



December 2014

Boreus



Newsletter of the Entomological Society of British Columbia

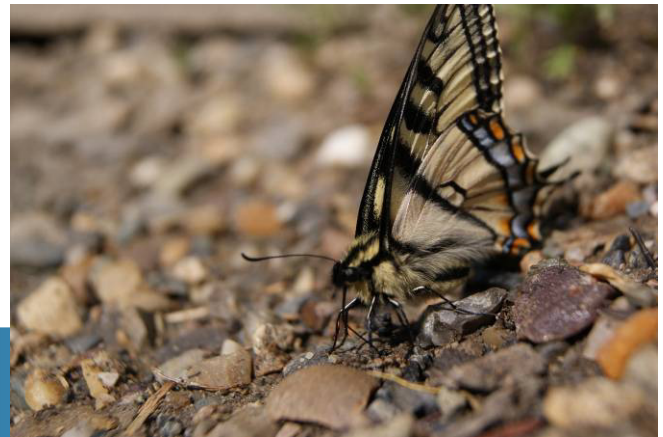




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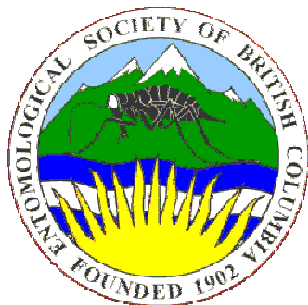
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Diapausing Hemlock Woolly Adelgid, *Adelges tsugae* Annand. Photo Credits: Tom McAvoy, Virginia Tech, Blacksburg, VA



The Executive



The Entomological Society of British Columbia is a scientific Society founded in 1902 for the advancement of entomological knowledge in the province.

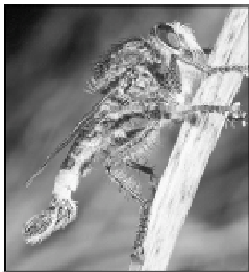
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| President | Steve Perlman University of Victoria, Victoria |
| First Vice President | Bob Lalonde University of British Columbia – Okanagan, Kelowna |
| Second Vice President | Brian Van Hezewijk Canadian Forest Service, Victoria |
| Secretary | Tracy Hueppelsheuser BCMAL, Abbotsford, BC |
| Treasurer | Ward Strong BC Ministry of Forests, Vernon |
| Editorial Committee (Journal) | Dezene Huber (Editor) University of Northern B.C., Prince George Robert Cannings, Royal B.C. Museum, Victoria Lorraine MacLauchlan B.C. Ministry Forests & Range, Kamloops Bob Lalonde University of British Columbia – Okanagan, Kelowna Steve Perlman University of Victoria, Victoria Leland Humble Canadian Forest Service, Victoria Rob McGregor Douglas College, New Westminster |
| Editor (Boreus) | Gabriella Zilahi-Balogh Canadian Food Inspection Agency, Kelowna |
| Directors | Renee Prasad (2 nd) E.S. Crop Consult Marla Scharzfled (1 st) University of Northern British Columbia |
| Graduate Student Representative | Joyce Leung Simon Fraser University, Burnaby |
| Honorary Auditor | Rob McGregor Douglas College, New Westminster |
| Regional Director of National Society | Bill Riel Canadian Forest Service, Victoria |
| Web Page Editor | Alex Chubaty Canadian Forest Service, Victoria |
| | |



Publications of ESBC

Journal of the Entomological Society of British Columbia

Journal of the Entomological Society of British Columbia



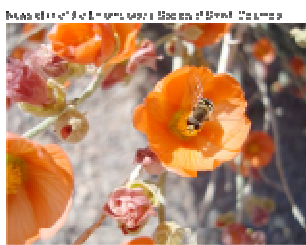
The Journal of the Entomological Society of BC is a peer reviewed, open-access journal. Manuscripts dealing with all facets of the study of arthropods will be considered for publication. Submissions may be from regions beyond British Columbia and the surrounding jurisdictions provided that content is applicable or of interest to a regional audience. Authors are invited to submit ideas for review and forum articles as well. Line drawings or photographs as candidates for the cover are also accepted.

For more information please contact Dr. Dezene Huber, Editor-in-Chief at journal@entsocbc.ca.

The deadline for submissions to be included in the 2015 issue is 1 September, 2015. Please submit articles at the JESBC website: <http://journal.entsocbc.ca/>.

Boreus

Boreus



Boreus, the Newsletter of the Society is published in June and December. It contains entomological news, comments, reports, reviews and notices of meetings and other events. While emphasizing the Society's affairs, *Boreus* provides members with a forum for their views and news of British Columbia entomology, as well as informal articles, notes regarding research projects, and anything else that may be of interest to entomologists.

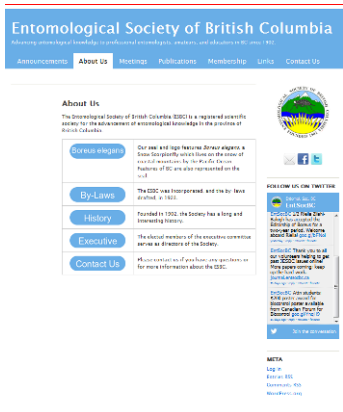
Please submit any entomological photograph, article, event or informational tidbit to the Editor!

Please send correspondence concerning *Boreus* to Gabriella (Riella) Zilahi-Balogh at boreus@entsocbc.ca.

The deadline for submissions to be included in the June issue is May 15, and the December issue is November 15.



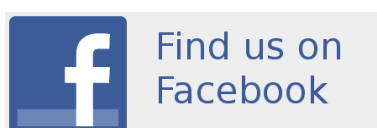
ESBC Website



Main Webpage: <http://entsocbc.ca>

Update your bookmarks, and save our new URL to your browser favourites. Our website provides all the information you need, in one place: ESBC announcements, meeting info, publications, contact information, and other useful links.


Facebook



Join us on Facebook:
<https://www.facebook.com/groups/13552445022/>

Keep in touch with students, colleagues, and friends! Stay up to date with the latest entomological happenings in BC, upcoming conferences, education and employment opportunities.

Twitter



Follow us on Twitter: <https://twitter.com/EntSocBC>

Join the conversation and connect with thousands of other entomologists and insect enthusiasts from all over the world. Stay up to date with insect news, announcements, conferences and job opportunities.



Membership

Membership of the Entomological Society of B.C. is available to anyone interested in entomology. Annual dues are: Canadian resident (\$20.00), International member \$25 or Student member \$10. Join or renew your membership online via the Society's website <http://entsocbc.ca/membership/>.

Inquiries concerning membership and back issues should be sent to the Treasurer, Ward Strong, E-mail: treasurer@entsocbc.ca

Cover Sketch: *Boreus elegans* (Mecoptera: Boreidae), one of the more conspicuous snow scorpionflies in B.C. Larvae and flightless adults live in, and feed on, moss and clubmoss. Adults appear in the fall and are active on snow on warm winter days. Cover sketch credit Ward Strong and Robert A. Cannings.

Cover Photographs:

| | |
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| Greater Night-stalking Tiger Beetle (<i>Omus dejeani</i>), taken on Denman Island, B.C. Photograph by Jennifer Heron. | Helliwell Provincial Park, May 2012. Photograph by Jennifer Heron |
| Photographs taken in the Peace Region, BC. Photographs by Jennifer Heron | |

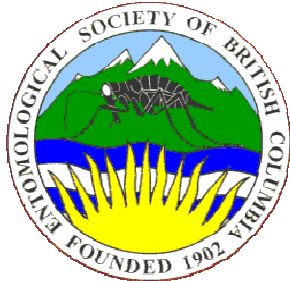


Western Grape Rootworm, *Bromius obscurus* L. on rose. Photo credits: Susanna Acheampong



December 2014

Entomological Society of British Columbia



ANNUAL GENERAL MEETING

October 24, 2014

PROGRAM

| | | | |
|---------------|---|--|----------------------|
| 8:00 – 8:30 | REGISTRATION, COFFEE, TEA, SNACKS | | |
| 8:30 – 8:45 | WELCOME AND ANNOUNCEMENTS | | |
| 8:45 | Aynsley Thielman , Dezene Huber and Michael Gillingham UNBC | Terrestrial Invertebrate Indicators of Ecological Function in Alpine Ecosystems | Regular presentation |
| 9:00 | Sean McCann , Tanya Jones, Onour Moeri, Catherine Scott, Sean O'Donnell and Gerhard Gries SFU | Red-throated Caracaras versus army ants as wasp predators in Neotropical forests | Ph.d. presentation |
| 9:15 | Paul MacDonald , Jennifer Cory and Judy Myers SFU | Temperature-induced changes in Western Tent Caterpillar feeding behaviour as a mechanism for variability in NPV Susceptibility | M.Sc. presentation |
| 9:30 | Jennifer Scholefield and Jennifer Cory SFU | Baculovirus and coinfection dynamics in an insect host, <i>Trichoplusia ni</i> | M.Sc. presentation |
| 9:45 | Jolene Swain , Gary Judd and Jennifer Cory SFU | Keeping up with climate change: Temperature and humidity effects on an insect herbivore in apple orchards | M.Sc. presentation |
| 10:00 – 10:30 | MASTICATION AND IMBIBATION BREAK | | |
| 10:30 | Dennis Quach , Franz Simon, Bernie Roitberg SFU | Temperature effects on pea aphid (<i>Acyrtosiphon pisum</i>) "personalities" in the context of anti-predator behavioural syndromes | B.Sc. presentation |
| 10:45 | Dietmar Schwarz WWU | When barcoding fails: molecular identification of apple maggot flies in the face of gene flow | Regular presentation |
| 11:00 | Jennifer Hill , Keely Hausken, Neal Shaffer, and Dietmar Schwarz WWU | Relative Desiccation Resistance of <i>Rhagoletis</i> Sister Species | M.Sc. presentation |



| | | | |
|---------------------|---|--|-------------------------|
| 11:15 | Tina Dancau and Tanya Stemberger SFU | Competitive Behavioural Strategies of <i>Drosophila suzukii</i> and <i>Drosophila melanogaster</i> | B.Sc. presentation |
| 11:30 | Kathrin Sim and Tracy Hueppelsheuser BCMA | What Women Want: Does bait influence the age of female <i>Drosophila suzukii</i> (Diptera: Drosophilidae) caught in traps? | Regular presentation |
| 11:45 | Mark Hanson , Finn Hamilton and Steve Perlman UVic | The immune repertoire of a divergent, symbiont-defended <i>Drosophila</i> | M.Sc. presentation |
| 12:00 – 1:15 | LUNCH BREAK – ON YOUR OWN | | |
| 1:15 | Robert McGregor , Alysha Martins and Katelyn Crisp Douglas College | Predators on the farm: Augmentative releases for biological control of blueberry aphids in British Columbia | Regular presentation |
| 1:30 | Warren Wong , Bekka S. Brodie, Sherah VanLaerhoven and Gerhard Gries SFU | Is aggregated oviposition by the blow flies <i>Lucilia sericata</i> and <i>Phormia regina</i> (Diptera: Calliphoridae) pheromone-mediated? | B.Sc. presentation |
| 1:45 | Christina Hodson and Steve Perlman Uvic | Genetic and ecological consequences of sex ratio distortion in a booklouse | M.Sc. presentation |
| 2:00 | Joshua Pol , Andrew Gould, Chris Guglielmo and Jeremy McNeil University of Western Ontario | Do short term atmospheric pressure changes affect the calling behavior of male crickets? | B.Sc. presentation |
| 2:15 | Chloe Gerak , Catherine Scott, Sean McCann, Gerhard Gries SFU | How the false widow spider finds true love: female contact pheromone elicits male courtship behaviour in <i>Steatoda grossa</i> | B.Sc. presentation |
| 2:30 – 3:00 | POLYPHAGY BREAK | | |
| 3:00 | Gwylim S. Blackburn and Wayne P. Maddison UBC | Stark sexual display divergence among jumping spider populations in the face of gene flow | Regular presentation |
| 3:15 | Marla Schwarzfeld , Anne-Marie Flores, Aynsley Thielman, Adam O'Dell, Allan Costello, Daniel Erasmus, Brent Murray, Lisa Poirier, Jeanne Robert, Michael Gillingham, J. Mark Shrimpton, and Dezene Huber, UNBC | Metabarcoding as a tool for assessing stream biodiversity and ecosystem function at pipeline crossings | Regular presentation |
| 3:30 | Samuel Glasgow and Tracy Hueppelsheuser BCMA | Apple Maggot (<i>Rhagoletis pomonella</i> Walsh): Resident quarantine pest in southwest British Columbia (Lower Mainland) | Regular presentation |
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| 3:45 | Gail S. Anderson and Lynne S Bell SFU | Impact of two contrasting marine habitats on decomposition and arthropod colonization of cadaver models in the Salish Sea | Regular presentation |
| 4:00 | THANKS, WRAP-UP, SET UP FOR BUSINESS MEETING | | |

ESBC BUSINESS MEETING

| | | |
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| 4:05 | ESBC BUSINESS MEETING, featuring: <ul style="list-style-type: none"> • Student Scholarships • Student Presentation Awards • Society Reports • Compelling new business • Elections • Scavenging leftover snacks | |
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San Jose Scale, *Quadraspidotus perniciosus* Comstock, on apple. Photo credits: Gabriella Zilahi-Balogh



ESBC Annual General Meeting Minutes

October 24, 2014

IRMACS Center, Simon Fraser University, Burnaby, B.C.

Meeting called to order, 4:15 pm, by president, Steve Perlman.

Participants: 47 in person.

1. Approval of agenda: moved Gail Anderson, 2nd Gabriella Zilahi-Balogh
2. Approval of previous AGM meeting notes: moved Bill Riel, 2nd Alex Chubaty
3. Executive reports:

a. **Grad Student Representative: Ikkei Shikano.** Report presented by Steve P.

This report brings to an end my two years of service as Graduate Student Representative for the ESBC. I joined the ESBC with the aim to increase graduate student participation in the society, because I believe that students whose research involve insects need to belong to an entomological society to identify themselves as Entomologists. Too many students think of themselves only as molecular biologists, evolutionary biologists, ecologists, etc. even though their research organism is an insect. By attending ESBC and ESC meetings, my hope is that these students will gain an appreciation for entomology and realize the vast array of really cool research that is being done that involve insects!

I have thoroughly enjoyed my time on the ESBC Executive. Student participation in the ESBC has been great; much of the credit for that belongs to the ESBC website, facebook page, and twitter feeds from the Webmaster, Alex Chubaty. Through the ESBC Executive, I met wonderful Entomologists working as professors or researchers that I aspire to be one day. When I took on the position as ESBC Graduate Student Representative, I was immediately contacted by the ESC to join their Student Affairs Committee to represent BC students. This has given me the opportunity to network with Entomologists all over the country. I am extremely grateful to the ESBC for instilling my passion for entomology from the first meeting I attended as a Masters student. My time in BC and life as a student is now over. I am off to Penn State University as a post-doc for more training, with the hope of returning to BC someday! Now to the actual report. The Entomological Societies of Saskatchewan and Canada held a joint meeting in



Saskatoon on Sept.26 – Oct. 1 2014. Student turnout from BC was high again with I believe 9 graduate students giving presentations; many from SFU and some from UNBC. Congratulations to Bekka Brodie and Catherine Scott from the Gries Lab at SFU for being selected to present at the Graduate Student Showcase!!! That's it from me. I am sure the new Graduate Student Representative will take up the position with lots of enthusiasm! I will compile a list of the duties I have performed in this position and add this information to a live document that was passed down to me from my predecessor. Thank you everyone for a wonderful two years!

b. Regional Director of the National Society: Bill Riel: Report presented:

The 2015 ESC Joint Annual Meeting will be hosted by the La Société d'entomologie du Québec (Entomological Society of Quebec) in Montreal in November 2015 (specific dates to be confirmed).

In 2016, the International Congress of Entomology will take place on September 25th to 30th in Orlando, Florida. The ESC will host their annual meeting in conjunction with the Congress in Orlando instead of a regular JAM in Canada.

In 2018, it will be BC's turn to host the JAM. That same year, the Entomological Society of America will be hosting their annual meeting in Vancouver from November 11th to 14th. The ESC (and ESBC) have both agreed to work with the ESA to make this a joint meeting. Though it is still a few years away, I believe we should put out a call for volunteers interested in helping to organize this meeting.

The ESC membership has voted to adopt the amended Standing Rules and are now fully functioning in compliance with current federal legislation. With increasing expenses and complexities relating to the administrative operation of the Society, the ESC struck an Ad Hoc Committee on Headquarter Operations last year to study and recommend a way forward. After much work, the committee produced a report exploring a number of alternatives ranging from maintaining the status quo to selling the headquarters building and retaining services of an Association Management Company (AMC). After a thorough analysis the ESC Board was convinced that moving towards an AMC makes the most sense for the society, and ESC membership approved this decision at the AGM in Saskatoon. The ESC Board will take steps in the upcoming year to make this transition.

c. Editors:

i. Boreus Newsletter, Gabriella Zilahi-Balogh:

I took over the duties as Boreus editor in Dec 2012. I initially committed to 2 years. I am happy to commit for another 2 years. If anyone else wants the opportunity to act as editor I am willing to hand over the reins. As always I am soliciting for input for items to report on ie. insect photography, reports of entomological activity, book reports etc. Keep items coming. I hope



the Boreus is an interesting read and I am open to feedback and subject matter. Next Boreus will be published in late December. Articles and info to Riella in November/Dec.

d. **Website, Alex Chubaty: webmaster@entsocbc.ca. Report presented:**

Main website

Our current website (entsocbc.ca) hosted at SFU will be shut down as part of SFU's transition away from WordPress. We need to transfer our main WordPress site off the SFU group blogs server in order to keep the website active and to facilitate core software updates and feature enhancements (including member profiles, and members-only content).

Ideally, we would want a Virtual Private Server setup (this gives us the most control for what we run on it); but minimally we need a WordPress installation that allows us to freely install plugins, and supports SSL. ***Can we secure (long-term) free hosting through another University?*** If not, we need to look at paid hosting options. I've been looking into several free hosting options, but they are too limited and will not serve us well. I welcome recommendations and suggestions.

Website visitor statistics are included at the end of this report.

Membership and subscriber lists

I have been working with Tracy to merge and update all of our subscriber and membership lists, and ensure that all Society communication with members is as streamlined as possible. The impetus for doing this was the introduction of Canada's new anti-spam legislation. In order to comply with the law, we are (among other things) required to:

- Obtain expressed consent to receive email from the Society. This needs to be an “opt-in” mechanism;
- Provide full contact information including mailing address of the Society in all correspondence;
- Provide a simple “opt-out” mechanism in all correspondence for those members who no longer wish to receive Society updates.

To this end, I set up a SurveyMonkey survey to solicit member and subscriber “opt-ins”, and have updated our lists accordingly. I have compiled these membership and subscriber lists in an Access database, and have assembled corresponding documentation on this database. This database and documentation are to be maintained by the Secretary.

Note: our list of exchange partners has not been fully updated; primarily because correspondence with them is only done via post (we don't have email addresses for most of them). I will assist Tracy with making contact with these institutions and updating our records.



Ideally, rather than using a Microsoft Access database, a more collaborative solution will be used that avoids the problems of 1) multiple circulating copies and 2) using proprietary software. The best solution would also integrate with our online membership and registration process, so that manual maintenance of these lists is no longer required. I am looking for a web-based solution, if practical, and currently have some options in mind. I welcome additional suggestions.

As part of a centralized, semi-automated solution to maintaining member lists and ensuring legal compliance I have set up a MailChimp account to handle all mass-mailouts to members and subscribers.

- It is compliant with anti-spam legislation, and automatically provides the requisite opt-out mechanisms.
- Allows us to easily manage subscriber and membership lists, and export them as needed.
- Allows multiple privileged users (i.e., Webmaster, Secretary, President, etc.) with different access permissions to use their own accounts to draft and send emails or to administer lists.
- Allows us to quickly and easily draft professional emails to lists subscribers.
- Provides statistics and feedback for every email sent, including open and click rates.
- Integrates easily with SurveyMonkey, WordPress, and others.

Online registration

Online registration for this year's AGM and Symposium was mostly smooth, although the site went down over the Thanksgiving weekend, and we had a small problem with the online registration form for the meeting. The latter issue did not affect payments, as these are processed via PayPal. Membership renewals were unaffected.

As part of moving our website off SFU's servers, I will revamp the online registration process to streamline as well as update the process, and (perhaps more importantly) to ensure a backup site can be deployed as quickly as possible in the event of future site disruptions.

JESBC digitization

Progress stalled over the summer due to lack of volunteers and computer failure. Although I initially had several volunteers contact me and agree to help with this project, all but one backed out, and even they were unable to contribute very much time. Added to this, a computer crash on my development server resulted in data loss, but I was able to restore most of it. Fortunately only part of the final uploaded database was lost, and the actual PDF articles and metadata are safe and can be re-uploaded.



NOTE: Although I am slowly working on this, I need help finishing this project off, as my time is much more limited. I'm appealing directly to the executive as well as members to commit to assisting with the final step of uploading the remaining articles so we can get them online before the end of the year.

Still on the to-do list, once all volumes are online, are the following items:

- Setting up Digital Object Identifier (DOI) cross-referencing;
- Ensure we are indexed in major scientific databases, such as Web of Science (we are currently listed with Google Scholar, the Directory of Open Access Journals, and a few others);
- Further discussion on the development of a taxonomic plugin to search journal content.

Social media

I would like to see the Society more engaged in social media. Unfortunately, I have not had the time to keep active on Facebook, Twitter, etc. and have thus only minimally been promoting the Society and sharing entomological news. Thus, I would like to encourage both executives and members to:

- Mention @EntSocBC on Twitter for links or info of general interest, such as entomological stories in the media; professional, regulatory, or academic news; conference info; cool insect photos; etc.
- Likewise, please feel free to share links with our Facebook group.
- We do occasionally get requests for insect IDs via Twitter, and I encourage any of our members on Twitter to reply to these when possible.
- Alternatively, you can email me and I can post on your behalf (with or without acknowledging the link came from you).

I especially encourage students to get involved, and I want to thank our active Twitter users for helping to keep me in the loop. If you're new to Twitter, be sure to follow @docdez, @VictoriaNHS, @ChandraMoffat, @dpsSpiders, @CMBuddle, @CMacQuar, @bslindgren, @TanyaLMS, @lbycter, @Cataranea, and @CanEntomologist.

Follow us on the web:

| | |
|----------|---|
| Website | http://entsocbc.ca |
| Facebook | http://ow.ly/CSw6n |
| LinkedIn | http://ow.ly/CSyxT |
| Mendeley | http://mnd.ly/WROZMb |
| Twitter | @EntsocBC |



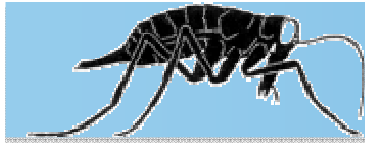
e. Journal, Dezene Huber: Report presented by Steve P.

2014 journal issue: The issue will consist of at least two papers which have been accepted. There are another two papers promised or in some state of process that may be included if they work their way through the system quickly enough. In total this year we have had three submissions. We expect to also publish an obituary/memorial article for Mike Smirle. We will also publish the annual meeting and symposium abstracts. I gratefully acknowledge our various volunteers and contractors: associate editors, reviewers, copy editor, layout editor, web editor, and any others who I may have missed. The journal would not be possible without your efforts.

BC Lepidoptera Checklist: It is copyedited and is waiting for layout editing. That task is not expected to be too complex as there are no figures involved. We need to think of a good distribution model. It will be freely available as a PDF on the JESBC and/or ESBC site. But we can also publish it as an ePub (eBook) and in print form. We are also considering print-on-demand services for ongoing physical copy access after the first batch are sold/given away. If anyone has experience with self-publishing and print-on-demand, please tell us about it. We thank the authors for this excellent contribution to the natural history literature of BC, and for giving us the opportunity to host it.

Journal physical print edition: It is my opinion that we need to end the print run of the JESBC:

- Printing itself is a major expense.
- Mailing is also a major expense (more than printing in many cases, in fact).
- Printing is a major time sink for all involved. It has an impact on the layout editing because of need to number pages/TOC/etc. That process means that it's hard to finalize individual articles until the entire issue can be assembled. That slows down getting to printing in the first place.
- It is a major time sink in terms of mailing, since that work (like mostly everything else) is volunteer work run off the side of a desk.
- We have very few actual flesh-and-blood subscribers at this point.
- We are open access anyhow, and when we tell subscribing libraries that, they are often quite willing to switch their databases to reflect that and end the print copy.
- While our exchange partner program has been very useful and successful, with the library in flux and the fact that most exchange partner literature is now available on the web, it is less of a contemporary concern. In addition, while Tracy and Max have done a lot to reconstruct who is who on our various distribution lists, things are not where they once were following loss of that data.
- A pure open access, online system would allow more rapid appearance of papers once they were accepted. As noted above, the current system means that it's hard to get things out in a timely manner due to issues with layout. An appear-as-it's-published system (see PLOS, eLife, or PeerJ for examples) would get around that.



- An appear-as-it's-published system would also end our yearly deadline. As it stands, there is always a rush in August - October (tending to the end of that time period) as people try to get stuff in. This makes for a lot of dead time earlier in the year and franticness later on. If papers simply appeared as they were processed, and then on 31 December each year we bundled the papers from that year into an online "issue", there would be no need for a deadline.
- There is concern with the viability of small, regional journals. E.g. JESO's recent discussion of shutting down. An appear-as-it's-published system would also get around that because the actual number of papers published in any year would be not overly relevant. The journal could still accept papers as they arrived on our doorstep, and we could commit to getting them through the system as quickly as possible in terms of first decision and (assuming acceptance) publication. This shift would work to keep a valuable natural history journal viable for the foreseeable future.

Discussion: We need to increase submissions and awareness of our journal. Suggest adding a 'natural history' section, and continue with the 'pest notes' section, in addition to the peer reviewed scientific sections.

- f. **Treasurer, Max Salomon:** Report presented by Ward Strong. Ward will audit, as past president.

This is my last year as treasurer of the society. I am pleased to hand over operations to Ward Strong, who will do a great job handling the society's finances.

The society's main revenue since November 2013 came from membership and subscription dues, JESBC page charges, and registration to the AGM and Symposium. The society's main expenses since November 2013 were related to the printing and typesetting of the JESBC and organization of the AGM.

The current balance in the society's chequing account is CAD \$22,627.85. The society's savings assets are invested as term deposits that will mature in 2016 or 2017 (current value is CAD \$ 31,789.67). Our savings assets are matured in the summer of 2014 will be re-invested by the new treasurer.

Please consult the following for financial details:



Period covered 01 November 2013 – 23 October 2014

ASSETS

| Item | CAD \$ |
|--|-----------|
| October 30, 2013 | |
| Chequing account balance (BMO) | 11,505.96 |
| Savings assets in the bank (BMO, Interior Savings) | 45,760.43 |
| October 23, 2014 | |
| Chequing account balance (BMO) | 22,627.85 |
| Savings assets in the bank (BMO) | 31,789.67 |
| Paypal account | 6,604.56 |

REVENUE

| Item | CAD \$ |
|---|-----------------|
| Membership and Subscription dues of 2014 and a few for 2013 | 1,555.66 |
| Page charges for JESBC 2013 | 2,479.10 |
| Registration dues for 2013 AGM and Symposium (during meeting) | 678.73 |
| Registration dues for 2014 AGM and Symposium (online) | 2,004.21 |
| North Okanagan Naturalist Club Award for 2013 AGM | 400.00 |
| TOTAL REVENUE | 7,117.70 |

EXPENDITURES

| Item | CAD \$ |
|--|-----------------|
| Student awards at 2013 AGM in Victoria (Phineas Hamilton, Grant Olson Catherine Scott) | 1,200.00 |
| Catering costs at 2013 AGM & Symposium in Victoria | 2,730.00 |
| Stationary and registration overpayment at 2013 AGM and Symposium | 69.37 |
| Printing of 2013 JESBC (UNBC Copy & Publishing Services) | 682.08 |
| Postage costs for mailing 2013 JESBC (Journal Editor) | 364.72 |
| Typesetting for 2013 JESBC (Tanya Stemberger) | 660.00 |
| BC Registry yearly dues for 2012 and 2013 | 65.00 |
| Banking service charges | 20.00 |
| Postage costs (Treasurer) | 10.50 |
| TOTAL EXPENDITURES | 5,801.67 |

Maxence Salomon
Treasurer

Ward Strong
Auditor and Past President



g. President, Steve Perlman: Report presented

I took on President duties a few months early due to Mike Smirle's death – such a terrible loss. With the excellent help of the executive, we organized the AGM and Symposium. We had a great number of people signing up to give talks and unfortunately had to turn a few away that had missed the submission deadline (perhaps next year, we can add some more poster presentation options). Following on Mike's excellent idea for a medical entomology symposium, we have assembled a great slate of speakers. I want to give my sincere thanks to everyone that helped put this meeting together and to make this transition, in particular Jenny Cory who despite being on sabbatical, agreed to chair the local committee and solved many on-site issues, Bob Lalonde, who organized the symposium, the supremely organized Alex Chubaty and Tracy Hueppelsheuser, who ran communication and advertising, and Ward Strong, who had a hand and sage words of advice for everything.

I am also excited to welcome our new additions to the executive. Pending ratification, we have a number of wonderful entomologists! Ward Strong will take over from Maxence Salomon as Treasurer, Joyce Leung will take over from Ikkei Shakano as Grad rep, Bob Lalonde will serve as 1st Vice-President, Brian van Hezewijk and 2nd Vice-president, and Joshua Pol will shadow Alex Chubaty for the next year in anticipation of taking his place as Web Editor, and finally Marla Schwarzfeld will continue as Director. Thank you so much to Maxence and Ikkei for all their hard work and contributions to the society. Thank you all for making this such a great society.

h. Secretary, Tracy Hueppelsheuser:

Membership lists are nearly updated and in better format now. Using online tools for member notifications and keeping member information updated.

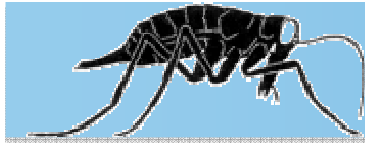
- Old Business: none noted.
- Graduate Student Scholarship for Travel: Steve Perlman presented to:

Recipient: Jennifer Scholefield, Simon Fraser University.

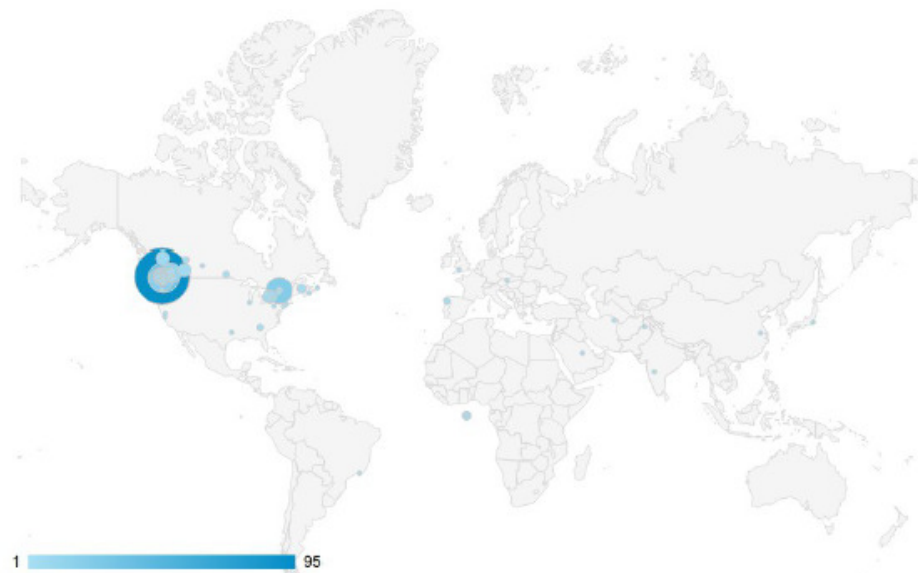
- Student Paper Awards for presentations at today's AGM: Steve P thanked the judges for taking the time to evaluate the presentations. There were 12 student presentations today. Awards were given to:
- **B.Sc.: Chloe Gerak** (Catherine Scott, Sean McCann, Gerhard Gries, Simon Fraser University). *How the false widow spider finds true love: female contact pheromone elicits male courtship behaviour in Steatoda grossa.*



- **M.Sc.: Jennifer Scholefield** (Jennifer Cory, Simon Fraser University). *Baculovirus and co-infection dynamics in an insect host, Trichoplusia ni.*
- **Ph.D.: Mark Hanson** (Finn Hamilton, Steve Perlman, University of Victoria). *The immune repertoire of a divergent, symbiont-defended Drosophila.*
- 7. Executive Election: New executive members listed. Voting by membership completed as per by-laws.
 - a. 1st Vice President: Bob Lalonde
 - b. 2nd Vice President: Brian van Hezewijk
 - c. Directors: Marla Schwarzfeld
 - d. Treasurer: Ward Strong
 - e. President: Steve Perlman
- Additional Business:
- Awareness on Student Awards: Judy Myers: asked that Societies continue to promote their award opportunities to students, both at the provincial (ESBC) and national (ESC) levels.
- Claudia Copley, Royal B.C. Museum: reported that the Museum has not yet filled the vacant Entomology Curator position. This position has been vacant for two years, since the retirement of Robert Cannings. There is concern that the position will remain vacant, which results in more workload for remaining staff, and therefore in the long term, erosion of the quality of the Museum's collection. Currently the Museum is the main collection for natural history specimens from B.C. and is widely used by scientists in B.C., Canada, and internationally for reference specimens and information. Contact Claudia directly for more information on how ESBC members and users of the Museum can demonstrate support for this important collection and service offered by the Museum.
- Adjournment: moved Jenny Cory 5:04 pm.

**Website statistics (year-to-date as of 15 Oct 2014)****Main Website (<http://entsocbc.ca>)**

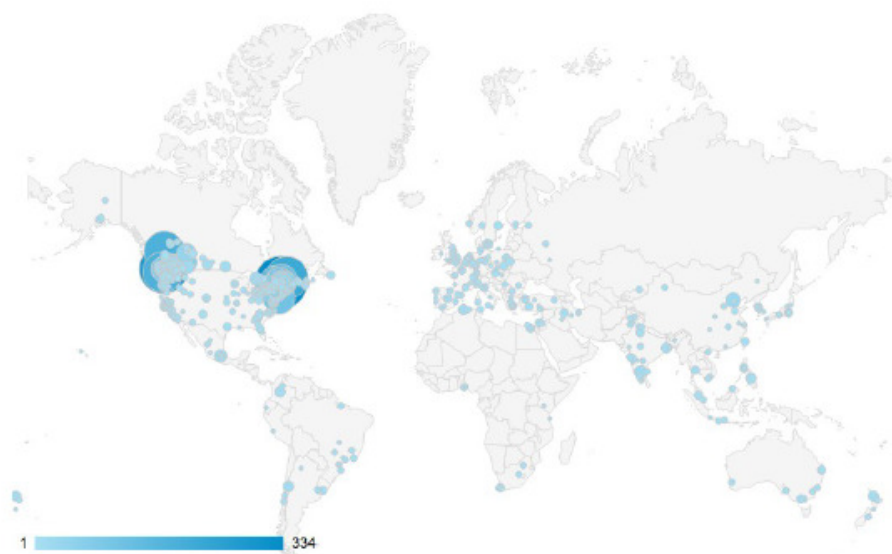
| City | Visits | % New Visits | Bounce Rate | Pages per visit | Avg. Visit Duration |
|-------------------|------------|---------------|---------------|-----------------|---------------------|
| TOTAL | 396 | 48.48% | 35.10% | 2.96 | 00:02:06 |
| 1 Burnaby | 95 | 45.26% | 24.21% | 3.40 | 00:02:18 |
| 2 Vancouver | 92 | 45.65% | 51.09% | 2.45 | 00:02:27 |
| 3 Abbotsford | 30 | 30.00% | 23.33% | 2.87 | 00:02:28 |
| 4 Ottawa | 22 | 54.55% | 27.27% | 3.68 | 00:03:10 |
| 5 Victoria | 19 | 47.37% | 31.58% | 2.95 | 00:01:21 |
| 6 Vernon | 12 | 0.00% | 0.00% | 4.25 | 00:02:26 |
| 7 North Vancouver | 11 | 54.55% | 54.55% | 1.82 | 00:00:32 |
| 8 New Westminster | 10 | 30.00% | 30.00% | 3.00 | 00:01:22 |
| 9 Richmond | 8 | 50.00% | 25.00% | 2.88 | 00:01:05 |
| 10 Surrey | 8 | 75.00% | 12.50% | 3.25 | 00:02:38 |
| 11 Prince George | 6 | 50.00% | 66.67% | 1.67 | 00:00:54 |
| 12 Calgary | 5 | 60.00% | 60.00% | 2.60 | 00:04:44 |
| 13 Toronto | 5 | 100.00% | 20.00% | 7.80 | 00:02:18 |
| 14 Guelph | 4 | 75.00% | 25.00% | 3.25 | 00:00:17 |
| 15 Coquitlam | 3 | 33.33% | 0.00% | 2.00 | 00:00:03 |
| 16 Haney | 3 | 33.33% | 66.67% | 1.67 | 00:00:54 |
| 17 Langley | 3 | 66.67% | 33.33% | 3.33 | 00:01:23 |
| 18 Oliver | 3 | 33.33% | 0.00% | 5.00 | 00:01:21 |
| 19 Fredericton | 3 | 33.33% | 100.00% | 1.00 | 00:00:00 |
| 20 V0X | 3 | 0.00% | 66.67% | 1.33 | 00:00:01 |





Journal website (<http://journal.entsocbc.ca>)

| City | Visits | % New Visits | Bounce Rate | Pages per visit | Avg. Visit Duration |
|---------------------|-------------|---------------|---------------|-----------------|---------------------|
| TOTAL | 5645 | 66.38% | 68.49% | 2.70 | 00:01:39 |
| 1 Chateauguay | 334 | 0.30% | 96.11% | 1.04 | 00:00:47 |
| 2 Vancouver | 277 | % | 72.92% | 2.65 | 00:01:36 |
| 3 Quebec City | 217 | 79.78% | 88.48% | 1.41 | 00:02:48 |
| 4 Prince George | 185 | 2.76% | 38.92% | 9.85 | 00:04:25 |
| 5 Joliette | 185 | 27.57% | 94.05% | 1.18 | 00:01:01 |
| 6 Victoria | 183 | 0.00% | 44.26% | 4.49 | 00:02:34 |
| 7 Ottawa | 144 | 66.67% | 47.22% | 5.40 | 00:03:09 |
| 8 (not set) | 133 | 93.23% | 71.43% | 1.85 | 00:01:04 |
| 9 Pointe-Claire | 117 | 2.56% | 98.29% | 1.02 | 00:00:15 |
| 10 Edison | 112 | 100.00% | 100.00% | 1.00 | 00:00:00 |
| 11 Vaudreuil-Dorion | 100 | 2.00% | 89.00% | 1.65 | 00:01:48 |
| 12 Kelowna | 77 | 92.21% | 75.39% | 2.35 | 00:01:04 |
| 13 Burnaby | 73 | 83.56% | 56.16% | 3.55 | 00:02:34 |
| 14 Richmond | 73 | 72.60% | 52.05% | 3.67 | 00:02:27 |
| 15 Toronto | 71 | 88.73% | 63.38% | 2.42 | 00:01:32 |
| 16 Calgary | 67 | 80.60% | 80.60% | 1.84 | 00:00:34 |
| 17 Surrey | 57 | 94.74% | 80.70% | 1.60 | 00:00:14 |
| 18 Sherbrooke | 51 | 3.92% | 19.61% | 2.65 | 00:00:22 |
| 19 Vernon | 48 | 85.42% | 70.83% | 2.50 | 00:02:27 |
| 20 Edmonton | 42 | 64.29% | 40.48% | 4.55 | 00:02:42 |





Student Winners



Student Winner of Undergraduate Award, Chloe Gerak (SFU) for presentation at AGM. Photo Credits: G. Zilahi-Balogh



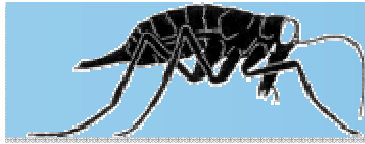
Student Winner of James Grant North Okanagan Naturalist Club Masters Student Award: Jennifer Scholefield (SFU) for presentation at AGM. Photo Credits: G. Zilahi-Balogh



Student Winner of Contech PhD Student Award: Mark Hanson (UVic) for presentation at AGM



Jennifer Scholefield, receiving Graduate Student Scholarship for Travel from president, Steve Perlman Photo Credits: G. Zilahi-Balogh



ESC President Prize Student Winners and Runners-up

Oral Presentations

Bees and Pollination

Winner: **Veronika Lambinet** (**Simon Fraser University**), with M. Bieri, M. Hayden, and G. Gries.

Bee talk – Do honeybees use the earth's magnetic field as a reference to align their waggle dance?

Honourable mention: **Danae Frier** (University of Regina), with C. Sheffield.

Bumblebees do it better: the importance of native bees to the pollination of haskap crops.

Biodiversity and Conservation

Winner: **Sebastian Ibarra** (**Simon Fraser University**), with S. McCann, R. Gries, H. Zhai, and G. Gries.

The wrath of the bald-faced hornet – pheromone-mediated nest defence.

Honourable mention: **Seung-II Lee** (University of Alberta), with J. Spence and D. Langor.

Variable retention harvesting and saproxylic beetle conservation in white spruce stands of the boreal ecosystem.

Sarah Loboda (McGill University), with J. Savage, T. Hoyer, and C. Buddle.

Ecological and evolutionary responses of Arctic flies to recent climate change in Zackenberg, Greenland.

Arthropod Biology

Winner: **Sharleen Balogh** (**University of Northern British Columbia**), with D. Huber and S. Lindgren.

Host selection of lodgepole pine (Pinus contorta) by the Warren root collar weevil (Hylobius warreni).



Honourable mention: **Aldo Rios** (University of Manitoba), with A. Costamagna.

Contribution of soybean aphid alates to colony fitness under predation.

Pest Management

Winner: **Tina Dancau** (CABI, Switzerland), with T. Haye, P. Mason, and D. Gillespie.

Mortality factors affecting the diamondback moth (Plutella xylostella) in continental Europe: a preliminary life table analysis.

Honourable mention: **Jon Williams** (University of Guelph), with H. Earl and R. Hallett.

Laboratory investigations of swede midge, Contarinia nasturtii, oviposition and damage symptoms to canola.

Posters

Winner: **Sabrina Rochefort** (McGill University), with T. Wheeler.

Taxonomy and diversity of Parapiophila (Diptera: Piophilidae).

Honourable mention: **Sarah Loboda** (McGill University), with C. Ernst and C. Buddle.

Yellow pan traps versus pitfall traps: best monitoring tool for ground-dwelling arthropods in the Arctic.



Monochamus scutellatus (Say) (Coleoptera: Cerambycidae). Photo credits: Jennifer Sheppard, July 2014.



December 2014



ENTOMOLOGICAL SOCIETY
OF
BRITISH COLUMBIA



SYMPOSIUM:

Dangerous Creatures? Arthropods Affecting Human Health, Fact and Fiction

October 25, 2014

PROGRAM

| | | |
|----------------------|---|--|
| 8:30 – 9:00 | REGISTRATION, COFFEE, TEA, SNACKS | |
| 9:00 | WELCOME AND ANNOUNCEMENTS | |
| 9:10 | Bernard Roitberg, SFU | Bloodfeeding in anopheline mosquitoes: context, context, context. |
| 9:45 | Allan Furnell, BCCDC | Nile virus in British Columbia |
| 10:20 - 10:35 | COFFEE, TEA, SNACKS | |
| 10:35 | Carl Lowenberger, SFU | Vector Competence: Why do some kill some pathogens, but transmit others? |
| 11:10 | Reuben Kaufman, U of A | Ticks: The perspective of a physiologist |
| 11:45 – 1:00 | LUNCH BREAK – ON YOUR OWN | |
| 13:00 | Yasmin Akhtar, UBC | Natural products as bed bug control agents |
| 13:35 | Catherine Scott, SFU | The truth about spider bites: "aggressive" spiders and the threat to public health |
| 14:10 | Muhammad Morshed, BC Centre for Disease Control | Tick distribution and tick-borne diseases in British Columbia |
| 2:45 | ADJOURN | |



Obituary: Mike Smirle

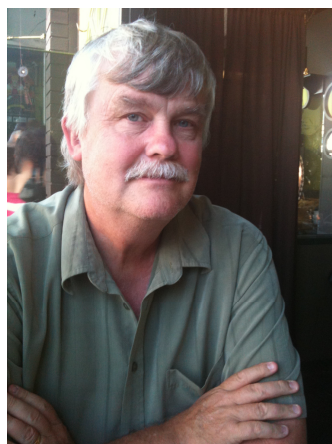
It is my sad duty to say some words of remembrance for Dr. Michael Smirle, who died in late July, this year, in Summerland, BC.

Mike, as he was known to his many friends and colleagues, was a long-time member of the entomological community in BC. He was a research scientist at the AAFC research centre in Summerland, where he studied insecticide resistance mechanisms and management, and natural products insecticides. He completed a B.Sc. in Forestry at UBC, and an MPM and Ph.D. in the Biology Department at Simon Fraser University, where he made significant contributions to the knowledge of effects of pesticides and honeybees. He published a number of scientific articles and book chapters, all of which are widely cited. He was an associate editor of *The Canadian Entomologist*. He was a director of the Entomological Society of British Columbia starting in 2008, and was president in 2013 and 2014.

Then there is Mike – the person. Mike put family first in his life, and that took priority over everything. He had a deep love of music, and started his academic career in the faculty of music at UBC. He was an accomplished pianist and organist, and a member of the Musaïc Vocal Ensemble in Summerland. On a personal note, I knew Mike for almost 33 years; he was a student in an entomology lab I TA'd at SFU. In all those years I never heard anyone speak negatively of him. Mike is remembered within the entomology community as a good scientist and a good guy.

On behalf of the Society, I would like to offer my condolences to Mike's family – Mary-Anne, his wife of 40 years, and his two sons, James and Jeff, and their families, and ask you to join in a moment of silence in his memory.

Dave Gillespie





Obituary: Phil Jones

March 1, 1924- January 8, 2015.

It is with great sadness that we announce Phil's unexpected passing at the Vernon Jubilee Hospital. Phil was predeceased by his parents Stanley and Lucy (Smith) Jones of Maple Ridge, BC. Predeceased also by his much loved brother, Owen Douglas Jones, Georgetown, ON and sister, Elizabeth (Betty) Pineault of Nanaimo, BC and niece, Diana (Lawrence) Isaac of Winnipeg, MB. He is fondly remembered by his sister-in-law, Jean (Stirrett) Jones and many nieces and nephews. He will be missed by Owen's children, Glyn (Susan) Jones, Sylvia (Jonathan) Cutmore, Trevor Jones, Donna Jones and Elizabeth's children, Sharlene, (Philip) Coss, Barbara Willis, Brian Pineault and Kathryn (Gary) Medcalf. His interest in genealogy and family history will bond the remaining Smith/ Joneses in his memory.

Phil was born in Prince George and moved to Smithers in 1937. He graduated from UBC in 1948 with a BSc (Ag) majoring in Horticulture. At the U. of Wisconsin (Madison); he attained a MSc in Entomology (1956) and a PhD in Entomology with a minor in Plant Ecology (1963).

Phil served in the Royal Canadian Navy Volunteer Reserve- Signals Branch from 1944-1945.

His professional career started in 1964 as Assistant Professor of Entomology at South Dakota State U. (Brookings).

Moving back to Canada in 1974, Phil worked for Niagara Chemicals. In 1977 he moved to Ottawa to join Environment Canada as a senior scientist, transferring to the Vancouver office in 1992. He then retired to Vernon in November 1993.

Phil had a passion for photography and all things outdoors, especially skiing. He was a life member of the North Okanagan Naturalist Club of which he was a founding member. In addition, Phil served on the executive of the BC Agrologists.

Recent projects included important documentation of the history of the Bulkley Valley.

Phil will be greatly missed by his wide network of friends and acquaintances.

Funeral Service will be held at All Saints Anglican Church, Vernon, BC at 2pm, Friday January 16, 2015. In lieu of flowers, you may donate to a Nature charity of your choice.

Pat Mcallister

(published in the Vernon MorningStar on January 14 2015).



Entomology Educational Opportunities in Canada

The Entomological Society of Canada published a Directory of **Entomological Education in Canada**. Available at: http://www.esc-sec.ca/students/Directory_of_Entomology.pdf

Research Opportunities – visit ESC website

MSc and PhD student positions (funded): sexual selection/conflict, life history evolution and speciation (Piophilid flies/*Drosophila*)

University of Ottawa, Department of Biology

Starting Date: flexible

Contact: hrundle@uottawa.ca

PhD position studying Temperature, seasonality and recurrent insect outbreaks in the Japanese tea pest

Queen's University, Department of Biology

Starting Date: September 2014 or January 2015

Contact: nelsonw@queensu.ca

http://nelsonlab.ca/?page_id=131

Ph.D. position in caterpillar resistance mechanisms

McGill University, Department of Plant Science

Starting date: January 2015 (or earlier)

Contact: jacqueline.bede@mcgill.ca

MSc or PhD student positions in forest plant-insect interactions

University of Calgary, Department of Biological Sciences

Starting Date: September 2014 or January 2015

Contact: mreid@ucalgary.ca

One (M.Sc. or Ph.D.) in caterpillar collective behaviour

Concordia University, Biology Department

Starting Date: September 2014 or January 2015

Contact: despland@alcor.concordia.ca

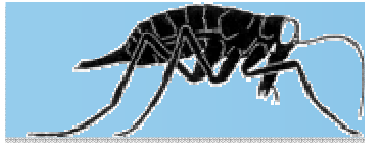
Two (MSc and PhD) student positions in Terrestrial Ecology (soil invertebrates)

University of Western Ontario, Department of Biology

Starting Date: September 2014 or January 2015

Contact: zlindo@uwo.ca

<http://publish.uwo.ca/~zlindo/other%20pdfs/Grad%20student%20positions-Lindo.pdf>



Three PhD student positions in Chemical Ecology in Forest Entomology

University of Alberta, Department of Renewable Resources

Starting Date: September 2014 or January 2015 (or applications accepted now until a suitable candidate is found)

Contact: erbilgin@ualberta.ca

Student Awards – administered by ESC (see ESC website for details)

- Entomological Society of Canada Graduate Research Travel Scholarships – deadline February 16 each year. One scholarship to MSc and one scholarship to PhD student.
- Entomological Society of Canada Postgraduate Awards - deadline February 16 each year. One award to MSc and one award to PhD student.
- Entomological Society of Canada John H. Borden Scholarship - deadline February 16 each year. Eligibility: studying IPM with an entomological emphasis.
- Entomological Society of Canada Ed Becker Conference Travel Awards – deadline when abstracts are due for that year's ESC AGM. Must have an active membership in ESC.
- Biological Survey of Canada Scholarship. Offered in even numbered years. Next competition 2016. Deadline February 16. Eligibility: Carry out a project on insect (or terrestrial arthropod) faunistics in a Canadian habitat.
- Keith Kevan Scholarship. Offered in odd numbered years. Next competition 2015. Deadline February 16. Eligibility: studying systematics in entomology.

Student Awards – administered by Entomological Society of America

- There are numerous awards. Check them out for eligibility.
http://www.entsoc.org/awards/whats_available#2

DNA Barcoding Website:

There is a new blog exclusively on the topic of DNA barcoding with the aim to have newsworthy information posted a few times per week. The blog is lead by Dirk Steinke, Lead Scientist Barcoding of Marine Life Biodiversity Institute of Ontario University of Guelph, Ontario, EMail: dsteinke@uoguelph.ca and blog website <http://dna-barcoding.blogspot.ca/>



Entomological Society of Canada

Blog Available at <http://escsecblog.com/>

September 2014 Bulletin available online at:
http://www.esc-sec.ca/bulletin/bulletin_sep_2014.pdf

Tenth Annual Photo Contest

The Tenth Annual Photo Contest to select images for the 2015 covers of *The Canadian Entomologist* and the *Bulletin of the Entomological Society of Canada* is over. View winning photos and a slideshow of submitted photos posted <http://www.esc-sec.ca/d13/photocontest14.php>



Adelges piceae (Ratzeburg) (Hemiptera: Adelgidae). Photo credit: Gabriella Zilahi-Balogh



Some International Entomological Societies

Royal Entomological Society www.royensoc.co.uk/

Entomological Society of Southern Africa www.entsocsa.co.za/

Egyptian Entomological Society www.ees.eg.net/

Australian Entomological Society <http://www.austentsoc.org.au/>

Xerces Society for Invertebrate Conservation www.xerces.org

Japan Coleopterists Society <http://www.mus-nh.city.osaka.jp/shiyake/j-coleopt-soc.html>

Chilean Society of Entomology <http://www2.udec.cl/~insectos/>

Butterfly Conservation <http://butterfly-conservation.org/>

Croatian Entomological Society <http://www.agr.unizg.hr/hed/index.htm>

European Association of Coleopterology <http://www.ub.edu/aec/>

Dutch Butterfly Conservation <http://www.vlinderstichting.nl/>

Butterfly Conservation of the Republic of China <http://butterfly.kingnet.com.tw/>



Puto cupressi (Coleman) (Hemiptera: Pseudococcidae) gouting. Photo credits : Lorraine Maclauchlan. Mt Kobau, BC Sept.2014



Entomological Meetings and Conferences

The Entomological Society of America compiles and maintains a list of entomology meetings and references. Below are some of these meetings, a full list is available at <http://www.entsoc.org/Periodicals/News/datebook>. To submit an entomology-related meeting or event for advertisement on the Entomological Society of America webpage visit http://www.entsoc.org/Pubs/Periodicals/News/submit_datebook for details.

2015

The Annual Meeting of the Southwestern Branch of the Entomological Society of America will be held February 22-25, 2015 at the Hard Rock Hotel and Casino in Tulsa, Oklahoma.

The Annual Meeting of the Eastern Branch of the Entomological Society of America will be held March 14-17, 2015 at the Atlantic Sands Hotel & Conference Center in Rehoboth, DE.

The Annual Meeting of the Southeastern Branch of the Entomological Society of America will be held March 15-18, 2015 at the Beau Rivage Resort & Casino in Biloxi, Mississippi.

The 8th International Integrated Pest Management Symposium will be held in Salt Lake City, Utah from March 23-26, 2015 at the Salt Palace Convention Center. Contact Elaine Wolff at 217-333-2880 or ipmsymposium@ad.uiuc.edu.

The 12th Arbovirus Surveillance and Mosquito Control Workshop will be held March 24-26, 2015 in St. Augustine, Florida. Contact Chris Bibbs at cbibbsamcd@bellsouth.net.

The XII International Symposium of Neuropterology will take place May 12-15, 2015 in Mexico City. Contact: isn2015@st.ib.unam.mx

The 4th International Forum for Surveillance and Control of Mosquitoes and Mosquito-borne Diseases will be held May 25-29, 2015 Place in Guangzhou, Guangdong, China. Contact Dr. Rudy Xuev at xueamcd@gmail.com or Dr. Tongyan Zhao at tongyanzhao@126.com.

The Dragonfly Society of America will host its first Central American Regional Meeting May 31 - June 9, 2015 in Costa Rica. Contact Marla Garrison at mgarrison@mchenry.edu.

The Annual Meeting of the North Central Branch of the Entomological Society of America will be held May 31 - June 3, 2015 at the Hilton Garden Inn in Manhattan, KS.

The Annual Meeting of the International Branch of the Entomological Society of America will be held in conjunction with the Joint Congress of the Entomological Society of Southern Africa and the Zoological Society of Southern Africa, July 12-17, 2015 in Grahamstown.



The Joint Congress of the Entomological Society of Southern Africa and the Zoological Society of Southern Africa will be held, July 12-17, 2015 at Rhodes University, Grahamstown, South Africa.

The XVII International Plant Protection Congress will take place August 24-27, 2015 in Berlin, Germany.

The Ento'15 International Symposium of the Royal Entomological Society on Insect Ecosystem Services will be held September 2-4, 2015 in Dublin, Ireland. Contact Archie K. Murchie at archie.murchie@afbini.gov.uk.

ESBCP 2015, the Fourth Regional Conference of Applied Biological Control of Pests, will be held October 19-22, 2015 in Cairo, Egypt. Contact Ahmed El-Heneidy at aelheneidy@gmail.com.

A Joint Annual Meeting of the Entomological Society of Canada and the Entomological Society of Quebec will be held November 8-11, 2015 in Montreal.

Entomology 2015, ESA's 63rd Annual Meeting, will be held November 14-18, 2015 in Minneapolis, Minnesota. The meeting will be co-located with the ASA-CSSA-SSSA Annual Meeting (American Society of Agronomy, Crop Science Society of America, and the Soil Science Society of America).

2016

2016 ESC Annual Meeting and International Congress of Entomology

ESC is pleased to announce that we will be co-locating our 2016 annual meeting with the **International Congress of Entomology (ICE)** hosted by the Entomological Society of America (ESA) in Orlando, Florida (see <http://ice2016orlando.org/>)! The ESC Governing Board has voted to accept the ESA's invitation to join them and other national entomological societies at the ICE 2016 venue.

The XXV International Congress of Entomology will be held September 25–30, 2016 in Orlando, Florida, USA. The 2016 ESA Annual Meeting and the 2016 Entomological Society of Canada meeting will be held simultaneously in Orlando.

ESC is pleased to introduce **Murray Isman** (UBC) as our appointed representative to the ICE Organizing Committee. Murray is already poised to collaborate with the ESA in ensuring a smooth merger of meetings. We have opted for a separate, pre-ICE conduct of our Society's business, and then full access to what will be a diverse and rich ICE scientific program under the theme of *Entomology without Borders*. Mark your calendars for September 23- 30, 2016.



Supporting Butterfly Conservation through Collaboration: The BC Butterfly Atlas

The BC Butterfly Atlas is a community-based citizen science project aimed at increasing our knowledge of the status and distribution of butterflies in British Columbia.

Project Description

Beginning in 2012, the BC Butterfly Atlas will harness the efforts of both professional biologists and citizen naturalists to document the distribution and abundance of butterflies in British Columbia. Gathering butterfly records from across BC will help identify which species are truly rare and which are more common, provide a snapshot of butterfly populations to which past and future surveys can be compared, and inform efforts to conserve butterflies and their habitats. Results will be collated into a single database and be made available on maps on the project website. The project also aims to educate and engage the public about the importance of biodiversity and increase involvement in butterfly conservation in BC.

Project Objectives

The BC Butterfly Atlas has the following objectives:

- Increase public interest in butterflies and involvement in butterfly watching;
- Share information on the distribution, abundance, and habitat relationships of butterflies in British Columbia;
- Educate British Columbians on the importance of conservation of butterflies and their habitat; and
- Develop resources and partnerships to improve conservation of butterflies and their habitats.

Background

Mapping biodiversity is a growing stewardship activity around the world, and the information collected is invaluable for the conservation of species and their habitat. Following on the recent success of the BC Breeding Bird Atlas¹ and butterfly atlassing projects in other jurisdictions (e.g., Butterflies of the New Millennium (UK)², Maritimes Butterfly Atlas³, and atlases in several US states), we are initiating a citizen-based survey and atlassing program for butterflies in British Columbia. Despite their important ecological role and value as habitat indicators, butterflies in BC lack adequate information on their distribution, abundance, and habitat relationships needed for effective conservation. An atlassing project would seek to fill this information gap while increasing public awareness and support for butterfly conservation.

¹ <http://www.birdatlas.bc.ca>

² <http://www.butterfly-conservation.org>

³ <http://www.accdc.com/butterflyatlas.html>



Executive contact information

| | |
|---|---|
| President | Steve Perlman president@entsocbc.ca |
| Secretary | Tracy Hueppelsheuser scholarships@entsocbc.ca |
| Treasurer and Memberships | Ward Strong treasurer@entsocbc.ca |
| Editor Entomological Society of BC Journal | Dezene Huber journal@entsocbc.ca |
| Boreus Newsletter Editor | Gabriella Zilahi-Balogh boreus@entsocbc.ca |
| Web Page Editor | Alex Chubaty webmaster@entsocbc.ca |



Iris whitefly pupa, *Aleyrodes spiroeoides* (Hemiptera: Aleyrodidae). Photo credits: Eric Maw.