

## 2015 ONTARIO FISH IDENTIFICATION WORKSHOPS

If you are a fisheries biologist or a student registered in a fisheries biology program, the Royal Ontario Museum (ROM) is providing an opportunity to improve your fish identification skills. The Department of Natural History, ROM, is offering introductory workshops that will cover the broad array of Ontario fish families and provide an opportunity to develop specialized knowledge of a group of interest. In addition, we are offering a 2-day workshop on fish species at risk in Ontario and a 3-day workshop on Ontario's minnows. The workshops are designed primarily for professionals -- technicians, field biologists, and environmental consultants -- but other interested individuals, including university and college students, are welcome.

Presentations and hands-on exercises will familiarize you with the characteristics that are used in distinguishing families, genera, and species. Exercises will develop your skills of counting, measuring, and examining the pertinent anatomical structures that are necessary to use keys to Ontario's fishes. Experienced individuals will be on hand to assist you with exercises, provide advice, and access the specimens housed in the reference collection.

This year, we are offering an introductory 4-day workshop in response to suggestions by many former participants who felt they needed more time to examine specimens and complete the hands-on exercises. In addition to the extra day, there will also be two new presentations (see below).

### Presentations

- Fish anatomy
- Families of fishes
- Lampreys, gars, herrings, pikes, suckers, and catfishes
- Trouts and salmons
- Minnows
- Sculpins, temperate basses, sunfishes, perches and gobies
- Barcoding fishes
- Group identification: Keying out minnows using a computer key
- Invasive fishes (4-day only)
- Preservation, documentation, and photographing fishes (4-day only)
- Review

### Hands-on exercises

We have prepared 40 exercises, which focus on anatomical characteristics that separate species and test your ability to key fishes to family and species. Approximately half of classroom time will be devoted to hands-on exercises; the other half to presentations, group identification, and testing. A reference collection of all Ontario freshwater fishes of a variety of sizes will be made available so that you can specialize in a group of your choice. The introductory workshops allow 9-10 hours (for the 3-day) or 14-15 hours (for the 4-day) for hands-on exercises, which are interspersed between presentations.

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### Two-day Species-at-Risk Workshop

This workshop will focus on the identification of fishes classified as Endangered, Threatened or Special Concern. Groups covered include gars, whitefishes, minnows, suckers, madtoms, darters, and sunfishes. Emphasis will be placed on how to assess the distinguishing characteristics and comparison with similar species. **Completion of at least a 3-day introductory workshop is required for participation in this workshop.** Presentations will include information on habitat. Jason Barnucz of Fisheries and Oceans Canada will be a guest instructor for this special workshop.

### Three-day Minnow Workshop

This workshop will focus exclusively on Ontario's minnow fauna primarily through guided hands-on exercises and presentations, which show live minnows. Preserved specimens of both adult and juvenile cyprinids of all Ontario's 40 species are available so that you can compare closely related species and practice keying out species both individually and as a group. There will be an introductory presentation that will focus on anatomical features used to identify the Cyprinidae, but it is highly recommended that you take one of the introductory workshops before taking this workshop.

### **Tests**

All workshops will conclude with a 30 minute slide test, and a 1.5 hour specimen test, which you will need to pass (70%) to obtain a certificate.

### **Handouts**

Workshop registration includes a copy of *The ROM Field Guide to the Freshwater Fishes of Ontario*. In addition, you will be provided with a binder that includes the following:

- Handouts of the presentations
- Revised identification keys to minnows and suckers of Canada, prepared by E. Holm
- Guides to groups such as the redhorses and juvenile salmonids
- Illustrated glossary of terms used in the computer minnow key
- Habitat preferences of Ontario Cyprinidae
- Ontario Fish Names and Species Codes
- Selected bibliography useful in the identification of Ontario's fishes
- List of companies that supply equipment and supplies for collecting, identifying and documenting collections
- Useful fish-related websites
- Exercise and answer sheets

The fish species at risk workshop will include additional handouts of illustrated guides to the identification of fishes at risk and other fishes that can be confused with them.

### **Time & Place**

The workshops have been scheduled as follows:

April 14 – 16 (introductory 3-day workshop)

May 4 - 6 (introductory 3-day workshop)

April 20 - 23 (extended introductory 4-day workshop) May 7 - 8 (2-day fish species at risk workshop)

April 27 – 29 (minnow workshop)

## 2015 ONTARIO FISH IDENTIFICATION WORKSHOPS

Place: **University of Guelph**, Science Complex, Room 2304 (highlighted in green on attached map)

Time: All workshops will begin promptly at 9AM and end at 5PM.

### Resource Staff

- Erling Holm, Assistant Curator
- Mary Burridge, Assistant Curator
- Brenna Wells, ROM contractor
- Jason Barnucz, Fisheries and Oceans Canada

### What to Bring

University of Guelph microscopes and a limited number of dissecting tools will be made available for your use. You are urged to bring your own dissecting tools if you have some. You are also welcome to bring some of your own collections of fishes. We will endeavour to assist you as much as possible to make positive determinations.

### Books and Fish Viewers

If you would like a copy of *Freshwater Fishes of Canada* by W. B. Scott and E. J. Crossman (1978) and *Fishes of the Great Lakes Region* by C. L. Hubbs, K. F. Lagler, Revised by G. R. Smith (2004), they can be pre-ordered (see registration form). Note that the former is not a revised copy. There are plans for supplements, which include accounts for species new to the fauna, updated distribution maps, and revised keys.

Fish viewers, which are manufactured by JRW Designs, are useful for viewing and photographing fishes in the field. Four standard sizes made of 3/16" thick plexiglass, can be pre-ordered from us and picked up at the workshops:

Dace viewer with inside dimensions 0.5" wide X 4.0" long X 2.0" deep

Chub viewer with inside dimensions 1.25" wide X 6.0" long X 3.0" deep

Sunfish viewer with inside dimensions 1.5" wide X 12.0" long X 8.0" deep

Trout viewer with inside dimensions 3.0" wide X 18.0" long X 8.0"

The Dace and Chub viewers come as a set for \$20. The Sunfish and Trout viewers are \$18 and \$20 each, respectively

### Food

There is an atrium in the Science Complex for coffee and sandwiches as well as a food court in the University Centre where lunch can be bought. There is also a variety of restaurants in the area.

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### Suggested Accommodation

- Best Western Plus Royal Brock Hotel & Conference Centre located at 716 Gordon Street, Guelph, Reservations: (519) 836-1240; FAX: (519) 763-5225. Approximately \$89.95 + HST, includes hot breakfast and free parking.
- Days Inn, located at 785 Gordon Street, Guelph. Reservations: (519) 822-9112; FAX: (519) 822-5570. Approximately \$89.95 + HST, includes continental breakfast.

*You must call these hotels directly (not through 1-800 reservation numbers) and specify that you are participating in the ROM Fish ID Workshop in order to receive the ROM rate. Both hotels are a 5-minute walk to the Science Complex.*

### Travel Information

See attached map. If you are driving into Guelph, allow ample time to drive through the rush hour. Parking is available on the University of Guelph campus for \$10/day. The closest lot to the Science Complex is P31.

### Registration/Cancellation

To inquire about availability or reserve a spot, contact Cathy Dutton by phone or email (see below). Print a copy of the registration form and email, FAX, or mail it to:

Cathy Dutton, Department of Natural History  
Royal Ontario Museum  
100 Queen's Park, Toronto, Ontario  
CANADA M5S 2C6  
Telephone: 416-586-5894 FAX: 416-586-5553  
E-mail: [cathya@rom.on.ca](mailto:cathya@rom.on.ca)

**If you need to cancel your registration, the registration fee will be refunded to you minus a \$50 administration charge if you cancel up to within two weeks of the workshop. None of the registration fee will be refunded if you cancel less than two weeks before the date of your workshop.**

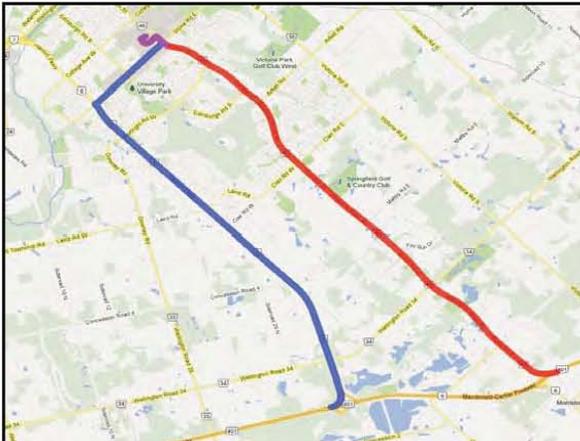
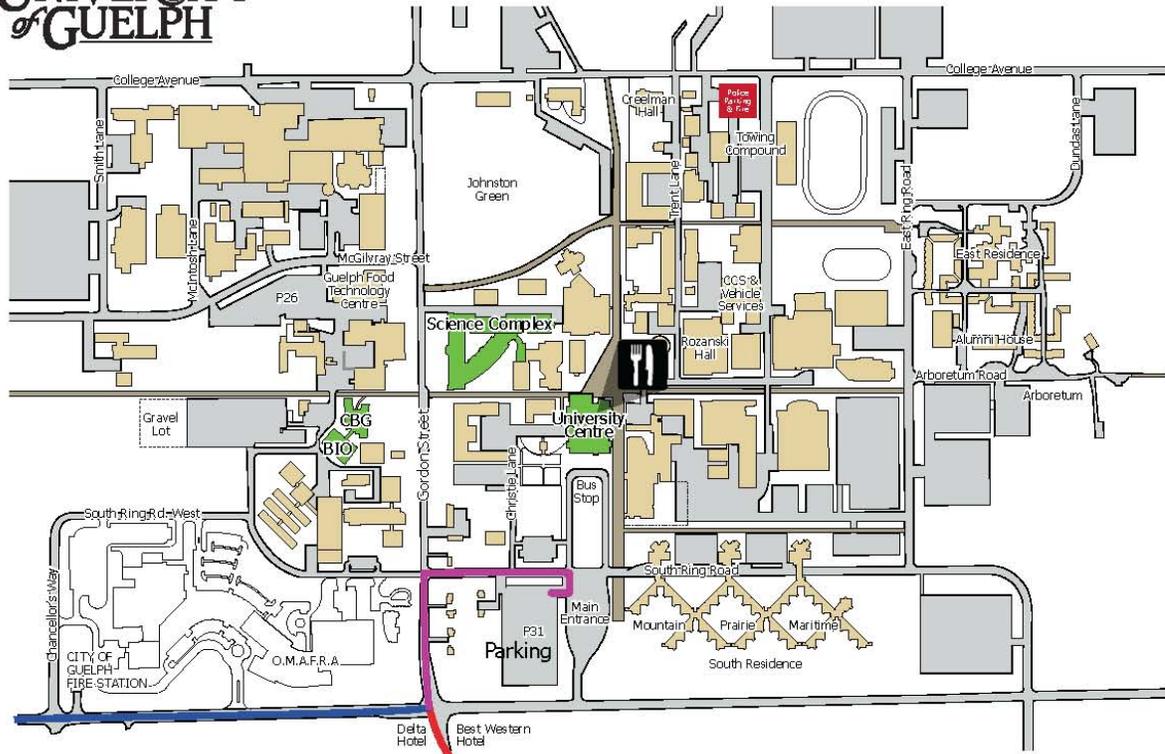
### Additional Information:

For information about course content or matters other than registration, contact:

Erling Holm or Mary Burrige, Department of Natural History (Ichthyology), Royal Ontario Museum  
100 Queen's Park, Toronto, Ontario CANADA M5S 2C6  
Telephone: 416-586-5760 (Erling), 416-586-5531 (Mary)  
FAX: 416-586-5553  
e-mail: [workshop-ichthyol@rom.on.ca](mailto:workshop-ichthyol@rom.on.ca)

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**UNIVERSITY  
of GUELPH**



### From Highway 401 (Toronto)

- Take the Brock Road (#299) exit and head North
- Continue along Brock Road as it turns into Gordon Street
- Take the first right past Stone Road, onto the South Ring Road
- Turn right into P31 and pay the attendant at the booth

### From Highway 401 (London)

- Take the Highway 6 North (#295) exit
- Travel along Highway 6 and turn right on Stone Road
- Follow Stone Road into town and turn left on Gordon Street
- Take the first right past Stone Road, onto the South Ring Road
- Turn right into P31 and pay the attendant at the booth

