geography & Environmental Studies, Carleton University, Ottawa, Ontario, Canada
[2]Department of Fish and Wildlife Conservation, Virginia Polytechnic Institute & State University, Blacksburg, Virginia, USA
[3]Norwegian College of Fishery Science, The Arctic University of Norway, Tromsø, Troms County, Norway
[4]Great Lakes Fisheries Commission, Ithaca, New York, USA
[5]Institute for Environmental and Interdisciplinary Sciences and Department of Biology, Carleton University, Ottawa, Ontario, Canada

Saturday, 31 January – 16:20

Matt Windle[1*], Kate Schwartz[1], Emma Ehrenfeld[1], Cassey O'Connor[1], Britney Bourdages[2], & Jeff Ridal[1]

Building baselines, bridging jurisdictions, and restoring fish habitat in the Upper St. Lawrence River

Since 2015, the River Institute has partnered with the Mohawk Council of Akwesasne (MCA) Environment Program to document nearshore fish communities in the upper St. Lawrence River through the Fish Identification Nearshore Survey (FINS) project. This work occurs within a complex jurisdictional landscape that spans international, federal, provincial, state, and Indigenous boundaries, including Canada and the United States; Ontario, Québec, and New York State; and the territories of Akwesasne and Kahnawà:ke. This long-term collaboration has produced one of the most extensive and

unique baseline datasets for the Upper St. Lawrence River, encompassing more than 200 sites from Lake Ontario to Montréal. The dataset includes information on nearshore fish distributions and habitats, environmental DNA (eDNA), drone-based surveys, water quality and nutrient measurements, as well as data on species at risk (SAR) and aquatic invasive species (AIS). Building on this foundation, the FINS research team has recently partnered with organizations and universities to translate long-term monitoring results into on-the-ground habitat restoration initiatives. This presentation will highlight key successes of the FINS project, recent habitat restoration efforts for SAR fish species and nature-based solutions, and the challenges of conducting restoration activities within a highly multi-jurisdictional setting with recently evolving priorities for conservation.

[1]River Institute, Cornwall, Ontario, Canada
[2]Mohawk Council of Akwesasne, Akwesasne, Ontario, Canada

Saturday, 31 January – 16:40

Alyssa Goodenough*

When feminism meets fisheries: Rethinking knowledge production in recreational angling research

Fisheries are commonly framed as the co-management of fish, habitat, and people, yet knowledge production in this field has traditionally privileged objective, empirical measures, often overlooking anglers as knowledge holders with the capacity to drive meaningful community change. This research draws on feminist methodologies that expand how fisheries science understands knowledge by asking not only what information is produced, but how and why it is produced, foregrounding reflexivity, positionality, and lived experience. Two complementary projects illustrate this approach. The first applies feminist, trauma-informed qualitative methods to explore the experiences of women leaders in Ontario's recreational angling community, demonstrating how centering lived experience reveals structural barriers, leadership dynamics, and pathways for change that are often missed by conventional approaches. The second extends these principles into biological research, where collaborative catch-and-release studies examine how angler gear choices influence fight dynamics and post-release outcomes, informed by angler expertise and field realities. Together, these projects show how feminist methodologies strengthen both social and biological inquiry by producing research that is more transparent, context-aware, and directly applicable. By engaging anglers as research partners rather than subjects, this work generates knowledge that is not only rigorous, but shared—and therefore capable of driving meaningful change.

Sunday, 1 February – 09:00

Keynote: **Dr. Kristi Leora Gansworth[1*]**

Unassimilated: Anishinabe knowledge and the nation of fishes

Canadians are widely familiar with ongoing government projects that attempt to "reconcile" histories of attempted assimilation and eradication of Indigenous lifeways. The 2015 Truth and Reconciliation Commission reports represented a culmination of decades-long efforts to publicly reveal and honor the experiences of families disrupted and traumatized by colonial tactics and systems designed to remove Indigenous presences and practices from lands and waters. This talk will discuss the lesser-known impacts of these colonial systems on Indigenous water governance and the expression of specifically Anishinabe legal traditions and responsibilities to water and aquatic habitats. Governance disruption and suppression persist through environmental injustices affecting native ecologies and species, reducing access to the benefits of nature for all populations.

Through scholarship and community efforts, solutions and other approaches have been offered, yet can be difficult to implement. Cooke et al. (2021 *Fish*. 46(2):89-97) refer to several collaborative processes including knowledge co-production, co-evolution, and co-assessment as foundational practices for building transformation in fisheries and management systems. These processes create benefits for biodiversity and for effective, rewarding research practices. This presentation will build on those adjacent practices to discuss both the costs and failures of trying to forcibly erase and assimilate Anishinabeg and their systems of relationality. It prioritizes value systems designed for intergenerational, interspecies purposes other than capitalistic goals and alienation from and ignorance of the natural world that has become normalized across sectors of Canadian society.

[1]Vassar College, Poughkeepsie, New York, U.S.A.

Sunday, 1 February – 09:45

Mary Ann Perron[1*], Abraham Francis[2,3*], Stephany Hildebrand[1], & Leigh McGaughey[1]

The tale of the Eel: A new dawn

The plight of Kiawerón:ko (the American Eel) in Kaniatarowenneneh (the St. Lawrence River) has been well known for over half a century. However, actions to date have been unsuccessful in bringing this species back from endangerment. Re-establishing Indigenous Rights to connection with this important relative is essential as part of the restoration of this iconic species. We are experiencing a shift in the waters, where the previously perceived "impossible" barriers are no longer acceptable when it comes to

species conservation. A crucial aspect in creating change is having a well-informed community. In the case of the eel, real-world change along Kaniatarowenneneh is occurring through a community- driven ecosystem health report, the Great River Rapport. This project brings together art, science, community and Indigenous perspectives to engage people in conversations related to the health of the river. Through a science-based systematic review of available data on American eels in the river, we have identified existing barriers to knowledge sharing, including a lack of access to data coupled with transparency and data sovereignty concerns that affect the knowledge mobilization needed to empower the local community. In addition, past neglect of Indigenous voices left unacknowledged trauma for the community and perpetuation of environmental harm. The case of the eel becomes symbolic of broader struggles. There is a need to move towards rights-based approaches rooted in Indigenous perspectives, for the inequities surrounding access to data to be addressed and recognise the transformative role of art in conveying truth.

[1]St. Lawrence River Institute of Environmental Sciences, Cornwall, Ontario, Canada
[2]Environmental Science and Engineering Program, Clarkson University, Potsdam, New York, USA
[3]Aronia Collective, Akwesasne, Ontario, Canada

Poster Presentation Abstracts

***** Denotes presenting author(s)

Saturday, January 31 – 17:00–18:00

Emma Geffros[1*], Cindy Chu[2], & Alyssa Murdoch[1,3]

Insights from Ontario's Broad-scale Monitoring program: Trends in sport fish abundance

Northern freshwater ecosystems are undergoing significant environmental changes including increasing temperatures, altered precipitation, changes in water quality, and increasing habitat loss. Understanding how these pressures impact fish species in Ontario is essential for developing effective conservation strategies and informed fisheries management. Long-term monitoring provides the opportunity to detect patterns of change across spatial and temporal scales. Ontario's Broad-scale Monitoring program has been collecting standardized data on inland lakes and fisheries since 2008, and this robust dataset can be used to evaluate trends in fish abundance and community composition over time. Using this dataset, we assessed the status of six key sport fishes: Lake Trout, Brook Trout, Walleye, Northern Pike, Smallmouth Bass, and Lake Whitefish. Preliminary results suggest province-wide increases in relative abundance for Walleye, Northern Pike, and Smallmouth Bass over the past 15+ years, Lake Whitefish showed a decline. In contrast, the relative abundance of Lake Trout and Brook Trout have remained stable. These findings will provide a foundation to further explore how environmental changes may be influencing fish communities in Ontario's inland lakes.

[1]Trent University, Peterborough, Ontario, Canada
[2]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada
[2]Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington, Ontario, Canada
[3]Ontario Ministry of Natural Resources, Peterborough, Ontario Canada

Tamara Donnelly[1*], Vivian Nguyen[1], and Andrew Howarth[1]

Proposed research on the human dimensions of provisioning fisheries around the Laurentian Great Lakes

Globally, an estimated 52.8 million people engage in subsistence fishing for household consumption. Subsistence fishing is closely linked to sustainable livelihoods, poverty mitigation, nutritional security, and gender equity, with women comprising

approximately 45% of subsistence fishers worldwide. While subsistence-oriented fisheries are more explicitly recognized in many regions, reported participation is lower in the Americas, where subsistence fishers represent approximately 1% of the fishing population. In North America, fishing is predominantly classified as commercial or recreational, with recreational fisheries commonly framed around sport and leisure. Although recreational fishing also contributes to food provisioning, wellbeing, and cultural practices, everyday food-oriented fishing and its associated social and cultural values are less consistently examined within fisheries' research and management. This proposed exploratory research addresses a gap in North American fisheries literature by examining the human dimensions of overlooked "provisioning fisheries" around Lake Michigan. Using the 'provisioning fisheries framework', this study seeks to investigate how fishing contributes to household food security, social capital, and cultural identity within diverse urban communities. Our mixed-methods approaches will integrate (1) a scoping review of literature on culture and subsistence-oriented fishing in North American fisheries and (2) two case studies in Milwaukee, Wisconsin, and Chicago, Illinois. Data collection will include surveys, focus groups, and semi-structured interviews to document fishing practices, motivations, and food-related drivers. By prioritizing community engagement and inclusive research practices, this project seeks to amplify underrepresented perspectives and generates insights relevant to equitable fisheries governance. Findings hope to inform more inclusive fisheries management and urban food security strategies.

[1]Social Ecology and Conservation Collaborative, Carleton University, Ottawa, Ontario, Canada