

# Newsletter of the AFS Ontario Chapter



AMERICAN FISHERIES SOCIETY  
**ONTARIO CHAPTER**

## President's Message



Hello everyone, this is my first message as President of AFS-OC. As your new President, I want to begin my message to all of you by expressing my thanks and the thanks of the chapter to our outgoing, now Past-President, Bill Gardner. Bill moved our Chap-

ter forward on a number of fronts, including helping to establish our new student subunit. Bill also confirmed the commitment of our Chapter as local chapter host for the AFS 2008 Annual Meeting in Ottawa. At this writing, Bill and his wife are still on a well-deserved vacation in China.

As President of the Chapter for this coming year, I have set a number of goals for myself. First is to work with the ExComm and our Education Committee co-chairs, Jason Barnucz and Dave Green to launch a series of annual training workshops to increase the capability of fisheries professionals to better protect and manage fisheries and aquatic resources. Second, the Chapter hopes to work with our sister Chapters in Minnesota and Wisconsin to hold joint AGMs and perhaps a regional symposium in February 2009. Finally, perhaps the biggest goal is to help make the AFS 2008 Annual Meeting in Ottawa a huge success.

The first goal is very important to me. Over my career as an aquatic ecologist, I have had the opportunity to gain an enormous amount of exposure and training in fields related to my interest in rivers, streams and watersheds. Some of this training (e.g. hydrogeology for biologists) occurred through the AFS Southern Ontario Chapter beginning in the late 1980's, early 1990's. Many of my contemporaries were also beneficiaries of this training and we all used our new awareness to move environmental and fisheries management forward. However, many of these women and men are now either retired or have moved on to other jobs. Many of our members have not had the opportunities for training that I had and so, I believe it is a perfect time to launch a new training initiative through our Chapter. As a matter of fact, the first such workshop on Bioengineering occurred a few weeks ago in partnership with the Grand River Conservation Authority, Harrington & Hoyle, Credit Valley Conservation, City of Waterloo and R & M Construction. This workshop was chaired by Samantha Mason and by all accounts an enormous success (see article on page 4).

The second goal is the joint AGM in February 2009 between our chapter, and the Minnesota and Wisconsin Chapters. Bill Gardner, myself and the ExComm think that this will be a wonderful opportunity to meet with our colleagues from across the border, learn about related fisheries and aquatic issues and perhaps develop new joint initiatives. This meeting will also hopefully re-engage our northwestern members. The meeting is proposed for Duluth, Minnesota and the Chapter is beginning now to save and raise funds to expedite travel by

## President's Message .....Cont'd

as many Chapter members as possible (including our students) to this meeting.

Of course, the biggest goal of this coming year is the Annual Meeting in Ottawa. As host Chapter we have agreed to actively support the 2008 Organizing Committee and help wherever we can. This will mean volunteering to assist on sub-committees of the Organizing Committee, helping with logistics at the meeting and helping with the content of the meeting. One of the biggest jobs is on the Fund-raising Committee, being ably chaired by AFS-OC member, Debra Martin-Downs. Our Chapter is well represented on this committee and we need even more help. The Chapter is also responsible for the Raffle held during the Annual Meeting and we will also be looking for people to assist us there. Already a number of our members have volunteered to assist on a number of committees. Don't be worried if you have not yet indicated that you want to help. We will require more help as we get closer to the event. Please contact

me if you wish to help and I will direct you to the committee that can use your help.

Finally, I would be remiss if I didn't stress how enormously pleased I am that we now have an official student sub-unit under the able Presidency of Mary Finch-Histed. This sub-unit has already conducted a successful Level 2 backpack electrofishing course for students (with the support of the Watershed Science Centre). Our student sub-unit has also already stepped forward to establish the student sub-committee for the Annual Meeting.

This will be a very exciting year. I am looking forward to the challenge and looking forward to meeting and working with as many of you as I can.

Here's to exciting times ahead.

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

## AFS 2008 Update

With the AFS 2007 Annual Meeting a success, preparation for the 2008 Annual Meeting is now on full throttle. The 2008 Annual Meeting website ([www.fisheries.org/afs08](http://www.fisheries.org/afs08)) is now up and active and accepting abstracts and symposia ideas (see the **1st Call for Papers** at the end of this newsletter). Our number one objective in the near future is fund-raising. The Fund-raising committee has established a long list of contacts and will need help with raising both funds and raffle prizes for Ottawa. Planning is also already underway for the hospitality events and the student events. Michael Donaldson, member of our student subunit and member of the Student Committee for the Annual Meeting has been very busy helping to structure the AFS 2008 Student Poster session. The Committee is also exploring what would be needed in order to make this conference a "green conference". San Francisco did a good job making their conference as green as possible and we hope to do the same.

Also be sure to check the AFS 2008 page on the Ontario Chapter website ([www.afs-oc.org](http://www.afs-oc.org)) for the latest developments!



Fisheries in Flux

American Fisheries Society • Ottawa 2008

## Student Subunit Update

We are very excited to announce that this is our first newsletter as the newly elected Student Subunit Executive! Thank you very much to everyone who chose us to represent the students of the Ontario Chapter of the American Fisheries Society. We would like to take this opportunity to remind you, that you are always welcome to make suggestions to us on how to improve the student subunit. Also, please feel free to forward us any opportunities that you think Ontario students would be interested in and we'll make sure to share them with the subunit.

Our electrofishing course offered in September was extremely successful. We would like to thank everyone for their support, especially the Institute for Watershed Science and the Cooke lab for their contributions. Please see the article by Mike Donaldson on page 6 for a student's perspective of the course.

We are busy planning our next event to be held in conjunction with the winter AFS-OC workshop. We are still floating around ideas but suggestions include an evening with a scientist or a mini symposium.

Mike Donaldson is heavily involved in the student activity planning for the 2008 AFS Annual Meeting and you should expect to hear more details as the conference gets closer.

Finally, we wish everyone a great autumn season or as we like to call it "Data Analysis Time."

Kind regards,

Andrew, Mary & Mike  
Student Subunit Executive

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

Michael Donaldson  
[student-vice-president@afs-oc.org](mailto:student-vice-president@afs-oc.org)

Andrew Drake  
[student-secretary@afs-oc.org](mailto:student-secretary@afs-oc.org)



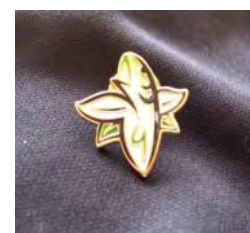
## AFS-OC Swag! Get your Hats and Pins Here!

***Impress your friends and colleagues - Support your AFS-OC now!***

Ontario Chapter baseball caps and lapel pins are now available for purchase from your Executive Committee.



<b>Cost:</b>	Baseball Cap	<b>\$20.00</b>
	Lapel Pin	<b>\$3.00</b>



If you would like to place an order for a baseball cap or lapel pin, please contact Heather Lynn ([secretary@afs-oc.org](mailto:secretary@afs-oc.org)).

## Continuing Education

### Introductory Bioengineering Course October 16-17, 2007

Kudos to Samantha Mason of the Grand River Conservation Authority for organizing a VERY successful and informative Introductory Bioengineering Course.

If you missed it, waffled (as I did) or just couldn't be bothered to make the time .....you made a big mistake! Hosting a capacity crowd our first "Continuing Education" offering was a HUGE success. This bioengineering course was very well attended with diverse participant affiliation ranging from federal and provincial agencies, various conservation authorities and consulting firms, non government organizations, as well as individual entrepreneurs and interested parties. The community support was equally impressive with Glenn Harrington, of Harrington and Hoyle Ltd. leading the charge.

Glenn's experience and grasp of industry challenges, attitudes and techniques were well blended into a montage of basic techniques and examples that bode well to demonstrate what can be done with a little ingenuity, willingness and openness to alternatives that counter the idea of "hard" engineering. Providing extensive examples, Glenn presented several scenarios demonstrating various soil bioengineering techniques (live facines, brush layering, brush mattresses & staking) and their temporal effectiveness by way of before, after, and long-term photos of completed projects.

Bob Morris of Credit Valley Conservation presented the challenges associated with garnering community support and working with private land owners, volunteers and community groups.

Harry Reinders of R&M Construction delivered a well-rounded end to the presentations by providing a contractors perspective of construction and implementation. Harry has been actively involved in restoration projects for over 15 years and demonstrated the real world of engineering, construction, timelines, scheduling and the reality of pulling it all together.

Day 1 ended with a "field trip" to cut, gather and prepare our brush material for the next day's hands-on project.



Day 2 began with morning field trips to three bioengineered project sites, all of which were completed by Harrington and Hoyle more than 10 years ago. This tour entailed a description of the challenges, successes and failures often encountered during the planning and field phases of such projects.

The "course practical" wrapped up this two-day extravaganza by engaging all participants in the actual reconstruction of a 20-m section of Laurel Creek in Hillside Park, Waterloo. It was terrific to feel the genuine enthusiasm and camaraderie of the group as we all tried our hand at building and installing facines, brush layers and brush mattresses, while live staking our construction to ensure our efforts did not wash away in the next storm event.

The success of this entire project could not have taken place so easily without the generous contributions and involvement of the City of Waterloo. We extend our deepest thanks and gratitude to Denise McGoldrick, Len Fay, Dan Ditaranto and ground crews of the City of Waterloo for helping to organize and prepare the test site by isolating the work area with jersey barriers and sand bags, collecting and delivering our brush cuttings and extra compaction soil and for providing a backhoe and operator extraordinaire to play with us.

**SORRY YOU MISSED IT? .....Keep your eyes peeled toward next fall, maybe we can coerce Samantha into a repeat performance. DON'T MISS IT AGAIN!**

See ya there next time.

Debbie DePasquale,  
Enthusiastic course participant!

# Introductory Bioengineering Course Photo Gallery



## AFS-OC Student Subunit

### Backpack Electrofishing Certification Course

On September 28<sup>th</sup> and 29<sup>th</sup>, the AFS-OC student subunit held their inaugural course offering, "The OMNR Class 2 Electrofishing Backpack Crew Leader Certification Course" at the Canadian Centre for Inland Waters in Burlington, Ontario. The student subunit pro-tem Executive (Mary Finch, Michael Donaldson and Andrew Drake)



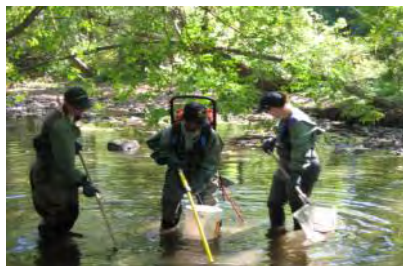
initiated and conducted the course.

Students from all education institutions in Ontario were eligible to take the course and "student friendly" course

fees were offered, along with an additional discount for AFS-OC members. The course featured an "in-class" theory component and a hands-on "field" component led by Andrew Drake. With nearly twenty students participating, Andrew had his hands full, but did a phenomenal job of delivering both components of the course to a captivated audience.



The course was enjoyed by all and featured excellent weather, delicious snacks, and a great group of people. All in all, the course was a major



success and bodes well for future education initiatives that will be conducted by the student subunit.

The student subunit would like to thank the American Fisheries Society Ontario Chapter, the Trent University Institute for Watershed Science, Lynn Bouvier, and countless other individuals who

helped make this course happen, and most of all, the course participants for making this a fun and educational experience!



Mike Donaldson,  
AFS-OC Student Subunit  
Vice President



## Take the Great Canadian Baitfish Survey TODAY!

Help Fisheries and Oceans Canada, the Bait Association of Ontario, the Ontario Ministry of Natural Resources and the University of Toronto understand what, where and how Canadians use baitfish for angling. Complete the survey at [www.surveymonkey.com/bait\\_survey](http://www.surveymonkey.com/bait_survey)

## Call for Nominations

### *Excellence in Fisheries Education Award Education Section, American Fisheries Society*

The American Fisheries Society (AFS) Excellence in Fisheries Education Award was established in 1988. The award is administered by the Education Section and is presented to an individual to recognize excellence in organized teaching and advising in some aspect of fisheries education. Nominees may be involved in extension or continuing education, as well as traditional college and university instruction.

Nominees must be AFS members, have been actively engaged in fisheries education within the last five years, and have had at least 10 years of professional employment experience in fisheries education.

Two or more people may act as nominators, but at least one nominator must be an AFS member. The nominator(s) is responsible for compiling supporting material and submitting the application.

The suggested format for applications can be found on the Education Section web site at <http://www.fisheries.org/afs/awards/>

Application materials should be sent to **Michael Quist** ([mcquist@iastate.edu](mailto:mcquist@iastate.edu)) in digital form.

Nomination deadline is **May 16, 2008**. Additional information can be obtained from:

Michael Quist  
Chair, Excellence in Fisheries Education Committee  
Dept. of Natural Resource Ecology & Management  
Iowa State University  
339 Science II  
Ames, IA 50011  
Email: [mcquist@iastate.edu](mailto:mcquist@iastate.edu)  
Phone: (515) 294-9682 / Fax: (515) 294-2995

## Mark These Dates

Leap year is on it's way and **something's brewing!** In lieu of this year's AGM, the Education Committee is cooking up plans for a workshop or two. Keep a close watch on our AFS-OC website at <http://www.afs-oc.org> and keep your calendar open February 28, 29 and March 1st, 2008

## Website Photo Gallery

We're working on it. Our website is dynamic, just like our webmaster who works very hard to keep things moving, providing continuous modifications to keep you informed. So visit often to see the latest on the job market or in educational opportunities AND .....soon to come .....a Photo Gallery highlighting our various events and all the fun times you may have missed. Don't miss out next time, stay informed and up to date by visiting <http://www.afs-oc.org/>.

## The View From Up Here

*The View From Up Here* will return.

We're holding Bill's place ..... And maybe even changing the name while he's gone, how about

**"The View from Over Here"**

Yes Bill is off exploring the exotics of the FAR EAST .....CHINA to be exact!

From all of us at AFS-OC .....We miss you Bill and look forward to your next instalment and the telling tales of your adventures overseas.



**Reserved**

## Call For Volunteers

This is a second call for volunteers for the AFS 2008 General Meeting in Ottawa, August 17-21, 2008. The organizing committee is now really gearing up and we will need more people signed up to assist us with everything from Fund-raising, the Meeting Raffle, Registration, Local Logistics, Social Events, Student Events and much, much more. If interested, please send a note to Jack Imhof, President, AFS-OC ([president@afs-oc.org](mailto:president@afs-oc.org)). The Ontario Chapter is the host Chapter for this fantastic meeting and this is a wonderful opportunity to contribute to your Chapter, Society and profession.

## Ontario Freshwater Fishes Life History Database

The AFS-OC is proud to be affiliated with the Ontario Freshwater Fishes Life History Database (OFFLHD). Once hosted by the Ontario Chapter, the OFFLHD now has its own domain ([www.fishdb.ca](http://www.fishdb.ca)). 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, status, reproduction and nomenclature for 150 species, 3 subspecies and 2 established hybrids. The website also includes photographs, range maps, notes, references, glossary of terms and related web links.

Try it out for yourself by clicking the OFFLHD logo on the Ontario Chapter homepage, or directly by visiting <http://www.fishdb.ca>. Explore, learn and enjoy.

The Ontario Freshwater Fishes Life History Database was created and is maintained by Rob Eakins, [webmaster@afs-oc.org](mailto:webmaster@afs-oc.org).







The Ontario Chapter of the American Fisheries Society and the Ontario Ministry of Natural Resources will host the 138<sup>th</sup> annual meeting of the American Fisheries Society in downtown Ottawa, Ontario, 17 – 21 August 2008. The meeting's theme, "Fisheries in flux: how do we ensure our sustainable future", addresses the ongoing challenge of confronting change when managing fisheries. Fisheries and fish communities are not static properties of ecosystems. Stressors such as exploitation, species invasions, climate change, and water resource demand are a few of the factors that drive changes. These changes potentially threaten sustainable use. Can we find solutions to these threats? What are we doing to ensure a sustainable future and what changes need to be made in our management of aquatic ecosystems?

### General Information

Aquatic resource professionals are invited to submit symposia proposals and abstracts for papers in a range of topics and disciplines. Participation by scientists at all levels and backgrounds, especially students, is encouraged.

The scientific program includes two types of sessions: Symposia (oral and poster presentations that focus on a single topic) and Contributed Papers (oral and poster presentations on any relevant topic).

Oral presentations are limited to 20 minutes (15 minutes for presentation plus 5 minutes for speaker introduction and questions). All oral presenters are expected to deliver PowerPoint presentations. Presenters must bring their PowerPoint file to the meeting on CD or USB flash memory stick by 7 p.m. the evening before their presentation. Laptop computers and LCD projectors will be provided and technicians will be available to help.

Traditionally, symposia have been dominated by oral presentations and sometimes supplemented by posters. Next year's meeting will experiment with a new symposium format that encourages greater use of posters in order to shorten the time demands of symposia. This new format elevates the profile of symposium posters through a 'speed presentation sub-session' that provides a time slot for short (i.e., 3 minute) oral presentations and dedicated viewing of symposium posters. See the 'Speed Presentation' box for details.

### What is a "Speed Presentation"?

"Speed Presentation" refers to a sub-session of a symposium that showcases posters. The speedy part is the oral presentation. The sub-session begins with a series of 3-minute talks (3 slides per speaker) during which each speaker advertises a poster. Following the mini-talks, speakers attend their posters for a one-hour period and address questions from interested parties. Speed presentation sub-sessions will be scheduled into the symposium program. Symposium posters will be displayed as a group within the general poster area and remain posted for the duration of the conference. The target number of posters in each sub-session is 10, allowing completion of the oral portion in 30 minutes and the entire sub-session in 90 minutes.

### Symposia

The Program Committee invites proposals for symposia. Topics must be of general interest to AFS members. Topics related to the meeting theme will receive priority. Symposium organizers are responsible for recruiting presenters, soliciting their abstracts, and directing them to submit their abstracts through the AFS online abstract submission form.

A symposium should include a minimum of 10 presentations and the time requested should not exceed two days (i.e., about 40 oral presentations). Regular oral presentations are limited to 20 minutes, but double time slots (i.e. 40 minutes) may be offered to keynote speakers. Posters associated with a symposium will be presented in the 'speed presentation' format (see box). Symposium organizers are urged to consider this poster format as an efficient means of communication that reduces time required for scheduling symposia.

Symposium proposals must be submitted by 11 January 2008 via e-mail to Mark Ridgway (mark.ridgway@ontario.ca) with the proposal attached in the correct format in MS Word or WordPerfect; please contact Mark Ridgway (address and phone below) if you do not receive confirmation by January 18. The Program Committee will review all symposium proposals and notify organizers of acceptance or refusal by 4 February 2008. If accepted, organizers must submit a complete list of all confirmed presentations and titles by 22 February 2008. Symposium abstracts (in the same format as contributed abstracts; see next page) are due by 29 February 2008.



Photo courtesy of Ottawa Tourism



**Ottawa Fact:** Ottawa is the capital of Canada, home to the Canadian Parliament. Parliament Hill, perched atop a bluff along the Ottawa River, is just a short walk from the Ottawa Congress Centre and AFS meeting hotels. The current buildings were completed in 1920, after a disastrous fire in 1916 destroyed all of the Centre Block, except the Library of Parliament. Parliament Hill is open to visitors all summer – you could catch the daily "Changing of the Guard" ceremony, take a tour of the buildings, hear a noon concert played on the 53-bell, 60 ton carillon housed in the Peace Tower or see the spectacular Sound and Light show playing every evening.

### Format for symposium proposals

- 1) **Symposium title:** Brief but descriptive
- 2) **Organizer(s):** Provide name, address, telephone number, fax number and e-mail address of each organizer. Indicate by an asterisk the name of the main contact person.
- 3) **Description:** In 300 words or less, describe the topic addressed by the proposed symposium, the objective of the symposium, and the value of the symposium to AFS members and participants.
- 4) **Format and time requirement:** Indicate the mix of formats (oral and poster). State the time required for regular oral presentations (i.e. 20 minutes per speaker) and the time required for speed presentations and poster viewing (3 minutes per speaker plus one hour of poster viewing).
- 5) **Chairs:** Supply name(s) of individual(s) who will chair the symposium.
- 6) **Presentation requirements:** We encourage speakers to use PowerPoint for presentations. All Mac-based presentations must be converted to PC format prior to the meeting. Presentations in other software programs must be approved prior to acceptance.
- 7) **Audiovisual requirements:** Symposium chairs must provide a PC-interface laptop computer for their session. LCD projectors will be available in every room. Other audiovisual equipment needed for the symposium will be considered, but computer projection is strongly encouraged.
- 8) **Special seating requests:** Standard rooms will be arranged theatre-style. Please indicate special seating requests (for example, "after the break, a panel discussion with seating for 10 panel members will be needed").
- 9) **List of presentations:** Please supply information in the following format:

Presenter's Name	Tentative title of presentation	Confirmed (yes/no)	Format (orals/speed presentation)
1. _____	_____	_____	_____
2. _____	_____	_____	_____

- 10) **Sponsors:** If applicable, indicate sponsorship. A sponsor is not required.

### Contributed Oral and Poster Papers

The program committee invites abstracts for presentations (oral and poster) at contributed paper sessions. Authors must indicate their preferred presentation format: 1) oral only, 2) poster only, 3) oral preferred, but poster acceptable. Only one oral presentation will be accepted for each senior author. Poster submissions are encouraged because of the limited time available for oral presentations. The program will include a dedicated poster session to encourage discussion between poster authors and attendees.

Abstracts for contributed oral and poster papers must be received by 8 February 2008. All submissions must be made using the AFS online abstract submission form, which is available on the AFS website ([www.fisheries.org](http://www.fisheries.org)). When submitting your abstract:

- Use a brief but descriptive title, avoiding acronyms or scientific names in the title unless the common name is not widely known;
- List all authors, their affiliations, addresses, telephone numbers, and e-mail addresses;
- Provide a summary of your findings and restrict your abstract to 200 words.

All presenters will receive a prompt email confirmation of their abstract submission and will be notified of acceptance and the designated time and place of their presentation by 30 April 2008.

For contributed papers, please indicate which two general topics best fit the concept of your abstract. Topics include: Bioengineering, Communities and Ecosystems, Contaminants and Toxicology, Education, Fish Culture, Fish Health, Fish Conservation, Freshwater Fish Ecology, Freshwater Fisheries Management, Genetics, Habitat and Water Quality, Human Dimensions, Marine Fish Ecology, Marine Fisheries Management, Native Fishes, Physiology, Policy, Population Dynamics, Statistics and Modeling, Species Specific (specify) and Other (specify).

Late submissions will not be accepted. AFS does not waive registration fees for presenters at symposia, workshops, or contributed paper sessions. All presenters and meeting attendees must pay registration fees. Registration forms will be available on the AFS website ([www.fisheries.org](http://www.fisheries.org)) in May 2008; register early for cost savings.

### Format for submitted abstracts

For abstracts submitted to a Symposium

Enter Symposium title: \_\_\_\_\_  
Specify format: (1) Oral (2) Speed presentation (i.e., Poster)

For abstracts submitted as a Contributed Paper

Enter 2 choices for topic: \_\_\_\_\_  
Specify format: (1) Oral (2) Poster (3) Oral preferred, but poster acceptable

Title: An example abstract for the AFS 2008 Annual Meeting

#### Authors:

Lester, Nigel. Ontario Ministry of Natural Resources, 2140 East Bank Drive, Peterborough, Ontario K9J 7B6; 705-755-1548; [nigel.lester@ontario.ca](mailto:nigel.lester@ontario.ca)

Maraldo, Dave. Ontario Ministry of Natural Resources, 300 Water St., Peterborough, Ontario K9J 8M5; 705-755-1906; [dave.maraldo@ontario.ca](mailto:dave.maraldo@ontario.ca)

Presenter: Nigel Lester

**Abstract:** Abstracts are used by the Program Committee to evaluate and select papers for inclusion in the scientific and technical sessions of the 2008 AFS Annual Meeting. An informative abstract contains a statement of the problem and its significance, study objectives, principal findings and application, and it conforms to the prescribed format.

**Student presenter?** (Work being reported was completed while a student): No

### Contacts

#### Meeting logistics and planning:

Dave Maraldo  
Fisheries Section, MNR  
[dave.maraldo@ontario.ca](mailto:dave.maraldo@ontario.ca) 705-755-1906

#### Symposia:

Mark Ridgway  
Aquatic Science & Development Section, MNR  
[mark.ridgway@ontario.ca](mailto:mark.ridgway@ontario.ca) 705-755-1550

#### Contributed papers:

Nigel Lester  
Aquatic Science & Development Section, MNR  
[nigel.lester@ontario.ca](mailto:nigel.lester@ontario.ca) 705-755-1548

#### Posters:

Tim Haxton  
Southern Science, MNR  
[tim.haxton@ontario.ca](mailto:tim.haxton@ontario.ca) 613-258-8240

#### Organizing a continuing education course

or workshop:  
Craig Woolcott  
J J Howard Marine Science Lab  
[craig.woolcott@nos.gov](mailto:craig.woolcott@nos.gov)