



Volume 23 | Issue 1 | June 5, 2018

Entomological Society of Ontario

SPRING NEWSLETTER



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Fellow Entomologists,

After a very slow start to spring, summer weather arrived in full force in late May. An early May Ontario Bioblitz in Durham was not as bursting with insects as we would have liked but it was a pleasant weekend none-the-less. There are many bioblitzes scheduled across the province this summer; participate if you are in the area and have the time!

My time until mid-June will be focused on the Spiders: Fear and Fascination blockbuster exhibit that we are presenting here at the Royal Ontario Museum. I hope some of you will get a chance to see it (it will be on until Jan 6, 2019). Let me know if you visit during the week so I can say hi.

There will be three Bug Days supported by the ESO this year: in Guelph, London and Ottawa. I am sure the organizers can use some entomological help, please contact them and volunteer to help out if you can.

I hope you have a chance to get out and spend some time observing the emerging insects and arachnids. I wish you a great summer and look forward to seeing many of you at the ESO conference in Bark Lake, Oct 19-21.

Antonia Guidotti
ESO President



Amro Zayed

President-elect

I am an Associate Professor of Biology and York University's Research Chair (Tier II) in Genomics. I completed my doctorate in Biology (PhD 2006) at York University on 'Bee Conservation Genetics', then held a Natural Sciences and Engineering Research Council of Canada's Postdoctoral Fellowship at the University of Illinois' Department of Entomology (2006-2008). I later served as a Fellow for the Institute for Genomic Biology's Genomics of Neural & Behavioral Plasticity Theme at the University of Illinois (2008-2009). I rejoined York University's Department of Biology in 2009, where I lead a research program on the genetics, genomics and behaviour of social insects using the honey bee as a model organism.

My research group has made several important contributions in the field of social insect biology and bee health. Since 2009, I mentored two postdoctoral fellows, 3 PhD students, 9 MSc students, 3 Research Associates, and 38 undergraduate students. Over the same period, I led or co-led grant applications worth over \$8.8 million. I received the Governor General's Gold Medal in 2007, the Ontario Ministry of Research and Innovation's Early Researcher Award in 2010, the Faculty of Science's Early Career Researcher Award in 2014. I was recently awarded the Entomological Society of Canada's Gordon C. Hewitt Award, and YorkU's President's Emerging Research Leader award.

As ESO's president, I will seek to increase the society's membership and status by liaising and coordinating activities with the different entomological groups found within Ontario, and attempting to recruit researchers that work on insects but don't typically consider themselves as 'entomologists'. The latter can be accomplished by broadening the academic programming of the Society's AGMs

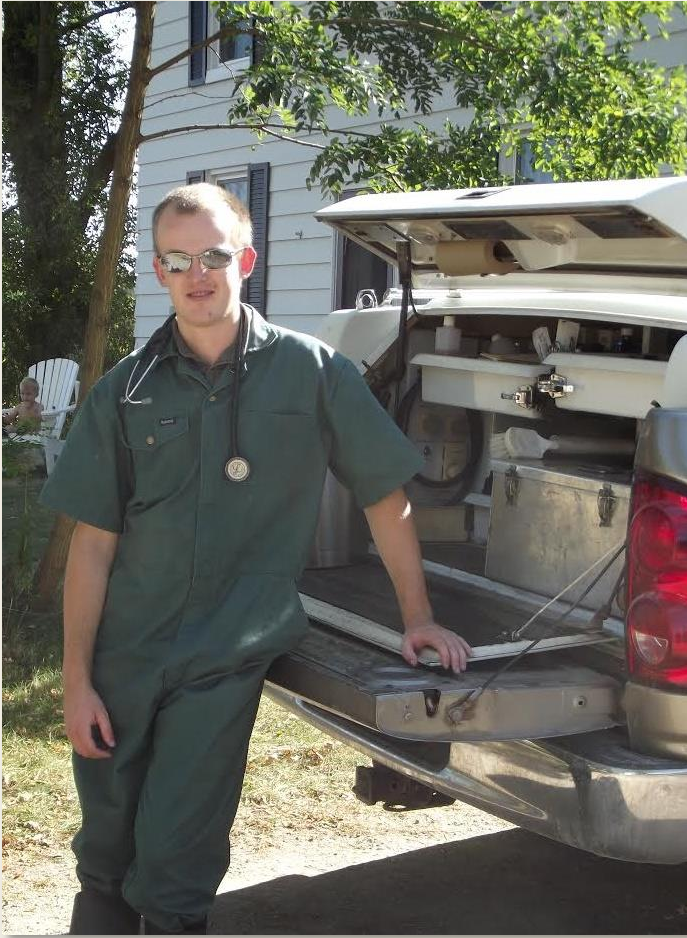


Sheila Colla

President-elect

Sheila Colla is an Assistant Professor at York University (Faculty of Environmental Studies). Her research lab focuses on interdisciplinary aspects of native pollinator conservation, primarily bumble bees. She has documented declines of native bumblebees and works on furthering evidence-based conservation management and policy.

She is the North American Coordinator for the IUCN SSC Bumblebee Specialist Group, which aims to assess bumblebee species globally using Red List Assessment criteria. She is a co-author of "The Bumblebees of North America: An Identification Guide" (Princeton University Press, 2014) and helps run BumbleBeeWatch.org, a North American-wide Citizen Science Project. Previously, she served as a member of COSSARO and the COSEWIC Arthropod sub-committee.



Gregory Aitken

Director

Gregory Aitken is a practicing large animal veterinarian in Peterborough County. He was raised on a working farm near Guelph, Ontario, and has experience in many facets of Ontario agriculture, which have culminated in working full-time with the agricultural sector in Peterborough and surrounding area. As a large animal veterinarian, he provides emergency, preventative health, and consulting services to a wide variety of agricultural species including cattle, sheep, goats, horses, and swine. He is interested in veterinary entomology/parasitology, with areas of interest including developing multi-modal approaches to internal and external pest management in cattle, mitigation of development of parasite resistance to anthelmintics in sheep and goat populations, and the monitoring the introduction of tick-borne diseases in local cattle and horse populations, as tick populations expand in eastern Ontario.



Tracey Baute

Director

I have been the Field Crop Entomologist with Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) since 2000. I received my MSc at the University of Guelph under the guidance of Mark Sears and Art Schaafsma, when Bt corn was first introduced into Canada for control of European corn borer. Previously, I have held positions at Agriculture and Agri-Food Canada – London Research and Development Centre (with Bruce Broadbent) and at Dow AgroSciences.

My role at OMAFRA has been to proactively prepare the province for any potential emerging or invasive pests that threaten Ontario field crops. This involves a wide range of activities including applied research on pest biology to developing monitoring programs and determining thresholds and pest management options for each new issue. Ontario has had its fair share of new pests including soybean aphids, swede midge, European chafer, western bean cutworm and brown marmorated stink bug, to name a few. Many of these issues have required strong collaborations with other Ontario entomologists or across borders, working closely with other provincial or US colleagues. A good example of this collaboration is the Western Bean Cutworm Trap Network that I have lead for the last ten years, with more than 650 trap locations across Michigan, Ontario, Quebec and new this year, Manitoba and the Maritimes provinces.

I have authored many extension publications and felt strongly in the need to deliver timely pest information to stakeholders that I helped pioneer the use of social media and digital technology in OMAFRA with the Baute Bug Blog, @TraceyBaute and pest management apps including Aphid Advisor (with Rebecca Hallett, UGRC) and Pest Manager (with Mike Cowbrough, OMAFRA).

Most recently my role has focused on research and policy development regarding the role of neonicotinoid insecticides use and pollinator health in Ontario. I have also played a strong role in the development of the National Plant and Animal Health Strategy to better connect the various plant pest monitoring programs and proactively share detection and research information on pests across Canada. I have previously served as an ESO Director in 2003-2005 and have been an active member of the Entomological Society of America since 1997. I look forward to using my skills and experience in helping to promote the role and continued efforts of the Entomological Society in Ontario.



Jeremy deWaard

Director

Jeremy deWaard is the Associate Director of Collections at the Centre for Biodiversity Genomics at the University of Guelph. He is responsible for leading a team of twenty staff and students, managing a natural history collection of over three million arthropod specimens, and overseeing all operations and research initiatives linked to the acquisition and processing of specimens for DNA barcode analysis.

His research focuses on biological inventories, ecosystem monitoring, biosurveillance, and the systematics of various terrestrial arthropod groups, particularly macro moths. He is an Adjunct Professor and Instructor at the University of Guelph, a member of the COSEWIC Arthropods Specialist Sub-Committee, an Editor for the journal *Molecular Ecology*, and a Research Associate at the Royal BC Museum.

He enjoys teaching and training the next generation of entomologists, especially in the use of genomic tools. He also likes engaging with the public about nature appreciation and stewardship through the BIObus program and BioBlitz activities.



Kaitlyn Fleming

Student representative

My name is Kaitlyn Fleming. I am a PhD candidate at Trent University in the Environmental and Life Sciences program. I study ground beetle biogeography in Northern Ontario. I am determining why ground beetles are where they are and how climate change will influence their distributions.

My MSc work was in an unrelated field, that being forensic anthropology. After completing my MSc, I came to the realization that entomology is where my true research interests lie. Since 2014, I have fully embraced being looked at strangely by many people when I suddenly stop and crouch down to look at one of our six-legged friends. I have been a member of the Canadian Entomological Society, the Entomological Society of Ontario and several other societies since 2015.

Outreach and engagement is incredibly important in encouraging students to enter the field of entomology. As well, both undergraduate and graduate students should have opportunities to engage with other scientists and members of the public about their research. I would love to be the student representative for the Entomological Society of Ontario to help encourage student research and provide opportunities for students to share their research.



Caitlyn MacDonald

Student representative

I am a student at the University of Guelph finishing my undergrad in Biodiversity and Plant Science. I will be beginning my Masters with Dr. Cynthia Scott-Dupree in the winter researching the best integrated pest management (IPM) practices to target the tree fruit pest, brown marmorated stink bug.

My fascination of insects started at a young age in the forest surrounding my family owned floriculture greenhouse where I spent my time collecting and observing all sorts of insects. I knew I wanted to be an entomologist from a young age, but my work experience with OMAFRA for the last 3 summers and my course work has allowed me to realize my passion for insect IPM and the possibilities it brings to reduce the environmental impact agriculture has. My most memorable course was field entomology, when I was chosen to accompany Drs. Cynthia Scott-Dupree and Steve Marshall to study insect diversity and ecology in India. This was an incredible opportunity which allowed me to expand my field work experience to this fascinating new environment.

I am running for the Student Representation position on the ESO board because I wish to help enhance the connection between students and the ESO, and continue to get young scientists excited about the amazing world of insects. I believe scientific outreach and communication is keystone in insect research. The ESO makes a large effort to encourage student participation through events such as the student presentation section in the AGM, which I had the opportunity to participate in, in 2017. I wish to build upon these student participation events since I feel this a very important aspect of every young scientists career.



CATCH ME IF YOU CAN

Entomological Society of Ontario

AGM 2018

Friday October 19 – Sunday October 21, 2018

Bark Lake Leadership and Conference Centre, Irondale, ON (near Haliburton)

Featuring:

- Student competition (oral and poster)
- Tales from the field open mic
- Lightning talks

More details soon at: www.entsocont.ca/eso_agm_2018.html



2018 ESA, ESC and ESBC Joint Annual Meeting
Crossing Borders: Entomology in a Changing World

11-14 November | Vancouver, BC, Canada

Réunion annuelle conjointe ESA, SEC et SECB 2018
Au-delà des frontières: l'entomologie dans un monde en changement

11-14 novembre | Vancouver, Colombie-Britannique, Canada

The Entomological Society of Canada Invites you to attend the 2018 ESA, ESC, and ESBC Joint Annual Meeting!

This is a unique opportunity to share your research, gain exposure, and collaborate across borders and Societies. Connect with over 3,000 scientists and researchers from around the globe over the four science-filled days.

Call for Submissions! We are currently accepting submissions for 10-minute papers, posters, and 3-minute presentations. All submitted presentations are due by Monday, June 4.

Submissions are being accepted for the following sections:

- Medical, Urban, & Veterinary Entomology (MUVE)
- Physiology, Biochemistry, & Toxicology (PBT)
- Plant-Insect Ecosystems (P-IE)
- Systematics, Evolution, & Biodiversity (SysEB)

Student Competition for the President's Prize: There are four components to the competition: 10-minute oral presentations, posters, virtual posters, and 3-minute presentations.





Societas Europaea Lepidopterologica

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

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

Their first time meeting in Canada in 30 years.
The big event of the summer for those
interested in butterfly and moth research.

Registration info [HERE](#)



Guelph Bug Day is a fun, free, educational event for community members of all ages! Our goal is to cultivate a fascination for the very cool, very small world of insects! Come get up close and personal with our live specimens, take one (or two, or three!) guided bug-catching hikes in the expansive and beautiful grounds at the University of Guelph Arboretum, try tasty insect cuisine, put your imagination to the test with insect drawing contests, and explore the variety of buggy vendors that Guelph has to offer. Rain or shine, bring your adventuring spirit and prepare to be amazed.

Special thanks to our sponsors: **Entomological Society of Ontario, University of Guelph Arboretum, Ontario Agricultural College** (Richards trust)

For details, contact:

Matthew Muzzatti & Sarah Dolson, (guelphbugday@gmail.com)

WHEN & WHERE:

Sunday August 26, 2018

[University of Guelph Arboretum](#) Center
(College Ave E, Guelph, Ontario N1G 2W1)



[Facebook](#)



[Twitter](#)



[Instagram](#)



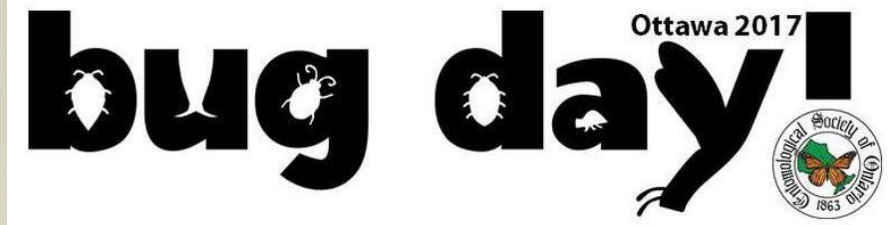
Ottawa Bug Day will be Saturday September 8th from 9AM to 4PM at 960 Carling Ave, Ottawa (at the research centre on the Central Experimental Farm). Activities will include insect expeditions, insect cuisine, cockroach races, crafts, demos by expert entomologists, and more. Don't miss ESO's biggest insect event of the year!

For details, contact:

Sophie Cardinale

Canadian National Collection and Agriculture and Agri-food Canada

(sophie.cardinal@agr.gc.ca)



London Bug Day will take place on Saturday, September 8th from 10AM-3PM at the London Children's Museum. Join them for a free day of fun with insects! This event includes cockroach races, edible insects, pinned insects from the University of Western Ontario collection, a live insect zoo, face painting, crafts, special guests from the community, and much more! Don't miss the 5th year of this great outreach event!

For details, contact: Jackie Lebenzon (jlebenzo@uwo.ca)



LONDON BUG DAY



[Facebook](#)



From intensive agriculture to ecological agriculture: tall-grass prairie land repurposing for agricultural benefits

Aleksandra Dolezal, Department of Integrative Biology, University of Guelph



As entomologists or insect enthusiasts we have heard the all too familiar story of insect declines across the globe. A wave of public buzz recently created from the study by Hallmann et al. (2017) has prompted warnings that the world is spiraling on a course of insect biodiversity decline, an ‘ecological Armageddon’ has even been a term used. This study has found that 75% of flying insect biomass has declined in protected areas in Germany over the last 27 years. If insect biomass is declining in protected areas— areas that we consider more pristine and less fragmented, how do we expect other places such as agricultural landscapes to keep up?

Agricultural lands are not only important for food production, but also ecologically as they cover nearly 50% of the continents surface area and half of the continent's species utilize farmland habitats (Stoate et al., 2009). Studies show that this expansion of intensive agricultural practices has been a key driver of biodiversity loss, including insect species abundance and richness (Benton et al. 2003), and the ecosystem services on which they rely (Sala et al. 2000; Albrecht et al. 2007; Geiger et al. 2010). This can create a management paradox on conventional farms – a need for insect services, yet conducting farm practices that reduce their presence and benefits. These trends have prompted more than two decades of intensive research focusing on an important question: How can we halt and reverse population declines of farmland biodiversity?

From intensive agriculture to ecological agriculture: tall-grass prairie land repurposing for agricultural benefits

I wanted to highlight the benefits of more ecological agriculture which is the basis of my thesis project I am working on as a Masters student at the University of Guelph in collaboration with ALUS Norfolk and Elgin. ALUS stands for Alternative Land Use Services and is a national farmer's organization, with an objective to offset the environmental footprint of its affiliated farms through stewardship including developing a 'marginal land' form of precision agriculture where intensive crop production is targeted towards higher quality farm areas, while low quality marginal areas are converted to species-rich prairie (<http://alus.ca/>), which provide insect habitat and critical food resources. The tall-grass prairie has become one of the most endangered ecosystems in North America and so this strategy is a way to conserve both plant biodiversity along with arthropod biodiversity. The objective of this study is to provide a comprehensive arthropod survey on these farms within three cover types: prairie, crop and woodlot. Field research was undertaken on 22 farms located in Southern Ontario to examine effects of local and landscape factors on four agriculturally important functional groups (parasitoids, predators, pollinators and herbivores), and ultimately how the presence of tall grass prairie effects crop damage.

Results show that tall grass prairie strips were associated with higher vegetation diversity, and correlated with higher arthropod functional group abundance and richness. Even though herbivores were always recorded in higher abundance in the prairie margins, crop damage in the plots adjacent to these margins was lower, presumably from natural enemies decreasing herbivory or prairies acting as a trap-crop. Arthropod predator abundance showed an interesting spatial result, where farms that had prairies present had more interior abundance of predators in the crop fields and those that didn't have prairies had less than half the abundance of predatory arthropods and this only restricted to edges. Overall, prairie restoration disproportionately increased arthropod abundance and richness within an agricultural context which was driven by the increase in local habitat diversity and resources from prairie grassland borders. This study provides a clear demonstration that precision agriculture, which supports ecosystem services, is compatible with, and even increase beneficial insect taxa to spill-over into crop fields.

From intensive agriculture to ecological agriculture: tall-grass prairie land repurposing for agricultural benefits

To feed an ever-growing population, strategies integrating crop production and biodiversity conservation need to be identified. Current trends suggest that, during the twenty-first century, a continuing and growing demand for agricultural and wild products and ecosystem services will require farmers, agricultural planners, and conservationists to reconsider the relationship between production agriculture and conservation of biodiversity (Scherr & McNeely 2008). Agroecosystem redesign through precision agriculture involves a shift from linear, one-to-one relationships between target insect taxa such as one pest species, to webs of relationships between insect functional groups, associated with landscape and agroecosystems diversification schemes.



Photo: Vince Bond Jr.

References

- Albrecht, M. Duelli, P. Schmid, B. & Müller, C. B. (2007). Interaction diversity within quantified insect food webs in restored and adjacent intensively managed meadows. *Journal of Animal Ecology*, 76(5), 1015–1025.
- ALUS Canada [2016] What We Do. Retrieved from: <http://alus.ca/what-we-do/>
- Benton, T. G. Vickery, J. A. & Wilson, J. D. (2003). Farmland biodiversity: Is habitat heterogeneity the key? *Trends in Ecology and Evolution*, 18(4), 182–188.
- Geiger, F., Bengtsson, J., Berendse, F., Weisser, W. W., Emmerson, M., Morales, M. B., & Inchausti, P. (2010). Persistent negative effects of pesticides on biodiversity and biological control potential on European farmland. *Basic and Applied Ecology*, 11(2), 97–105.
- Hallmann CA, Sorg M, Jongejans E, Siepel H, Hofland N, Schwan H, et al. (2017) More than 75 percent decline over 27 years in total flying insect biomass in protected areas. *PLoS ONE* 12(10): e0185809.
- Sala, O.E., F.S. Chapin, J. J. Armesto, E. Berlow, J. Bloomfield, et al., (2000). Global Biodiversity Scenarios for the Year 2100. *Science*, 287, 1770–1774.
- Scherr, S., & McNeely, J. (2008). Biodiversity Conservation and Agricultural Sustainability: Towards a New Paradigm of 'Ecoagriculture' Landscapes. *Philosophical Transactions: Biological Sciences*, 363(1491), 477–494.
- Stoate, C., Báldi, A., Beja, P., Boatman, N. D., Herzog, I., van Doorn, A., de Snoo, G. R., Rakosy, L. & Ramwell, C. (2009). Ecological impacts of early 21st century agricultural change in Europe – A review. *Journal of Environmental Management* 91(1), 22–46.

Submit a photo to the 2018 Bug Eye photo contest!

Instructions:

All Ontario residents, including international students living in Ontario are eligible to submit photographs. Copyright for the photo remains with the photographer, but use must be granted for ESO promotional material. Images must be of insects or closely related arthropod species (e.g. mites, spiders, etc). All submissions must be as a digital files. The judging criteria will be based on: a) image composition; b) visual impact of image; c) subject interest; d) sharpness of subject; e) difficulty of image acquisition; and f) lighting.

You may submit up to 3 unique images, but can only win one prize plus the People's Choice Award. Submit the image file by creating a digital file that is the equivalent of 7.5 inches by 10 inches (19.5cm by 25.4cm), at 300 dpi, formatted as a jpg. Create a filename using an appropriate title, underscore, your last name, underscore, first initial (e.g. **dragonfly_smith_j**). Images may be either "landscape" or "portrait" in orientation. Images recorded on film must be digitally scanned and then edited according to the prescribed resolution (i.e. 7.5" by 10", at 300 dpi) for submission.



Best photo (2017)
Leigh Ayres ('Nomad')

Instructions (continued):

Photographic enhancement is allowed as long as it is something that could also be achieved in a real darkroom with a color or black & white negative (e.g. adjustment of contrast, color enhancement, cropping, etc.). However, very dubious enhancements will be negatively scored.

The best pictures submitted will be selected by judges and entered into the People's Choice Award competition. The selected pictures will be posted on the ESO website and/or on a photo sharing website such as flickr for the community to vote on. The pictures will also be displayed at the Annual Meeting of the Entomological Society of Ontario. If you do not wish for your pictures to be posted in such a way, you can choose to not participate in the People's Choice Award.

Please include a short description of your entries (where they were taken, why you like them, etc.) and whether the picture is of an Ontario insect and if you are a child under the age of 13. You must also indicate if you would like to be considered for the People's Choice Award. Do not forget to include your complete address.



Prizes for:

Best photo (\$50)

Best photo of an Ontario insect (\$50)

Best photo by a junior entomologist under 13 (1st \$25, 2nd \$20, 3rd \$10)

People's Choice Award (\$50)

Open to all Ontario residents, no entry fee

Submission deadline: September 30th, 2018

Submit photos to: esophotos@gmail.com

Winners announced: October 21st, 2018



MEDIA RELEASE

SPIDERS: FEAR & FASCINATION

Opens at the ROM on June 16

TORONTO — The **Royal Ontario Museum (ROM)** invites visitors to explore the hunting, burrowing, and weaving world of spiders at the North American debut of [*Spiders: Fear & Fascination*](#), opening **Saturday, June 16, 2018**. Featuring more than 400 live and preserved specimens, cutting-edge interactive experiences, and new scientific discoveries, this awe-inspiring exhibition debunks myths about one of the most successful yet misunderstood animals on the planet.

“Be prepared to see spiders as you’ve never seen them before,” said Josh Basseches, ROM Director & CEO. “*Spiders: Fear and Fascination* draws on the latest scientific research in the field of arachnology and the ROM’s curatorial expertise, inspiring a deeper understanding of the vital role spiders play in our ecosystem and their cultural significance throughout history.”

Spiders: Fear & Fascination spins an immersive tale for visitors, revealing how this incredibly diverse group of animals has evolved and survived for over 300 million years, a time long before the dinosaurs. Real specimens, including 18 different types of live spiders and their relatives, plus interactive virtual elements let visitors get closer than ever to some of the over 48,000 known spider species, from the top ten local spiders to the world’s most venomous, like the Black Widow and Brown Recluse.

“From spinning webs, dancing, and swimming, to parachuting across hundreds of kilometres and even losing a limb and growing it back, spiders are amazing animals,” said Dr. Doug Currie, Vice-President, Department of Natural History and Senior Curator of Entomology at the ROM. “This exhibition sparks curiosity, challenges misconceptions, and compels us to learn more about these uniquely talented and capable creatures.”



About the exhibition

Spiders investigates how silk, venom, movement, vision, and vibrations have enabled these animals to thrive over millions of years, and adapt to different environments in nearly every corner of the globe. Breakthrough discoveries explain the extraordinary properties of spider silk and venom. Visitors will experience the world's largest spider silk garment, a gold cape handwoven from iridescent silk of more than a million Golden Orb Weavers. It may seem delicate, but spider silk is one of the strongest and most flexible materials in the world, with research focusing on its replication for use in heart surgery. While venom can paralyze and even liquefy spiders' prey, scientists are exploring the use of its chemicals in pain management.

In the multi-faceted *Spider Lab*, trained ROM technicians – known as Spider Wranglers – will demonstrate live venom milking and engage visitors in hands-on learning activities with spider specimens. With the latest augmented reality and video projection technology, visitors of all ages will encounter virtual spiders as they explore the subterranean home of cave-dwelling spiders, compete in a mating dance ritual with a Peacock Spider, and create their own animated arachnid. They will also witness live Tent-Web Weavers spinning webs above their heads in a dome spider sphere. The ROM's presentation features inclusive design elements such as touchable models, video captioning, and a described audio tour for an accessible exhibition experience.

Exclusive to the ROM's presentation, the exhibition explores the significance of spiders in traditional and popular art and culture. From Indigenous crafts and textiles to the first edition Spider-Man comic book, visitors will learn more about why spiders are central to storytelling across cultures and time.



Associated programming & events

- **Through a Web Darkly: Sex and Death in the World of Spiders** with arachnid behaviourist Dr. Maydianne Andrade. [ROM Speaks](#), June 19, 2018.
- **#FNLROM: Arachnophile**, a spectacular spider-themed party that includes complimentary exhibition access. [Friday Night Live](#), June 29, 2018.
- **Spider Silk: A Golden Opportunity** with Simon Peers, designer of the rare spider silk cape. [ROM Connects](#), July 6, 2018.
- **Arachnophobes to Arachnophiles: friendly spiders of your house, gardens and parks** Dr. Chris Buddle. Annual Quimby F. Hess Lecture presented by the Toronto Entomologists' Association and the ROM. Dec. 1, 2018.

Developed by the Australian Museum and toured internationally by Flying Fish, *Spiders: Fear & Fascination* is on display from Saturday, June 16, 2018 to Sunday, January 6, 2019 in the Museum's Garfield Weston Exhibition Hall. It is a separately ticketed exhibition. ROM Members enjoy free admission and exclusive opportunities to experience ROM exhibitions and programs.

For ticket information, visit: <https://www.rom.on.ca/en/exhibitions-galleries/exhibitions/spiders>

For ROM Membership details, visit: <https://www.rom.on.ca/en/join-us/membership/become-a-member>

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ROM SOCIAL MEDIA

Join the Conversation: #ROMSpiders @ROMtoronto
Like: [ROM Facebook](#)
Watch: [ROM YouTube](#)



FLYING FISH

Exhibition Partners



2018 Ontario BioBlitz – Duffins Creek Watershed

September 21-23, 2018

Since 2012, the Ontario BioBlitz program has presented a single event annually, and shared the details of other events happening around the province. In 2018, we're doing things a little different! For the first time, we are planning and presenting multiple bioblitz events run by the Ontario BioBlitz team. These events will take place across the Durham Region, and will be bookended by the Lynde Creek Watershed BioBlitz in May, and the Duffins Creek BioBlitz in September. Smaller "mini-blitzes" and workshops are being planned throughout the summer. All summer, from May 11 to September 23, anyone visiting, living, or travelling through the Durham Region, can contribute to our iNaturalist project, and join us in being citizen scientists.

Details about the fall BioBlitz are coming soon! Check out the [Ontario BioBlitz](#) website for updates.



Members' Meeting

Saturday, Sept 22, 2018 – 1:15 PM, Victoria College Rm. 212 (Toronto, ON)

At this meeting, members are invited to bring specimens, prints, or images that they have taken over the year. Please limit your presentation to 5-10 minutes since there are many members that like to share their pics. Members are also welcome to share any unusual sightings. Also at this meeting, we renew our membership for the year: \$30 for individuals, \$35 for families, students are free. Please let Antonia know if you will be bringing images to share (antoniag@rom.on.ca).

+ many field trips, workshops, and more between June and August!

Check out the Toronto Entomologists' Association [website](#) for details!



Photo: Alex Wild



Photo: Alex Wild

Graduate Student Positions

MSc Student – Plant-insect interactions

Department of Plant Sciences, College of Agriculture and BioSources, University of Saskatchewan

Application deadline: None listed. [Details here](#)

MSc Student – Wireworm biology and integrated pest management

Brandon University (Brandon, Manitoba)

Application deadline: Open until filled; Start date: Summer 2018 preferred. [Details here](#)

PhD Student – Insect genetics

Department of Entomology, Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem. Application deadline: None listed; Anticipated start date: August 2018. [Details here](#)

For graduate positions outside of Canada (mostly USA), visit the ESC-SEC [website](#)

Job postings

Lead Biologist

Wildlife Preservation Canada's Native Pollinator Initiative

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Within Canada

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