



Volume 25 | Issue 2 | December 1, 2020

ENTOMOLOGICAL SOCIETY OF ONTARIO

FALL NEWSLETTER



From the board

Officers of the ESO	2
President's address	3
New board members	4-8

Annual meetings

2020 ESO AGM (cancelled)	9
2021 AGM announcement	10

Outreach & BugEye

Guelph Virtual Bug Day recap	11
BugEye 2020 contest winners	12

Announcements

Bugdex app	13-14
Opportunities	15-16

Society

Secretary wanted	17
Join the ESO board!	18
Publish in JESO!	19
ESO membership	20



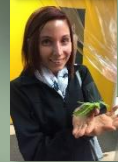
President
Amanda Roe
NRCan
amanda.roe@canada.ca

President-elect
Alex Smith
U. of Guelph
salex@uoguelph.ca

Past president
Amro Zayed
York University
zayed@yorku.ca

Secretary
Michelle Locke
AAFC, CNC
michellemlocke@gmail.com

Treasurer
Alan Macnaughton
U. of Waterloo
amacnaug@uwaterloo.ca



Webmaster
Kaitlyn Fleming
Trent University
kaitlynfleming@trentu.ca



ESO rep to ESC
Roselyn Labbé
AAFC
roselyne.labbe@canada.ca



JESO Editor
Chris MacQuarrie
CFS - GLFC
chritian.macquarrie@canada.ca



JESO Assoc. Editor
Andrew Bennett
AAFC, CNC
andrew.bennett@agr.gc.ca



JESO Technical Editor
Thomas Onuferko
York University
onferko@yorku.ca



Director 2019-21
Tracey Baute
OMAFRA
tracey.baute@ontario.ca



Director 2019-21
Jeremy DeWaard
U. of Guelph
dewaardj@uoguelph.ca



Director 2020-22
Ziggy Kullik
CFIA
sigrun.kullik@canada.ca



Director 2020-22
Meredith Miller
U. of Guelph
mmille05@uoguelph.ca



Director 2021-23
Andrew Young
U. of Guelph
andrew.young@uoguelph.ca



Director 2021-23
Christi Jaeger
AAFC, CNC
christi.jaeger@canada.ca



Student rep. 2020-22
Aleksandra Dolezal
U. of Guelph
adolezal@uoguelph.ca



Student rep 2021-23
Marlee-Ann Lyle
U. of Guelph
mlyle@uoguelph.ca



Newsletter co-editors
Lauren Des Marteaux
AAFC
ldesmart@uwo.ca
Kruti Shukla
Ryerson University
kruti.shukla@gmail.com

OFFICERS OF THE ESO



Dear Society Members and fellow entomophiles,

I write this address from my office in the basement. Like many of you, this pandemic has forced me to live and work differently. I long for the spontaneous hallway conversations with staff and fellow scientists. I miss seeing friends and family; I tire of flat people on screens. We did not get to meet together for our Annual Meeting held jointly with the Ontario Pest Management Conference, the Ontario Weed Society, and the Canadian Phytopathological Society - Southwestern Ontario Regional Association in London, ON. This pandemic has, and will, determine how we conduct our science, but I am confident we will meet again in the near future.

A special shout out to Amro Zayed, the past president of the ESO, who led this society through some of the most challenging times the ESO has faced in a generation. He responded with grace, humor, and compassion, and he deserves a virtual standing ovation for his work. I would also like to welcome all the newly elected members of the ESO boards, and our new president-elect, Dr. Alex Smith. We look forward to your involvement and leadership in the coming year.

I am amazed at the resiliency shown by so many entomologists, who are doing science in their basements and backyards. Kudos to the students keeping insect colonies alive in their bedrooms or technicians identifying trap catches on the kitchen table. The entomological community rose to the challenges imposed by a global pandemic and we have supported each other even while staying apart. A shout out to the team of graduate students in Guelph who organized a Virtual Bug Day, in lieu of their popular in-person event. They figured out how to engage with the public, even during a global pandemic. Entomologists are a creative, driven group of people. This creativity and grit make me hopeful for the future of our community.

As we all sit in our respective basements, we look forward to 2021 with hope. We hope for a return to in-person meetings, setting our sights on the 2021 ESC/ESO JAM. We hope for opportunities to celebrate with our colleagues and share our passion for bugs and science with the public. We have faith that science will bring us the tools to confront the pandemic and allow us to return to our labs, our colleagues, and our families. Until then, stay healthy and stay safe.

- Amanda Roe



ESO Presidential Cockroach



Alex Smith

President-elect

I grew up near the small town of Douglas in the Ottawa Valley in eastern Ontario and it was here in the numerous rivers, streams and marshes of Renfrew County that I first thought I wanted to be a biologist - it was while volunteering in Costa Rica in 1991 that I knew.

Today, most of my research program at the University of Guelph (where I am an Associate Professor in the Department of Integrative Biology) tries to answer the questions of: How are the smallest and most diverse of terrestrial animals affected by the climate crisis? How is the biodiversity under your feet affected by climate change? How can we use digital images to help us answer these questions and promote the little things that run the world to the world at large? My students and I are particularly focus on answering such questions by documenting the diversity of arthropod species across elevational gradients in northwestern Costa Rica. Here, in the Area de Conservacion Guanacaste (ACG - a UNESCO world heritage preserve) - we use field biology, natural history, DNA and high-resolution photography to document what species

lives where, who eats whom and how these patterns are changing as the climate crisis forces warmer and drier conditions upslope to volcanic peaks formerly covered in near permanent cloud and mist.

The ESO has been my entomological home throughout my professional life and it has been so welcoming. I love the community and size and inclusivity of the meetings. I have enjoyed serving as a Board member for several years and it will be an honour to serve as President.



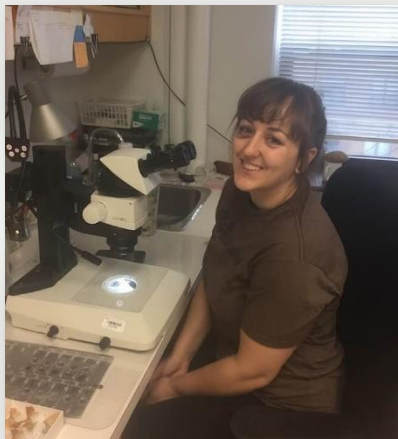
Andrew Young

Director

I cannot remember a time when I didn't have a strong interest in wildlife and the natural world. It was during my undergraduate at the University of Guelph that insects became my specific focus. After taking several of Dr. Steve Marshall's entomology courses, I undertook an M.Sc. in his lab with Dr. Jeff Skevington (Canadian National Collection of Insects, Arachnids, and Nematodes) as my co-advisor, wherein I revised the North American members of the flower fly (Diptera: Syrphidae) genus *Platycheirus*. Throughout my education I have been an active member of the ESO, since first participating as a student volunteer at the 2009 Annual General Meeting. As a masters student, I gave my first public research presentation at The ESO AGM, and I was struck by the welcoming atmosphere from junior and senior members alike.

After completing my M.Sc., I earned my Ph.D. with Dr. Skevington in Ottawa, revising the Australian members of the flower fly genus *Psilota*, and publishing a world phylogeny of the family. Across all my degrees a research goal has been to make entomology more accessible to the public. I have published user-friendly illustrated identification guides (available both in print and online) to further facilitate invaluable contributions from citizen and community scientists. It was during my Ph.D that I also served as the student representative for the ESO's board of directors and coordinated a Careers in Entomology workshop for grad students and prospective undergraduates.

After my Ph.D I relocated to Sacramento, California to work with Dr. Steve Gaimari and the California Department of Food and Agriculture. Most recently, I am thrilled to have returned to the University of Guelph in the position of Assistant Professor of Systematic Entomology. My research has focused on the systematics of flower flies (Diptera: Syrphidae). I have worked extensively with our native Canadian fauna, having recently contributed to a groundbreaking field guide to the flower flies of Northeastern North America. Now that I've moved back to Ontario, I will be delighted to once again serve the society in an official capacity.



Christi Jaeger

Director

Christi Jaeger moved to Ottawa from Alberta in 2018 to accept a position at the Canadian National Collection as a technician in the Lepidoptera unit. Prior to this move, she spent 5 years in Mississippi, USA, as a Research Associate and then MSc graduate student in the Mississippi Entomological Museum at Mississippi State University. Her thesis focused on whole body morphology of de-scaled Lepidoptera, and refining histological staining techniques.

Christi is interested in supporting the entomological pursuits of students in Ontario, with special emphasis on the technical side of our work - dissections, staining, imaging, and preparing adult and larval Lepidoptera specimens.



Marlee-Ann Lyle

Student representative

From a young age, I found myself fascinated with insects. My fascination has not changed since then and if anything, it has increased! I am a Guelph native and I completed my BSc in Environmental Science at the University of Guelph. In my undergraduate degree, I found myself inspired by Dr. Morgan Jackson's and Dr. Cynthia Scott-Dupree's teachings on insect biology, diversity, and pests to pursue a career in agricultural entomology. In 2018, I took the field entomology course trip to Costa Rica and was amazed to see the pictures in my textbook jump to life. I enjoyed the field course so much that I attended the 2019 field entomology course trip to Ecuador. In my last year, I pursued an undergraduate thesis on the ovarian development of female Brown Marmorated Stink Bugs to determine their phenology in the Niagara region. This experience led me to my graduate studies in entomology. I am currently working on my MSc in Environmental Science with Dr. Rebecca Hallett and Dr. Justin Renkema at the U of G. My project is to develop a molecular method to detect a tiny agricultural pest called cyclamen mite in strawberry and to test the efficacy of biopesticides at controlling it.

Since before my enrollment in university, I have been interested in scientific communication and outreach. In high school, I was apart of TERRA, a program which fostered scientific communication and teaching to elementary school students. In my undergrad, I was a student representative of the Environmental Sciences Student Executive, an organization which was responsible for planning educational events for all undergraduate students in the BSc in Environmental Science program. Last year, I was involved in Guelph Bug Day 2019 as a volunteer and this year, I am involved as a head organizer.

While I was completing my BSc, I was unaware of the ESO and the awesome resources it has for entomology students. As an ESO student representative, I will not only bring the connections I made at the U of G, but also all of the connections I have made as a Guelph native to share ESO with budding entomologists to foster their passion. I believe that education of the next generation is essential and is something I am extremely passionate about.



Roselyne Labbé

Student representative

Dr. Roselyne Labbé leads the Greenhouse Entomology research program at Agriculture and Agri-Food Canada's Harrow Research and Development Centre (HRDC). Her group rigorously evaluates the many new tools, technologies and agents used for crop protection, with an emphasis on the discovery and development of native biological control agents for pest management in Canadian greenhouses. Recently, the greenhouse entomology program at Harrow has worked on better understanding the impacts of artificial grow lights on biological control agents and crop pests, as well as on the assessment and commercialization potential of novel predator and parasitoid biological control agents. The research program ultimately aims to identify both the most effective and sustainable ways to manage the diversity of pests present within Canada's protected crops.

Dr. Labbé holds both an HBSc degree in Biology and a PhD degree in Molecular Entomology from Western University. She holds an MSc degree in Greenhouse Entomology from l'Université Laval. She has also served as Research Fellow at the University of Toronto and at Wayne State University.



2020 ESO ANNUAL GENERAL MEETING

Insects, Plants and Weeds: Facing the Future Together

CANCELLED



Due to COVID19 we had to cancel this one. Lets hope to see everyone in 2021!



ESC-ESO 2021 NIAGARA FALLS



Location: Marriott Fallsview Hotel, Niagara Falls, ON
Dates: November 14 – 17, 2021

Strength in Diversity. The insects are among the most diverse group of organisms on the planet, and entomologists are applying an increasingly diverse toolkit to advance knowledge on a diversity of topics in the field. We are keenly aware of the declines in the diversity of insects that threaten vital ecosystem functions, human health, and our economy. We are also becoming increasingly aware of systemic barriers that preclude many from studying and practicing entomology, threats that likely impact the productivity and ingenuity of entomological research in Canada. Our goal for the 2021 JAM – Strength in Diversity - is to showcase state of the art entomological research on a diversity of taxa, ecosystems and disciplines, and to collectively discuss solutions to enhancing equity and diversity in Entomology.

Speakers

Heritage Lecture: Dr. Lisa Myers, York University
Keynote: Dr. Amanda Moehring, Western University
Keynote: Dr. Jayne Yack, Carleton University
Keynote: Dr. Claire Kremen, University of British Columbia



Guelph Bug Day went virtual in 2020!


Guelph Bug Day gives student volunteers the opportunity to develop their public speaking and communication skills that are critical to success as a graduate student and researcher. Graduate students engage with the public to support knowledge translation and transfer and encourage scientific literacy within the community. Even though this year's Guelph Bug Day was virtual, we still had a blast! Between our Twitter, Instagram, and Facebook accounts, we shared insect content from our [YouTube channel](#):


Content ranged from insect ID workshops to entomology research talks, covering a wide variety of entomology topics. We also had a Guelph Bug Day survey for our participants, and they would be entered into a contest to win 1 of 2 buggy prizes (see pictures below). From our survey results, it looks like we had over 50 participants! Considering the circumstances, this was a very successful Guelph Bug Day and we're looking forward to planning Guelph Bug Day 2021!

- Aleksandra Dolezal

[YouTube](#) 

[Twitter](#) 

[Facebook](#) 

[Instagram](#) 





We **WENT** **virtual**

Search 'Guelph Bug Day' or use this link: <https://bit.ly/35Xo5Pt>

Search for channel 'Guelph Bug Day' or use this link: <https://bit.ly/35Xo5Pt>

2020 **GUELPH BUG DAY**

Guelph Bug Day
August 23, 2020
University of Guelph





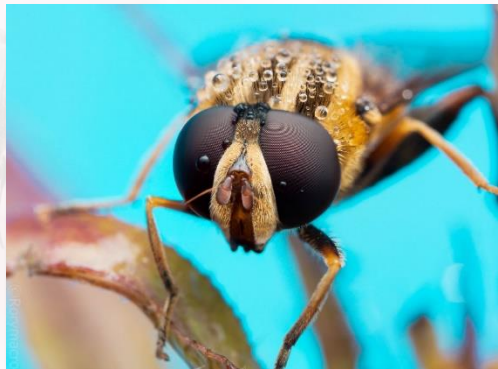
This year BugEye received 20 excellent photos from seven contestants. In lieu of the AGM, the ESO community was able to vote for People's Choice on our Facebook. Thanks to the judges, ESO Comms, and everyone who submitted photos! We had no junior entries - so please encourage the young folk to submit photos next year!

Best photo: Leigh Ayres



"Little plant bug on some lavender in my front garden. I liked the minimalistic composition and liked the bokeh"

Best Ontario Insect & People's Choice: Rory Wills



"Early bird gets the worm: A very dew-covered hover fly captured on a brisk blue skied October morning. Found in Norval, Ontario. I believe it to be in the genus *Helophilus*."

BUGDEX



When insect guides meet digital design

Head scratching and eyebrows frowning, you know the look, stuck upon a particularly challenging couplet from a dichotomous taxonomic key; any undergraduate student who has taken a course in biology has been there before. Accurate morphological identification of insects relies on good keys with precise and easily understandable characters. The lack of visual support makes it difficult and frustrating at times for both novices and experts. We need a game changer. Enters Bugdex, your portal to entomology: an extravagantly illustrated and animated guide to insect diversity.

The primary target groups are first year undergraduate students and senior high school students with a strong interest in biology. In principle, anyone that is curious about nature should get a kick out of Bugdex. The idea from the start has been to create something that is accessible for people potentially interested but not necessarily with a lot of prior knowledge of insects. Of course, the hope is that Bugdex will appeal even to the most experienced bug enthusiasts too!

Bugdex is the brainchild of a team of like-minded creative entomologists bringing together their skill, passion and dedication into a cohesive free app to promote entomology. Dave Cheung is a University of Guelph graduate, former collection manager at the Natural History Museum of Denmark and now runs DKB Digital Designs, a company dedicated to developing visually stunning educational software like Bugdex and BugFinder. His partner in crime from the earliest stages of Bugdex, Line Kræmer, is a University of Copenhagen graduate and full-time lead photographer and designer on the project. She dedicated her MSc to the development and testing of Bugdex and now continues her dream to contribute to the growth of the project.



BUGDEX



When insect guides meet digital design

When the two entomologists met in Denmark back in 2014, they immediately felt a strong chemistry. While mastering the art of immortalizing live specimens through macrophotography and animating them afterwards, they discovered the desire to develop educational guides harnessing the power of interactive visual design which the video game industry had been refining for decades.

Lars Vilhelmsen, a wasp systematics researcher and curator at the Natural History Museum of Denmark, came along as project administrator. He also teaches several courses for undergraduate students at the University of Copenhagen, including a field course for which Bugdex is scheduled to become the primary reference. Retired McMaster entomology instructor Marvin Gunderman, a long-time friend and mentor of Dave, became chief publicity strategist to support outreach activities. Marvin brought his passion and knowledge of entomology, photography and pedagogy to help Bugdex achieve its mission.

Charles-Étienne Ferland came on board as social media manager. Assisting in project development with content creation, communications, networking, Charles brings together his skills as a published author, entrepreneur and entomologist.

This project blends design, interactivity, high quality photography, didactics and entomology. There's a plethora of novelties that Bugdex is bringing to modern educational apps, which elevates traditional textbook knowledge to the next level. Filled with amazing animations, images and videos, the users will get to experience a very personal and up-close encounter with the small and mysterious creatures with which we share our world. Bugdex is being packed with interactive features, such as wing folding animations, that make learning easy and fun. At launch, the app will include a key to insect orders. Keys to the families of beetles, flies, true bugs, bees and wasps will follow shortly after, with improvements planned over the next three years.

- Charles-Étienne Ferland

Don't miss the Spring 2021 launch by subscribing to the mailing list on www.bugdex.buzz!

GRADUATE STUDENT POSITIONS

MSc or PhD student – Behavioral ecology and evolutionary biology of *Nicrophorus* beetles

Queen's University (Kingston, ON)

Application deadline: 15 January 2021; start date: May or September 2021

Details: <https://esc-sec.ca/wp-content/uploads/2020/11/Nicrophorus-grad-ad.pdf>

MSc Student – Mitigation and management of Cry1F resistance in European corn borer in Canada

School of Environmental Sciences, University of Guelph (Guelph, ON)

Application deadline: none listed; anticipated start date: April 2021

Details: https://esc-sec.ca/wp-content/uploads/2020/10/Grad_Assistantship_ECB_Phenology_MSc.pdf

PhD Student – Mitigation and management of Cry1F resistance in European corn borer in Canada

School of Environmental Sciences, University of Guelph (Guelph, ON)

Application deadline: none listed; anticipated start date: January 2021

Details: https://esc-sec.ca/wp-content/uploads/2020/10/Grad_Assistantship_ECB_PhD.pdf

MSc or PhD student (Parasite-host ecology)

University of Alberta (Edmonton, AB)

Application Deadline: Feb 1, 2021

Details: <https://grad.biology.ualberta.ca/luong/graduate-student-opportunities/>



Drawing by David Beresford

JOB POSTINGS



Postdoc – New threats from pest insects in the boreal forest of northwestern Quebec

Concordia University (Montreal QC)

Application deadline: None listed

Details: [Here](#)

Shiff Curator of Climate Change

Royal Ontario Museum (Toronto, ON)

Deadline to Apply: January 4, 2021

Details: [Here](#)

Leader, Applied Forest Ecology

J.D. Irving, Woodlands Division (Saint John, NB)

Application deadline: None listed.

Details: [Here](#)

For more postings, visit the [ESC-SEC opportunities](#), [ESA careers](#), and [CSEE](#) pages.

WE'RE LOOKING FOR A SECRETARY!

The Entomological Society of Ontario is looking for someone to take on the role of Secretary. Michelle is retiring from this position and hopes you will consider volunteering for the job.

Duties include:

- taking minutes at meetings
- keeping the membership roll up to date
- maintaining the main society email account and PO Box
- keeping the membership informed through email
- keeping society documents and assisting with knowledge transfer



This position is ideally suited to someone who would like to take a very active role in the ESO and would be open to a longer-term commitment (there is no fixed term length for Secretary position). Michelle would be happy to talk to you more about this position if you are interested and will gladly work with you to ensure a smooth transition.

Please contact Michelle at michellemlocke@gmail.com

JOIN THE ESO BOARD!

The ESO society functions thanks to the help of the board! There are many different positions, and joining is a great way to make a difference to the society, work in a team, and gain public service experience in a relaxed, friendly atmosphere. Within the board you will also get the opportunity to join various committees for outreach, meeting planning, and more. Perhaps you have some new ideas or expertise that you'd like to bring to the society!

Each summer, the ESO members elect an incoming president, director, and student representative. The duration of these positions is as follows:

President: 3 years (incoming, current, outgoing)

Director: 2 years

Student representative: 2 years

Interested members can send their photo and a short bio to Michelle Locke: entsocont.membership@gmail.com



Some of the current and past ESO board



PUBLISH IN JESO!

The Journal of the Entomological Society (JESO) is the second oldest entomological journal in North America.

Papers on any aspect of entomology are accepted, and do not need to be restricted to Ontario! Both French and English manuscripts are welcome. At least one author must be a member of the ESO. To submit, please see the [Instructions for Authors](#) page.



Editor
Chris MacQuarrie
chritian.macquarrie@
nrca.nrcan.gc.ca



Assoc. Editor
Jeff Skevington
jhskevington@gmail.com



Assoc. Editor
Andrew Bennett
andrew.bennett@
agr.gc.ca



Technical Editor
Thomas Onuferko
onerko@yorku.ca

JOURNAL

of the
ENTOMOLOGICAL
SOCIETY
OF
ONTARIO



Volume
One Hundred and Fifty One
2020



MEMBERSHIP FORM

Just fill out this form (+ cheque or money order if required) and send to:

Michelle Locke
Entomological
Society of Ontario

Vista Centre, 1830 Bank St.
P.O. Box 83025
Ottawa, ON, K1V 1A3



Type of membership requested

- Retired (free) Student / Amateur (free)
 Regular (\$30) Student / Amateur
 Regular 5-year (\$150) (International) (\$10)

Name _____

Affiliation _____

Street Address _____

City, Province/State, Country _____

Postal Code/Zip Code _____ Telephone Number _____

Email Address _____

(Optional) Background Information

Employment (Location/Subject area) _____

Entomological Interest _____

- Check if you would like to get more involved with ESO activities if so, how?



JOIN THE ESO!

For ESO membership, complete the [Membership form](#) (also available on the ESO website)

Canadian student, amateur, and retiree memberships are FREE!
Email Michelle for membership renewal (must be done each year): entsocont.membership@gmail.com

Regular members: A one-time payment of \$150 secures you a 5 year membership! For payment options, including PayPal, please visit www.entsocont.ca, or mail your invoice and payment to:



Michelle Locke (ESO Secretary)
Vista Centre 1830 Bank St.
PO Box 83025 Ottawa, ON
K1V 1A3 Telephone:
(613) 759-1727