



Volume 22 | Issue 2 | November 30, 2017

Entomological Society of Ontario

FALL NEWSLETTER

Photo: Sean McCann 2017
(*Tutelia elegans*)

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Fellow Insect Enthusiasts,

I feel very honoured to be assuming the role of President of the ESO for 2017-2018. The ESO has had so many great presidents; I hope to live up to their awesome examples!

The recent ESO AGM in Guelph was fabulous! Past-president Gard Otis really worked hard to get people out and it paid off. We had over 135 registrations with 73 presentations of various types. I am always impressed by the depth and breadth of research that is being done by entomology students and researchers. Thank you to Gard and all the committee members that helped with the assorted tasks required to make the meeting so successful.

Next year's meeting (the 155th) will be Oct. 19-21 at Bark Lake Leadership and Conference Centre in Irondale (near Haliburton). It looks like a beautiful location and I hope you will join us!

One of the activities of the ESO is the publication of a journal. Please consider publishing in the JESO—there are no page charges and articles enjoy open-access on the web.

On behalf of the ESO, I would like to thank our outgoing board members, Joel Gibson, Jocelyn Smith, Andrew Young and Dave Beresford. Congratulations to Dave as he will be continuing as President-elect. Welcome to the incoming directors, Miriam Richards and Julia Mlynarek. Sarah Dolson will be the incoming student rep.

The slate of candidates for this year's election were impressive. I hope the unsuccessful individuals will consider running next year. I would like to thank Michelle Locke and Shiyu Li for their ongoing dedication to the ESO as secretary and treasurer respectively.

If you are receiving this newsletter, you already are an ESO member. Please remember to renew when you receive the notice in the new year, and please encourage your lab mates to join as well!

In addition to the journal, newsletters and AGM, the ESO has been sponsoring/organizing Bug Days. This year, there were three very successful ones! Entomologists and naturalists in Guelph, London and Ottawa shared their love of insects with many members of the general public. Since this program has been so successful, if you are interested in hosting one in your city/community, please do it! I think I can safely say that most ESO members are supportive of this kind of outreach. Thank you to all of you who assisted at these events.

If you are anywhere in the Greater Toronto Area and you need a bug fix this winter and spring, there are a few lectures and events hosted by the Toronto Entomologists' Association through the winter. Everyone is welcome to attend!

Antonia Guidotti
ESO President



David Beresford

President-elect

I am from Peterborough Ontario, and live on a nearby beef farm where I conducted my graduate research. My PhD thesis examined the overwintering success and population dynamics of stable flies on dairy and beef farms in southern Ontario, and I have been involved with biting flies of one kind or another since that time – usually as bait! I am developing a stable fly matrix population model using degree day time steps, and I am collaborating with American colleagues on a wide scale phenological study of stable fly emergence and population growth. This work takes place on the farms in the Peterborough area. My other research looks at species diversity for conservation purposes, focusing on Tabanidae diversity in the Hudson Bay lowlands of Northern Ontario. To this end, I spend much of my summer at an MNRF field camp on Akimiski Island in James Bay. At Trent University, I teach introductory entomology, agricultural entomology, forensic entomology, and biology of invasive species. I have been privileged to have had so many great students over my past several years of teaching. Three of my students have published in JESO, and I am very proud of their continued post-graduate success.



Sarah Dolson

Student representative

I am a M.Sc. student at the University of Guelph in Alex Smith's lab. I study Rove Beetle (Staphylinidae) community structure and diversity across an elevation gradient. My research is currently focused in Costa Rica. I have been interested in scientific communication and public outreach since I began studying arthropods. Together with my friend Matt Muzzatti and the ESO, we have organized the first Bug Day in Guelph. I believe events such as bug days are not only important in getting the public interested and excited about entomology, but also for students, to help learn to communicate their research in ways that make it accessible to the public.



Miriam Richards

Director

I am a professor in the Department of Biological Sciences at Brock University in St. Catharines. My students and I study the social behaviour and ecology of bees in Niagara, and we are particularly interested in carpenter bees, sweat bees, and long-term studies. I have previously served as a director on the ESO Board and was editor of JESO for a number of years. ESO is one of my favourite societies because of the welcome it offers to anyone studying insects - I did not think I was a "real" entomologist until ESO members insisted that I was!



Julia Mlynarek

Director

I started as an entomology research scientist (focused on non-greenhouse insects) at Agriculture and Agri-Food Canada at the Harrow Research and Development Centre in 2016. I want to develop a program to monitor insect populations and communities, and develop sound integrated pest management strategies in field, horticultural and vegetable crops of Southern Ontario. My passion for entomology started during my undergraduate studies when I discovered the amazing diversity of insects at the Lyman Entomological Museum. I have worked on insects ever since! I spent time working on taxonomy and systematics of the Chloropidae (Diptera) at McGill University (BSc 2003-2007; MSc 2007-2009) and host-parasite associations in damselflies (Odonata) infested by water mites (Acari) and gregarines (Apicomplexa) at Carleton University (PhD 2010-2014). I have been involved in Entomology Societies for many years serving as an assistant editor of the ESC Bulletin, on the student committee and as a trustee of the ESC.



On Sunday afternoon, October 1st, after the ESO conference had concluded, my brain thankfully began to switchover from “conference organizing mode” to “conference wrap-up mode”. After months of planning meetings with colleagues and service providers, the conference had concluded, and with no major kaffuffles.

All the speakers and poster registrants who were expected to give presentations had done so—74 in total by people from 12 different universities, several companies, and government departments! The opening remarks from the Dean of the Ontario Agriculture College and Director of the Arrell Food Institute were concise and on target, and the three plenary speakers who followed gave wonderful snapshots of their research.

Highlights? So many! Great presentations on a fantastic diversity of entomological topics. A new record—just over 140—for attendance at an ESO conference. The wonderful setting at The Arboretum for the banquet. Excellent food and service. Fantastic support from members of the organizing committee that allowed for seamless registration, presentations, and transitions. High quality judging of student presentations. And the opportunity to reconnect with friends and meet new entomologists!

Photos:
Morgan Jackson



Photos: Morgan Jackson



I unfortunately had no control over the weather. After a long spell of exceptionally warm weather, the evening of the banquet was cold and clear with a bright moon, which resulted in just one moth showing up the blacklight set up at banquet. I had hoped a flurry of insect activity at the lights would be the icing on the dessert after our meal. It was a good idea.....

Even with so many presentations packed into the day and a half of the conference, there were a number of people who could not be accommodated within the schedule. I apologize to those who were so affected. If attendance at ESO conferences remains high, we may need to consider starting with activities on Friday and/or extending the conference into Sunday afternoon.



Photos: Antonia Guidotti



I have many people to thank. To my colleagues on the organizing committee, your support in helping to plan and implement the meeting was essential to the success of the conference. A large group of people volunteered their time to judge posters and oral presentations and decide upon the award winners. Hospitality Services (U. of Guelph) was easy to work with and provided everything exactly as we had requested.

Andrew Bendall (U. of Guelph) and Andalyne Toffelmire (Cambridge Butterfly Conservatory) tried to attract moths to blacklights. We received phenomenal financial support from the university (Arrell Food Institute, College of Biological Sciences, Ontario Agricultural College, and School of Environmental Sciences) and businesses (Bayer CropScience, Syngenta, Plant Products, Dow AgroSciences, Crop Defenders, BASF and the Cambridge Butterfly Conservatory). If I have forgotten anyone, it is not intentional.

Of the several conferences I hope to attend in 2018, the only one I know I will attend for sure is the ESO meeting, Oct. 19-21, at the Bark Lake Centre, east of Minden.

Mark your calendar now!

Gard Otis
Past President of ESO & Chair of the
ESO-2017 Organizing Committee



Photos (right): Morgan Jackson



Nadejda Tsvetkov

President's prize - talk

Field realistic neonicotinoid exposure reduces honey bee health

Experiments linking neonicotinoids and declining bee health have been criticized for not being 'field realistic'. Here we quantified the duration and magnitude of neonicotinoid exposure in Canada's corn-growing regions and used these data to design realistic experiments. Colonies near corn were naturally exposed to neonicotinoids for up to 4 months—the majority of the honey bee's active season. Realistic experiments showed that neonicotinoids increased worker mortality and were associated with declines in social immunity and increased queenlessness over time. Our work demonstrates that field-realistic exposure to neonicotinoids can reduce honey bee health in corn-growing regions.



Chanchal Yadav & Anne-Sophie Caron

Travel awards

Chanchal Yadav traveled from Ottawa, ON (Carleton University) to give an oral presentation entitled: ***Ontogeny of social living in caterpillars and the role of vibratory communication***

Anne-Sophie Caron traveled from Ste-Anne-de-Bellevue, QC (McGill University) to give an oral presentation entitled: ***The effects of stand diversification on neotropical beetle assemblages***

Photos: Morgan Jackson



Photo: Morgan Jackson

Kurtis Turnbull presented the poster:

Energetics of overwintering in the soil in the western bean cutworm, *Striacosta albicosta*

Overwintering insects risk depleting finite energy stores at elevated temperatures due to an increase in metabolic rate. However, insects can conserve energy behaviourally by selecting a microhabitat that buffers against high temperatures, or physiologically through metabolic plasticity. The western bean cutworm (*Striacosta albicosta*) might use both strategies; the soil depth of prepupal chambers is a determinant of overwintering temperatures, and warmer conditions induce a decline in the thermal sensitivity of metabolism in the lab. Here, I discuss factors impacting the depth of overwintering sites, and test if metabolic plasticity or overwintering depth reduce winter energy drain.

Kurtis Turnbull & Kevin Scaife

President's prize - poster

Kevin Scaife's poster was entitled:

Brown marmorated stink bug distribution and phenology in Ontario

The brown marmorated stink bug (BMSB) (*Halyomorpha halys* (Stål)) is an invasive insect pest from East Asia that is established in Ontario, Quebec, and British Columbia. BMSB's mobility and highly polyphagous nature make it capable of causing significant economic damage to fruit, vegetables and field crops. To elucidate how many generations of BMSB are in Ontario, field-collected females were assessed for reproductive status using a 5-stage ranking system based on ovary development. Results from 2016 indicate that there is not a 2nd generation of BMSB in Ontario. Data from 2017 is still being analyzed.





1st place – Junior Entomologist: “Common whitetail”

Jan Przybylo

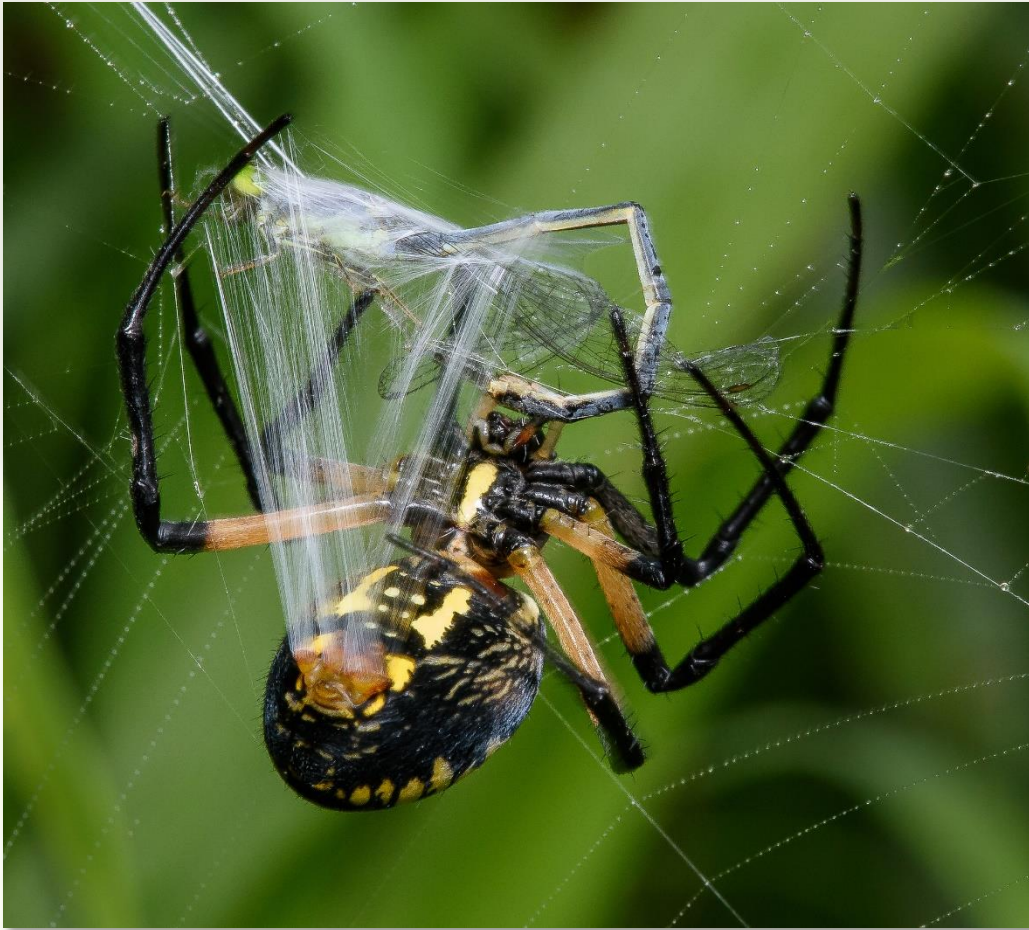
Best Photo: “Nomad”

Leigh Ayres

**The 2017 contest received 81 images from 35 entrants,
including 10 junior entomologists (under 13)**

To see all the entries, visit:

<https://www.flickr.com/photos/159479405@N05/sets/72157688611387036/>



Best Ontario Insect: "Spider capturing a damselfly"
Marion Buccella



People's Choice: "Damselfly"
Leigh Ayres



2nd place – Junior Entomologist: “Ant vs Ant”
Mason Walton



3rd place – Junior Entomologist: “Widow skimmer”
Reed Fitzsimmons

Ottawa Bug Day was held September 9th on the Central Experimental Farm in conjunction with the Ottawa Research Center Open House. This Bug Day is an ever-growing and ever- successful event; this year attracting a whopping **3,000-4,000 visitors!**



The organizers (led by Sophie Cardinal) would like to thank the **83 volunteers** that worked hard to make everything happen. They would also like to thank the partners: **The Ottawa Field-Naturalists' Club** and **Agriculture and Agri-Food Canada**, for making this event possible.

Thanks everyone for coming out and being so enthusiastic about bugs!



The fourth annual **London Bug Day** was a great success! This year, more than 500 people came to the London Children's Museum for a day of insect-related fun and learning. We had plenty of insects for visitors to hold at our **insect zoo**, to race in **cockroach races**, and even some to **eat**!

Visitors has the chance to learn about the world of insects at booths from **Western University Zoological Collections**, **Nature London**, **Middlesex-London Health Unit**, and the **Cambridge Butterfly Conservatory**.



Photo: Lamees Mohammed

We would like to thank our 30+ volunteers for their hard work that made this day a success, and our partners - **Crickstart** and the **Western University Zoological Collections** - for their generous donations and help at the event.

Thank you to Lamees Mohammed for taking photographs throughout the day. Finally, thank you to everyone who attended for being so interested in bugs! We hope you all had a blast, and are excited to see you at next year's event!

- John Ciancio and co.



Photo: Lamees Mohammed

The first-ever **Guelph Bug Day** took place on Sunday August 27th 2017 at the University of Guelph Arboretum Centre. Bug Day attracted over **800** guests of all ages and with varying interests in science and insects, however, by the end of their time there, nearly everyone was holding insects and participating in activities!

We had over 20 booths and activities. Bug day attendees could hold arachnids and giant insects, go on bug catching hikes, eat chocolate covered crickets, look through pinned insect displays, learn about creating pollination gardens, learn about aquatic insects, play with stingless bees, and draw their own insects.



Photos: Lauren Stitt



Guelph Bug Day was funded mainly by the ESO and a scholarship we received from the University, the OAC Richard's Learning Trust. The School of Environmental Sciences (SES) at Guelph and the Guelph Arboretum also provided additional support.

We would like to thank the **OAC, SES, Guelph Arboretum**, and **ESO** for their support. We want to thank Morgan Jackson for his continuous praise and support, as well as Dr. Gard Otis for his guidance and availability to lend a hand where necessary. Finally, we thank our AMAZING team of over 30 undergraduate and student volunteers who dedicated many hours towards the planning of Guelph Bug Day – without them, this day would not have run. You have inspired many!

-Matthew Muzzatti and Sarah Dolson



Photos: Lauren Stitt





Societas Europaea Lepidopterologica

Combined Annual Meeting of The Lepidopterists' Society and Societas Europaea Lepidopterologica

Carleton University, Ottawa, Ontario, Canada
11-15 July 2018

The 67th Annual Meeting of The Lepidopterists' Society will take place July 11-14, 2018 as a combined meeting with Societas Europaea Lepidopterologica (SEL) at Carleton University in Ottawa. The meeting will be followed by excursions on July 15. The venue is within a 30 minute walk from the Canadian National Collection (CNC), the largest insect and Lepidoptera collection in Canada. The 2018 meeting will follow the Third North American Microlepidopterists' meeting, to be held on July 10, 2018, at the K.W. Neatby Building in Ottawa which houses the CNC. Registration for both meetings will open by March 2018.

Deadlines for abstract submission for oral or poster presentations will be announced at that time. International travel support is available for LepSoc and SEL members upon application (Bryant Mather Award; <https://www.lepsoc.org/content/awards>).

For additional information or inquiries please contact the organizers at lepsoc2018@gmail.com.

TEA monthly meetings

Location TBA

The Toronto Entomologists' Association meets on the fourth Saturday of every month to discuss all things insect-related! Some of the upcoming meeting dates are:

Saturday, January 27, 2018, 1:15 pm

Saturday, February 24, 2018, 1:15 pm

TEA Student Symposium

Saturday, March 24, 2018 – 1:00 pm to 3:00 pm

Ramsay Wright Building Rm. 432, University of Toronto (25 Harbord St., Toronto, ON)

Every year in March, TEA holds an annual Student Symposium at the Ramsay Wright Zoological Building at the University of Toronto. Graduate students, senior undergraduates, and postdoctoral fellows are eligible to present either a talk or a poster. Everyone is welcome to attend. The audience is a good mix of professional and amateur entomologists who provide a large forum for the students.

Also stay tuned for the TEA Bug-Rearing Day, this coming April!

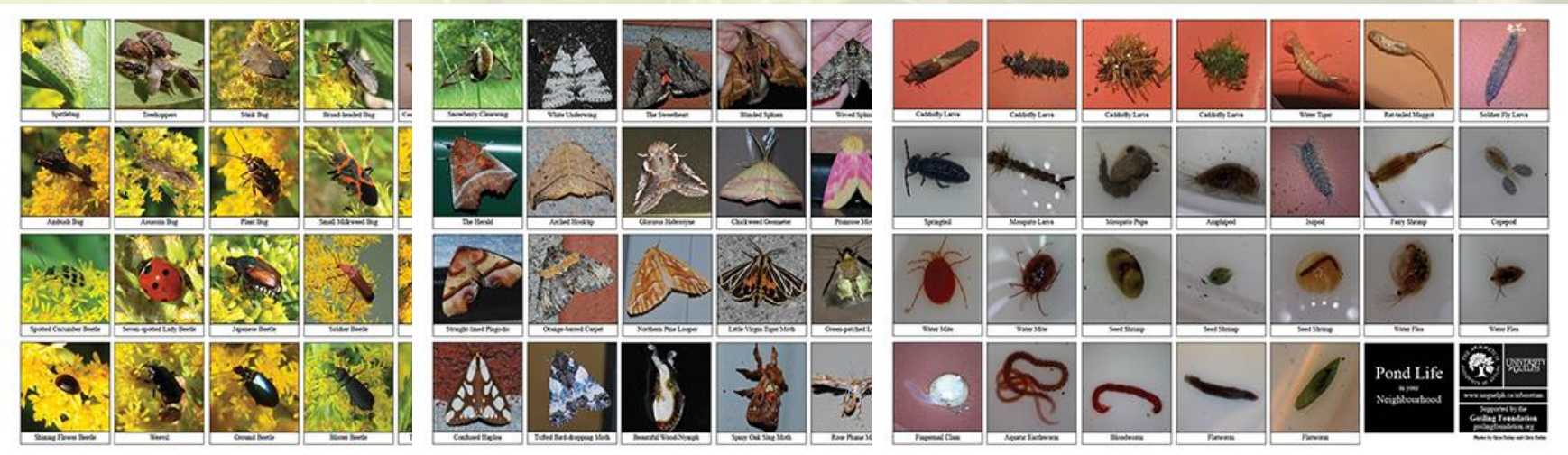
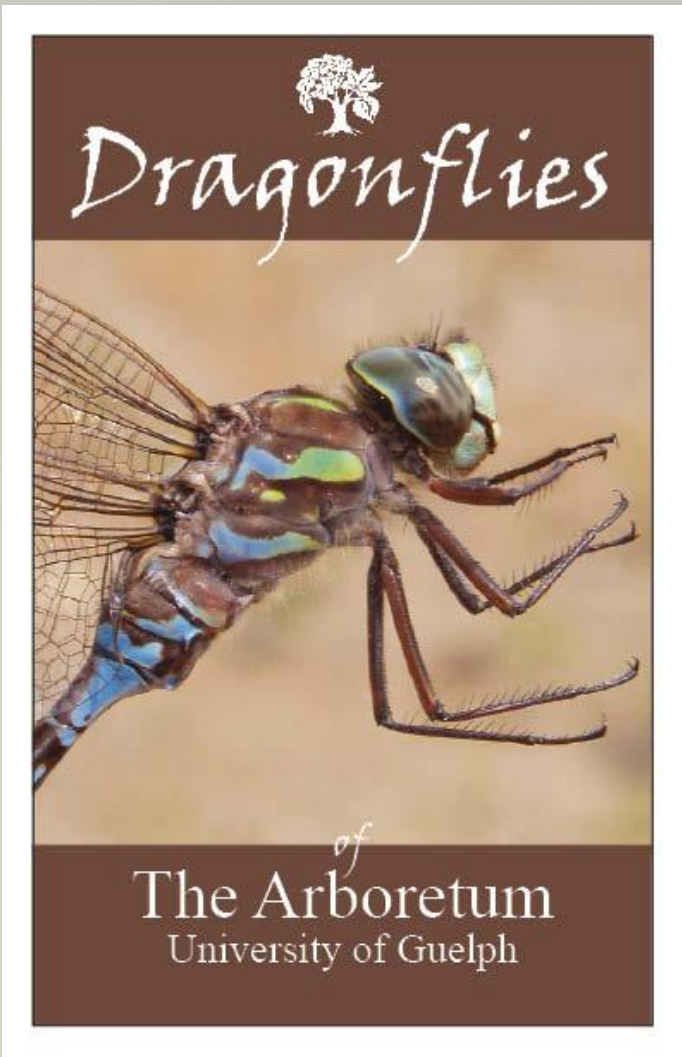
Details can be found at www.ontarioinsects.org

Ever wonder who is visiting your feeder or what that dragonfly might be called? How about identifying that pretty woodland flower?

To increase awareness of local wildlife, The Arboretum at the University of Guelph has put together five booklets to help you and your family connect with nature. Summer Garden Birds, Wildflowers, Mammals, Feeder Birds, and Dragonflies: Arboretum booklets are \$8.00 each.

The Arboretum also offers laminated, double-sided **Biodiversity Identification** allowing the viewer to scan through 53 colourful images in a flash. Some are organised to cover specific habitats and some concentrate on specific groups of organisms. The sheets also make great placemats; one of our volunteers has a 2.5-year-old grandson who can identify all of the insects on the goldenrod sheet! There are 21 different sheets at \$5 each.

These booklets are supported by the **Girling Environmental Education Endowment** and the **Gosling Foundation**. To purchase your copy, please contact us at: arbor@uoguelph.ca. For more information, visit: www.uoguelph.ca/arboretum/educationandevents/arboretumbooks



The Prairie Provinces Butterfly Atlas

The Toronto Entomologists' Association (TEA) announces the launch of an online butterfly atlas for the prairie provinces!

The initial data consists of 44,000 records; 10,000 records posted on eButterfly as of January 2017 and 34,000 records from a database initially constructed for Layberry et al. (1998) and updated up to 2011 by Ross Layberry. The latter set of records includes the species, location and holder of the records (e.g., University of Alberta), but not the date and often not the observer. The plan is to consolidate, with full data, all butterfly observation data from various sources for the three provinces.

The Atlas is initially a project of volunteers with the (TEA), using software from the Ontario Butterfly Atlas Online (Macnaughton, 2011; Macnaughton et al., 2017), but it is expected to evolve into a partnership with the Alberta Lepidopterists' Guild. The Atlas is expected to be of interest to local butterfly observers and may also contribute to scientific research.

Check it out at www.ontarioinsects.org/prairie !

Instructions for use can be found at:
www.ontarioinsects.org/prairie/prairie.pdf





Graduate Student Positions

PhD position, University of Western Ontario

The Moehring lab is looking for students with an interest in behavioural genetics and behavioral neuroscience, and students with an interest in the genetic basis of sterility. Work with *Drosophila*!

www.uwo.ca/biology/faculty/moehring

Undergraduate and graduate student opportunities, University of Manitoba

The Costamagna lab is looking for students interested in processes that regulate insect populations at multiple scales in landscapes with mixed agricultural and natural habitats.

home.cc.umanitoba.ca/~costamac/students

Check out: www.entsocont.ca/opportunities

For graduate opportunities in the USA, visit: www.esc-sec.ca/jobs

Job postings

Within Canada

See the ESC-SEC jobs page, www.esc-sec.ca/jobs

International (mostly USA)

See the ESA jobs page, www.entsoc.org/listjobs





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.



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THE ENTOMOLOGICAL SOCIETY OF ONTARIO

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

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- ☐ 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:



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