



THE ESO Newsletter

February 2014

Volume 19, Issue 1

ESO

President's Message:



There is no doubt that the joint meeting of the ESO and ESC, "Predating the Nation" was a great success, in large part to the great turnout of ESO members. However, I would be remiss if I did not give special thanks to outgoing President Skevington, the ESO Board, the outstanding ground zero team at Guelph and the members who did such an exceptional job organising the symposia. We will soon be announcing information about the date and venue for the 2014 meeting.

Nicole McKenzie (Secretary) and Angela Gradish (Editor of the New Letter) have recently stepped down from their respective positions within the Society, and I would like to take this opportunity to thank them for their stellar service to the ESO.

One major issue being considered by the Board is the future of the **Journal of the Entomological Society of Ontario** (formerly known as the Proceedings of the Entomological Society of Ontario). The JESO is rather unique in that it has been published for over 140 years, making it one of the oldest entomological journals in the world.

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ESO President's Message continued . . .

However, times are changing and despite the valiant efforts of several recent editors, submissions have declined significantly. Furthermore, the recent elimination of page charges not only failed to increase the number of papers submitted but also raised the possibility of a financial liability if we continue to produce a printed version of the journal. There are a number of non-mutually exclusive reasons for the observed decline, including a proliferation of venues to publish, the attention being given to the impact factor when authors select where to publish and the decline in the number of libraries buying subscriptions of lower ranking journals..

A small committee, headed by Brent Sinclair, has been struck to study the options available to the ESO. These range from closing up shop (as has happened with a number of other local/regional publications) or making a major effort to find a suitable niche area of subjects to be covered, format (electronic) and having it listed in suitable databases. Clearly, the former is easy but given the history of the journal this decision should not be undertaken lightly. In contrast, if one would like to see the JESO continue for another century it will require an effort from all ESO members. The most obvious way is to submit manuscripts but in the short term the Board would also like to have your thoughts on this issue-please email your comments to Brent at bsincla7@uwo.ca.

Unless you have been on an extended field trip with absolutely no form of communication with the outside world you have heard discussions concerning the muzzling scientists and the closing of scientific libraries. While scientists are speaking out, it is necessary that members of the Canadian public also make their views known although many would say they know little about science and thus really don't have an opinion. And this leads me to a second ESO initiative, science outreach, that will help us let the world know what we do and why it is important. In September 2013, several colleagues in Ottawa organized "Bug Day" for the general public that offered a variety of activities including guided walks, presentation of live insects and interactive displays. The ESO is hoping that similar activities can be initiated in other areas of the province for 2014, so any members interested in organising or

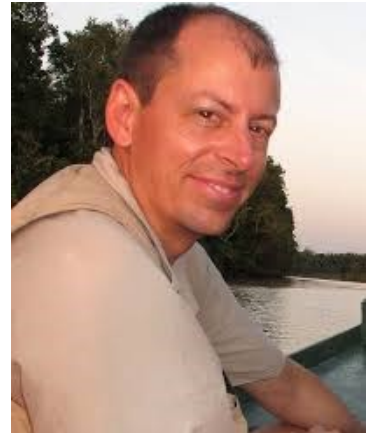
activities should let me know (jmcneil2@uwo.ca).

Jeremy McNeil
ESO President

ESO

Past President's Message:

I hope that you are enjoying the winter and catching up on your lab work. If not, maybe you are off to somewhere warmer for field-work.



2013 was a busy year for the ESO. It was capped off with our 150th anniversary meeting in Guelph. The organizers did a marvelous job and everything ran very smoothly. The food and rooms available for the meeting were terrific, the program was fantastic, and we had our best turnout ever to share in this monumental celebration. I want to again thank the organizers for the countless hours that they invested to ensure that the meeting was a success. In particular, I would like to thank Gary Umphrey (General Chair, Local Arrangements), Morgan Jackson (Chair of Local Arrangements, Webmaster), Joel Gibson and Rebecca Hallett (Scientific Program Co-chairs), Cynthia Scott-Dupree (General Vice-chair, Treasurer), Angela Gradish (Registration), Rose Buitenhuis (Fundraising) and Véronique Martel (Translation). Many others were involved and are listed along with their roles at:

<http://www.uoguelph.ca/debu/esc-eso2013/contacts.html>.

Another big event in 2013 was our first public **Bug Day**, held in Ottawa and organized by Sophie Cardinal. It was a great success, with over 800 people dropping in to meet the 20 volunteer experts and explore the many entomological

Continued on next page . . .

ESO Past President's Message continued . . .

displays that were set up. Events included: insect hikes, learning how to make an insect collection, cockroach races, observing live aquatic insects, an insect zoo, and exploring many displays that focused on pinned insects and insect research. In addition to the crowds at the event, we had some great media coverage that helped to promote the ESO. The Ottawa Field-Naturalists' Club co-sponsored the event and made their clubhouse available to be used as the focal point of the day. The Entomological Society of Canada also helped by providing financial support for Bug Day. Based on this success, ESO members in Ottawa, Toronto, London and Guelph are all planning an event like this for 2014. If you would like to organize one yourself or participate in one of these, please contact us (entsocont.membership@gmail.com) and we can direct you to your closest local organizer or provide you with a report suggesting how to run a Bug Day event.

In other news, we have an agreement with the Biodiversity Heritage Library to have all of our ESO publications scanned and put online. This should greatly increase our exposure once it happens.

We have put a two-year embargo on new issues so that members still have an advantage when it comes to seeing current papers. The volumes which have already been scanned can be found at :

<http://www.biodiversitylibrary.org/search?searchTerm=entomological+society+of+ontario#/titles>.

Links to the papers will ultimately be put on our own ESO website after an overhaul of the site is completed. Trevor Burt and Morgan Jackson are heading up this initiative. We hope to see the revamped site later this year.

We still have one key position open to fill on the board. After serving as Secretary for several years, Nicole McKenzie is stepping down (to look after her new baby!). Based on Nicole's experience and advice, we would like for two people to share this position (likely to split the job between membership and other secretarial duties). Michelle Locke has stepped in and we are looking for a second person to work with her. If this

sounds like something you might enjoy doing, please send us an email at:

entsocont.membership@gmail.com

Have a safe and productive winter!

Jeff Skevington,
jhskevington@gmail.com

Angela Gradish: The *First* Recipient of the ESO's Sesquicentennial Graduate Student Award!

I grew up in Tillsonburg, a small town in the heart of southern Ontario tobacco country. In addition to all of the other typical things kids did in the 1980s and 1990s, I spent many hours playing, and later working, on our family's tobacco farm. To this day, I believe that the informal education I received on the farm is the most valuable education I'll ever receive, and that it has largely formed the basis for all that I've since achieved. And it afforded me my very first entomological skill: dodging flying tobacco hornworm larvae, frequently thrown at me by my cousins.

I went on to complete my BSc in Zoology at Western University. Among my many beloved mammalian-focused courses, I managed to squeeze in one insect physiology class in my last semester. This class first piqued my interest in insects, and I eventually started my MSc in entomology at the University of Guelph with Drs. Cynthia Scott-Dupree and Les Shipp. My project focussed on the non-target effects of pesticides on beneficial arthropods used in greenhouse vegetable production.

Part of this work involved bumble bees, an insect that will forever hold a special place in my entomological heart. Since my MSc, I've gratefully been able to continue to work with them, in both toxicological and behavioural contexts, in collaboration with some talented and generous researchers (Drs. Cynthia Scott-Dupree, Chris Cutler, and Gard Otis).

Continued on next page . . .

Angela Gradish continued . . .

For my PhD, I packed up and moved one lab down the hall to work with Dr. Gard Otis. Because I enjoy a challenge, my PhD research has taken a complete 180°

turn from my previous work: I'm now applying genetic data to study the evolution, ecology, and conservation of two species of North American arctic (*Oeneis* spp.) butterflies, the Macoun's Arctic (*Oeneis macounii*) and the White Mountain Arctic (*Oeneis melissa semidea*). My

main point of interest is whether asynchronous, biennial emergence of adults is creating temporal isolation between, and hence promoting the divergence of, sympatric, alternate-year populations of both species. This project has been very rewarding, and I was able to spend two exciting field seasons chasing butterflies on top of a mountain.

Throughout my time in Guelph, I have been an active member of the ESO: I sat on the board for three years as newsletter editor, served on the awards and outreach committees, and, most recently, helped to organize the ESC/ESO 2013 JAM. Through these rewarding positions, I've had the opportunity to meet and engage with many great people, and I've observed first-hand how the ESO, via its annual meetings, publications, and general activities, provides an intimate and engaging forum for staying abreast of the latest entomological research and connecting with other researchers. Thus, I strongly encourage everyone to become and remain involved in the society however they can. I'm definitely honored to be the first recipient of the ESO's Sesquicentennial Graduate Student Award!

Angela Gradish



ESO Sesquicentennial Graduate Student Awards

This will be the second year this award is offered by the Entomological Society of Ontario. The award, in honour of the 150th anniversary of the ESO, will be presented yearly at the annual meeting of the Society. It is to be awarded to Ontario graduate students in recognition of achievements and excellence in the discipline of Entomology. The awardees will be evaluated by a committee composed of entomologists from academia, government, and industry. Applications for the award must be submitted each year by July 1st, to allow time for the selected students to prepare an abstract on their research that will be distributed at the meeting. A single award of \$1500 will be presented; however, in the event of a tie, this amount will be split between the two top applicants. Recipients will be encouraged to attend the ESO annual meeting, provide a poster or oral presentation of their research, and receive their award during the banquet ceremony. This award will not replace the President's Prizes or ESO travel awards, but will constitute additional recognition of the high calibre of the research conducted by Ontario graduate students.

Applicants must submit a CV, a 500-word (1 page) summary of their research, and the names and contact information of two personal references. To be eligible, applicants must be registered at an Ontario university, or have completed a postgraduate degree at an Ontario university after January 1st, 2014. Applicants pursuing graduate studies on insects, spiders, ticks, mites, or related arthropods will be considered. The award recipient(s) will be evaluated based on the following criteria:

- *Innovation, creativity, and potential impact of the research*
- *Publications*
- *Other evidence of research activity, such as presentations at meetings and grant proposals*
- *Honours, awards, and achievements*
- *Referee's statements*

The deadline for award submission is July 1st, 2014. Further information on application and evaluation will be posted on the ESO website, including an on-line application form.



2013 ESC-ESO JAM President's Prize Winners



President's Prize winners & runners-up (from left to right): Daniel Wiens, Brock Harpur, Raphael Royauté, Etienne Normandin, Dorothy Maguire, Catherine Scott, Grant Olsen, Ashley Mullins, Bryan Brunet, Paul Abrams, Maryam Sultan. Photo: Rick West

Etienne Normandin

Biodiversity Session

Biodiversity of wild bees in two urban settings: Montreal and Quebec city (E. Normandin, V. Fournier, C. Buddle; oral presentation)

Etienne has been passionate about entomology since he was young. He has a DES in bioecology, a bachelor's degree in biology (UQÀM) and he's now a M.Sc candidate at Laval University (Valérie Fournier) co-supervised by Chris Buddle at McGill university. Etienne is involved in many projects and he is vice-president of the amateur entomologist association of Quebec.

His first conference in 2008 was on wild bee ecology and he's now working on the biodiversity of wild bees and syrphid flies in two urban settings : Montreal and Quebec city. The important data set he got by collecting in both cities has updated the species list for the province of Quebec and should give a better understanding of wild bees patterns of distribution in cities.

Catherine Scott

Behaviour and Biological Control Session

Web reduction in black widows: a story of attraction, courtship, manipulation, and rivalry (C. Scott, D. Kirk, S. McCann, G. Gries; oral presentation)

Catherine has a BSc from Queen's University and is currently doing my MSc at SFU with Gerhard Gries, studying courtship behaviour and sexual communication in western black widows (*Latrodectus hesperus*).

Western black widow females attract males with a silk-borne sex pheromone. During courtship, males often engage in 'web-reduction', dismantling and bundling up parts of the female's web. We present data from a field experiment demonstrating that web-reduction functions to decrease web attractiveness, thereby limiting the arrival of male competitors.



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Brock Harpur

Physiology and Molecular Biology Session

Population genomics of the honey bee (*Apis mellifera*): adaptation on worker traits (B.A. Harpur, C.F. Kent, D. Molodtsova, J.M.D. Lebon, A.S. Alqarni, A.A. Owayss, A. Zayed; oral presentation)

Brock is currently a PhD student at York University where he studies honey bee genomics with Dr. Amro Zayed. Brock comes to Ontario from British Columbia, where he did his undergraduate degree at the University of Northern British Columbia, working with Dr. Staffan Lindgren.

My talk presented the first data coming out of the honey bee population genomics database created by the Zayed Lab. We have recently re-sequenced the genomes of 50 honey bees from their major population groups and the presentation explored how genes involved in worker traits evolve relative to genes involved in queen traits.

Ashley Mullins

Agriculture and Biological Control Session

Field edge planting to deter white-tailed deer and attract carabid beetles (A. Mullins, C. Cutler, N. McLean; oral presentation)

Ashley is currently working toward finishing her MSc thesis at Dalhousie Agricultural Campus in Truro, NS, she plans to be finished by April 2014. She has a BSc Agr (with honours) from Dalhousie Ag Campus. She is also a full-time agricultural technician for the Dept of Natural Resources in St John's, NL working on nuclear seed potato propagation.

The work presented at the conference was an overview of my MSc project: using field-edge planting in soybean fields to deter deer from consuming the cash crop while concurrently encouraging predatory carabid beetles to enter the crop field. In short, the stats showed that the soybean plants adjacent to perimeter plantings (alfalfa, red clover and orchard grass) had less deer consumption damage and also higher numbers of carabid

beetle than areas of soybean without perimeter planting. I think this shows that the field-edge planting can act as a trap crop, or push-pull tactic, for minimizing deer consumption as well as a wildlife corridor to bring in carabid beetles for potential insect pest control.

Grant L. Olson

Ecology Session

Transgenerational effects on disease resistance in tent caterpillars (G.L. Olson, J.H. Myers, J.S. Cory; oral presentation)

Grant earned his BSc in Marine Science at Eckerd College in St. Petersburg, FL in May of 2008. He expects to complete his MSc in Biology from Simon Fraser University in Burnaby, BC in March of 2014.

Transgenerational effects act as important non-genetic determinants of offspring condition. In insects, transgenerational effects can influence many fitness-related aspects, including life history, fecundity, and disease resistance. We explored environmental aspects of transgenerational disease resistance in the western tent caterpillar, an outbreaking herbivore species that suffers viral epizootics every 6-10 years. We hypothesized that density-related environmental factors may cause transgenerational effects, altering offspring disease resistance. We tested the effects of transgenerational plant induction and phylloplane bacteria on the condition and disease resistance of offspring. This study marks the first known example of transgenerational effects of plant induction on disease resistance. This study suggests that environmental stressors in the parental generation, such as plant induction, may lead to higher levels of offspring disease resistance.

Paul K. Abram

Agriculture and Forestry Poster Session

Conditional egg colouration by a predatory stink bug (P.K. Abram, M.-L. Després-Einspenner, J. Brodeur, G. Boivin; poster presentation)

Paul K. Abram continued . . .

Paul is currently a PhD student in the department of biological sciences at the Université de Montréal, co-supervised by Jacques Brodeur (UdeM) and Guy Boivin (Agriculture and Agri-Food Canada). He completed his master's degree at Carleton University in Ottawa, and his undergraduate at Queen's in Kingston. His research interests primarily focus on the behavioural ecology of insect parasitoids and its application to biological control.

The work I presented in my poster at the ESO/ESC JAM in Guelph was an experiment that I initiated from personal interest, after I noticed that one of the stink bugs I am working with (the spined soldier bug, *Podisus maculiventris*) lays eggs of different colours, from pale green to almost black. By keeping bugs in petri dishes painted different colours, I found that individual females are capable of changing the colour of the eggs they lay depending on where they are laying - they lay darker eggs in black petri dishes than in white petri dishes, and individual females in petri dishes painted half black/half white changed the colour of their eggs depending on where they laid. My working hypotheses are that this plasticity in egg colouration could function for either for thermoregulation or camouflage in habitats with different light levels (sunny vs. shady) or differently coloured oviposition substrates.

Daniel Wiens



Non Agricultural /Non Forestry Poster Session
Honey bees (*Apis mellifera*) pack thrips (Thysanoptera) into pollen pellets while foraging (D. Wiens, A.R. Davis; poster presentation)

Daniel is currently a M.Sc. student at the University of Saskatchewan, where he's studying the insects associated with *Vicia faba* (faba beans). Previously, he completed a B.Sc. in Biology at the UofS.

Pellets of pollen collected by honey bees have been found to occasionally contain a variety of

other biological materials, including small arthropods such as thrips. To investigate if thrips could potentially serve as an alternate food source to honey bees, we determined the frequency of thrips found in pellets of borage (*Borago officinalis* L.) and *Brassica* spp. compared to that of borage and canola (*Brassica napus* L.) flowers. The frequency of thrips in flowers compared to pollen pellets was 55 times greater for *B. napus*, and 500 times greater for borage. Since many flowers are visited to form a single load of pollen, the results suggest that honey bees pack thrips into pollen pellets incidentally, rather than purposefully.

ESO Awards

For information on how to apply or compete for **Annual ESO Awards** please visit the ESO Website for details or contact the ESO Secretary.



ESO BugEye Photo Contest

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 ESO Members and all Ontario Residents, no entry fee!

Submission Deadline: TBA

Submit Photos to: esophotos@gmail.com

Ontario resident means anyone who makes their primary residence in Ontario – international students welcome! Images must be of insects or closely related arthropod species (eg. mites, spiders). All submissions must be as 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.

Visit the ESO Website for complete contest details for **2014** submissions.

ESO BugEye Photo Contest: 2013 Winners



The ESO would like to thank the participants of the
2013 BugEye Photo Contest.

Once again, we received many amazing arthropod shots! Below are the first place winners from each of this year's categories. Check out all the **Winning Photos** on **flickr**:

<http://www.flickr.com/photos/103398327@N06/sets/72157637346945866/>



Morgan Jackson:
Best Photo and People's Choice Award

Steven Paiero:
Best Photo of an Ontario Insect



Alexander Skevington:
Best Photo by a Junior Entomologist



Mason Walton:
2nd Place Photo by a Junior Entomologist

Colin Walton:
3rd Place photo by a Junior Entomologist



ESO BugEye Photo Contest continued . . .

People's Choice Award Nominees

These images were so striking we thought they deserved honourable mention.



Larry Zibroski



Stuart Campbell



Roger Casement



Crystal Ernst



Diane LePage



Jennifer Read



Crystal Ernst



Crystal Ernst

Submit your next Manuscript to JESO

Consider submitting your next manuscript to the

Journal of the Entomological Society of Ontario

Instructions to authors are available on-line at
www.entsocont.ca

**As of 2011, page charges in JESO have been
waived!**

Electronic submissions should be directed to:

john.huber@agr.gc.ca

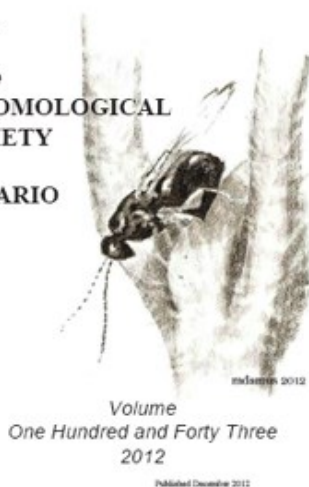
Submissions should be directed to:

John Huber, JESO Editor
Canadian National Collection of Insects
Agriculture and Agri-Food Canada
960 Carling Ave.
Ottawa, Ontario, Canada
K1A 0C6

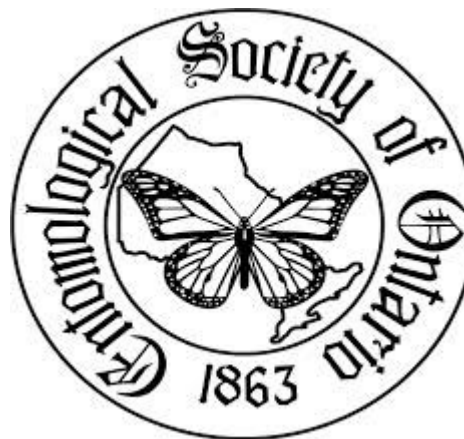
Tel: 613-759-1840

JOURNAL

of the
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ESO Membership Renewal



Do you often forget to pay your yearly ESO membership dues (hint, hint, the start of 2014 and a new membership season will soon be upon us)? Are you a long-time devoted member of the ESO?

Based on member feedback, we've created a NEW membership dues option that has been available since 2013:

**A one-time payment of \$150 to secure a
5 year membership!**

Coming soon to the PayPal payment method and ESO registration form; both are available via the
ESO website.

For all membership and payment options, please visit **www.entsocont.ca** to pay via **PayPal** or mail your invoice and payment to:

Michelle Locke (ESO Secretary)
Vista Centre
1830 Bank St.
PO Box 83025
Ottawa, ON
K1V 1A3

entsocont.membership@gmail.com
(613) 759-1727

Student, amateur and retired memberships in Canada are free but **must be renewed each year!** Free memberships may be renewed electronically by sending an email to Michelle at:
entsocont.membership@gmail.com



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Message from the Secretary

Hello everyone,
As many of you may know, this past fall I took over the secretary position from Nicole McKenzie. Nicole has retired from this position to focus on her newly expanded family. On behalf of the ESO

I want to thank Nicole for all of her hard work and dedication to the society over the years and congratulations on Asher's arrival!
Don't Forget to Renew Your ESO Membership!
Please visit www.entsocont.ca to pay via PayPal or mail your invoice and payment to: Michelle Locke, ESO Secretary Vista Centre 1830 Bank St. P.O. Box 83025 Ottawa, ON K1V 1A3. Student, amateur, and retired memberships in Canada are free but must be renewed each year! Free memberships may be renewed electronically by sending an email to me Please note: our email address has changed, as Nicole is no longer our secretary. Please use entscont.membership@gmail.com from now on.

Michelle Locke
ESO Secretary

Message from the Editors

The ESO Newsletter Editors would like to thank **Angela Gradish** for her exceptional work on the Newsletter from past years (Since 2010!) and for her gracious assistance and advice during our transition as the incoming Editors.

Thank you, Angela. All the best!

Amanda Lindeman & Trevor Burt
ESO Newsletter Editors

Editors' Note

If you have a story, project, photo, profile or upcoming event that you would like ESO Membership to know about, please contact the ESO Newsletter Editors via email at:

amanda.lindeman@gmail.com
trevburt@gmail.com

Subject: **ESO Newsletter**