



## Message from the President

Hello Ontario Chapter Members!

Well, it seems that just as quickly as winter hit us in December, it is on its way out with crazy, warm and sunny spring-like conditions in February throughout most of Southern Ontario.

I am sure that most members can attest that it has been difficult lately to avoid getting sucked in and distracted by the political environment occurring south of the border. It has dominated many recent conversations with colleagues, friends and even acquaintances. However, in the last few months, I've tried to "turn the volume down" on that noise and focus in on all of the amazing initiatives, research and projects that are occurring here in our own backyard! Within our small AFS-OC bubble, thanks to your amazing Executive Committee, there have been numerous well attended events throughout 2016. Looking forward, I am very excited about our upcoming Ontario Chapter Annual General Meeting & Conference. We have presentation topics ranging from invasive species, climate change, women in angling to species specific research, including an entire afternoon dedicated to discussions on Brook Trout. To top that all off, we also have Dr. John Casselman, a Canadian Fisheries Legend kicking the AGM off for us!

If you are still on the fence on whether you should attend or not, take a peek at the page 12 of this newsletter where we've laid it all out there for you!!

I look forward to meeting you in early March!

Cheers,

Jessica

[president@afs-oc.org](mailto:president@afs-oc.org)

### Contents:

- \* Message from the President....P1
- \* 2017 AFS-OC AGM....P2
- \* New Assistant Webmaster....P2
- \* Working with Indigenous Communities 101....P3
- \* Student Subunit Update.... P4
- \* 2017 AGM Keynote Speaker—Dr. John Casselman....P5
- \* ROM Fish ID Workshop.... P5
- \* Ontario's Lost Kokanee Salmon....P6
- \* Welcome our new Regional Representative ....P7
- \* "On the Hook" ....P7
- \* 2017 AGM Gold Level Sponsors.... P8
- \* Continuing Education .... P9
- \* Fish Facts—River Darter. ... P9
- \* Ontario's Lost Kokanee Salmon - continued.....P10
- \* 2017 AGM Silver Level Sponsors.....P 11
- \* Why should I attend this year's AGM....Page 12
- \* 2017 AGM Bronze Level Sponsors...P13
- \* 2017 AGM Exhibitors....P13



## 2017 AFS-OC Annual General Meeting



On March 2nd to 4th, the Ontario Chapter of the American Fisheries Society will host their 2017 Annual General Meeting & Conference at the YMCA—Genvea Park in Orillia, Ontario.

This year's conference theme is ***Biodiversity Conservation in the Face of Development*** and we have a great line up of oral and poster presentations associated with the conference theme, and two special events this year. Gary Prichard will be hosting a workshop titled "Working with Indigenous Communities—101" on Thursday afternoon. See page 3 for a short biography for Gary. On Friday afternoon, the Ontario Ministry of Natural Resources and Forestry will be hosting a Brook Trout Monitoring and Conservation Symposium.

This year we are excited to host [Canadian Fisheries Legend](#) - **Dr. John M. Casselman** - as keynote speaker for the meeting on the morning of Friday March 3rd. Mr. Casselman will entertain AFS-OC Conference attendees with his talk "Fisheries Science as a Profession : Personal Reflections". Read more about Dr. Casselman on Page 5.

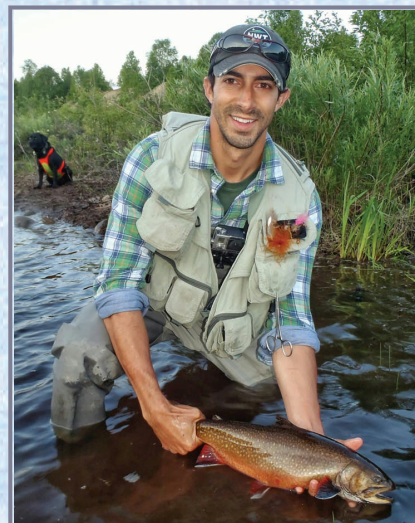
We will also be hosting another mentoring session and social on Friday night, including the student subunit raffle.

The Executive Committee looks forward to seeing you there!

### ***Meet our new Assistant Webmaster—Steve Burgin***

Born and raised in Lindsay, Steve attended Fleming College where he received his Fish & Wildlife Technician diploma in 2008 before heading to Trent University for his B.Sc (Honours) degree in 2010. Steve started his fisheries career with the Algonquin Fisheries Assessment Unit, living and working in the park during the summers of 2008 and 2009. Following this he worked as an Electrofishing Technician for Credit Valley Conservation in the summer of 2010. He currently works as an Aquatic Project Biologist for Natural Resource Solutions Inc. (NRSI), where he has since 2010. In this position he manages and contributes to a broad range of projects including fish community assessments, benthic monitoring, and detailed aquatic habitat characterizations for Environmental Impact Studies, municipal Class Environmental Assessments and multi-year monitoring projects. In his spare time he volunteers on rehabilitation activities for Trout Unlimited and is also currently involved with the *Bringing Back Brookies* initiative occurring within the Upper Credit River Conservation Area.

Steve has been keenly interested in the aquatic environment since he was young and has cultivated a passion for fisheries conservation over the years through school, work, volunteer experience, and many, many hours spent fishing across Ontario. Steve lives near the Grand River in Elora with his wife and baby boy and still manages to get out with his fly rod whenever he can. He hopes to foster this same passion in his son and plans to introduce him to fishing as soon as possible.





# Working With Indigenous Communities 101

**Instructor—Gary Pritchard**

## ABOUT THE WORKSHOP

Working with Indigenous Communities 101 creates a safe place for people to engage in dialogue that increases understanding of working with Canada's Indigenous Peoples, and explores the meaning of reconciliation and our respective role to play.

Workshops are modeled on an Indigenous circle process that creates a supportive and safe environment for meaningful dialogue and relationship building to occur. Together participants explore pathways to develop community-based and community-driven action plans and relationships.

Each workshop offers a truly powerful and transformative experience, and creates a solid foundation for building meaningful relationships between Indigenous peoples and all Canadians.

## GARY'S STORY

**Gary Pritchard** is an Environmental Project Manager from Curve Lake First Nation and brings over 14 years of environmental experience. He has worked with and travelled to over 280 Indigenous communities throughout Canada and the United States. He has extensive knowledge of conducting environmental assessments, implementing environmental policy, project planning and permitting while working in conjunction with a variety of multi-disciplinary sectors. He has successfully collaborated with many stakeholder groups, researchers, institutes, government agencies and First Nation communities and political organizations to address environmental concerns and identify practical solutions to environmental related issues. Gary also serves as a technical advisor and past professor at two post-secondary institutes within Ontario.

## STRUCTURE OF THE CIRCLES

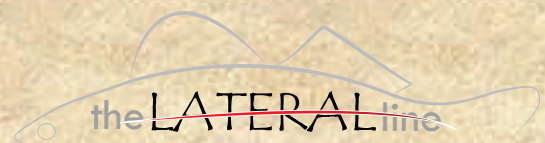
Each workshop will create a safe space for participants to share personal stories, discuss visions for a better future, and to develop individual and collective reconciliation action plans. The workshop begins in a large circle with introductions of the participants, the work of Reconciliation Canada and the shared history of the Indian Residential School system and current reality of inter-generational impacts. Afterwards, the attendees form smaller circles to discuss the meaning of reconciliation, share personal experiences and insights, and to explore the role they can play in it based on their particular set of strengths, skills and abilities.

## PARTICIPANTS

Dependent on the audience of the workshop, participants may include Survivors, Indigenous leaders, government policy-makers, community leaders, multi-cultural and faith groups, and other interested people. Some workshops target specific demographic and professional groups and can be tailored to the interests of young adults or corporate leaders, for example.

## OUTCOMES

Working with Indigenous Communities 101 is designed to provide opportunities for participants to build meaningful partnerships, create synergies and identify collaboration opportunities that work towards building vibrant and sustainable communities for our shared future.



# STUDENT SUBUNIT UPDATE

## The AFS-OC Student Subunit is off to a great start to the New Year!

The **Student Success Workshop** held in Ottawa on January 19<sup>th</sup> was a huge hit!

Over 50 participants from around Ontario joined us online at the R webinar workshop, while 50 local students and mentors gathered at the Fox and Feather pub in Ottawa for some tips on interviews and CV writing, and an engaging discussion panel. Panel guests included:

Dr. Nick Lapointe - [Canadian Wildlife Federation](#) (AFS-OC member)  
Dr. Mike Donaldson - [Canadian Science Publishing](#) (AFS-OC member)  
Dr. Joe Bennett - [Carleton University](#)  
Tara MacDonald - [Environment and Climate Change Ontario](#)  
Dr. Ayesha Prasad - [Morrison Hershfield Consulting](#)

We also had special guest mentors from the Departments of National Defence and Fisheries and Oceans! Many thanks to our panel guests!

---

### Some key take-home messages were:

- 🐟 **Get involved!** Take-on voluntary and extra-curricular activities to build your network. Jobs are often found through your network rather than through a cold application. One mentor said: “I’ve been to three interviews my whole career and did not get any of them. All my jobs were found through connections and relationships I have developed”.
- 🐟 **Travel!** Volunteer, work or study abroad. These experiences help you build perspective, empathy and help you manage stressful and unforeseen situations
- 🐟 **Take risks and challenge yourself.** Engage in something that is outside of your comfort zone. This is when you will learn new skills, learn more about yourself, and learn to adapt – essential soft skills for the workplace.
- 🐟 **Career or family?** It does not have to be a trade-off. Prioritize what you value, and look for the right job that fits your values.

---

The Subunit has also been awarded the **North Central Division Most Active Subunit Award!** Thank you to all members and volunteers that have been actively engaged to make this happen.

Last but not least, we would also like to welcome all of **our new student area reps for 2017!** We hope this initiative will create a more unified Subunit with liaisons across of Ontario:

Sherry Du (McMaster University)  
Mike Lawrence (Carleton University)  
Meagan Kindree (University of Toronto)  
Danielle Hennink (Fleming College)  
Sarah Larocque (University of Windsor)





## 2017 AFS-OC AGM Keynote Speaker

### Dr. John Casselman

Dr. John M. Casselman is an adjunct professor, Biology Department, Queen's University, Kingston, Ontario, and former senior scientist who supervised fisheries research on Lake Ontario for the Ontario Ministry of Natural Resources. He is a fisheries ecologist and environmental physiologist who has numerous publications in the primary literature (172), reports, and book chapters on numerous aspects of fisheries science. Has studied and published on many species and topics, most recently on rare and endangered anguillid eels and sturgeon, conservation, microhabitat associations, climate change, and calcified structure analyses. He has conducted extensive research on fish and fisheries around the world, by invitation in Tibet, Ethiopia, and the



Canadian Arctic, as well as throughout the Great Lakes Basin. John has received numerous awards: in 2008, the American Fisheries Society prestigious Award of Excellence; in 2009, the Great Lakes Fishery Commission Distinguished Scientific Contributions Award and the Ontario Commercial Fisheries Association Partnership Award for contributions to sustainable

fish resources through fisheries research and management; and in 2015, voted into the Canadian Angler Hall of Fame, inducted as a Legend in Canadian Fisheries Science and Management, and installed into the inaugural class as a Fellow of the American Fisheries Society.



## ROM Fish I.D. Workshops—2017

Staff at the Royal Ontario Museum (ROM) would like to remind everyone of their upcoming 2017 Fish Identification Workshops being offered at the Guelph University Science Complex, Room 2304. This year the ROM is offering four workshops related to fish identification:

Three-day Introductory Workshop—two dates available: April 11-13, and May 1-3

Four-day Introductory Workshop—April 25-28

Three-day Minnow Workshop—April 19-21

Two-day Species at Risk Workshop—May 4-5

ROM Staff offer presentations and hands-on exercise that will familiarize participants with characteristics that are used in distinguishing families, genera and species of Ontario fish species.

If you are interested in more information, registration forms or more information about each course, please contact :

**Cathy Dutton, Administrative Assistant,**

**Department of Natural History, Royal Ontario Museum**

**416-586-5894 [workshop-ichthyol@rom.on.ca](mailto:workshop-ichthyol@rom.on.ca)**



# SERIES: Fish Species Complexity—Highlighting Diversity in Ontario

## Ontario's Lost Kokanee Salmon

Brian Morrison / Ganaraska Region Conservation Authority,

Kokanee Salmon (*Oncorhynchus nerka*) is a freshwater form of Sockeye Salmon, native to the western half of North America. Ontario's largest introduction of Kokanee Salmon occurred in Lake Huron from 1964 to 1969, using source populations from British Columbia, Colorado, Montana, and Washington (Collins 1971). These included a mix of source populations that had riverine and lacustrine spawning traits. In total, approximately 5.5 million Kokanee Salmon were stocked

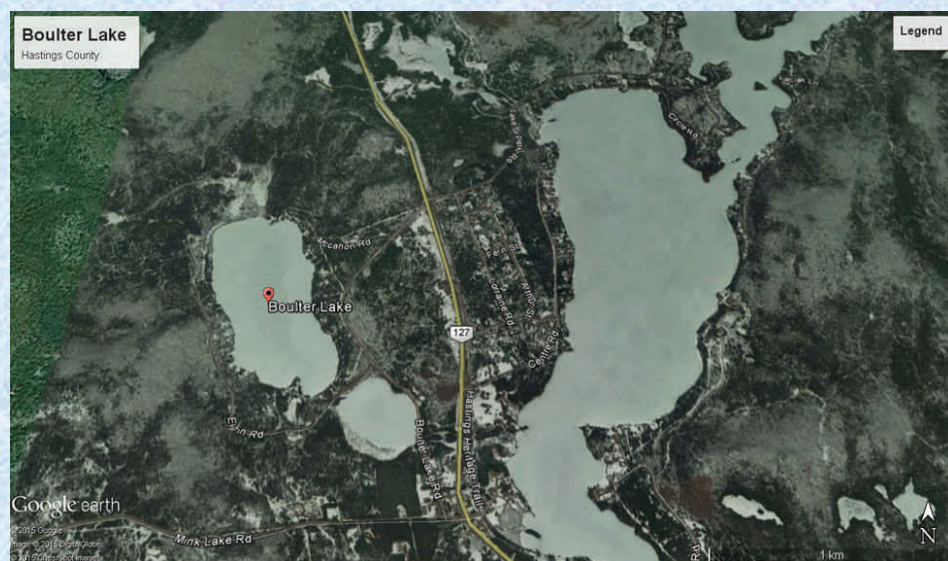
(inclusive of eggs, fry, and fingerlings). From these plantings, individuals returned to stocking sites, as well as strayed into new portions of the lakes. Adults returning ranged from 18 to 49 cm in length, and were in their third year of life. In addition to efforts in Lake Huron, Kokanee were also introduced into Lake Ontario, with over 3 million stocked between 1969 – 1972 (Wainio et al 1975). Successful spawning in some streams and shorelines was documented, but over the long term Kokanee did not persist within the Great Lakes.

Prior to the release of Kokanee into Lake Huron, the Ontario Department of Lands and Forest stocked 250 yearlings into Boulter Lake (Hastings County) in June 1960 (Fallis 1970) (Figure 3). These fish were a riverine spawning stock from Kootenay Lake, British Columbia. Mature Kokanee were captured during the late summer and fall of 1963, indicating the initial stocking event was successful. Based on this success, an additional 920 fingerlings were released in 1965, raised from gametes collected during the fall of 1964 (Fallis 1970).

Boulter Lake is a 41.1 hectare oligotrophic lake, with a mean depth of 9.3 m, and a maximum depth of 23 m (Figure 1). Spawning was completed within the lake over an area of cobble and coarse gravel, with mature adults being captured from September to April.

*Continued on Page 10.*

**Figure 1.** Boulter Lake (Hastings County)





# Welcome Our New Regional Representative

## Megan Lloyst: Eastern Regional Representative



Megan Lloyst has been a member of the American Fisheries Society since 2011, and presented at several Ontario Chapter Meetings. Megan has over 7 years of experience working in academia, private natural resource consulting, and government agencies including the Ontario Ministry of Natural Resources and Forestry, and Fisheries and Oceans Canada. Megan's experience focuses on the design, implementation, and management of aquatic research within various industry sectors including mining, oil and gas, linear infrastructure, commercial and residential land development, and renewable energy. Megan's experience and knowledge in aquatic ecosystems extends across Ontario, Saskatchewan, British Columbia and the Yukon.

As an aquatic biologist with SLR Consulting, Megan specializes in the characterization and assessment of stream and lake fish communities and fish habitat. She identifies potential impacts to aquatic systems, predicts ecosystem responses, and recommends mitigation and offset strategies. Megan is experienced in the development, implementation and coordination

of large-scale biological monitoring programs in urban and remote field environments.

Megan received a Bachelor of Science degree from Guelph University and a Master's of Science degree from Trent University. Megan collaborated with DFO and MNRF for her graduate research. She assisted with the development and delivery of a stocking effectiveness monitoring program to investigate the distribution and habitat associations of stocked American Eel (*Anguilla rostrata*) in Lake Ontario and the Upper St. Lawrence River. She also designed and lead a study to investigate the dispersion patterns of stocked eels in Lake Ontario tributaries.

## "On the Hook!"



**'MNRF plan partial removal of Black Sturgeon River Dam'**

<https://www.tbnewswatch.com/local-news/mnrf-plans-partial-removal-of-black-sturgeon-river-dam-507030>



**'How the CDS Storm water treatment system works.'**

<http://www.estormwater.com/how-cds-storm-water-treatment-system-works>

**'Its finally here: Radioactive Plume from Fukushima marked Landfall on America's West Coast'**

<http://www.environews.tv/121216-seaborne-caesium-134-fukushima-makes-landfall-us-1st-time-oregon-coast>



**'Concrete cloth as a way to simplify complex, costly culvert repairs.'**

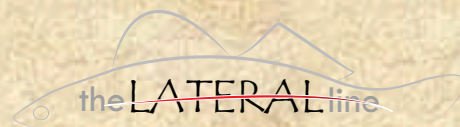
<http://www.estormwater.com/videos/concrete-cloth-culvert-lining-video/5188807272001>



**'EcoMOBILE is an exciting new extension of the EcoMUVE curriculum.'**

<http://ecolearn.gse.harvard.edu/ecomobile/overview.php>





## Thank You to our 2017 AFS-OC AGM Sponsors



Gold Level Sponsors



Stantec



Ontario



vemco



## Continuing Education

### ***Trout Unlimited would like to remind you.....***

That there is still time to register for the remaining three workshops in their six part series “**Stream Rehabilitation, From Form to Function: A Comprehensive training Course**”. Remaining titles and dates include:

Workshop # 4—Linking Solutions to the Problems

Date: Saturday, March 25th or Tuesday, March 28th

Workshop # 5—Project Planning, Development & Managing the Cookbook

Date: Saturday, April 8th or Thursday, March 30th

Workshop # 6—Applying a Strategic Approach/Large Scale Rehabilitation

Date: Saturday, April 22 or Thursday, April 20th.

*\*Please note that registration closes 1 week prior to workshop date.*



## Fish Focus: River Darter (*Percina shumardi*)

**Habitat:** Prefers large clear streams with moderate to fast flows with a gravel bottom containing some rubble and boulders.

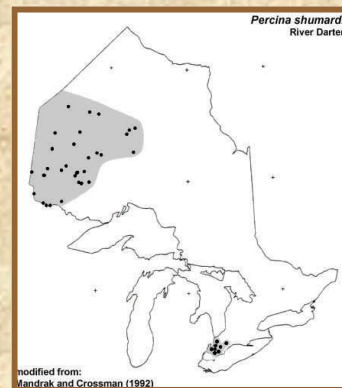
**Reproduction:** The River Darter spawns in the spring (anywhere from February –May), and lays its eggs in the shallow slow-moving waters of large streams. They spawn numerous times with several different partners and eggs as well as young, are left unguarded.

**Diet:** Benthic invertebrates (midges, caddisflies) and crustaceans (snails) that on the river bottom.

**Maximum Age:** 3

**Ontario Average:** 5.0 cm

**Ontario Record:** 7.6 cm



### **DID YOU KNOW?**

The River Darters is more abundant in northern Ontario than southern due to habitat requirements.

No other darter has two spots on the spiny dorsal fin. The name *Percina shumardi* comes from the Latin name *Percina* ‘little perch’ and *shumardi* comes from its discoverer; Dr. George Shumard who was a surgeon for the Pacific Railroad in Missouri.

The River Darter has long pectoral fins which help it cling to the bottom of its preferred habitat of large fast flowing rivers and streams.

Native to only the United States and Canada, the River Darter is the most abundant darter species within the Mississippi River channel.

## Ontario's Lost Kokanee Salmon—continued

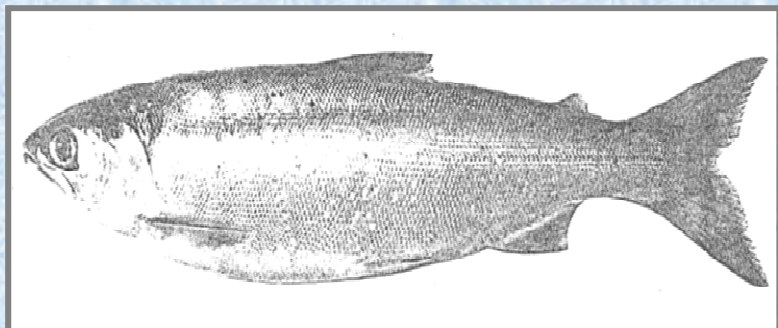


Figure 1. Boulter Lake (Hastings County)

The bulk of the spawning Kokanee were collected during November and December. During 1970 sampling, 184 mature Kokanee were captured (106 males and 57 females). Males had an average fork length of 286.7 mm (range 258 to 370), while females had an average fork length of 288.2 mm (range 257 – 317). The age structure of the fish

comprised four ages ( age 0 up to age 3+), which is consistent with other Kokanee Salmon populations (Collins 1971). Fish aged 2+ and 3+ comprised the adult spawning population.

The success of Kokanee Salmon introduction in Boulter Lake shines, relative to other introductions, especially based on the number of individuals stocked. In George Lake (southwest of Sudbury), 80,600 fry and fingerlings were introduced in 1966/67, but no adults were recovered (Fallis 1970). Similar to introductions within Lake Huron, adults were captured and successful spawning was documented, but the populations were not able to persist over time. Despite the antiquated nature of these studies, it is believed that Kokanee Salmon still persist within Boulter Lake.

FISH DISTRIBUTION FROM 1960 TO 1964					
Species of Fish	Number of Fish Planted				
	1960	1961	1962	1963	1964
Salmon, Kokanee Yearling	250	—	—	—	—

Figure 3. Stocking records Ontario Department of Lands and Forests.

Collins, J.J. 1971. Introduction of kokanee salmon (*Oncorhynchus nerka*) into Lake Huron. Journal of the Fisheries Research Board of Canada 28: 1857-1871.

Fallis, B.W. 1970. The ecology of an exotic population of Kokanee *Oncorhynchus nerka* (Walbaum) in Boulter Lake, Ontario. M.Sc dissertation, University of Toronto. 113 pp.

Wainio, A.A., G.J. Haarmeyer, K.C. Faulkner, and A. Inglis. 1975. The Credit River coho project. Ministry of Natural Resources internal report. 54 pp.





## Thank You to our 2017 AFS-OC AGM Sponsors



Silver Level Sponsors

**SLR**

global environmental solutions



Ontario Waterpower  
Association



**NATURAL RESOURCE SOLUTIONS INC.**

Aquatic, Terrestrial and Wetland Biologists

**ATS**  
ADVANCED TELEMETRY SYSTEMS

**R•M**

**ROYAL  
ONTARIO  
MUSEUM**

**GEO**

M O R P H I X

Geomorphology  
Earth Science  
Observations



**DILLON**  
CONSULTING

**DRIFT**

**OUTFITTERS & FLY SHOP**

### ***Why Should I Attend This Year's Annual General Meeting?***

The next Annual General Meeting & Conference of the Ontario Chapter of the American Fisheries Society is coming up soon. Many of you may be wondering why you should attend your Chapter's AGM, particularly when considering the tight budget and travel restrictions that are all too common these days. We would never discourage attending larger meetings, but many are unaware of the benefits of smaller, local meetings. Below is just a small sampling of these benefits:

#### **☛ Affordability:**

Registration fees are about half the cost compared to a large national meeting. Due to the smaller size of these meetings, there are typically more cost-effective options for venues available, which lowers attendees' fees. Better accommodation rates are also often secured at the same time.

#### **☛ Ease of travel/location:**

Chapter meetings are always held in Province, meaning you don't have to spend as much time and money to travel to the meeting as you would for a larger conference.

#### **☛ Connect with your peers:**

Chapter meetings are more intimate than most Society meetings. You won't get lost in a sea of people, and it's easy to connect and re-connect with new and old friends alike. You're more likely to find someone who has worked with your boss/supervisor or in your program/agency and you can take some time to bond over your mutual likes and dislikes. As you attend more of these meetings, you will start to recognize faces and keep up-to-date with colleagues you don't get to see frequently.

#### **☛ Student awards:**

With a smaller meeting, fewer students are in attendance overall, which increases the odds of earning the coveted E.J. Crossman Award for Best Oral Student Presentation! The Chapter also presents the Ontario Bass Nation Award for the Best Student Poster, along with travel awards each year to help students to attend the Chapter meeting.

#### **☛ Priority access to new research:**

A Chapter meeting is one of the earliest opportunities most researchers have to spread the word about the important work they are doing and to get feedback from peers who are more likely to be familiar with the topic/geography/issues than most who might attend at a larger meeting. It's also an opportunity to learn what others in your region are learning and developing, which could be important for future work. Wouldn't you love to finally put a face to the name you keep citing in your papers?

#### **☛ Career development:**

There is so much to learn at a Chapter meeting, it's almost overwhelming! Aside from learning about all the amazing research being conducted in your local area, attendees also have the opportunity to develop their skills in Continuing Education workshops, and learn from the best about how to progress in your career at the Student/Mentor session. Chapter meetings are also a great place for job seekers to find local jobs and for employers to meet potential candidates to fill an upcoming job opening.

#### **☛ Get inspired!**

This is one of the best places to learn about innovative approaches to challenges in your region and interact with colleagues to develop creative solutions and collaborations to your own issues. The plenary sessions often inspire by revisiting the challenges and successes of a lifetime of work and encouraging the next generation to forge ahead in the face of the many challenges encountered along the way.

#### **☛ Have some fun!**

It's not all work and no play! The Executive Committee makes sure you're taken care of by organizing fun events like a banquet that includes a dinner buffet and mixer, and a raffle to support student research. The first round is on us!

Are you excited yet? This list gives you just a taste of everything we have in store for you at the 2017 AGM in Orillia March 2-4, 2017. Check out <http://www.afs-oc.org/> for the latest meeting updates.



AMERICAN FISHERIES SOCIETY  
**ONTARIO CHAPTER**





## Thank You to our AFS-OC 2017 AGM Sponsors



### Bronze Level Sponsors



Credit Valley  
Conservation



### Exhibitors

