

2017 ONTARIO FISH IDENTIFICATION WORKSHOPS

If you are a fisheries biologist or a student registered in a fisheries biology program, the Royal Ontario Museum (ROM), Department of Natural History, is providing an opportunity to improve your fish identification skills. 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 identification 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 brought from the ROM.

A variety of courses are being offered this year:

- Three-day introductory workshop that will cover the broad array of Ontario fish families and provide an opportunity to develop specialized knowledge of a group of interest;
- Four-day introductory workshop that will cover the same information as the three-day introductory workshop but has an additional one day in the field (Speed/Eramosa rivers) with Jason Barnucz from Fisheries and Oceans Canada, Robin Gaspard, and ROM staff. A presentation on preservation, documentation, photographing and sampling tissues for genetic studies will also be given in the field;
- Two-day workshop on fish species at risk in Ontario;
- Three-day workshop on Ontario's minnows.

Introductory Workshop 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, given by Dr. Bob Hanner, Associate Director, Canadian Barcode of Life.
- Group identification: Keying out minnows using a computer key
- Preservation, documentation, tissue sampling, and photographing fishes (4-day only)
- Review

Hands-on exercises

Approximately half the classroom time will be devoted to hands-on exercises, which focus on anatomical characteristics that separate species and test your ability to key fishes to family and species. The remaining time focuses on 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 have 9-10 hours of hands-on

2017 ONTARIO FISH IDENTIFICATION WORKSHOPS

exercises, which are interspersed between presentations.

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 three-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. 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

The introductory and species-at-risk workshops will conclude with a 30-minute slide test, and a 1.5 hour specimen test. The minnow workshop will also conclude with a slide test and a jar of 20 assorted cyprinids will need to be identified during the course of the workshop. A passing grade of 70% is required to obtain a certificate.

Handouts

Workshop registration for the introductory workshops includes a complimentary copy of *The ROM Field Guide to the Freshwater Fishes of Ontario* and a spiral-bound lab manual that includes the following:

- Presentation slides
- Revised identification keys to freshwater fish families such as minnows, suckers, trouts and salmons, North American catfishes, sunfishes and basses and perches and darters of fishes of Ontario by E. Holm
- Guides to groups such as the redhorse suckers
- Illustrated glossary of terms used in the computer minnow key
- Habitat preferences of Ontario minnows
- Ontario recognized common and scientific fish names and OMNRF species codes
- Selected bibliography useful in the identification of Ontario's fishes
- Companies that sell 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 illustrated guides to the identification of fishes at risk and other similar-looking fish species. The minnow workshop includes a lab manual of lecture notes.

2017 ONTARIO FISH IDENTIFICATION WORKSHOPS

Time & Place

The workshops have been scheduled as follows:

April 11–13 (Three-day introductory workshop)

April 19–21 (Three-day minnow workshop)

April 25–28 (Four-day introductory workshop)

May 1–3 (Three-day introductory workshop)

May 4–5 (Two-day fish species-at-risk workshop)

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 dissecting tools will be made available for your use. 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.

Identification of small living fishes is facilitated by viewing and photographing them in plexiglass fish viewers. We recommend that all fish crews have at least a small “Chub” viewer, which helps to keep a fish alive during its identification in the field and results in a better photograph for identification confirmation. If you are conducting fieldwork and are interested in purchasing one or more plexiglass fish viewers, note this on the registration form and we will pre-order from Unique Merchandising Displays. Prices for the viewers will depend on quantity ordered, but cost is estimated below:

- Dace viewer with inside dimensions 0.5" wide X 4.0" long X 2.0" deep – approximately \$15
- Chub viewer with inside dimensions 1.25" wide X 6.0" long X 3.0" deep – approximately \$15
- Sunfish viewer with inside dimensions 1.5" wide X 12.0" long X 8.0" deep – approximately \$25
- Trout viewer with inside dimensions 3.0" wide X 18.0" long X 8.0" – approximately \$25

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.

2017 ONTARIO FISH IDENTIFICATION WORKSHOPS

Nearby Accommodation

- Days Inn, located at 785 Gordon Street, Guelph. Reservations: (519) 822-9112. Approximately \$89.95 + HST, includes continental breakfast. You must call the hotel directly to get this rate. Tell them you are attending the Fish ID Workshops at the University of Guelph.
- Delta Guelph Hotel and Conference Centre, 50 Stone Rd W., Guelph, (519) 780-3700. From \$141 to \$168. There is no special rate for this hotel.
- Holiday Inn Hotel, 601 Scottsdale Dr, Guelph, (519) 836-0231. \$117.99 + SHT, includes breakfast for two people. You must call the hotel directly to get this rate. Tell them you are attending a workshop at the University of Guelph and have been told you will get the U. Guelph rate.

Please note that these hotels book up quite quickly. Many of the hotels in Guelph have already been booked for a big conference being held in the area in May. You are encouraged to book your hotel asap to ensure you get a room reasonably close to the U. Guelph campus.

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

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.

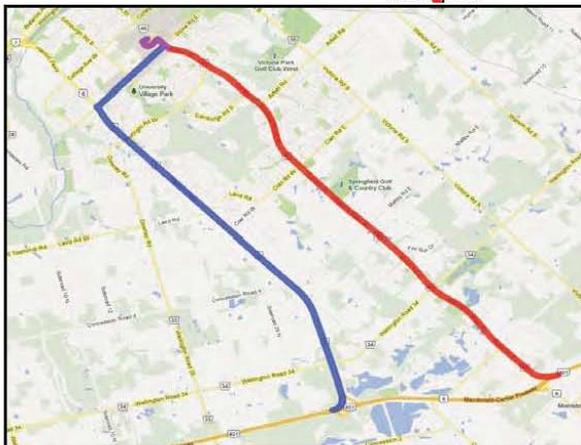
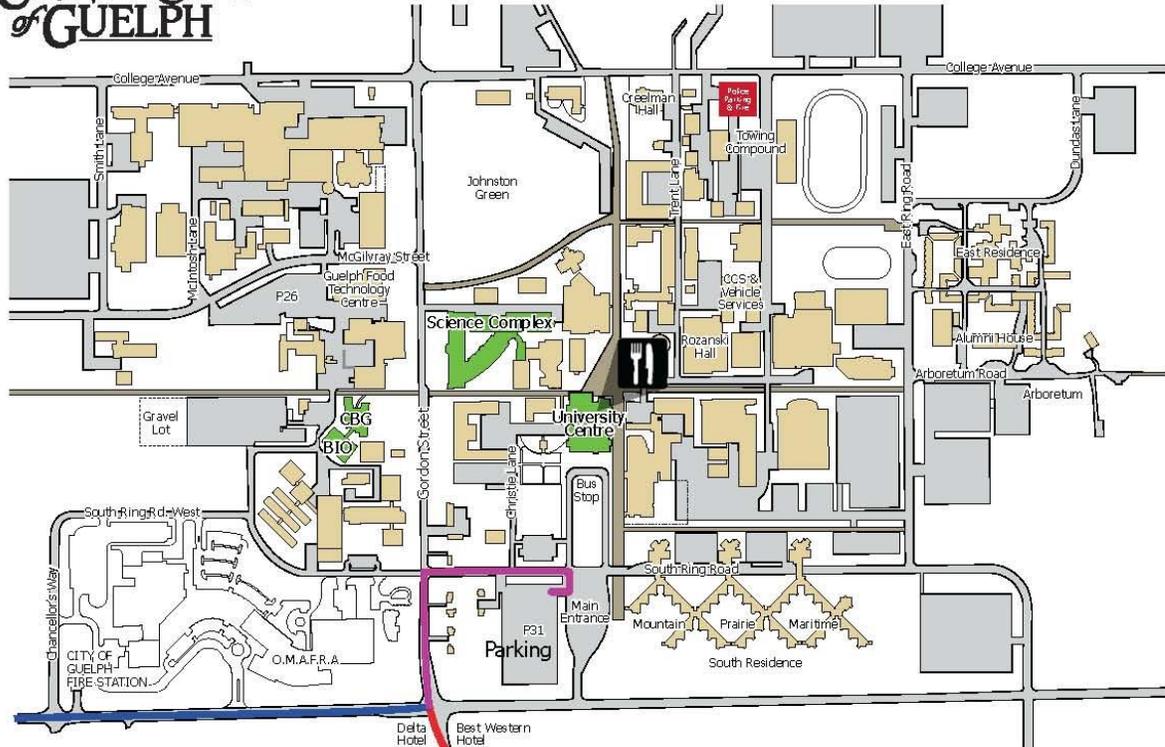
Additional Information:

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

2017 ONTARIO FISH IDENTIFICATION WORKSHOPS

**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



Science Complex