

# QUBS SUMMER 2023 NEWSLETTER

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QUEEN'S UNIVERSITY  
BIOLOGICAL STATION

June 2023

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## HELLO SUMMER!

The Queen's University Biological Station (QUBS) is thrilled to welcome back researchers, field course students, instructors, interns and community members to both our Opinicon campus and the Elbow Lake Environmental Education Centre.

Field courses offer immersive hands-on learning experiences that allow students to explore the natural world and develop their scientific skills. Thus far in 2023 we have hosted Winter Ecology of Birds, Ecology of Spring, Turtles: Ecology, Behaviour, and Conservation, and Field Methods in Ecological and Environmental Genomics. Upcoming summer field courses include the Canadian Scientific Research Diver course and Fish Ecology and Fisheries: Conservation and Management. If you are an Ontario undergraduate student, check out the Ontario Universities Program in Field Biology ([www.oupfb.ca](http://www.oupfb.ca)) for offered courses at QUBS and around the world every year.

The research done this year is diverse and exciting, ranging from the evolution and constraint in purple loosestrife, community ecology of burying beetles, ecotoxicology, overwintering and breeding ecology of turtles, whole lake fish studies on predator-prey interactions, using Environmental DNA to map aquatic species distributions across spatial scales, functional ecology of white-footed mouse, tiger moth acoustic defense signals during bat attack, to bass management in the Rideau waterway. We are committed to advancing our understanding of the natural world and are excited to have you join us on this journey at our upcoming Open House!

## Join Us! 2023 QUBS OPEN HOUSE SUNDAY, JUNE 25, 12PM-3PM

On **Sunday, June 25th, from 12pm to 3pm**, the Queen's University Biological Station will be hosting our annual Open House to celebrate our 78th anniversary of our founding in 1945! Come explore what QUBS has to offer through interactive research displays, outreach and education programs, and conservation initiatives at the station. Refreshments and snacks will be available along with tours of the facilities.



QUBS Director, Dr. Stephen Loughheed leading a tour of QUBS at the 2022 Open House

# EVENTS & OUTREACH

## ELBOW LAKE ENVIRONMENTAL EDUCATION CENTRE FAMILY NIGHTS

Family Nights are free public events hosted in person at the Elbow Lake Environmental Education Centre, every Thursday evening, beginning July 13 until August 17. Cabin rentals are available for \$75/night for a group/family.



For more details see our [Events Page](#)

Topics for this year include:

July 13 - Pollinators of Elbow Lake

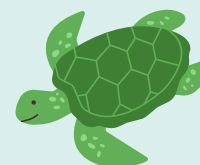
July 20 - Art in the Forest

July 27 - Nocturnal Animals

Aug 3 - Aquatic Species Study

Aug 10 - A Night Under the Stars

Aug 17 - Gettin' Toasty: Bonfire Night



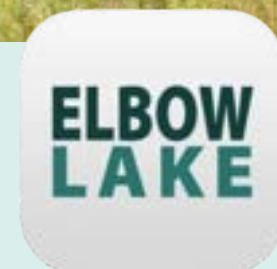
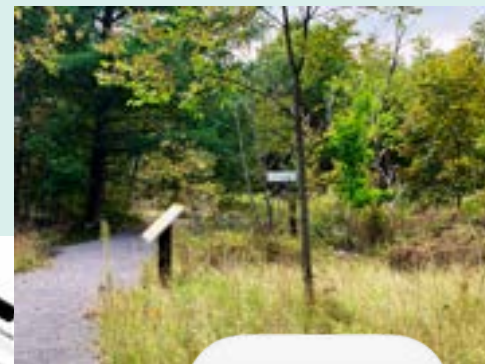
## NEW ELBOW LAKE TRAIL APP

Enrich your visit to the Elbow Lake Environmental Education Centre (ELEEC) with NEW Trail Guide. Explore the Elbow Lake property and trails. Learn about its diverse environmental and cultural features, and how both have been affected by a dynamic, changing landscape.

Use the Map tab of the app to navigate the trails and see where you are on the landscape.

Interact with our Indigenous Knowledge trail signs by accessing additional stories shared in Anishinaabemowin and Kanyen'kéha.

[Learn More Here](#)

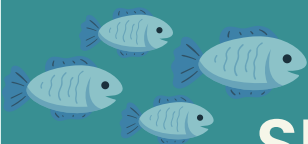


# QUBS 2023 SEMINAR SERIES



QUBS Writers Studio on June 14. Photo C. Pulcine

The QUBS Seminar Series is hosted in the Lower Seminar room of the Raleigh J. Robertson BioDiversity Centre every Wednesday evening from 7pm to 8pm, from May to August. Seminar topics range from bird ecology, natural history photography to environmental stewardship. Check out our [Seminar Schedule](#) and join us Wednesday nights! Call the station a day in advance if you wish to join us for dinner (5:30-6:30pm).



## FAMILY FISHING DAY SUNDAY, JULY 9TH, 10AM-3PM



Interested in learning to fish? Join us on July 9th from 10am-3pm for a day of family fishing fun at the Elbow Lake Environmental Education Centre. Spend time on the dock learning from fish biologists about fishing techniques and the importance of catch and release. Don't have a rod... no problem! Use one of ours! Fun for the whole family with many prizes to be won. We only allow catch and release fishing using barbless hooks and no live bait. You must register at our [Events Page](#) on the Elbow Lake website or see our [Facebook Events](#) for more info on future events.



## QUEEN'S UNIVERSITY ENVIRONMENTAL DNA WORKSHOP 2023

Join us for the second annual eDNA Workshop from **Sunday, July 23rd to Friday, July 28th, 2023**. Open to students, the general public, and professionals. The workshop include lectures, field and lab demonstrations, hands-on sampling, extraction, amplification training, and analysis & interpretation of data. Meals and accommodation are included in cost. Earn a Queen's University micro-credential.



Find more information and register online at this [link](#)!



# LAKE OPINICON NORTHERN MAP TURTLE NESTING PROGRAM

Have you seen a Northern Map Turtle nesting on your property on Lake Opinicon?

Some turtles have the bad habit of laying their eggs where they may be destroyed by vehicles or machinery. We can relocate the eggs into an incubator at QUBS and, once hatched, bring the hatchlings back to where they were collected. Please visit our [website](#) for more information on what to do if you find a nest or if you need a nest protector which QUBS will provide for free.



Northern Map Turtle.  
Photo via Ontario Nature



## ECO-ADVENTURE CAMP 2023 ELBOW LAKE

SUMMER  
CAMP



Eco-Adventure Camp Staff have been working hard to ensure another great year of in-person camp! This year's Summer Day Camp sessions and the Leader in Training (LIT) Week are all sold out! If you have any questions about camp, please contact Mel, our Camp Director, at [ecoadventurecamp@queensu.ca](mailto:ecoadventurecamp@queensu.ca)



The LIT program provides young people ages 13-18, a week to learn about ecology, first aid, canoeing, and gain important leadership and life skills. LITs will also be given the opportunity to volunteer at our day camp and earn volunteer hours!



Our Day Camp for youth ages 8 - 13 is running for 7 week-long sessions this summer! Our camp features a blend of traditional camp activities and hands-on learning to engage and educate our campers.



**If you missed the chance to join this year, registration for next summer opens January 2024!**

# QUBS INTERNS SPOTLIGHT

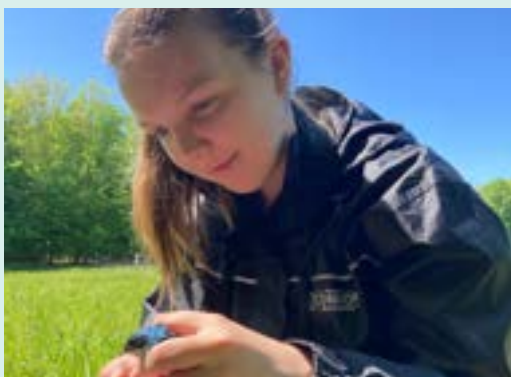


**Tree Swallow Monitoring Project:** Amy Wilson (QUBS Avian Field Biologist) has led the 48th year of monitoring and banding of over 200 tree swallow nest boxes on the QUBS land base. Supported by QUBS Conservation Research summer Interns, Janice Yu and Maxwell Hammer, Queen's University Biology undergraduate students. The 2023 season has gone well, with challenges as well. There has been approximately 80% occupancy across the 8

nest box grid sites, with remaining boxes occupied by Eastern Bluebirds nestlings or empty. Thus far, nestlings in 86 nest boxes have been banded, with most nests having 5 to 6 chick's per box. Challenges faced this season included several days of high smoke levels from northern wildfires which lowered insect abundance. During this period, adult tree swallows were not able to forage enough insects to feed the chicks and a few nests failed as a result. This was inferred from observations of the foraging behavior of the adults and the nest checks before and after.

**Insect Monitoring Network:** For more than 3 years, QUBS has joined over 80 other researchers from across Canada and the USA contributing insect abundance data from collection sites on several of our tree swallow grid sites using malaise traps (pictured above). Check out the March 2023 Ecology paper [here](#), demonstrating regional variation in the phenology of insects and their response to temperature.

**Stewardship:** Christopher Lewis and Sarah Van Den Heuvel (Queen's University Biology undergraduates), are the QUBS Field & Stewardship summer interns carrying out a variety of stewardship projects including, but not limited to, maintaining ratsnake nest boxes, building turtle nest protectors, trail maintenance, mapping, and identification and removal of invasive species on sensitive sites on the land base and contributing to the management and stewardship plan for QUBS properties.



**Outreach:** Charlize Pulcine (Queen's University Environmental Studies undergraduate) is the QUBS Outreach and Education Intern. She works alongside Emily Verhoek, QUBS Outreach and Teaching Coordinator to facilitate educational programming and outreach efforts for the station and Elbow Lake Education Centre. She also participates in the Canadian Lakes Loon Survey for Elbow Lake, creating an educational social media series for species at risk, and is hosting the 2023 ELEEC Family Nights!

# SUPPORT QUBS

At a time when humans are altering the natural world at an unprecedented pace and scale, objective biological field research is critical to informing decisions that will help ensure healthy environments and human populations for the future. With your support, QUBS can continue to address critical scientific issues through multi-faceted teaching and research, develop a more comprehensive understanding of the natural world, and mitigate human-caused environmental impacts.

If environmental & conservation research and training future generations of students are important to you, please consider supporting QUBS today. You can donate **online**, or by calling 1-800-267-7837 or by mailing a cheque made out to Queen's University to Queen's University, Gift Services, Old Medical Building, 99 University Avenue, Kingston ON K7L 3N6.

Thank you to all our donors who have helped QUBS offer high quality teaching and research opportunities.

Thank you to Paul Thompson who generously supported research students at QUBS this summer. Thank you to James Fotheringham for sustained support of student research at QUBS. Thank you to the Gordon and Patricia Gray Fund Animal Welfare Foundation fund for supporting Snake Conservation and Research at QUBS in 2023.

The Queen's University Biological Station acknowledges that reconciliation is a long-term process and that it is the responsibility of all Canadians to reflect on the ways in which they can contribute to meaningful change. Working alongside local Indigenous communities, QUBS is committed to active learning and engagement in truth and reconciliation work through a number of projects including the Queen's University Indigenous Land-based Learning STEM (QUILLS) Program.

We look forward to sharing QUILLS resources this year, including lesson plans and accompanying videos, an outreach initiative integrating secondary school environmental science and Indigenous Science into lessons plans. Thank you to **NSERC PromoScience** for funding this initiative (2020-23).

**TD Friends of the Environment** awarded funds in April 2023 to support the development and installation of interpretative signage and trail app stations at the Lake Opinicon campus Cow Island trail. We look forward to finalizing this new trail app - check it out next summer!

Thank you to the South Frontenac Township Lake Ecosystem Grant, for funding the 'Turtle Nest Projection & Relocation' project in 2023.

# RESOURCES

## QUBS RESEARCH THROUGH THE YEARS

In 2019, QUBS launched its [Projects website](#), a research portal that we strive to keep updated that serves as a permanent digital repository of peer reviewed researched conducted at QUBS. This database contains over 1000 publications, with some dating back to the 1950s.



If you find a publication that has been missed, [let us know!](#)

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