FALL 2025

VOLUME 2 ISSUE 1

# THE PETRI DISH

**Trent Biology Department**

TRENT UNIVERSITY

## In this newsletter:



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## Meet the Prof: The Biology Department is pleased to welcome Dr. Maggie MacPherson!

Maggie MacPherson comes to Trent with a wealth of experience. From their roots in northern Ontario, Maggie has studied, researched, and taught at locales as diverse as Ontario, Louisiana, Pennsylvania, Costa Rica, Arizona, and Guyana, reflecting the biogeographic breadth of their interest in birds.

And nearing the end of the first semester, Maggie is busy. The Petri Dish caught up to Dr. MacPherson for a chat — to discuss passions, experiences, and and plans for the coming months and years.

**Tell us how your first term has gone**.

Quickly. To no surprise, teaching has been great. Every day, I feel so lucky and grateful to have this job. I was just talking to my partner about struggling to fit everything in that I want to do, and how privileged I am to be stressed out, in this case, about finding time to read and undergraduate honours thesis about moth diversity. Where will I find the time to fit that into everything else? At Trent, having TAs and the lab demonstrator has really, really helped me keep up with the new academic workload.

This term I also wrote an NSERC Discovery Grant application that was far more work than I expected. You get the proposal done in August, but everything takes a lot longer because there are way more parts than just the proposal! So, yeah, it's busy, but all good stuff. *(Continued on pages 2 & 3)*

## Dr. Maggie Xenopoulos: Award for Outstanding Graduate Mentorship for Senior Mentors

The School of Graduate Studies Award for Outstanding Graduate Mentorship for Senior Mentors is awarded to extraordinary mentors who inspire their students towards scholarship; support critical thinking and professional skill development; and encourage their students to share their research both within and outside of academia. We are delighted to congratulate Dr. Maggie Xenopoulos who has recently received this award for the 2024-2025 year!

# Meet the Prof Continued - Dr. Maggie MacPherson

**You're passionate about birds and conservation. Where did those passions come from?**

Perceiving birds, seeing them in the first place, comes from my dad, who was really into bird photography when I was growing up. I was a naturalist as a kid growing up, but my dad who is now retired was a big influence on me and we still watch birds together and tell each other what birds we're seeing every day, regardless of where either of us are. I also had other important mentors: from high school my biology teacher, Mr. Doug Fraser influenced my understanding of evolution and my decision to follow in his footsteps by taking Wildlife Biology at the University of Guelph. Mr. Fraser wrote the high school biology textbook and was probably the first person in northern Ontario to get a smart car. He was a really big influence on me.

Maggie MacPherson holding a Northern Saw-whet Owl that was banded as part of the NSWO project at Trent's Oliver Property (started in 1995 by Erica Nol) near Bobcaygeon this Fall (2025).

Mr. Bruce Murphy was another high school teaching that I took a special TERRA course with: Teaching Ecological Responsibility, Recreation, and Adventure. This four-course, semester-long program honed my interest in studying birds, conservation, and teaching. The Hilliardton Marsh, near where I grew up, is this amazing hotspot for bird diversity in northern Ontario where Mr. Bruce Murphy runs an important bird banding station. I first banded birds there on an elementary school field trip when I was quite young, 9 years old. Once I was old enough, I continued to band birds throughout high school and I believe this opportunity really kept me out of trouble.The original property is owned by Ducks Unlimited Canada, and more adjacent property is privately owned surrounding those grounds now that is all a part of the Hilliardton Marsh Research and Education Centre. Interacting with Ducks Unlimited, that kind of conservation of wetlands, really influenced my early years.

**Your career has been wide-ranging. Tell us a about those places, some of the highlights.**

Being from northern Ontario, there aren't a lot of universities there, so I had to come to southern Ontario to go to school. My spark bird, in terms of what got me interested in migration ecology, was going to Niagara Falls with the Wildlife Club at Guelph, when I was an undergrad. Seeing a Common Loon in winter plumage, it just blew my mind that they have a whole other life than what I knew.

The big name in migration ecology at the time in Ontario was Bridget Stutchbury, and so I did my Master's with her. Her field research was on Wood Thrush in Pennsylvania, and then we extended that onto the wintering grounds in Costa Rica. I then got into a lab in the U.S., and wanted to study austral migration because I wanted to know everything about bird migration. That took me across northern South America to study Fork-tailed Flycatchers, which are the most studied such migrant. During my Ph.D., I started in Venezuela and Colombia, but there were difficulties in those countries because you couldn't export tissue samples at the time. I couldn't bring blood or feathers back to the U.S. to be analyzed for isotopes etc., so I pivoted to Guyana in my second year.

How do birds expand their ranges? Why are their ranges becoming restricted? Those questions took me to southwestern Arizona to study Great-tailed Grackles for a postdoc and continue building my understanding of predictive distribution modeling of wildlife under the pressures of global change.

# Meet the Prof Continued - Dr. Maggie MacPherson

**What unexpected things did you encounter in these places?**

I didn't expect to see such diversity of birds in Louisiana, which is amazing! I could see a White Ibis every day of the year — a species doesn't even occur here, and it's a super weird-looking but amazing bird. A highlight in South America was seeing the related Scarlet Ibis in Venezuela, which is one of the coolest birds to feast your eyes on! To my surprise, when I would catch Fork-tailed Flycatchers at their nocturnal roosts in Guyana, the sea of gigantic fireflies is something that I and my field technicians will never forget. It was also something to notice the stars, seeing the Southern Cross instead of the Big Dipper up in the sky is really neat. All of that feels just as special as seeing northern lights. Whoa! The sky looks totally different! It's this kind of magical experience that you can only get when you are fortunate enough to travel outside of your normal surroundings.

**What about the future? What do you intend to pursue at Trent?**

My big interest is the evolution of bird migration and how things are shifting with global change. Birds have this flexibility, and I want to know if they're in trouble or if they'll be able to adapt. And because a big part of my inspiration comes from northern Ontario, in the long term I'm really interested in pursuing research in the far north, in the boreal forest, looking at warblers and other birds that migrate really far, in a unique and special place on the planet. My career goal is to really develop bird research in the north, in the boreal forest.

**And your plans for training and teaching?**

I really love teaching and get my energy from interacting with undergraduate students. I am so excited to take on teaching Ornithology at Trent! And I'm excited to build up the ornithological community at Trent, in Ontario, and in Canada. I want students to come to Trent to study birds. We do a really good job of training here at Trent. I want to contribute to that — to have our students be the best students, to get picked for the best jobs. As part of that, I've recently invited students, faculty, and staff to a Bird Lunch — informal, bi-weekly gatherings to discuss birds and birdy ideas. I hope the Bird Lunch will build community and contribute to the undergraduate experience at Trent. To build community.

Great-tailed grackle (*Quiscalus mexicanus*)

I'm looking to recruit graduate students, too. They're the heart of the research lab and they're really important experts that help create a great training environment for undergrads. I do like undergraduate research, and grad research that goes out into the field to lead summertime research by facilitating projects and developing their own research ideas.

In Biology at Trent, we have the "ologies", which is awesome. I'm excited by ornithology, of course, and I am thinking of taking on mammalogy as well, especially to contribute to the new Specialization in Natural History. When you teach a bunch of different things, it informs how you think about your own specialty and makes you a better scientist. Mammals evolved in the cold; birds evolved in the heat. There are these really important differences that teed up research that has been done in each group. I'd also be happy to teach ecology, urban ecology, population ecology, behavioural ecology, etc. ... I am an ecologist!

Maggie MacPherson research lab and TA from Western Illinois University from last Spring (2025). From right to left: Epitope "Michael" Adunbi (also Ecology TA), Moshood Ayinde, Sabrina McMahon Ryan, Sydnee Osgood, Maggie MacPherson, Amelia Sugden, Dijonne Hanley, Naomi Scotland, Dominic Hinds, Farhan Jamil Emon (Ecology TA).

**So we're going to need a few more Maggie MacPhersons.**

Right, yeah. I do feel really lucky to be here. I'm looking forward to contributing to the Trent community, and even to The Petri Dish.

# Focused on Research: Biology Honours Thesis Topics

## Biology Undergraduate Honour Thesis 2025/26

Dr. Thomas Hossie, Coordinator

This year I have the pleasure of coordinating the 2025-2026 offering of the biology undergraduate thesis course. We have an excellent cohort of new and talented undergraduate students completing independent research projects and they are working on a wide variety of exciting topics. As we continue towards the end of the fall semester, these students have written proposals, delivered oral presentations about their proposed work, and conducted anonymous peer reviews of each other's work. As such, this is a great time to showcase the impressive work being done by these emerging scientists.

Here is a list of the students, their working project titles, and the supervisory team that they are working with:

**Adrian Guaman Vargas:** Effects of Wavelength on Fungal Photoreception. *Supervisory team:* Neil Emery, Zeyn Azimychetabi

**Allison Reitz:** Environmental distribution of Highly Pathogenic Avian Influenza. *Supervisory team:* Andrew Tanentzap, Kirk Hillsley

**Amelia Farrish:** The affect of common tick repellant in tick dragging in Southwestern Ontario. *Supervisory team:* David Beresford, Thomas Hossie

**Amy McManus**: The effects of population density on mating systems in *Arabidopsis lyrata*. *Supervisory team:* Marcel Dorken, Joanna Freeland.

**Angelina Gordon:** Moth Community Assembly in Ontario's Carden Alvar: A Comparison of Forested and Grassland Habitat Types. *Supervisory team:* Richard Feldman, Maggie MacPherson

**Brianne Christensen:** Comparative Analysis of Post-Wildfire Insect Assemblages Across Boreal Forest Types in Northern Ontario. *Supervisory team:* David Beresford, Stephen Mayor.

**Edie Levine-Barnoff:** Nesting Success of Piping Plovers. *Supervisory team:* Thomas Hossie, Lyn Brown

**Emma Brouwer:** Understanding the endocrine role of thermogenic brown adipose tissue in rodents. *Supervisory team:* Cayleih Robertson, Holly Bates

**Erin St. Clair:** Effects of Endurance Training on Trit 1 Expression. *Supervisory team*: Stephanie Tobin, Kirk Hillsley

**Ethan Money Gomes:** Monarch butterfly OE rates in Southern Ontario. *Supervisory team:* Sarah Jamieson, David Beresford.

**Hannah Watson:** Diversity of saproxylic invertebrates found within the soil-to-bark transition zone of coarse woody debris. Supervisory team: David Beresford, Thomas Hossie

**Jack Millar:** Spatial and temporal changes in zooplankton community stoichiometry in the Kawartha Highlands region. *Supervisory team:* Paul Frost, Joanna Gauthier.

**Jordan Colclough:** Beautiful Workers in an Unlovely Task. *Supervisory team:* David Beresford, Arun Moorthy

**Kalysta Zander:** Fungal uptake of cytokinin hormones. *Supervisory team:* Neil Emery, Mark Seegobin

**Keemya Fazel:** External Dose vs. Uptake of Cytokinins and Rare Earth Elements in the moss species *Physcomitrium patens* . *Supervisory team*: Neil Emery, Huy Dang

**Lila Mercer:** Enhancing Taxonomic Keys: The Role of Illustrated Diagnostic Features in Insect Species Identification. *Supervisory team:* David Beresford, Thomas Hossie

**Maeve Gormley:** Quantifying Arbuscular Mycorrhizal Fungi in a Tallgrass Prairie. *Supervisory team:* Autumn Watkinson, David Beresford

**Megan Tapajna:** The role of TRIT1 in skeletal muscle endurance training. *Supervisory team:* Stephanie Tobin, Cayleih Robertson

**Michaela VanHaren:** Terrestrial isopod identification in St. Thomas Ontario. *Supervisory team:* David Beresford, Thomas Hossie

**Molly Moyle**: A genetic investigation of reproductive barriers between aquatic plants (*Typha spp.*) in Europe. *Supervisory team:* Joanna Freeland, Marcel Dorken

**Nathan Kritzer:** Fibrosis of brown adipose tissue in UCP-1 knock out mouse model of obesity. *Supervisory team*: Cayleih Robertson, Holly Bates

**Shannon Learoyd:** Drowning hazards: Pools as an overlooked cause of mortality in urban wildlife. *Supervisory team:* Sarah Jamieson, Cayleih Robertson

**Swati Banerjee:** Human-induced reduction of the American Oystercatcher's pre-fledging success on two of Virginia's barrier islands. *Supervisory team:* Thomas Hossie, Lyn Brown

**Teya Helae:** Pathogen dynamics over the last 1000 years reconstructed from sedimentary ancient DNA. *Supervisory team:* Andrew Tanentzap, Kirk Hillsley

### Interested in a thesis course next year?

- Check that you will meet the BIOL-4020D course requirements next year
- Think about the courses you have enjoyed, your own research interests, and papers published by Biology. Use that to focus who you approach.
- Begin talking to Biology Faculty early in 3rd year to discuss about thesis opportunities next year
- Once a supervisor is secured, complete the Biology Thesis Application Form and submit it to biology@trentu.ca before the start of the next school year
- Questions? Email biology@trentu.ca!

# Biology Undergraduate Society (BUGS) Honours Thesis Panel Recap!

By: Megan Tapajna

The night began with a Thesis 101 presentation from BUGS President, Kaitlin Guitard. Guitard provided an overview of what an honours thesis entails, including details about the thesis course itself, how to get involved in research, and if a thesis is the right path for you. Professors, Dr. Sarah Jamieson and Dr. Neil Emery, were in attendance to answer insightful questions from enthusiastic biology students. We then heard from four students currently enrolled in the BIOL-4020D Research Thesis course about their own unique experiences getting involved with research.


**BUGS 2025 Honours Thesis Panel Presenters** (from left to right: Teya Helae, Edie Levine-Barnoff, Nathan Kritzer, Shannon Learoyd)

On Wednesday, November 19th, the Biology Undergraduate Society hosted our annual Honours Thesis Panel to an eager group of prospective biology thesis students. The event was an overwhelming success, with our largest event-specific turnout yet! We had a wonderful group of professors, students, and special guests who made the event a night to remember.


Teya Helae

Our first speaker of the evening was Teya Helae, who presented her work on "Pathogen dynamics over the last 1,000 years reconstructed from sedimentary ancient DNA," exploring lake pathogens under a One Health perspective in Dr. Andrew Tanentzap's lab.

Next, we heard from Edie Levine-Barnoff of Dr. Thomas Hossie's lab, who presented her research on the "Nesting success of piping plovers," along Assateague Island in Maryland and Virginia.

Edie Levine-Barnoff

Nathan Kritzer of Dr. Cayleih Robertson's lab then presented his work on "Fibrosis of brown adipose tissue in UCP-1 knock out mouse model of obesity," exploring the connection between cold exposure and brown adipose tissue in mice.


Nathan Kritzer

Finally, under the supervision of Dr. Sarah Jamieson, Shannon Learoyd presented her research on "Pools as an overlooked cause of mortality in urban wildlife," explaining how the fun, summer oasis can be a significant drowning hazard for many species.


Shannon Learoyd

To conclude the evening, we had a special appearance from Dr. Richard Feldman from the Ministry of Natural Resources (MNR), who spoke with students about potential research opportunities and future projects in the field of ecology. We then wrapped up the event with a question period and networking session where prospective thesis students had the opportunity to connect with upper-year students and professors about research in the field of biology.

The Biology Undergraduate Society would like to extend our thanks to all those who participated and attended our wonderful Honours Thesis Panel.

# Spotlight on Department Publications

## Jim Schaefer

This paper highlights Jenna Knight's Honours thesis, in collaboration with MNR. We show that white-tailed deer, when selecting habitat, lower the environmental variance they experience relative to their surroundings. During fieldwork, Jenna measured vegetation structure and composition at more than 3800 quadrats in the Peterborough Crown Game Preserve.

Knight, J., J. A. Schaefer, B. R. Patterson, S. Sucharzewski, and J. M. Northrup. 2025. Habitat selection as a reduction in habitat variance. Acta Oecologica 128: 104103. https://doi.org/10.1016/j.actao.2025.104103

Jenna Knight measuring canopy cover for white-tailed deer.

## Marcel Dorken

Marcel's recent Tansley review in the science journal *New Phytologist* was an invited review of a central topic in plant ecology and evolution - fitness based trade-offs with reproduction. More about the costs of reproduction in flowering plants can be found below:

Dorken, M.E., van Kleunen, M. and Stift, M. (2025), Costs of reproduction in flowering plants. New Phytol, 247: 55-70. https://doi.org/10.1111/nph.70166

## Stephanie Tobin

Graduate and undergraduates thesis students are hard at work in Stephanie Tobin's laboratory. This recent publication is the culmination of three years of undergraduate thesis work: Abbey Politeski and Alex Rico '22-'23; Julio Cisneros Medrano, Ben Witmer and Risha Gupta '23-'24, and Noah Fiorucci, Katie Lycett and Hannah Kavanagh '24-'25 plus graduate students Hannah Smith and Jack Campbell.

Politeski AL, Rico AQL, Cambell J, Cisneros Medrano JG, Witmer B, Gupta R, Fiorucci NA, Lycett KM, Smith HC, Kavanagh HM, Robertson CE, Brenner IKM, Shafer ABA, Bates HE, Hillsley K, Tobin SW. The Monocrotaline Model of Hypertension Leads to Cachexia in Male but Not Female Mice. J Cachexia Sarcopenia Muscle. 2025 Dec;16(6):e70129. doi: 10.1002/jcsm.70129. PMID: 41267538; PMCID: PMC12635420.

## David Beresford

David Beresford is pleased to share a recent paper about protecting the wild hedges that grow on field borders and along wooden fences commonly found on marginal farmland. These are effectively linear forests, and as woodlands disappear hedges become critically important for wildlife

Archer, D., Sager, E., Porter, M., Beresford, D.V. 2025. From fencerow to product: The potential of feral apple jelly and other products for farm gate sales. Journal of Agriculture, Food Systems, and Community Development, 14(3), 41–46. https://doi.org/10.5304/jafscd.2025.143.031

Desiree Archer, (left) with a field assistant collecting feral apples for making jelly.

# Spotlight on Department Publications

## Graham Raby

New paper alert! New study published in PLOS Biology shows that giving fish more oxygen can't save them from heat waves. Led by Graham Raby and an international team of researchers, the study involved close to 1500 animals, 24 experiments, and four locations across the globe. A subset of the experiments were conducted at Trent by co-author and Trent Biology honours thesis study Leroy Reynolds - recipient of the 2023 Roy L. Edwards Scholarship.

Raby GD, De Bonville J, Reynolds L, Storm Z, Cowan ZL, et al. (2025) Oxygen supersaturation has negligible effects on warming tolerance across diverse aquatic ectotherms. PLOS Biology 23(11): e3003413. https://doi.org/10.1371/journal.pbio.3003413

A stream-resident brook trout, one of the study species in Raby et al. 2025, swims in a stream in Ontario. Photo credit: Jacob Bowman.

## Maggie Xenopoulos

This paper is especially meaningful to me because it represents a true team/lab effort. For about a year and a half, our lab met every two weeks to shape this manuscript, discussing ideas, managing data, analysing data, refining analyses, and polishing the writing together. Every student in the lab contributed in some way, gaining hands-on experience with data management, citation organization, scientific writing, and statistical analysis. It's not just a paper—it's the culmination of collective curiosity, persistence, and collaboration across the entire group.

Kelley, J. D., Klemet-N'Guessan, S., Pearce, N. J. T., Stevens, C. M., Arsenault, A. J., Denga, M., et al. (2025). Climate change and urbanization decouple dissolved organic carbon quantity and composition in streams. Global Biogeochemical Cycles, 39, e2025GB008534. https://doi.org/10.1029/2025GB008534

A few of the authors - from left clockwise: James Kelley, Claire Stevens, Sherryann Prowell, Sandra Klemet-N'Guessan, Carolina Koebel, Sasindu Gunawardana, and Maggie Xenopoulos

# Awards & Achievements

## Bradley Howell Wins the Peter A. Larkin Award for Excellence in Fisheries at a Canadian Institution!

*Bradley Howell, the 2025 doctoral Peter A. Larkin Award for Excellence in Fisheries at a Canadian institution winner with a brook trout.*

Bradley Howell was recently awarded this year's Peter A. Larakin Award, which is administered by the Canadian Aquatic Resource Section (CARS) of the American Fisheries Society (AFS). This award is given yearly to two deserving graduate students, one doctoral and one master's, conducting fisheries research at a Canadian based institution. The award honours one of Canada's great fisheries scientists who was passionate about students and identifies the top current students (at each level) based on their academic CV.

Bradley is the first two time winner - first as a Master's student during his time at the University of Winnipeg and now as a doctoral student in the Integrative Fish Ecology Lab with Graham Raby at Trent University. The Biology Department congratulations you on your great achievement!

## Adaption of the Year Winners

This fall, the Biology first year course, BIOL-1020H, held a competition to find the Adaption of the Year, as voted on by their classmates. We have some fantastic entries this year, making this a close competition but the winners were:

From BIOL-1020H-A Section:
**1st Place:** Nature's Invisible Ninja - The Glass Frog (*Hyalinobatrachium valerioi*)
Haleigh Norton, Sophie Dorais, Kirsten Stolk
**2nd Place:** The disappearing squid - Cranch's glass squid (*Cranchia scabra*)
Meghan Booth, Team Member # 2, Team Member #3
**3rd Place:** the Blood squirting lizard
Hannah Oesch, Team Member # 2

Winners from BIOL-1020H-A

From BIOL-1020H-B Section:
**1st Place:** The Diving Bell Spider (*Argyroneta aquatica*)
Hunter Brown
**2nd Place:** Radiation munching mushrooms (*Cladosporium sphaerospermum* and others)
Tristan van den Heuvel
**3rd Place:** The glass frog (*Hyalinobatrachium fleischmanni*)
Kierstyn Pratas, Shayna Kiffin

Winners from BIOL-1020H-B

# Wanting a summer job that gives you research experience? Learn about Undergraduate Student Research Awards (USRA):

The Undergraduate Student Research Awards (USRAs) allow students to gain valuable research work experience that complements their studies in an academic setting by providing financial support available through Trent University. Through the support of the USRA program, students can develop the potential for a research career in the sciences while it also encourages students to undertake graduate studies and foster the pursuit of a research career in these fields. Students must find a faculty member who will supervise the research project they will be working on during the tenure of the award. Refer to the Biology Faculty page for potential supervisors.

Students and Faculty are encouraged to consult the NSERC USRA Guidelines before completing an application.

**Internal Deadline:** January 20 2026, at 4:00 PM EST
**Duration:** 14 - 16 consecutive weeks, from May 1st, 2026
**Award Value*:** $6000 from NSERC plus host institution/supervisor contribution (see below)

- 14 weeks: $9,871.03 ($6,000 NSERC + $3,871.03 supervisor contribution)
- 15 weeks: $10,576.10 ($6,000 NSERC + $4,576.10 supervisor contribution)
- 16 weeks: $11,281.18 ($6,000 NSERC + $5,281.18 supervisor contribution)

* Note: these are the minimum award values based on the minimum required supervisor contribution for each award duration.

**Additional notes:**

- Indigenous heritage students: All applications from students of Indigenous heritage that otherwise meet all the eligibility criteria will be submitted to NSERC for funding.
- Black heritage students: All applications from students of Black heritage that otherwise meet the eligibility criteria will submitted to NSERC for funding.
- Basic Eligibility (more details can be found online):
  - Be a Canadian citizen, a permanent resident of Canada or a Protected Person under subsection 95(2) of the Immigration and Refugee Protection Act (Canada), as of the internal deadline date for applications.
  - Be registered in a non-professional bachelor's degree program as of the internal deadline date for applications.
  - Have a minimum cumulative average of 70% (B -range)
  - Have a supervisor who is willing to co-apply for the award and has the resources to pay the supervisor portion of the award in accordance with the NSERC guidelines above.

## In the Field - Limnology Showcase

By: Susan Chow

Every year the Biol 3050 - Limnology class has an all-day field trip to the **James McLean Oliver Ecological Centre**. This 270 acres Trent University field station is located west of Bobcaygeon on Pigeon Lake. The objectives of the lab are to teach students Physical, Biological and water chemistry sampling techniques and how to use the data to answer questions about Pigeon Lake water quality, abundance, richness and distribution of zooplankton, and how physical and chemical factors affect the distribution of macrophytes and benthic Inverts.

Sam Monaghan & Grace Robillard at Pigeon Lake for BIOL-3050, Fall 2025

Sam Monaghan, Kate Cornish, Jordyn McLean Deering and Grace Robillard from the Ecological Restoration joint program in the Fall 2025 field lab.

# From the Archives: The Ecology Bulletin

## The Original Department Newsletter: The Ecology Bulletin, started in 1974!

We have the following back issues of Ecology Bulletin, created by the Biology Department at Trent University, and welcome any information on missing editions, copies, or photocopies of these. Kind thanks to Professor Emeritus, Dr. Ian Sanderman for donating the following editions (right):

- Vol 1
  - No. 1 Fall 1974
  - No. 2. Spring 1975
  - No. 3 Fall 1975
- Vol 2
  - No. 1 Spring 1976
  - No. 2 Fall 1976
- Vol 3
  - No. 1 Spring 1977
  - No. 2 Fall 1977
- Vol 4
  - No. 1 Fall 1979
- Vol 5
  - No. 1 1981
- Vol 6
  - No. 1 1982
- Vol 7
  - No. 1 1983
- Vol 8
  - 1984

## Perc Powles: Fish of the Kawarthas - Part 1, Forage Fish

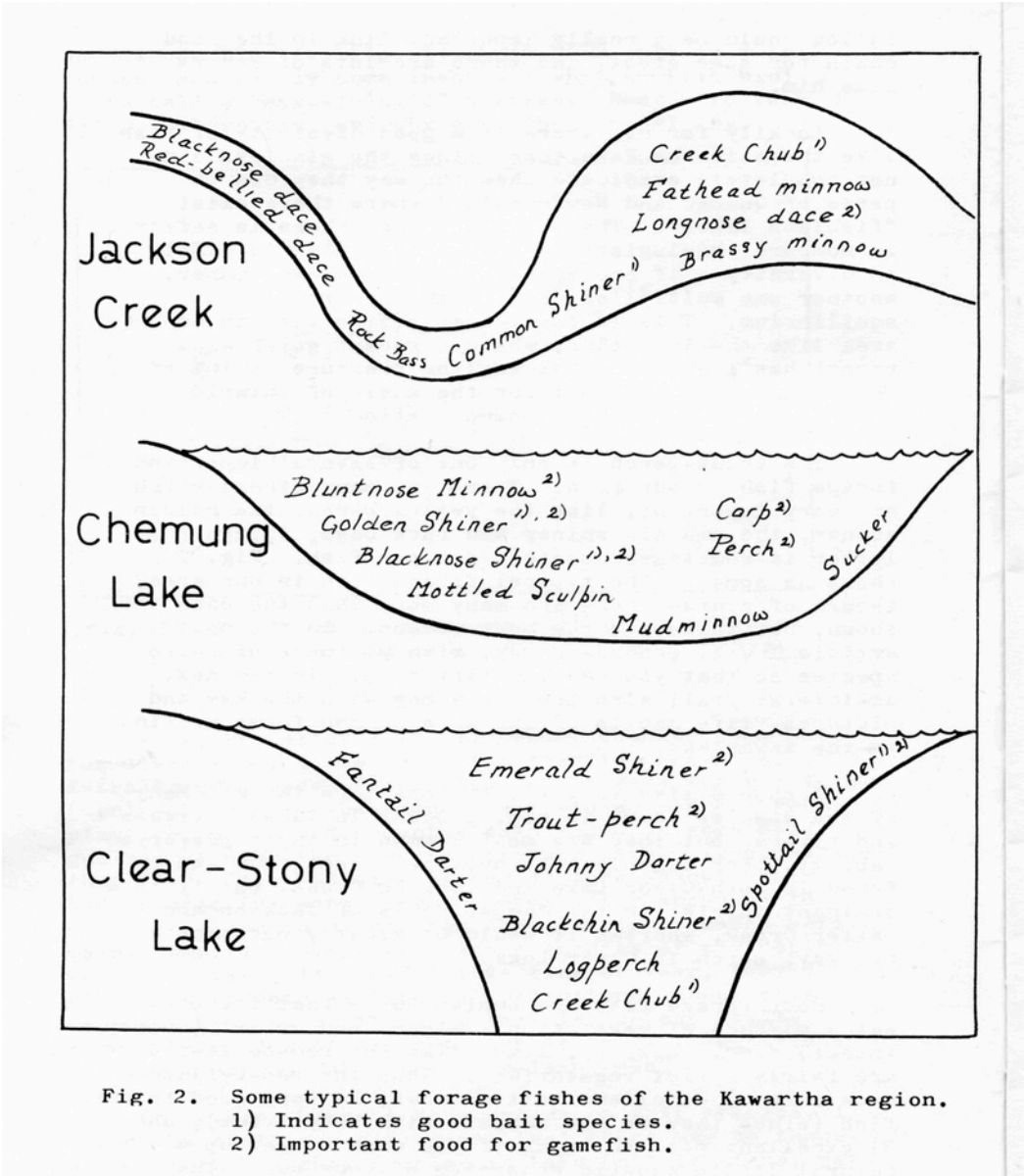



Fig. 2. Some typical forage fishes of the Kawartha region.
1) Indicates good bait species.
2) Important food for gamefish.

The first issue contained an article by Perc Powles (1930-2025): Fish of the Kawarthas – Part 1, Forage Fish, Pages 3 – 7. This is Figure 2 (left) from that article to peak your interest (Vol. 1, No. 1, page 6).

## Present Day: Upcoming Events from BUGS!

**Trivia Night!**

- Come test your general and biology-specific knowledge for the chance to win awesome prizes and bragging rights!

**What Can I Do With a Degree in Biology?**

- An opportunity for students to explore potential career options by learning and networking with professionals in the field of biology.

**Movie Night!**

- A relaxing night off from studying with popcorn, warm beverages, and more!

**Annual Year-End Trip**

- To conclude the 2025-2026 academic year, BUGS will be hosting our annual Year-End Trip! Past destinations include the Toronto Zoo and the Royal Ontario Museum (ROM).

Stay tuned for specific dates, times, and locations by following **@bugsattrent** on Instagram!

## Take a Break Crossword

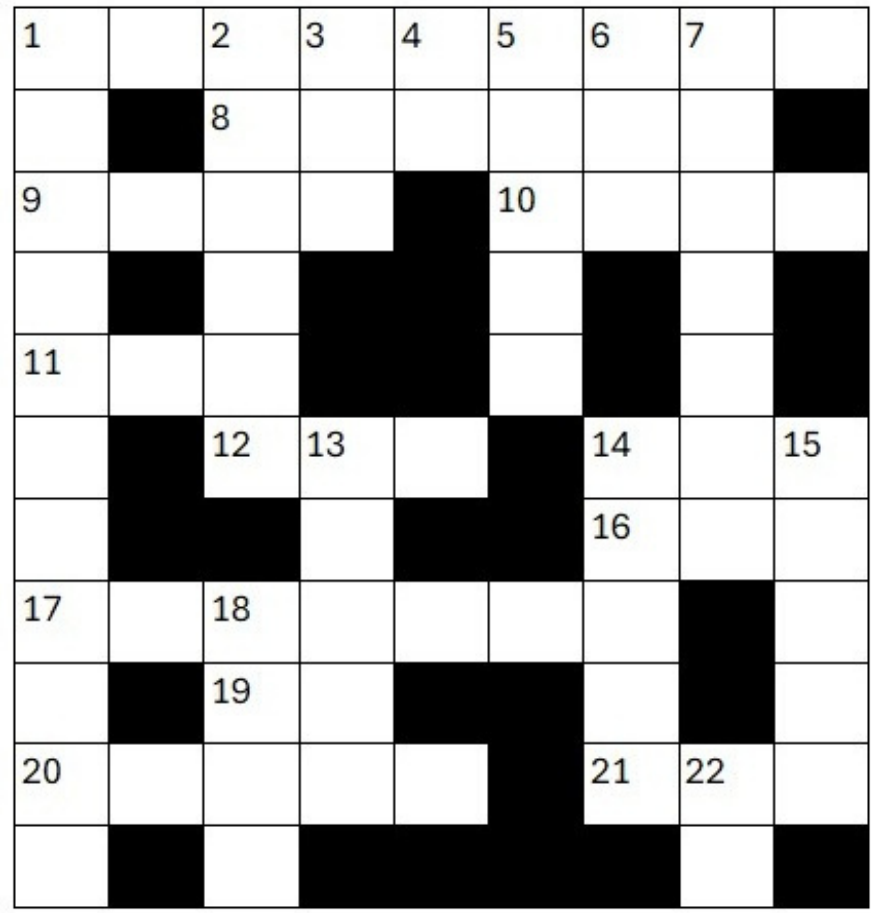
ECOLOGY BULLETIN CROSSWORD PUZZLE NO. 1, page 11, Vol. 5 No. 1
1981 by C. D. Johnson Biology Department, Trent University

Across

1. A relationship between animals, in which one of them is destroyed and usually consumed.
8. Originating naturally in a particular country or region.
9. Intimately linked to 1 across.
10. To destroy cells.
11. Fallen woody stem of an angiosperm.
12. Common name for the well known gymnosperm Taxus canadensis.
14. A house mouse.
16. A biological dictionary is what you may have to _____.
17. One of the largest classes of the Phylum Arthropoda - all members are air breathing and have the body divided into three parts.
19. Ecological specialist.
20. A region of Canada of great concern to environmental biologists at the present time.
21. *Equus asinus*.

Down

1. Assemblages of plants or animals living in a given area.
2. The available "power" in a community.
3. A division of time equal to 21 hours.
4. A flying mammal that lost an insect perhaps.
5. The generic name for basswood.
6. A climbing vine - *Hedera helix*.
7. Reproductive cycle occurring in many mature female mammals.
13. Opposite to ingest.
14. A house fly.
15. Plant propagules.
18. One of a series of stages in an ecological succession.
22. Symbol for a chemical element used by diatoms.



Answers for this crossword will be found in the next issue!

subscribe here>

Be sure to **subscribe** to **The Petri Dish** by **emailing** **biology@trentu.ca**

**Stay in Touch!**

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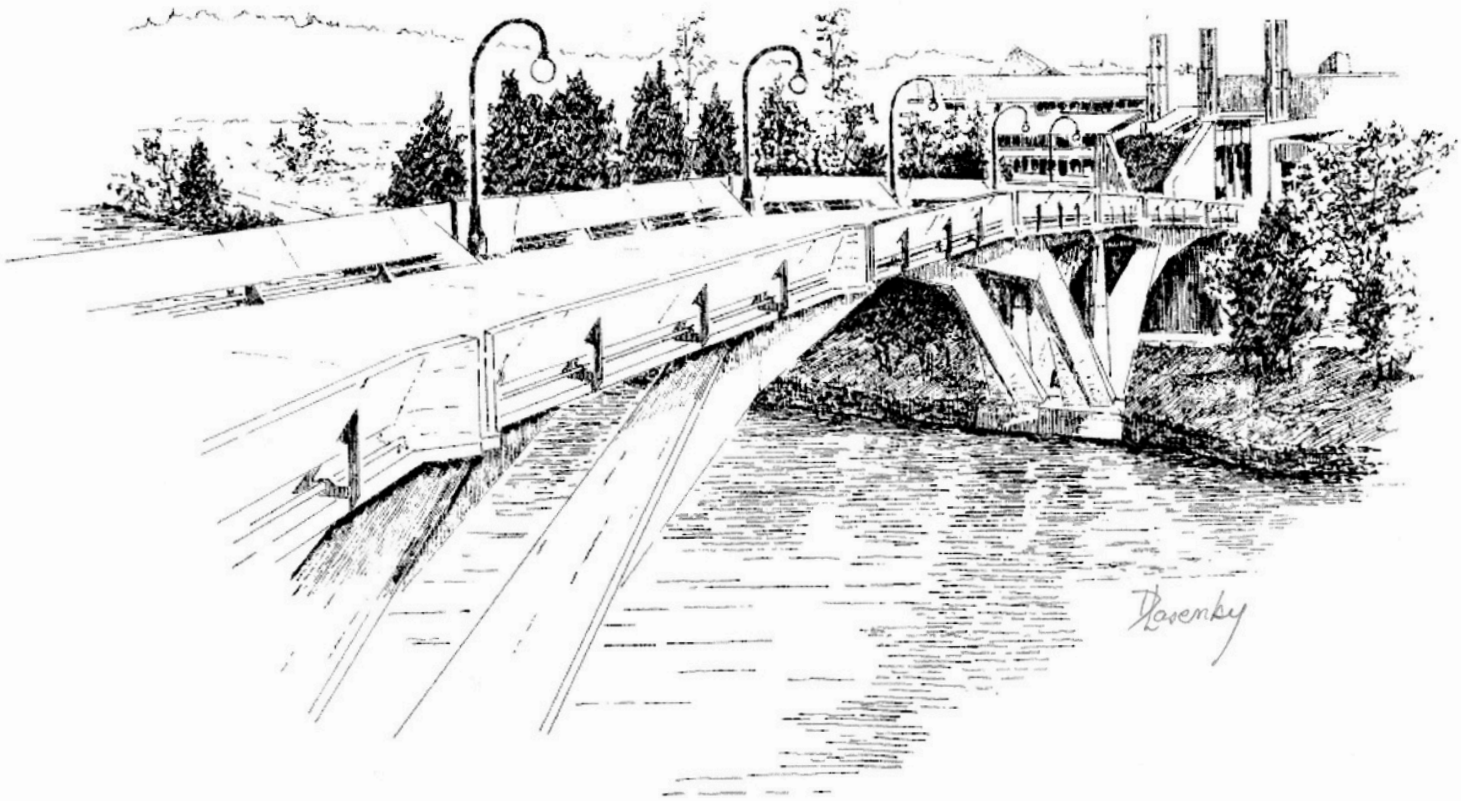


Illustrated by David Lasenby (‘64), Professor Emeritus