



## Message from the President

Greetings,

The recent hot weather suggests that summer is in full swing, making it easy to forget our winter meeting was only a few months ago! With more than 70 participants, attendance was among the strongest in recent years. First-day participants enjoyed an intimate slide-free presentation from our honorary guest speaker Dr. Henry Regier. Dr. Regier's fascinating talk elicited numerous well-thought and philosophical questions from the audience. When the questions finally subsided, our friend's at Credit Valley Conservation, which is where Dr. Regier launched his esteemed career, presented him with a beautiful map of the Credit Valley watershed. It was a wonderful moment that I think we were lucky to share.

Many fantastic talks followed Dr. Regier before we were treated to another excellent dinner from the staff at Geneva Park. Dinner complete, our evening social which included a very well-received student mentoring event, prizes, and games was underway.

The conference, which was a huge success, would not be possible for all the hard work of those at Geneva Park, the AFS-OC Executive Committee, Student Subunit, and of course all those who attended and participated. Here I would like to extend my deepest gratitude to everyone who had a hand in making the meeting one of the best. I would also like to tip my hat to the exceptional number of people who expressed an interest in becoming more involved with AFS-OC, whether as new members of the ExComm, Ad-hoc committee members, or simply as volunteers. This type of initiative drives the spirit of AFS-OC and I'm truly excited to be involved at a time when spirit is sky high!

Tight lines,

-Lee

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

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## 2016 AFS-OC Annual General Meeting



AMERICAN FISHERIES SOCIETY  
ONTARIO CHAPTER

On February 25-27th, the Ontario Chapter of the American Fisheries Society hosted their 2016 Annual General Meeting and Conference at the YMCA—Genvea Park in Orillia, Ontario.

There were a total of 73 attendees including 32 students, 8 conservation authority representatives, 2 Fisheries and Oceans Canada representatives and 8 Ministry of Natural Resources and Forestry representatives.

This year's theme was "Celebrating Evidence-Based Decision making in Ontario and Abroad", and our Keynote speaker was LEGEND of Canadian Fisheries Science and Management—**Dr. Henry Regier**. Dr. Regier spoke of Ontario's fishery policy since confederation in 1867, comparing it to more modern conservation movements in ecosystem contexts.

Conference participants were honoured by Henry's commitment to conservation biology, and his willingness to share it with all of us.

There were a number of vendors that also participated in the AGM, including Hoskin Scientific, Lotek, and Enviroluk Vegetated Environmental Solutions.

### *Introducing Vice President Nominee — Phil Bird*

Phil received his BSc. Honours degree from Trent University in 2009 where he completed a joint major in Biology and Environmental and Resource Sciences with a specialization in Ecological Management. He has worked in a number of capacities involving aquatic monitoring at Credit Valley Conservation (CVC) and has extensive electrofishing experience. Phil has been a member of the Ontario Chapter since 2008. He was fortunate to be part of a contingent of Ontario Chapter members who attended the parent society's AGM in Quebec City in 2014. His current role at CVC involves leading the fisheries component of the Integrated Watershed Monitoring Program, and supporting the Aquatic Sciences group. His areas of interest include fish and stream ecology, species distributions, community dynamics and stream restoration. The Credit Valley is his home watershed where he grew up and developed a passion for fish and angling. Phil enjoys training (especially fish ID), mentoring his staff and introducing them to the chapter. He is also involved with collaborative and volunteer work with other agencies, universities and non-governmental organizations. Following the keynote address at Geneva Park in 2016, Phil had the privilege of presenting C.A.R.S. Legend Dr. Henry Regier with a map depicting the 1954 stream sampling of the Credit River; a sampling effort that represents both the beginnings of Dr. Regier's incredible career and the incorporation of fisheries science into the early Conservation Movement.





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# AFS-OC Student Subunit

## Introducing the New Executive



**PRESIDENT**—Vivian Nguyen (<http://www.fecpl.ca/people/vivian-m-nguyen/>)

I am currently a Ph.D. candidate in the Fish Ecology and Conservation Physiology Laboratory supervised by Dr. Steven Cooke at Carleton University. My research focuses on the knowledge mobilization of fish telemetry research. In other words, how does telemetry science make its way into practice? I am very interested in understanding the process of knowledge exchange and mobilization, and how to promote interdisciplinary and transdisciplinary research. Currently I meddle between the social and natural sciences to bring two perspectives together for the purpose of better understanding the big picture. I have always been fascinated by the living world around me and keen

to share my experiences and opportunities with others. As such, as a member of the AFS-OC student subunit executive committee, I hope to engage with the membership, to share opportunities and perspectives, and enhance their experiences as a student in fisheries research.

**VICE PRESIDENT**—Jacqueline Chapman (<http://www.fecpl.ca/people/jacqueline-chapman/>)

Jacqueline Chapman received her B.Sc. from the University of Manitoba and her M.Sc. from Carleton University supervised by Dr. Steven Cooke. During her MSc, Jacqueline's research focused on the effect of watershed land use on the health, growth, and parasite communities of stream fish in agriculturally dominated areas. Her PhD research, supervised by Dr. Cooke and co-supervised by Dr. Kristi Miller (DFO), seeks to identify interactions between fisheries stressors and pathogenic microbes in wild salmon during annual spawning migrations to understand how fish health at the time of capture influences individual variability in post-release survival and behaviour. Jacqueline is excited to expand her role with the AFS-OC Student Subunit and looks forward to another great year!



**TREASURER**—Jill Brooks (<http://www.fecpl.ca/people/jill-brooks/>)

Jill Brooks completed her BSc degree in Marine Biology from the University of Bangor, UK and then spent several years working on various shark species in the Bahamas and Florida before moving to Canada. She began her MSc degree in fish ecology with Dr. Steven Cooke at Carleton University in May 2015. Her thesis involves acoustically tracking multiple fish species in a Lake Ontario harbour undergoing restoration. She is a recent member of the American Fisheries Society and is looking forward to using her previous project management and outreach experience to help the Ontario Chapter's student subunit grow.

## 2016 AFS-OC AGM Award Winners

### ***Outstanding Mentor Award Winner—Dr. Steve Cooke***

Being a mentor is one of the most important roles of a fisheries professional. I am fortunate to have had many outstanding mentors in my career – some were my professors, some were colleagues, and all were my friends. Today I still maintain a circle of mentors that I rely on for guidance and advice. I am also fortunate to be surrounded by keen learners on a day to day basis – students, post docs and others that want to learn about fish and fishers. That part is easy and is my job. I focus my mentoring efforts on trying to help learners grow in other ways – encouraging them to serve our profession, connect with the public, set personal goals, take time to reflect, and to be good global citizens. One of my proudest achievements as a mentor was working with a group of grad students to define a series of points that we felt important and wanted to share with others. We published a paper to help early career researchers to “be relevant” – a paper that will likely never be cited – but will hopefully influence those that read it. As a professor I get to wallow in my students achievements on a daily basis. For that I am truly grateful. Mentors “matter” and I am so fortunate to have been recognized as a mentor by the AFS OC student sub-unit. I am humbled by the incredible talent that exists on the Canadian fisheries landscape and am pleased to be able to give back by sharing my experiences with others. This award is really for the mentors that I have had (and have) and the mentees that give me an opportunity to influence their lives.

### ***E.J. Crossman Award Winner—Zachery Wells***

Thanks very much to the AFS-OC and the many participating sponsors for hosting such a great annual meeting, and thank you very much for giving me the opportunity to give an oral presentation. I was honoured to have been selected as the recipient of the E.J. Crossman award, and will be putting the bursary towards attending the Canadian Society for Ecology and Evolution conference in Saint John’s, Newfoundland, this July. I’m happy to have finally gotten my hands on a copy of Freshwater Fishes of Canada, and will now have the luxury of having it in my office as opposed to constantly borrowing it from the library. This was my first year attending the AFS-OC Annual Meeting, and I will certainly be returning. Not only was there a wide variety of interesting talks and associated dialogue, but meeting with experts from various academic, governmental, and consulting backgrounds was invaluable. I look forward to next year’s meeting, where I anticipate, as Henry Regier would expect, seeing the results of a year’s worth of evolving ideas.

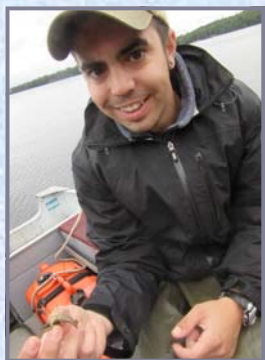


### ***Ontario B.A.S.S. Nation Award Winner—Karl Lamothe***

Thank you to the American Fisheries Society – Ontario Chapter (AFS-OC) for honouring my poster with the Ontario B.A.S.S. Nation Award at the 2016 Annual General Meeting (AGM). Conferences and meetings such as the AGMs of the AFS

Chapters have been, and continue to be some of my favourite experiences during my undergraduate and graduate degrees.

These local meetings bring together many knowledgeable senior fisheries scientists, limnologists, managers, and sponsors who show a great amount of support for us up-and-coming fish-heads. Having the opportunity to communicate my research on the methods of measuring resilience of communities to disturbance, and being recognized by fellow members of the AFS-OC, encourages me to continue the work that I am passionate about. Again, I want to thank the AFS-OC for their recognition and continued encouragement. I look forward to participating again next year!





## A Special Thank You....



On behalf of the AFS-OC Executive Committee, and all the fellow AGM attendees, we extend our warmest thank you to Dr. Henry Regier for attending this year's AGM as the Keynote Speaker.

Henry spoke about Governmental fishery policies for Ontario waters since confederation. He related these policies to conservation movements in ecosystemic contexts.

Listening to Dr. Regier speak, was a snap shot of his legendary career. You could relive the conservation movements, environmental impacts and overall fisheries management changes in his past experiences and immense amount of knowledge that seemed to permeate out of every inch of his being.

We extend much gratitude to Dr. Regier for making the trip to this year's AGM, and for enlightening us fellow fish heads!

We can't thank you enough!



Phil Bird presenting a map of the Credit River watershed, depicting the 200+ sites sampled by Dr. Regier during the 1954 conservation report stream surveys. This and other watershed surveys around this time marked an important stage in conservation and fisheries research in the Province.

Thank you to Brian Morber from Credit Valley Conservation for creating this map.

Photo Credit: Jon Clayton, CVC



Dr. Henry Regier-Keynote Speaker 2016 AFS-OC AGM.

Photo Credit: Jon Clayton, CVC.



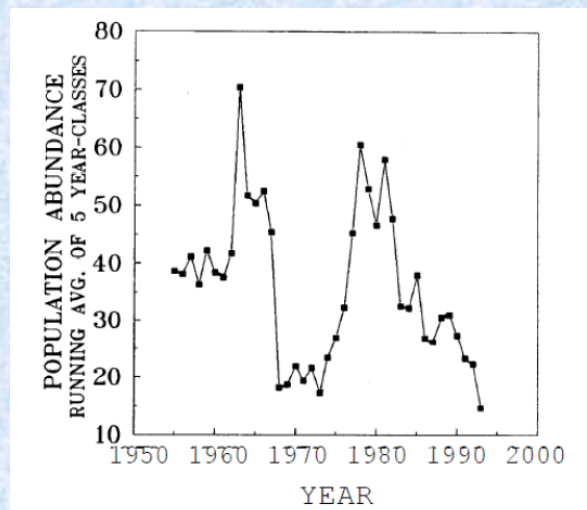
# SERIES: Fish Species Complexity—Highlighting Diversity in Ontario

## Nottawasaga River Walleye—A Unique Spawning Population

Brian Morrison / Ganaraska Region Conservation Authority, and Fred Dobbs / Nottawasaga Valley Conservation Authority

Walleye (*Sander vitreus*) is a freshwater fish ubiquitous across Ontario and the Great Lakes basin, and is considered one of the most highly prized, and pursued fish in Ontario. Spawning occurs in the spring or early summer, shortly after ice break up. Males tend to move onto the spawning grounds first, which typically consists of rocky areas in fast moving rivers, or coarse-gravel shoals of lakes<sup>1</sup>. Nottawasaga River Walleye are one of two documented native populations within the Great Lakes basin that exhibit unique habitat use for spawning. The Nottawasaga River drains approximately 3000 km<sup>2</sup>, and flows into southern Georgian Bay. The main spawning location for this population is within the Minesing Wetlands, where adults use submerged floodplain vegetation during spring freshet as their

spawning substrate. High spring discharge would promote extensive flooding in the Minesing Wetlands, good access into the floodplain for spawning, appropriate egg incubation conditions and sufficient time for newly hatched larval Walleye to migrate back to the main river channel. Floodplain spawning Walleye utilize floodplain locations, often where old oxbows exist, and maintain an inlet/outlet providing for a continuous flow of water while the floodplain is inundated<sup>2</sup>. The dominant vegetation of these spawning locations consists of reed canary grass (*Phalaris arundinacea*), sweet flag (*Acorus calamus*), rice cutgrass (*Leersia oryzoides*), and sedges (*Carex* sp.). Minor spawning activity has taken place in water horsetail (*Equisetum fluviatile*), giant bur-reed (*Sparganium*



*Population trends of Nottawasaga walleye stock estimates by relation of year-classes to runoff and then smoothed by a running average of five successive year-classes assumed dominant in the fishery each year.*

*eurycarpum*), river bulrush (*Scirpus fluviatilis*), and common cattail (*Typha latifolia*)<sup>2</sup>.

The Nottawasaga River once provided an important recreational fishery for Walleye, but their population has declined since the late 1980's to a point where the population is considered unattractive for fishing<sup>3</sup>. Habitat alterations along with changes to environmental conditions may have played a role in the population decline (e.g. development of municipal drains and dyking in Minesing Wetlands, altered watershed hydrology).

### REFERENCES:

- <sup>1</sup>—Scott, W.B., and E.J. Crossman. 1973. Freshwater Fishes of Canada.
- <sup>2</sup>—Priegel, G.R. 1970. Reproduction and early life history of the walleye in the Lake Winnebago region. Department of Natural Resources Technical Bulletin 45. 105 pp.
- <sup>3</sup>—Reckahn, J.A., and L.W.D. Thurston. 1991. The present (1989) status of walleye stocks in Georgian Bay, North Channel, and Canadian waters of southern Lake Huron, p. 85-144. In P.J. Colby, C.A. Lewis, and R.L. Eshenroder (ed.). Status of walleye in the Great Lakes: case studies prepared for the 1989 workshop. Great Lakes Fish. Comm. Spec. Pub. 91-1.



*Adult Walleye in Nottawasaga River.*



## Wanted: Eastern Regional Representative



Are you an AFS-OC member? Do you live EAST of Peterborough? Do fish and organizing fishy events interest you?

Have you been yearning to be more involved with the AFS-OC ... but just didn't know how? Well here is your chance! We have a Eastern Regional Representative position open. If you are interested, please send an email to [president@afs-oc.org](mailto:president@afs-oc.org) and tell us a bit about yourself and why you would make a great Eastern Regional Representative. We look forward to hearing from you!

## Employment Opportunity

### Regional Aquatic Science Analyst

The Science and Research Branch seeks a task-oriented team player to perform data analysis, data management tasks, prepare reports and participate in field sampling activities at the Southern Biodiversity and Monitoring Unit. Two (2) permanent positions (Sutton West and Bracebridge). The deadline to apply is Wednesday, June 29, 2016 11:59 pm EDT.

View the [Job Posting](#) and [Job Description](#) for details and [Apply Online](#).



## Congratulations!

### Jake Brownscombe—Best PhD

The AFS-OC Executive Committee would like to extend a hearty congratulations to Jake Brownscombe for being awarded a prestigious University Medal for the top PhD Carlton University this year. Way to Go JAKE!

We would also like to say a fond farewell to Jake. He has been acting as President of the Student Sub-Unit for the past four years but is now passing on the torch to Vivian Nguyen (See page 3). Jake, you will be missed on the ExComm but we know you have left your position in capable hands.

Good luck on all your future endeavors!



## 2017 AFS-OC Annual Meeting

### **MARK YOUR CALENDERS**

***The 2017 American Fisheries Society—Ontario Chapter Annual General Meeting and Conference will be held March 2-4th, 2017.***

AFS-OC members will have another opportunity to enjoy the wonderful hospitality of the YMCA—Geneva Park in Orillia, Ontario when they host the 2017 Annual General Meeting for the American Fisheries Society—Ontario Chapter.

Mark the date on your calendar and come out and enjoy social night with like-minded individuals, amazing oral and poster presentations put on by student and professional members on various fish-related topics, a mentoring session, and a raffle draw fund-raiser hosted by the Student Sub-unit.

Stay tuned to the Lateral Line and AFS-OC website for details regarding the guest speaker, early bird dead-line to save on registration fees, and the theme for the 2017 Annual Meeting and Conference.



***We hope to see you there.***

### Fish Focus: Bowfin (*Amia calva*)

The Bowfin is a mysterious fish, unknown to most Ontarians, and not often spoken of in your usual 'fish story.' This species of fish is the only kind in the Amiidae family to occur in Ontario. Being a living fossil, this fish is the only survivor of a larger group of fishes which evolved over 200 million years ago.

The Bowfin gets its name from Amia: Greek for a perch-like fish and calva: refers to the scaleless head.

This fish has an elongated dorsal fin and round caudal fin. No other fish in Ontario resembles the Bowfin. Spawning males will have bright green belly and orange/yellow colouration around the 'eyespot' (see below).

The Bowfin prefers heavily vegetated swamp areas of lakes and streams and has the ability to burrow into the bottom of these areas to hibernate in poor environmental conditions. Similar to other fish species such as the Central Mudminnow (*Umbra limi*), the Bowfin has the ability to gulp air from the surface, providing oxygen to the swim bladder.

The diet of the Bowfin is variable—ranging from minnows, frogs, crayfish, aquatic invertebrates and even snakes! They aggressively gulp water at the surface to catch their prey. Females will grow much larger and live substantially longer than males.





## "On the Hook!"



**'Environ span Modular Culvert Systems—A light footprint for a heavy load.'**

<http://www.envirospan.ca/>



**'Skinny dipper disrespects rare and endangered fish '**

[http://www.theweathernetwork.com/videos/Gallery/skinny-dipper-disrespects-rare-and-endangered-fish/2312993038001/2312993038001\\_3](http://www.theweathernetwork.com/videos/Gallery/skinny-dipper-disrespects-rare-and-endangered-fish/2312993038001/2312993038001_3)



**'Invasive Species not best Conservation Tool.'**

<http://phys.org/news/2016-04-invasive-species-tool.html>

## World Fish Migration Day—Ottawa 2016

On Tuesday May 17th, approximately 35 local students and professionals migrated their way to the Lieutenant's Pump to celebrate the second biennial World Fish Migration Day with a pub talk and trivia night. Guests were entertained by a captivating presentation on the cultural significance of the American Eel in the Ottawa area given by Ethan Huner of the Algonquins of Ontario. Following Ethan's talk, everyone enjoyed some healthy competition as teams tackled fish trivia questions before spending the night mingling over food and drinks. We would like to thank our sponsors for donated prizes and the Lieutenant's Pump for hosting another successful evening! On Saturday May 21st, the second biennial World Fish Migration Day outreach event was hosted at the Canadian Museum of Nature in Ottawa, ON. Volunteers from Carleton University, the Canadian Wildlife Federation, and Kilgor and Associates were decked out and ready to talk fish with the museum's over 1000 patrons! For the little ones, fishy themed face painting, post cards, and colouring sheets helped foster an interest in fish, while 'spawning migration Plinko' demonstrated how predators, fisheries, and barriers can prevent fish from reaching their spawning habitat.

Fisheries biologists from the Fish Ecology and Conservation Physiology Research Laboratory and Kilgor and Associates were present to demonstrate fish tagging and research technologies and answer questions about local and global research projects. As a city located at the confluence of two large rivers, WFMD volunteers highlighted local waterways and migratory species that are impacted by barriers such as dams, such as the species at risk American Eel. Finally, the Canadian Wildlife Federation's green screen transported patrons under water and face to face with a living fossil, the Lake Sturgeon!



*Ethan Huner from Algonquins of Ontario speaking about the cultural importance of American Eel in the Ottawa River.*

We would like to thank the Canadian Museum of Nature for making this event possible!

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



*Introducing Northern Member-at-Large Nominee — Bill Gardner*

William Gardner has lived and worked in Sault Ste. Marie, ON since 1992. Bill is a technician in Fisheries and Oceans Canada's Great Lakes Lab for Fisheries and Aquatic Sciences (DFO-GLLFAS). He has been fortunate enough to work on projects throughout the Great Lakes basin and in many parts of northwestern Ontario. He has worked with many people from different agencies and companies, on both sides of the border over the years as well as many exceptional students. Bill has a technician's diploma in Fish and Wildlife from Fleming College and a BSc. from the University of Guelph. Bill has been a member of the American Fisheries Society since 2001. He has been involved with the Ontario Chapter since its inception. He is a former President of the Chapter (September 01, 2006 to August 31, 2007), a former newsletter editor (October 2009 to December 2013) and has served as the chapter's historian since the beginning. He looks forward to the next phase of his involvement in the chapter as the Northern Member-at-large.

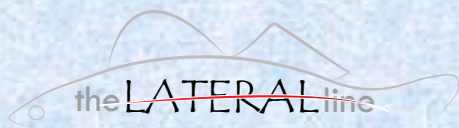
*Ontario Freshwater Fishes Life History Database*

The AFS-OC is proud to be associated with the Ontario Freshwater Fishes Life History Database (OFFLHD), "The online resource for Ontario's Fisheries Professionals since 2002". This website is an unparalleled source of information concerning the fishes of Ontario. Researchers, consultants and students alike agree this interactive searchable database provides a valuable resource to all those interested in Ontario freshwater fishes.

The OFFLHD is a fully searchable database for all Ontario and adjacent Great Lakes freshwater fishes including introduced, extirpated and extinct species. It contains current information pertaining to life history, habitat, size and age, distribution, conservation status, ecological value, reproduction and nomenclature for 154 species, 3 subspecies and 2 established hybrids. The website also includes photographs, range maps, notes, Ontario record lengths and weights, information sources, glossary of terms and related web links.

Try it out for yourself by following the OFFLHD link on the Ontario Chapter website, or directly by visiting <http://www.ontariofishes.ca>. Explore, learn and enjoy.

The Ontario Freshwater Fishes Life History Database was created and is maintained by Rob Eakins, AFS-OC Webmaster.





## Photo Theme of the Issue — Fishing at Work



*Photo taken by Ann Rocchi*

*Tiger Trout (hybrid of a female Brown Trout and male Brook Trout) captured in the Headwaters of 12 Mile Creek, St. Catharines.*



*Photo taken by Chris Lorenz*

*Remnants of a spring spawner in Maxwell Creek, Owen Sound.*

*Photo taken by Chris Lorenz*

*Nice view on the patio of the Sound after a hard day's work.*



### **Next Issue's Theme—Summer Vacation**

*Photo taken by Kim LeBrun*

*Just a little break during a hike to search for fish from an old heritage bridge in Guelph, Ontario.*



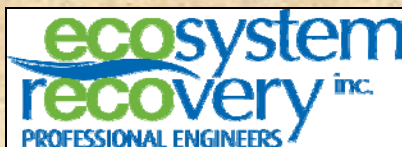
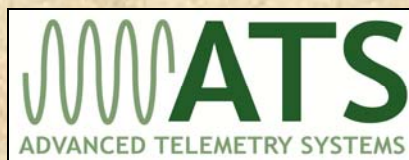


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