

## New Technology from OMNR

The Ontario Ministry of Natural Resources – Resources Report (March 1999) has announced that researchers with the OMNR are using high tech equipment and methods to pinpoint the exact day a particular fish hatched. As well, they can determine the temperature of the water in which the fish spent most of its life. Research Scientist Dr. John Casselman reports that by using electronic equipment to study the calcified tissue, or 'ear stones' in the inner ear of fish the age of the fish can be determined not only in years, but in days – allowing researchers to determine what day the fish hatched.

In another highly technical procedure, researchers use stable isotopes to determine the temperature of the water in which the fish have spent most of their lives. Those figures are important because they could determine if, for example, walleye in the Bay of Quinte are adapting to waters that, according to records, have warmed in the past 20 years. If walleye are still spending time in the cooler waters, it means they are seeking out lower

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## Freshwater Fishes of Canada – Reprinted

Galt House Publications Ltd. has reprinted Scott & Crossman's – Freshwater Fishes of Canada. The 1998 reprint includes all of the information contained in previous publications and a new section, "Authors Comments, 1998" which addresses more recent information and references. The book will be retailing for \$175.00 CDN, however, Galt House Publications have extended their promotional price (\$99.95) to recipients of the AFS-SOC Newsletter. See order form on page 6.

## DFO Releases the 'Revised' Interim Fish Habitat Referral Process

Over the past year, DFO has been establishing working arrangements with individual Conservation Authorities that are interested in, and capable of, undertaking reviews under Section 35 of the Federal Fisheries Act. Three levels of review were established with each participating Conservation Authority (CA), with their level of review depending on the arrangements negotiated with DFO.

### *Level I Agreement:*

The CA conducts the initial assessment of the projects to identify any impacts on fish habitat

### *Level II Agreement:*

In addition to the Level I Agreement, the CA determines how the proponent can mitigate any impacts

### *Level III Agreement:*

In addition to the Level I and Level II agreements, the CA works with the proponent to prepare a comprehensive plan that will meet Fisheries Act Section 35 (2) Authorization requirements.

DFO and Parks Canada have also reached a similar agreement for National Parks, National Marine Conservation Areas, National Historic Canals and National Historic Sites.

OMNR still remains involved in fish habitat activities under the terms of the multi-agency revised protocol for fish habitat in Ontario. Under this provision, the OMNR is involved in supporting Fisheries Act requirements in Ontario. The area that they are no longer involved in is Section 35 project review and enforcement. They will

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## New Editors

The torch has been re-lit! - The staff of Natural Resource Solutions Inc. has taken on the challenge of producing the AFS-SOC Newsletter. This is our first attempt at producing the Newsletter and we every intention to produce many more on a regular basis!

It was important for us to get this issue out promptly to ensure you don't miss out on any upcoming events, so it may be lacking some of the flare you have seen in previous newsletters. However, we have great plans for the Newsletter including, new format, new regular columns and more.

Your comments and contributions on the SOC Newsletter are extremely important and always welcome. We would like to include a variety of columns and comments to make the Newsletter an interesting and informative publication. We look forward to receiving your articles, suggestions or any information you would like to see shared with other AFS-SOC members. ■

You can contact us at:

### AFS-SOC Newsletter

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## Technology

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levels and not adapting because they have temperature limits. Further Warming of those cooler areas in the Bay could eventually wipe out the species.

Electro-fishing to sample the species in a body of water has also been improved. Instead of shocking fish in the area around an electrofishing boat in selected parts of a lake, researchers can now temporarily stun fish by shocking precise strips of a water body. Casselman stated that they are now sampling one-metre-wide cross-section strips. By collecting all the fish in that area they can actually estimate the grams of fish per square metre of bottom.

The OMNR used this precise sampling in court to show how unauthorized dumping of rock in the St. Lawrence River near Prescott damaged a fishery. By electrofishing the edge of rocks and areas away from rocks, scientists were able to calculate how the biomass of fish had been changed.

OMNR scientists are also using a software program developed by whale researchers, called 'distance sampling', to estimate numbers of fish. After locating a pod of whales, researchers steer along a centre line through a group, counting the whales around the boat. When the data is entered, the software automatically multiplies the number of whales off centre line for an accurate count. The OMNR researchers are using similar software to calculate juvenile lake trout populations using boats and several kinds of underwater cameras.

One research camera called a ROV (Remotely Operated Vehicle) is in effect a small submersible operated from a boat. The researchers can cruise up a river or stream, or along a shoreline, counting fish in a specific area. The camera can also be used to videotape habitat conditions and study them in detail later. ■

## Moving?

Please help us keep our membership list current by notifying the Chapter of your new address. Change of address information should be sent to:

Dave Gibson  
DFO - Burlington  
Phone: (905) 639-7848  
Fax: (905) 639-3549  
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## Habitat

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continue to enforce other provisions of the Fisheries Act pertaining to pollution (Section 36), dams and obstructions (Section 20, 22 and 29), destruction of fish (Section 32) and regulations made respecting fishing activities.■

To obtain further information on the Revised Interim Fish Habitat Referral Process contact your local Conservation Authority, Parks Canada office or:

Department of Fisheries and Oceans  
Fish Habitat Management Program  
Referrals Coordinator  
867 Lakeshore Road  
Burlington, Ontario L7R 4A6  
(905) 336-4595 or by fax at (905) 336-6285

## AFS-SOC Annual Meeting

By Brian Hindley

The AFS Annual meeting was held once again at the Frost Centre on March 27 & 28, 1999, courtesy in large part to MNR who gave us a good discount. The theme of the conference component of the meeting was Fish Passage for the Saturday session and The Current State of Fisheries Science: A Panel Discussion for the Sunday session. As usual the meeting was well attended with about 80+ people including students from Sir Sanford, Niagara and Centennial Colleges and Guelph, Toronto, Waterloo and Trent Universities, and a smattering of government, consultant and academic reps. Special thanks to our sponsors Tarandus, Ecotec and Hoskins Scientific who provided beer and food on both nights! Hoskins also provided a display of their wares and contributed an excellent prize which was raffled off on Saturday!

I think it goes without saying that the calibre of speakers this year was excellent and we had some great presentations on the effects of

hydroelectric facilities, the use of biotelemetry in fish movement studies and fish community differences around small dams – to name a few. I was particularly impressed by several graduates from U. of T. who volunteered presentations (as opposed to those of you whom I cajoled!). There were some excellent topics covered concerning the effects of isolation factors and lake origin on fish community types in lakes and use of innovative census techniques for fish community assessment. On Sunday, Vic Cairns and Cheryl Lewis provided good overviews of the challenges facing their research organizations heading into the new millennium and Steve Cooke and Rob MacLaughlin did an excellent job addressing the difficulties facing graduates wishing to pursue research careers.

On the social front, this President Elect learnt a number of new and wonderful pastimes that actually can (and probably should) be done at the same time as consuming alcohol!

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# Freshwater Fishes of Canada

By

W.B. Scott & E.J. Crossman

(Reprinted 1998, Galt House Publications Ltd.)

## INTRODUCTORY PROMOTIONAL PRICE

**CANADA: \$99.95**

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We are pleased to extend to you an introductory offer for the most recent reprint edition of the Freshwater Fishes of Canada.

The Freshwater Fishes of Canada is a comprehensive reference book including:

- Facts and figures on all species (over 181) occurring in Canadian fresh waters,
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- economic importance,
- maps of their Canadian range and, as appropriate, the world distribution,
- Over 500 illustrations,
- Keys to the identity of various fishes,
- Over 1400 references and special 'Suggested Reading' referrals
- Xix, 966 pages

Most of the drawings were prepared especially for this book using typical examples of each species for reference and present a high degree of accuracy and realism

The publication was first issued in 1973. Its third reprinting in 1979 contained supplemental information included as 'Authors Comments, 1979'. This current reprint includes all the information contained in previous publications and a new section, 'Authors Comments, 1998', which addresses more recent information and references.

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## **Meeting**

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For those of you who passed on the chance to come to this excellent weekend of fun, frivolity and fisheries science, DON'T MISS NEXT YEAR!

One final note: we did hold our elections and the new EXCOM starting September 1999 is as follows: President: Brian Hindley; Past President: Cindy Mitton-Wilkie; President Elect: Vacant; Vice President: Rick Booth; Secretary: Adam Cottrill; Treasurer: Barry Myler; Membership Chair: Dave Gibson; Student Reps: Amy Fraser, Kim Connors; Subcommittee Member-At-Large: Jack Imhof; Newsletter Editor: Dave Sangster.

Anyone wishing to nominate or volunteer for the President Elect, please contact me at bhindley@beak.com. We also agreed that there could be a student rep from each educational institution, so if anyone wishes to volunteer to be a contact for their alma mater please let me know. Finally, I would welcome any suggestions for a theme for next years meeting. THANKS ONE AND ALL FOR A GREAT ANNUAL MEETING BEFITTING THE END OF THIS MILLENNIUM. STAY TUNED FOR NEWS OF NEXT YEARS MEETING! ■

## **Upcoming Conferences and Workshops**

### **May**

20<sup>th</sup>, 1999. 2nd Class Crew Leader Backpack Electrofishing Certification. Held at the Grand River Conservation Authority, 400 Clyde Rd., Cambridge ON. Cost \$100.00

### **December**

5<sup>th</sup> - 8<sup>th</sup>, 1999. Midwest Fish and Wildlife Conference. Sheraton Chicago Hotel and Towers. Chicago Illinois. Contact: gkruse@dnrmail.state.il.us

If you have any events you would like to have published in the AFS-SOC Newsletter, please contact the Newsletter Editor @ (519) 570-4019 or sangster@nrsl.on.ca

# The Southern Ontario Chapter of the

American Fisheries Society

## Electrofishing Certification



May 20, 1999

Grand River Conservation Authority  
400 Clyde Road, Cambridge

### 2<sup>nd</sup> Class Crew Leader Backpack Electrofishing Certification

#### Program:

- 9:00 Registration
  - 9:30 Electrofishing theory and safety
  - 12:00 Lunch (to be provided)
  - 1:30 Field Exercise\*
  - 3:00 Exam
- \*Please bring chest waders, polaroid glasses, gloves*

Cost: \$100

#### Registration Form

Registration Due by May 14, 1999

Name: \_\_\_\_\_ Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

#### Electrofishing Experience

☐ None ☐ Some ☐ Extensive

Send Cheque and Registration Form to:

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Department of Fisheries and Oceans, Fisheries and Habitat Management, 867 Lakeshore Road, P.O. Box 5050  
Burlington, Ontario, L7R 4A6  
Phone: (905) 639-7848 Fax: (905) 639-3549

*Space is limited, so register early*